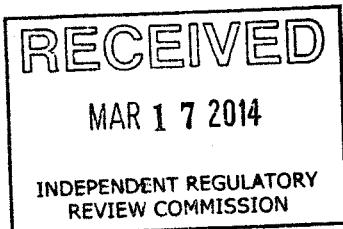


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14 March 2014



Via email to: RegComments@pa.gov
Via U.S. Mail to:

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Harrisburg, PA 17101

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CARRIE B. CRUMPTON
Director – Environmental Compliance &
Regulatory Affairs

Re: Comments on Proposed Amendments to 25 Pennsylvania Code Chapter 78, Subchapter C,
Environmental Protection Standards

Members of the Board:

CONSOL Energy Inc. (CONSOL), a leading diversified energy company headquartered in the Appalachian Basin, appreciates the opportunity to comment on the proposed amendments to 25 Pa. Code Chapter 78, Environmental Protection Performance Standards at Oil and Gas Well Sites (Proposed Regulation). CONSOL is also a member of multiple trade organizations, including the Marcellus Shale Coalition (MSC). The comments submitted here echo and support a number of the comments submitted separately by MSC.

CONSOL supports the Commonwealth's effort to amend regulation to support, encourage, and ensure responsible development of natural resources in the Commonwealth. However, we believe the Proposed Regulation should not exceed statutory authority by expanding regulatory provisions beyond the terms of Act 13; impose standards on oil and gas operations that are more stringent than those for other industries; introduce operational complexity or obligations that have no meaningful environmental benefit; or create ambiguities of duplicative requirements. While the Proposed Regulation contains appropriate provisions to enhance environmental protections, it also contains several provisions that go beyond Act 13, which impose unique, costly, and unnecessary burdens on the industry and are overly prescriptive with little, if any, environmental benefit.

CONSOL has included detailed comments on the Proposed Regulation but, there are some issues that warrant initial mention. These include:

- *Public Resource Impacts:* Section 78.15(f) proposes to equate "critical communities" with "special concern species" without an adequate basis in fact or law. That term is undefined by state or federal statute or regulation, no federal or state agencies have utilized the rulemaking process to designate any species as "special concern," and there is no rational ecological basis for equating the term "communities" to "species." This raises

substantial questions about how any such list is generated, what criteria are used to determine whether there is an impact to a “special concern” species, and why/how the DEP would develop well permit conditions to mitigate impacts to such species. To the extent the term is intended to refer to certain species on the Pennsylvania Natural Diversity Inventory (PNDI) database, such designation is not done by rulemaking. Accordingly, DEP is seeking to create a binding regulatory requirement in excess of its statutory authority and jurisdiction. The proposed rule creates tremendous uncertainty about a permit applicant’s obligations with regard to an ever-changing and undefined list, to which there is no public access. The provision places Pennsylvania at a serious competitive disadvantage with respect to other states. The reference to “special concern species” should be eliminated. Section 78.15(g) replicates, in part, the language of Act 13 Section 3215(e) which recognizes the oil and gas owners’ property rights to develop the oil and gas resources. However, Section 3215(e) also requires the EQB to develop criteria for the DEP to utilize in the imposition of any permit conditions to protect public resources while respecting those property rights and ensuring optimal development of those resources. DEP has not proposed any such criteria. The rule thus fails to comply with Act 13, which requires the EQB develop these criteria in this rulemaking.

- *Pre-Hydraulic Fracturing Assessment:* With regard to proposed section 78.52a, CONSOL supports a rule that requires reasonable diligence to identify abandoned and orphaned wells prior to hydraulic fracturing. The regulation should provide clear direction to both the DEP staff and well operators. The rule should provide a precise limitation of the area of review, both horizontally and vertically from the well bore, based upon potential risks related to hydraulic fracturing and communication with other wells in the area, rather than propose open ended obligations. There is a technical consensus that shallow wells are largely irrelevant to deep unconventional well operations. As such, the questionnaire as proposed is unlikely to yield useful information and is more likely to create confusion, administrative complications and delays for well operators and DEP staff without any benefit. The regulation should be amended to reflect that the operators’ obligation consists of: a) consulting with the DEP’s database to identify only those active, inactive, plugged, abandoned and orphaned wells that are known or reasonably expected to penetrate the area of review (i.e., located within the specified horizontal distance of a planned wellbore and extending deep enough to potentially be impacted by hydraulic fracturing of the target horizon); b) monitoring of abandoned or orphaned wells that penetrate the area of review during hydraulic fracturing by visual observation or other method approved by the DEP, including circumstances where an operator does not have access to the well; and c) taking appropriate remedial action on any well that is affected by hydraulic fracturing in such a way as to create an environmental risk, recognizing limitations of access and ownership of such well.

- *Waste Management at Well Sites:* CONSOL supports regulations that encourage operators to beneficially reuse fluids and drill cuttings in an efficient, environmentally-responsible, and cost-effective manner that is practicable for operators to implement in the field. Section 78.58 is a good step in that direction but Subsection 78.58(b) should be expanded to include other activities that can be conducted without prior approval. These should include settling as well as filtration of solids and removal of free-phase hydrocarbons. In addition, the regulations should include a residual waste storage and processing permit-by-rule option pursuant to the suggested modifications to the DEP's proposed Section 78.58 provided by the MSC to the Technical Advisory Board (TAB) for consideration at the August 14-15, 2013 Subcommittee Meeting. This permit-by-rule would provide unconventional operators with authority and flexibility to store and process fluids generated by the development, drilling, stimulation, alteration, operation, or plugging of a well for reuse by the operator. Additionally, the permit-by-rule would significantly reduce truck traffic and air pollution, caused by additional handling and by unnecessary transport of fluids by operators.
- *Water Supply Protection:* Sections 78.51 (b) and (c) purport to implement Section 3218(b) of Act 13; however the proposed regulation adds "well site construction" to the list of activities enumerated in Act 13 that trigger the reporting and investigation activities set forth in Subsection 3218(b). DEP simply has no authority to amend the statutory language and this addition should be stricken. DEP can investigate complaints regarding water supplies; however, they cannot engraft new language onto the legislative language. CONSOL agrees with TAB's interpretation that "exceeded," as the term is used in Section 3218(a) of Act 13 and used by the DEP in its proposed Section 78.51(d)(2), refers to an operator's requirement to restore an affected water supply to its pre-drilling conditions, when that water supply did not meet Safe Drinking Water Act standards (SDWA) prior to drilling. The DEP's proposed contrary interpretation that operators would be required to improve each and every water supply to a minimum of SDWA standards is unreasonable since it is well documented that many private water supplies do not meet SDWA standards for water quality parameters for reasons unrelated to oil and gas operations, and since there are no residential drinking water well construction standards. It is also impractical to require operators to restore an affected water supply to pre-drilling conditions for individual parameters that were better than SDWA standards. In some cases the private water well will have had no pre-drilling samples taken or in other cases the pre-drilling sample may not be sufficient to reflect natural variability/seasonal changes in water quality. Moreover, the cost to implement treatment technologies to achieve such uncertain pre-drilling conditions for individual parameters, even if possible, may be prohibitively expensive. Such a requirement has not been imposed upon any other industry and it would be unfair to impose it solely upon the oil and gas industry. CONSOL accepts the responsibility to address impacts to water

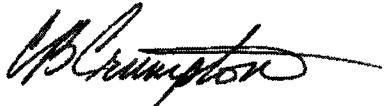
supplies that may have been caused, but it is unreasonable for the DEP to require that the oil and gas industry address contamination in water supplies unrelated to oil and gas operations.

- *Definitions:* Numerous new definitions have been proposed that would expand the scope of obligations under Chapter 78, if adopted as written. For example, the definition of “Mine influenced water” gives DEP discretion to include all waters impaired by mine drainage. Given the breadth of the DEP’s list of waters impaired by mine drainage this definition would include many surface waters throughout the Commonwealth, including sections of the major rivers such as the Allegheny, Monongahela, Youghiogheny and West Branch of the Susquehanna some of which are widely used for public water supplies. The definition is overly broad. Storage and use of such a vaguely defined and potentially broad universe of waters, which are routinely used for numerous other purposes by industries beyond the oil and gas industry, should not be subject to the special approval requirements of section 78.59b(g). Other proposed definitions not only expand the scope of Chapter 78, and target oil and gas industry with unique requirements, but also create ambiguity and confusion with respect to compliance obligations that would be created. For example, the definition of “Regulated substances” refers to the definition in Act 2 that was developed to assist those conducting cleanup operations at brownfield sites throughout the Commonwealth. The definition, which includes substances “covered by” six other named statutes, is overly broad and fails to provide the necessary guidance for reporting obligations that would be imposed under the proposed Section 78.66(b). The term is utilized extensively throughout the proposed rule, which does not appear to be warranted and may lead to unintended consequences for both the Department and the regulated community. At a minimum, the definition must be further clarified by reference to some known list of substances, such as those found in Chapter 250. In addition, the term should be replaced or removed entirely where the intent of the rule is better served by a different term. See specific comments for Sections 78.55 (Control and disposal planning), 78.56 (Temporary storage), 78.59c (Centralized impoundments), 78.61 (Disposal of drill cuttings), and 78.64a (Containment systems and practices at unconventional well sites).

CONSOL Energy Inc. recognizes the importance of robust environmental protections and views these protections as an essential part of operations. However, we believe that the DEP has failed to provide an adequate analysis for the rule that would allow for an objective assessment of whether any additional environmental protection measures are needed to address specific, documented environmental impacts. Again, CONSOL appreciates the opportunity to comment on the proposed revisions to 25 Pennsylvania Code Chapter 78, Subchapter C, Environmental Protection Standards, and continues to support the Department’s efforts to

establish reasonable and appropriate environmental protections for the Commonwealth and its residents. If you have any questions, please do not hesitate to contact me.

Regards,



Carrie Crumpton
Director - Environmental Compliance & Regulatory Affairs
CONSOL Energy Inc.

cc: E. Christopher Abruzzo, Secretary, Department of Environmental Protection (DEP)
Patrick Henderson, Energy Executive, Governor's Office of Policy & Planning
Scott Perry, Deputy Secretary, Office of Oil and Gas Management, DEP

**CONSOL Energy Inc. Comments and Suggested Amendatory Language for the proposed
Chapter 78 Regulation**

§ 78.1 Definitions

[(a) The words and terms defined in section 103 of the act (58 P. S. § 601.103), section 2 of the Coal and Gas Resource Coordination Act (58 P. S. § 502), section 2 of the Oil and Gas Conservation Law (58 P. S. § 402), section 103 of the Solid Waste Management Act (35 P. S. § 6018.103) and section 1 of the Clean Streams Law (35 P. S. § 691.1), have the meanings set forth in those statutes when the terms are used in this chapter.]

[(b)] (a) The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

Act – [The Oil and Gas Act (58 P. S. § 601.101 – 601.605.) 58 Pa.C.S. §§ 3201-3274 (2012 Oil and Gas Act).

Act 2 – The Pennsylvania Land Recycling and Environmental Remediation Standards Act (35 P. S. §§ 6062.101 – 6026.208).

CONSOL Comment: Act 2 compels oil and gas operators to utilize a standard that is voluntary for all other entities. These procedures should continue to be available for operators choosing to use them to obtain relief from liability; however they should not be a requirement at oil and gas well sites. Chlorides are among the most common component of spills on well sites, but Act 2 provides no soil statewide health cleanup standards. Without the presence of a cleanup standard, in addition to the requirement to utilize Act 2 procedures, oil and gas operators will experience excessive and unnecessary costs without any environmental benefit.

Approximate original conditions – Reclamation of the land affected to preconstruction contours so that it closely resembles the general surface configuration of the land prior to construction activities and blends into and complements the drainage pattern of the surrounding terrain, and can support the land uses that existed prior to oil and gas activities to the extent practicable.

CONSOL Comment: Act 13 does not define or require well sites to be restored to approximate original "conditions." CONSOL suggests deletion of the defined term. CONSOL recognizes that well sites need to be reclaimed with vegetation and effectively managed per post-construction stormwater management practices. CONSOL understands the intent is to reduce the pad footprint but achieving original contour is not practical and often unwanted by the landowner.

Borrow pit – An area of earth disturbance activity where rock, stone, gravel, sand, soil or similar materials is excavated for construction of well sites, access roads or facilities that are related to oil and gas development.

CONSOL Comment: Given this definition all site development activities would classify as borrow pits since they involve earth disturbance activity. The definition would add additional permitting and bonding obligations under the proposed Section 78.67. Borrow Pits.

CONSOL suggests amending the language:

Borrow pit—An area of earth disturbance activity where rock, stone, gravel, sand, soil or similar material is excavated to be used for the construction of well sites, access roads or facilities that are related to oil and gas operations. This definition does not include earth disturbance at well sites or otherwise permitted by the Department under the Oil and Gas Act.

Gathering Pipeline – A pipeline that transports oil, liquid hydrocarbons or natural gas from individual wells to an intrastate transmission pipeline.

CONSOL Comment: This definition is inconsistent with the definitions in Act 127, the federal pipeline safety laws and regulations, the PA One Call law and Act 13. To avoid confusion CONSOL suggests the regulation should use the Federal definition for gathering pipeline contained in 49 CFR Part 192, which is consistent with how the term is defined in Act 13, Section 3218.5.

Mine influenced water – Water contained in a mine pool or a surface discharge of water caused by mining activities that pollutes, or may create a threat of pollution to, waters of the Commonwealth. The term may also include surface waters that have been impaired by pollutonal mine drainage as determined by the Department.

CONSOL Comment: This definition is too broad and could potentially include a majority of the surface waters in the coal fields of the Commonwealth. “Mine influenced water” does not necessarily pose a threat to the waters of the state. In this definition, the determination of “impaired” is not linked to the requirements for impairment designation in Section 303(d) of the Clean Water Act, 33 U.S.C. § 1333(d). Given the breadth of the DEP’s list of waters impaired by mine drainage this definition would include many surface waters throughout the Commonwealth, including sections of the major rivers such as Allegheny, Monongahela, Youghiogheny and Susquehanna, some of which are widely used for public water supplies. This definition is overly broad. Storage and use of such a vaguely defined and broad inventory of waters, which are routinely used for numerous other purposes by municipalities and industries beyond the oil and gas industry, should not be subject to the special approval requirements of section 78.59b(g). The second sentence of this proposed definition should be deleted.

Oil and Gas Operations – The term includes the following:

- (1) well location assessment, seismic operations, well site preparation, construction, drilling, hydraulic fracturing, completion, production, operation, alteration, plugging and site restoration associated with an oil or gas well;
- (2) water withdrawals, residual waste processing; water and other fluid management and storage used exclusively for the development of oil and gas wells;
- (3) construction, installation, use, maintenance and repair of:
 - i. Oil and gas pipelines;
 - ii. Natural gas compressor stations; and
 - iii. Natural gas processing plants or facilities performing equivalent functions; and
- (4) construction, installation, use, maintenance and repair of all equipment directly associated with activities specified in paragraphs (1), (2), and (3), to the extent that the equipment is necessarily located at or immediately adjacent to a well site, impoundment area, oil and gas pipeline, natural gas compressor station or natural gas processing plant.
- (5) earth disturbance associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.

CONSOL Comment: Although this definition is provided, the proposed regulations also use the phrase "oil and gas activities" in numerous subsections. This creates confusion as to whether different meanings are intended. Please note specific amendatory language in the individual sections.

Process or Processing—The term shall have the same meaning as “processing” as defined in the Solid Waste Management Act (35 P. S. §§ 6018.101—6018.1003).

CONSOL Comment: This definition causes confusion because the Solid Waste Management Act generally requires a permit for residual waste processing activities. The term "processing" can also refer to natural gas processing which is not considered in this definition.

Regulated substance—Any substance defined as a regulated substance in section 103 of The Pennsylvania Land Recycling and Environmental Remediation Act (Act 2) (35 P.S. § 6026.103).

CONSOL Comment: The definition of the term "regulated substance" is very broad and its use throughout the proposed regulation is often difficult to apply to the oil and gas industry. The term "regulated substance" was adopted in the context of Act 2 which focuses on characterization and remediation of releases causing impacts to environmental media. The term was not designed to be used in the context of affirmative regulatory obligations. CONSOL recommends that revisions be made as suggested throughout the subsections below to address the DEP's particular intent of the regulatory section in which the term has been proposed.

The term may be appropriate in the spill reporting and remediation subsection 78.66, but even there, the scope of the term as defined above creates uncertainty with respect to reporting obligations in particular. Section 78.66(b) creates a two-tiered release reporting system for the

oil and gas industry. The oil and gas industry is already subject to the requirements for reporting releases pursuant to 25 Pa. Code § 91.33 that apply to all other regulated entities in Pennsylvania, as well as the numerous federal reporting requirements under CERCLA (e.g. 40 C.F.R. 302), CWA (e.g. 40 C.F.R. 112), and EPCRA (e.g. 40 C.F.R. 355) that provide specified reportable quantity thresholds

In particular, Section 78.66(b)(1) as currently proposed would impose an obligation to report any spill or release of 5 gallons or more of a regulated substance over a 24-hour period that is not completely contained by a containment system. This reporting obligation applies regardless of whether there is any actual or threatened impact to waters of the Commonwealth or any other impact to the environment or to public health or safety. In recognition that EQB is proposing to eliminate the existing “reportable release of brine” definition and provision, CONSOL recommends that this additional requirement be clarified and limited to reporting brine spills over 5 gallons outside of containment.

See the subsections below for additional comments and suggestions that explain CONSOL’s recommendations for terms that will serve the purpose of the regulation and provide better guidance to the regulated community.

§ 78.15. Application requirements.

- (a) An application for a well permit shall be submitted [on forms furnished by the] electronically to the Department through its website and contain the information required by the Department to evaluate the application.
- (b) The permit application will not be considered complete until the applicant submits a complete and accurate plat, an approvable bond or other means of complying with section [215] 3225 of the act [(58 P. S. § 601.215)] (58 Pa.C.S. § 3225), the fee in compliance with § 78.19 (relating to permit application fee schedule), proof of the notifications required under section 3211(b.1) of the act (58 Pa.C.S. § 3211(b.1)), necessary requests for variance or waivers or other documents required to be furnished by law or the Department, and the information contained in subsection (c)–(e). The person named in the permit shall be the same person named in the bond or other security.

CONSOL Comment: CONSOL recommends that “complete” permit applications be further clarified, as provided in suggested language for 78.15(d) below, so that the applicant’s obligation to provide information with respect to threatened and endangered species is clear.

- (c) The applicant shall submit information identifying parent and subsidiary business entities operating in Pennsylvania with the first application submitted after [effective date] and provide any changes to its business relationships with each subsequent application.
- (d) The applicant shall provide proof of consultation with the Pennsylvania Natural Heritage Program (PNHP) regarding the presence of a State or Federal threatened or

endangered species where the proposed well site or access road is located. If the Department determines, based on PNHP data or other sources, that the proposed well site or access road may adversely impact the species or critical habitat, the applicant shall consult with the Department to avoid or prevent the impact. If the impact cannot be avoided or prevented, the applicant shall demonstrate how the impacts will be minimized in accordance with State and Federal laws pertaining to the protection of threatened or endangered flora and fauna and their habitat.

CONSOL Comment: This section restates, with minor edits, 25 Pa. Code § 102.6(a)(2). CONSOL recommends the following modifications to clarify the obligation of applicants to provide information and/or engage in a consultation process, and the extent of the plan or measures to avoid, prevent or minimize impacts to State or Federal threatened or endangered species and their habitat.

Suggested amendatory language:

(d) The applicant shall utilize PNDI to identify the presence or absence of a State or Federal threatened or endangered species where the proposed well site or access road is located and shall provide proof of notification and consultation with the applicable resource agency regarding the screening for the presence of such species and their critical habitat in the well permit application. For purposes of consulting with the Department, if the proposed well site or access road will have a probable adverse impact on such species or their critical habitat, the applicant shall submit a proposed plan or measures to avoid, prevent, or minimize the impact in accordance with State and Federal laws pertaining to the protection of threatened or endangered species and their habitat. An applicant's submission of the proposed plan or measures concludes the information required to be submitted to the Department pursuant to subsection (b).

(e) If an applicant seeks to locate a well on a well site where the applicant has obtained a permit under 25 Pa. Code § 102.5 (relating to permit requirements) and complied with 25 Pa. Code § 102.6(a)(2), the applicant is deemed to comply with subsection (d).

CONSOL Comment: Because 78.15(d) essentially restates 25 Pa. Code 102.6(a)(2), it seems unnecessary to refer to Chapter 102. This section is apparently meant to preclude duplicate PNDI clearances for the same location. CONSOL understands the purpose of this section to provide for circumstances where the applicant has obtained an ESCGP-2 for a well site, and the PNDI review would therefore not need to be duplicated for the permit application. CONSOL recommends clarification that this deemed compliance also incorporates the application submission requirements under 78.15(b).

Suggested amendatory language:

(e) If an applicant seeks to locate a well on a well site where the applicant has obtained a permit under § 102.5 (relating to permit requirements), the applicant is deemed to comply with the application submission requirements of subsections (b) and (d) with respect to supplying the

required information regarding proof of consultation with the applicable resource agency and the Department.

(f) An applicant proposing to drill a well at a location listed in paragraph (1) shall notify the applicable resource agency, if any, in accordance with paragraph (2) and provide the information in paragraph (3) to the Department in the well permit application.

(1) This subsection applies if the proposed surface location of the well is located:

(i) in or within 200 feet of a publicly owned park, forest, game land or wildlife area.

(ii) in or within the corridor of a state or national scenic river.

(iii) within 200 feet of a national natural landmark.

(iv) in a location that will impact other critical communities. For the purposes of this section other critical communities means special concern species.

CONSOL Comment: It is not the express language or the intent of Act 13 to impose oil and gas development restrictions based on undefined and unknown “other critical communities.” Section 3215(c)(4) refers to habitats of rare and endangered flora and fauna and other critical communities. The Department’s proposal in 78.15(f)(iv) equates other critical communities with special concern species without an adequate basis in fact or law, nor any rational ecological basis for equating “communities” with individual “species.” The first sentence should be revised to properly focus on the well-established concept of critical habitats of threatened and endangered species, and the second sentence should be deleted.

In addition, CONSOL has concerns about the selection, listing and public participation process for special concern species.

- The term “special concern species” has no legislative or regulatory definition in Pennsylvania law.
- The Department has no statutory authority with respect to any species, and no authority to define, designate or list any plant or animal as a special concern species.
- No State or Federal agencies have used rulemaking to designate any species as “special concern species” in Pennsylvania.

Suggested amendatory language:

(iv) in a location that will impact critical habitats of State or Federal threatened or endangered species

(v) within 200 feet of a historical or archeological site listed on the Federal or State list of historic places.

(vi) in the case of an unconventional well, within 1000 feet of a water well, surface water intake, reservoir or other water supply extraction point used by a water purveyor.

(2) The applicant shall notify the public resource agency responsible for managing the public resource identified in paragraph (1), if any. The applicant shall forward by certified mail a copy of the plat identifying the proposed location of the well, well site and access road and information in paragraph (3) to the public resource agency at least 15 days prior to submitting its well permit application to the Department. The applicant shall submit proof of notification with the well permit application. From the date of notification, the public resource agency shall have 15 days to provide written comments to the Department and the applicant on the functions and uses of the public resource and the measures, if any, that the public resource agency recommends the Department consider to avoid or minimize probable harmful impacts to the public resource where the well, well site and access road is located. The applicant may provide a response to the Department to any such comments.

CONSOL Comment: CONSOL recommends that the Department revise this paragraph to reflect the situation where a public resource agency is also the surface landowner. Additionally, CONSOL recommends that the Department clarify that the public resource agency shall have 15 calendar days to provide written comments to the Department and the applicant.

Suggested amendatory language:

(2) The applicant shall notify the public resource agency responsible for managing the public resource identified in paragraph (1), if any. The applicant shall forward by certified mail a copy of the plat identifying the proposed location of the well, well site and access road and information in paragraph (3) to the public resource agency at least 15 days prior to submitting its well permit application to the Department. The applicant shall submit proof of notification with the well permit application. From the date of notification, the public resource agency shall have 15 calendar days to provide written comments to the Department and the applicant on the functions and uses of the public resource and the measures, if any, that the public resource agency recommends the Department consider to avoid or minimize probable harmful impacts to the public resource where the well, well site and access road is located. The public resource agency shall also provide the relevant portions of any records indicating pre-existing agreements, whether leases, surface use agreements or others, between the agency and the applicant that reflect mitigation measures already adopted for the protection of public resources that may be affected by the proposed well. The applicant may provide a response to the Department to any such comments. With respect to surface landowners who are also a public resource agency to be notified, the notification contained in Section 3211(b)(1), provided it includes the information required by this subsection, satisfies the notification requirements of this subsection.

(3) The applicant shall include the following information in the well permit application on forms provided by the Department:

(i) an identification of the public resource.

(ii) a description of the functions and uses of the public resource;

(iii) a description of the measures proposed to be taken to avoid or mitigate impacts, if any.

(1) The information required in paragraph 3 shall be limited to the discrete area of the public resource that may be affected by the well, well site and access road.

(g) If the proposed well, well site or access road poses a probable harmful impact to a public resource, the Department may include conditions in the well permit to avoid or mitigate those impacts to the public resource's current functions and uses. The Department shall consider the impact of any potential permit condition on the applicant's ability to exercise its property rights with regard to the development of oil and gas resources and the degree to which any potential condition may impact or impede the optimal development of the oil and gas resources. The issuance of a permit containing conditions imposed by the Department pursuant to this subsection shall be an action that is appealable to the Environmental Hearing Board. The Department shall have the burden of proving that the conditions were necessary to protect against a probable harmful impact of the public resource.

CONSOL Comment: The proposed regulations in Chapter 78 Section 15 do not establish the criteria for conditioning a permit and simply allocate authority to implement changes to the Department. This counteracts Section 3215(e) of Act 13 which requires the Department to establish criteria to guard public resources while protecting oil and gas resource development and respecting oil and gas owner property rights.

Act 13 already establishes the standard for the disturbance of critical communities and habitat for rare and endangered flora and fauna. An attempt is being made to equate rare and endangered species with special concern species; however the nature of the special concern species is such that there is insufficient data to identify it as critical. The industry is obligated to protect endangered and threatened species as identified by the Department. Requiring an additional consultation through the Pennsylvania Natural Heritage Program, adds a redundant step that inhibits the progress of the application process. Protection is already established through Act 13 and this proposed regulation does nothing more than to put an additional burden on the industry without improving the current practice or increasing environmental protection. The applicant shall demonstrate due diligence by submitting proof of notification and consultation with any resource demonstrating the investigation of the presence of threatened or endangered species and their habitat. If it is determined that the construction of a well site or access road will have a

negative impact on the species or their habitat, a plan should be required outlining the measures that will be taken to prevent or minimize the effect on the species and or habitat.

Given the nature of oil and gas operations, activity may take place on or near public resources. The Department should follow Section 3215(e)(1) when determining whether to impose a condition on the permit. A condition may not be imposed unless the Department can provide evidence of probable harm to a public resource and can demonstrate that existing measures are insufficient to prevent harm. In order to ensure optimal development of an oil or gas resource, a condition may not be imposed if it causes excessive financial burden, and or reduces the anticipated recoverable resources. The condition may not be imposed if it in any way alters the terms of any lease, deed, surface use agreement, or similar contract between a surface owner and subsurface oil and gas owner.

§ 78.51 Protection of water supplies

(c) Within 10 calendar days of the receipt of the investigation request, the Department will investigate the claim and will, within 45 calendar days of receipt of the request, make a determination. If the Department finds that pollution or diminution was caused by the well site construction, drilling, alteration or operation activities or if it presumes the well operator responsible for polluting the water supply of the landowner or water purveyor under section [208(c)] 3218(c) of the act [(58 P. S. § 601.208(c))] (58 Pa.C.S. § 3218(c)), the Department will issue orders to the well operator necessary to assure compliance with this section. The presumption established by 58 Pa.C.S. § 3218(c) is not applicable to pollution resulting from well site construction.

CONSOL Comment: The Department does not have the authority to change that statutory language and should remove "well site construction" from the list of activities that require reporting and investigation.

(2) *Quality.* The quality of a restored or replaced water supply will be deemed adequate if it meets the standards established under the Pennsylvania Safe Drinking Water Act (35 P. S. §§ 721.1—721.17), or is comparable to the quality of the water supply before it was affected by the operator if that water supply exceeded those [did not meet these] standards.

CONSOL Comment: CONSOL agrees with TAB's interpretation that "exceeded", as the term is used in Section 3218(a) of Act 13 and used by the DEP in its proposed Section 78.51(d)(2), refers to an operator's requirement to restore an affected water supply to its pre-drilling conditions, when that water supply did not meet Safe Drinking Water Act standards (SDWA) prior to drilling. The DEP's proposed contrary interpretation that operators would be required to improve each and every water supply to a minimum of SDWA standards is unreasonable since it is well documented that many private water supplies do not meet SDWA standards for water quality parameters for reasons unrelated to oil and gas industry operations. It is also impractical to require operators to restore an affected water supply to pre-drilling conditions for individual parameters that were better than SDWA standards. In some cases the private water

well will have had no pre-drilling samples taken or in other cases the pre-drilling sample may not be sufficient to reflect natural variability in water quality. The cost to implement treatment technologies to achieve such uncertain pre-drilling conditions for individual parameters, even if possible, may be prohibitively expensive. Such a requirement has not been imposed upon any other industry and it would be unfair to impose it solely upon the oil and gas industry.

Suggested amendatory language:

(2) Quality. The quality of a restored or replaced water supply will be deemed adequate if it meets the standards established under the Pennsylvania Safe Drinking Water Act (35 P. S.

§§ 721.1—721.17), or is comparable to the quality of the water supply before it was affected by the operator if that water supply did not meet those standards.

§ 78.52a. Abandoned and orphaned well identification.

(a) Prior to hydraulically fracturing the well, the operator of a gas well or horizontal oil well shall identify the location of orphaned or abandoned wells within 1,000 feet measured horizontally from the vertical well bore and 1,000 feet measured from the surface above the entire length of a horizontal well bore in accordance with subsection (b). Prior to hydraulically fracturing the well, the operator of a vertical oil well shall identify the location of orphaned or abandoned wells within 500 feet of the well bore in accordance with subsection (b). For the purposes of this section a gas well is a well which is producing or capable of producing marketable quantities of gas or of gas and oil with a gas-oil ratio of more than 100 MCF per bbl. of oil.

(b) Identification shall be accomplished by conducting the following:

(1) A review the Department's orphaned and abandoned well database;

(2) A review of applicable farm line maps, where accessible; and

(3) Submitting a questionnaire on forms provided by the Department to landowners whose property is within the area identified in subsection (a) regarding the precise location of orphaned and abandoned wells on their property.

(c) Prior to hydraulically fracturing a well, the operator shall submit a plat to the Department showing the location and GPS coordinates of orphaned and abandoned wells identified pursuant to subsection (b) and proof of notification that the operators submitted questionnaires pursuant to subsection (b)(3).

CONSOL Comment: The location coordinates for a large number of wells that may exist in the Department's database are likely derived from sources other than field GPS coordinates. Some

coordinates may have been derived from old maps. For a variety of reasons, a well with latitude/longitude coordinates in the Department's database may not be visible on the ground, perhaps because the coordinates are inaccurate, or possibly because the well does not exist.

It seems appropriate that any wells which appear on the Department's database should be identified, provided their total depth extends below the interval that could reasonably be influenced by hydraulic fracturing. A vertical isolation distance of 1,500 feet above the zone to be perforated or isolated for hydraulic fracturing in an unconventional well and 500 feet above the zone to be perforated or isolated for hydraulic fracturing in any other well is a reasonable isolation distance that exceeds the normally expected vertical growth of induced fractures.

A requirement to consult "applicable farm line maps, where accessible" in order to identify wells lacks the clarity required for a regulation. There are many sources of information on old wells in Pennsylvania, including many reports by state agencies, as well as privately owned maps and records maintained by various operators. If the Department's database could be sufficiently enhanced, a review of the database should be an adequate obligation for well identification. A partnership effort between industry and state government seems an appropriate method of compiling available data on historical oil and gas wells.

Because of the generally higher rate, volume and pressure used in hydraulic fracturing of the Marcellus and other deep shale formations, constructing a more comprehensive database of historical deep wells (those that penetrate to a depth at least 1,500 feet above the Marcellus Shale) would be a priority. It is hoped that with good cooperation, this could be accomplished within a few months, as the state's current database for this set of deeper wells is believed to be nearly complete.

Enhancement of the shallow well database will require significantly more work, time and expense, and is likely a multi-year project.

The proposed language in Subsection 78.52a(b)(3) would require submission of a questionnaire to landowners requesting information on orphaned or abandoned wells on forms provided by the Department. It is unclear how responses to such questionnaires would be directed and what obligations might fall on operators to verify information received. There is far too much uncertainty related to this provision to support it as a regulatory requirement. The requirement to use a questionnaire should be eliminated.

Additionally the oil and gas industry's identification of abandoned and orphaned wells will benefit from further development of the Department's database, and should be postponed until the database and map viewer system is improved. Accordingly, the Department should consider a phased implementation of this new section.

Suggested amendatory language:

§ 78.52a. Well identification prior to hydraulic fracturing

- (a) Prior to hydraulically fracturing an unconventional well, the operator shall identify in accordance with subsection (b) the location of active, inactive, plugged, orphaned or abandoned wells within 1,000 feet measured horizontally from the surface projection of

any portion of the wellbore whose total depth is known or reasonably expected to be less than 1,500 feet above the shallowest vertical depth to be perforated or isolated for hydraulic fracturing. Prior to hydraulically fracturing a conventional well, the operator shall identify the location of active, inactive, plugged, orphaned or abandoned wells within 500 feet of the well bore whose total depth is known or reasonably expected to be less than 500 feet above the shallowest vertical depth to be perforated or isolated for hydraulically fracturing.

- (b) Identification shall be deemed to have been satisfied by conducting a review of the Department's database for active, inactive, plugged, orphaned and abandoned wells.
- (c) Prior to hydraulically fracturing a well, the operator shall submit a plat to the Department showing the location and GPS coordinates of wells identified pursuant to subsection (b) whose total depth is known or reasonably expected to be less than 1,500 feet, in the case of an unconventional well or 500 feet, in the case of any other well, above the shallowest vertical depth to be perforated or isolated for hydraulic fracturing. The operator may notify the Department of any wells that are identified on the Department's database but which have not been located on the ground using reasonable efforts.
- (d) This subsection shall become effective [six months] from final publication in the Pennsylvania Bulletin.

§ 78.55. Control and disposal planning; emergency response for unconventional wells.

- (a) *Preparation and implementation of plan for oil and gas operations.* [Prior to generation of waste, the well operator] **Persons conducting oil and gas operations** shall prepare and implement **site specific PPC plans according to the requirements in 25 Pa.Code § 91.34 and 102.5(l).**

CONSOL Comment: This provision should clarify that PPC planning is required to the extent 25 Pa. Code §§ 91.34 and 102.5(l) apply to the subject activity. It also appears that Section 78.55(a) overlaps and duplicates requirements that are set forth in Section 78.55(b). While Section 78.55(b) requires well operators to prepare PPC plans for activities at well sites, Section 78.55(a) covers "oil and gas operations" and applies to any "person" conducting such operations thereby introducing significant uncertainty and confusion as to how these provisions are to operate in tandem. CONSOL recommends that Section 78.55(a) be clarified to apply only to oil and gas operations that do not take place at well sites (well sites are covered under Section 78.55(b)) and that at such locations, the person or entity in charge of the operations be responsible for preparing and implementing a PPC plan, as appropriate, to eliminate the potential for preparation of multiple, competing PPC plans.

Suggested amendatory language:

- (a) *Preparation and implementation of plan for oil and gas operations at a location other than a well site.* Persons conducting oil and gas operations at a location other than a well site shall prepare and implement site specific PPC plans according to §§ 91.34 and 102.5(l), as applicable.
- (b) Preparation and implementation of plan for well sites. In addition to the requirements in subsection (a), the well operator shall prepare and develop a site specific PPC plan prior to storing, using, generating or transporting regulated substances to, on or from a well site** from the drilling, alteration, production, plugging or other activity associated with oil and gas wells.

CONSOL Comment: The use of the term “regulated substance” in this subsection is unclear and is difficult to apply to the oil and gas industry. The potential for an overly broad interpretation is high with the Department’s proposed definition, which includes literally thousands of substances, many of which are naturally occurring and many of which are environmentally benign. In addition, the proposed paragraph appears to include some grammatical confusion, which should be clarified.

Suggested amendatory language:

- (b) *Preparation and implementation of plan for well sites.* The well operator shall prepare a site specific PPC plan, in accordance with §§ 91.34 and 102.5(l), as applicable, prior to storing, using, generating or transporting substances subject to those provisions to, on or from a well site.

[(b)](c) Containment practices. The unconventional well operator’s PPC plan must describe the containment practices to be utilized and the area of the well site where containment systems will be employed as required under section 78.64a. The PPC plan must include a description of the equipment to be kept onsite during drilling and hydraulic fracturing operations that can be utilized to prevent a spill from leaving the well site.

CONSOL Comment: The Proposal has not clarified the nature of equipment that should be described in the PPC plan. The second sentence of this subsection should be deleted.

Suggested amendatory language:

- (c) *Containment practices.* The unconventional well operator’s PPC plan must describe the containment practices to be utilized and the area of the well site where containment systems will be employed as required under section 78.64a.
- (d) Requirements.** The **well operator’s** PPC plan must **also** identify the control and disposal methods and practices utilized by the well operator and be consistent with the act,

The Clean Streams Law (35 P. S. §§ 691.1—691.1001), the Solid Waste Management Act (35 P. S. §§ 6018.101—6018.1003) and §§ 78.54, 78.56—78.58 and 78.60—78.63. The PPC plan must also include a pressure barrier policy developed by the operator that identifies barriers to be used during identified operations.

[(c)](e) *Revisions.* The well operator shall revise the PPC plan prior to implementing a change to the practices identified in the PPC plan.

[(d)](f) *Copies.* A copy of the well operator's PPC plan shall be provided to the Department, the Fish and Boat Commission or the landowner upon request and shall be available at the [well] site during drilling and completion activities for review.

CONSOL Comment: Since the parties listed in (f) have no jurisdiction over operations at the well site, CONSOL objects to a requirement to provide a copy of the PPC plan to the Pennsylvania Fish and Boat Commission or the landowner.

Suggested amendatory language:

(f) *Copies.* A copy of the well operator's PPC plan shall be provided to the Department upon request and shall be available at the well site during drilling and completion activities for review.

§ 78.57. Control, storage and disposal of production fluids.

(a) Unless a permit has been obtained under § 78.60(a) (relating to discharge requirements), the operator shall collect the brine and other fluids produced during operation[, service and plugging] of the well in a tank[, pit] or a series of [pits or] tanks, or other device approved by the Department for subsequent disposal or reuse. Open top structures shall not be used to store brine and other fluids produced during operation of the well. Except as allowed in this subchapter or otherwise approved by the Department, the operator may not discharge the brine and other fluids on or into the ground or into the waters of this Commonwealth.

(b) Except as provided in § 78.56 (relating to pits and tanks for temporary [containment] storage), the operator may not use a pit for the control, handling or storage of brine and other fluids produced during operation, service or plugging of a well. [unless the pit is authorized by a permit under The Clean Streams Law (35 P. S. §§ 691.1—691.1001) or approval to operate the pit as an impoundment under The Clean Streams Law is obtained from the Department under subsection (c).]

(c) [The operator may apply for approval from the Department to operate a pit as an impoundment under The Clean Streams Law, as indicated by the Department's issuance of

a pit approval number in accordance with this section. No pit will be eligible for approval under this subsection unless the capacity of any one pit or of any two or more interconnected pits is less than 250,000 gallons, or the total capacity contained in pits on one tract or related tracts of land is less than 500,000 gallons. Compliance with this subsection does not relieve the operator from the obligation to comply with section 308 of The Clean Streams Law (35 P. S. § 691.308) and the requirements for obtaining a permit for the erection, construction and operation of treatment works promulgated under that section.] Secondary containment capable of preventing tank contents from entering waters of the Commonwealth is required for all new, refurbished or replaced tanks or other aboveground containment structures approved by the Department, including their associated manifolds, that contain brine and other fluids produced during operation of the well. If one tank in a series of tanks is added, refurbished or replaced, secondary containment is required for the entire series of tanks. The secondary containment area provided by dikes or other methods of secondary containment open to the atmosphere shall have containment capacity sufficient to hold the volume of the largest single tank, plus an additional 10% of volume for precipitation. Compliance with § 78.64 (relating to containment around oil and condensate tanks) or using double walled tanks capable of detecting a leak in the primary container shall fulfill the requirements in this subsection.

CONSOL Comment: CONSOL is an established and growing gas producer, with over 3,000 well sites in the Commonwealth. A requirement of secondary containment for brines would necessitate a large effort on CONSOL's part to comply with the proposed standard if a large number of those tanks are required to be repaired, upgraded, or retrofitted simultaneously. In order to make this standard more attainable CONSOL is suggesting inclusion of language that allows flexibility for the Operator to develop a plan (to be approved by the Department) to upgrade the containment at their locations in a phased, risk based approach.

§ 78.59a Impoundment embankments

CONSOL Comment: This section prevents the industry from making quick changes when improved designs and materials are made available. The Department should establish "performance standards" and allow the industry to propose methods and alternatives to meet the standards.

(g) Prior to storing mine influenced water in a freshwater impoundment, the operator shall develop a mine influenced water storage plan and submit it to the Department for approval.

CONSOL Comment: Given the current efforts of the industry, the DEP and legislature to develop a strategy for the reuse of mine influenced water, there needs to be more flexibility in the storage if it is located within the same watershed as the site of the MIW.

§ 78.59b. Freshwater impoundments

(c) Freshwater impoundments shall be constructed with a synthetic impervious liner.

CONSOL Comment: This subsection should not be included. Synthetic liners should not be required because onsite soils may provide sufficient permeability for use as a liner for freshwater.

Suggested amendatory language:

(c) Freshwater impoundments shall be designed to hold water without significant leaks that could affect the integrity of the embankment.

§ 78.59c. Centralized impoundments.

(c) Centralized impoundments shall not be constructed in any portion of the following areas:

(3) In areas underlain by limestone or carbonate formations where the formations are greater than 5 feet thick and present at the uppermost geologic unit. These areas include areas mapped by the Pennsylvania Geological Survey as underlain by the formations, unless competent geologic studies demonstrate the absence of limestone and carbonate formations.

CONSOL Comment: The proposed excerpt appears to have been copied from Pennsylvania's Solid Waste Regulations, which include this provision due to the acidic nature of landfill leachate. If landfill leachate were to penetrate a landfill's liner system and infiltrate into a limestone layer, there is increased potential for that acidic water to dissolve and erode away the limestone. Flowback, production brine, and other waters encountered during operations are pH neutral, however, and would not affect limestone in the same fashion. Additionally, duplicative requirements for activities already addressed through other regulatory programs should not be added to Chapter 78.

Suggest deletion of subsection (c)(3).

(e) Centralized impoundments shall be constructed with a liner system composed of the following components:

(1) A sub-base that:

CONSOL Comment: The soil quality specified below may not be available on or near many proposed locations. Consequently, this subsection should include an allowance for the use of alternative materials such as Geosynthetic Clay Liners (GCLs) and/or soil amendments.

Suggested amendatory language:

(1) A sub-base that meets the following, or is otherwise approved by the Department:

(i) Bears the weight of the liner system, impounded fluid, and equipment operating on the impoundment without causing or allowing a failure of the liner system.

(ii) Accommodates potential settlement without damage to the liner system.

(iii) Is compatible with the impounded fluid.

(iv) Covers the bottom and sidewalls of the impoundment.

(v) Is covered with non-woven geotextile fabric to cushion the secondary liner and allow for adequate venting between the secondary liner and sub-base to prevent entrapment of gases beneath the liner system.

(vii) Is constructed of a natural clay material and include an upper 6 inches that is:

(A) Free of coarse rock fragments greater than 0.75" in diameter.

(B) Hard, uniform, smooth and free of debris, rock fragments, plant materials and other foreign material.

(C) No more permeable than 1.0×10^{-6} cm/sec., based on laboratory and field testing. Soil compaction and permeability testing shall be conducted on the bottom and sides at a minimum rate of once per 2,500 square feet.

CONSOL Comment: The soil compaction test (i.e., moisture/density testing) frequency is excessive, where one test per 2,500 square feet results in 18 tests per acre. Typically, the 6-inch thick subbase layer in a landfill liner system is tested at a frequency of one test per acre. CONSOL recommends that the test frequency be one test per acre per soil type.

The soil permeability testing in the proposed subsection is excessive. In addition, the subsection could be misinterpreted to require field permeability testing which is impractical. CONSOL recommends that laboratory permeability testing be performed at a frequency of 1 sample per soil type. In addition, it is suggested that the proposed subsection be changed to utilize a correlation between laboratory Proctor and Permeability testing that is used to specify parameters for field compaction testing.

Suggested amendatory language:

§ 78.59c(e)(vi) (C) No more permeable than 1.0×10^{-6} cm/sec. Laboratory Standard Proctor and Permeability testing shall be used to delineate limits for field moisture/density testing. Field

limits shall be delineated for each soil type used, and at least one Standard Proctor and Permeability test per soil type shall be performed. Field moisture density testing shall be performed at a frequency of one sample per acre per 6-inch thick lift per soil type.

(2) A secondary liner that:

- (i) Prevents the migration of fluid from the impoundment.**
- (ii) Is designed, constructed and maintained so that the physical and chemical characteristics of the liner are not adversely affected by the impounded fluid, and the liner is resistant to physical, chemical and other failure during transportation, handling, installation and use. Liner compatibility shall satisfy ASTM Method D5747 Compatibility Test for Wastes and Membrane Liners.**
- (iii) Covers the bottom and sidewalls of the impoundment.**
- (iv) Is composed of a synthetic material with a coefficient of permeability not greater than 1.0×10^{-10} cm/sec., based on laboratory testing.**
- (v) Has a minimum thickness of 40 mil unless a greater thickness is recommended by the manufacturer's specifications.**
- (vi) Is installed according to manufacturer's specifications under the supervision of an authorized representative of the manufacturer. A Department approved quality assurance and quality control plan shall be implemented in the field during the installation of the liner.**

CONSOL Comment: CONSOL recommends that an appropriately trained professional can supervise installation. Requiring an authorized representative of the manufacturer imposes an unnecessarily strict, and potentially expensive, requirement.

Suggested amendatory language:

(vi) Is installed according to manufacturer's specifications under the supervision of an appropriately trained professional. A Department approved quality assurance and quality control plan shall be implemented in the field during the installation of the liner.

(vii) Is inspected for uniformity, damage and imperfections during construction and installation.

(viii) Uses of a composite secondary liner may not be substituted for a separate primary liner.

(3) A leak detection system that meets the following:

- (i) Rapidly detects and collect liquid entering the leak detection zone, and rapidly transmit the liquid to a sump.
 - (ii) Withstands chemical attack from the water or wastewater being impounded.
 - (iii) Withstands anticipated loads, stresses and disturbances from impounded liquid.
 - (iv) Functions without clogging.
 - (v) Does not affect the primary or secondary liner by puncturing, cracking, tearing, stretching or otherwise losing its physical integrity.
 - (vi) Cover the bottom and sidewalls of the impoundment.
 - (vii) Create a flow zone between the secondary liner and the primary liner equal to, or more permeable than 1.0×10^{-2} cm/sec., based on laboratory testing and, when required by the Department, field testing.
- CONSOL Comment: Field testing of the flow zone would require an extremely complex testing scenario that would be very difficult to develop and acquire approval at the Department's regional level. The proposed subsection as written is therefore impractical. The permeability/permittivity of geosynthetic flow zone products and aggregate meeting standard AASHTO gradation are well known and documented.
- (viii) Contain a perforated piping system capable of detecting and intercepting liquid within the leak detection zone and conveying the liquid to a collection sump.

CONSOL Comment: Due to the extremely high flow volumes that can be transmitted through geosynthetic flow zone products and many aggregates, they can, in nearly every instance, more than adequately transmit flow without piping. The requirement for the use of transmission piping significantly complicates grading and liner configurations to accommodate piping.

Suggested amendatory language:

- (viii) If the leak detection zone cannot adequately transmit detection zone flow, the system shall contain a perforated piping system capable of detecting and intercepting liquid within the leak detection zone and conveying the liquid to a collection sump.
 - (A) The collection sump shall be equipped with a sump pump with a switch to automatically activate the pump if a leak occurs.
 - (B) Discharge from the sump pump shall be directed back into the impoundment or other suitable containment. The sump shall have no outlet other than the sump pump discharge.
 - (C) The pump and sump shall be of sufficient size and capacity to convey any leak that may occur back into the impoundment without a discharge.

(ix) A piping system that meets the following requirements:

(A) The slope, size and spacing of the piping system shall assure that liquids drain from the leak detection zone.

(B) The pipes shall be installed as close to perpendicular to the flow as practicable and shall have a minimum post-settlement grade of at least 2%.

(C) The minimum diameter of the perforated pipe shall be 4 inches with a wall thickness of Schedule-80 or greater as specified by ASTM, or equivalent.

(D) The pipes shall be cleaned and maintained as necessary to ensure the effectiveness of the system.

(x) A minimum bottom slope of 2%.

(xi) Designed to allow the operator to monitor and record leakage rates.

(xii) Not contain carbonate stones or aggregate with sharp edges.

CONSOL Comment: This subsection was borrowed from the solid waste regulations, and “not contain carbonate” is a specification relevant to that industry where the acidic nature of landfill leachate can dissolve carbonate aggregate and affect leachate collection systems. Due to the fact that all aggregate has some carbonatious content and “not contain carbonate” is an impractical specification, a small percentage of carbonate content in aggregates is allowed in solid waste projects.

The waters handled in the oil and gas industry are typically pH neutral and would not affect a carbonatious aggregate. In addition, landfills permanently store waste. For an oil and gas impoundment, detection zone problems can be repaired because the contents are not permanently stored. Therefore, it is recommended that this proposed subsection be deleted.

Suggest deletion of subsection (3)(xii).

(xiii) The operator shall monitor the leak detection zone weekly to determine whether liquid is flowing from the zone. These records shall be made available to the Department upon request.

(4) A primary liner that meets the following:

(i) The effectiveness of the primary liner may not be adversely affected by the physical or chemical characteristics of the impounded fluids from the impoundment.

(ii) Designed, constructed and maintained so that the physical and chemical characteristics of the liner are not adversely affected by the impounded fluid and be resistant to physical, chemical and other failure during transportation, handling, installation and use. Liner compatibility shall satisfy ASTM Method D5747 Compatibility Test for Wastes and Membrane Liners, or other compatibility tests approved by the Department.

(iii) Cover the bottom and sidewalls of the impoundment.

(iv) Composed of a synthetic material with a coefficient of permeability not greater than 1.0×10^{-10} cm/sec., based on laboratory testing.

(v) A minimum thickness of 40 mil unless a greater thickness is required by manufacturer recommendations.

(vi) Installed according to manufacturer's specifications under the supervision of an authorized representative of the manufacturer. A Department approved quality assurance and quality control plan shall be implemented in the field during the installation of the liner.

CONSOL Comment: CONSOL suggests that an appropriately trained professional can supervise installation. Requiring an authorized representative of the manufacturer imposes an unnecessarily strict, and potentially expensive, requirement.

Suggested amendatory language:

(vi) Installed according to manufacturer's specifications under the supervision of an appropriately trained professional. A Department approved quality assurance and quality control plan shall be implemented in the field during the installation of the liner.

(vii) Inspected for uniformity, damage and imperfections during construction and installation.

(viii) Use of a composite primary liner does not relieve the operator of responsibility for a separate secondary liner.

(ix) Allowable leakage rates through the primary liner shall be determined based upon the maximum depth of the impounded fluid as specified in Table 1. The area shall be calculated as the area of the liner in contact with the impounded fluid. Weekly leakage rates shall be documented and provided to the Department upon request. These records shall be made available to the Department upon request.

Table 1

Fluid Height (ft)	Allowable Leakage Rate (gallons/acre/day)
$h \leq 10$	340
$10 < h \leq 15$	420
$15 < h \leq 20$	490
$20 < h \leq 25$	550
$25 < h \leq 30$	610
$h > 30$	case by case

(x) In the event that the flow rate of leakage through the primary liner, as collected in the leak detection sump, exceeds the value in Table 1 for a given fluid depth, the operator shall notify the Department within 24 hours, drain the impoundment to the extent necessary to repair the impoundment and shall repair the impoundment. Notice shall be made electronically to the Department through its website.

(f) Hydrogeologic investigation—An operator that intends to construct a centralized impoundment must initially complete a baseline hydrogeologic investigation to document background conditions pursuant to this subsection.

(1) The investigation shall determine the groundwater flow beneath the site and adjacent area, based on an initial round of water quality testing, a groundwater elevation study and a review of reasonably available secondary source information. The results of the initial round of water quality testing shall be submitted with the permit application.

(2) A second round of testing, including water quality testing and water level measurements, shall also be completed. The second round of testing shall be conducted between 90 and 120 calendar days from the initial round of testing. The results of the second round of water quality testing may be submitted after the permit application is submitted. The Department will not make a decision on the permit application until the operator submits the results of the second round of water quality testing.

(3) The water quality testing required by this subsection shall include the constituents listed subsection (i)(6) below.

(4) If during the groundwater elevation study, soil mottling is apparent within the intended confines of the impoundment or within 20 inches of its base, or if the seasonal

high water table will be adjusted using engineering controls in order to accommodate the impoundment, the requirements of 289.121-123 (relating to description of geology, soils and hydrology; general requirements; geology and groundwater description; and groundwater quality description)
shall be followed and the groundwater monitoring period must be extended to four quarterly tests.

CONSOL Comment: Soil mottling does not provide conclusive evidence of the seasonal high water table. In fact, 289.432(a)(1), of the solid waste regulations, states "Soil mottling may indicate the presence of a seasonal high water table." Therefore, it is recommended that this section be revised to allow groundwater elevation data in place of soil mottling, as an option, to delineate the seasonal high water table.

Regarding the period over which groundwater elevation data is needed prior to its manipulation, "four quarterly tests" is not required by the solid waste regulations for permanent waste disposal facilities, and is excessive for the temporary storage of flowback and production water. Based on empirical evidence, the seasonal high groundwater condition occurs within the first five months of the year. Consequently, it should be sufficient to proceed with manipulation if groundwater data has been collected during that period. Or, at the very least, data from that period should be sufficient to proceed with the permitting process (including permit issuance).

(5) Only passive drainage systems that lower the seasonal high water table and do not alter the supply of receiving water bodies or downgradient groundwater users may be utilized to adjust the seasonal high groundwater table.

(g) An operator that operates a centralized impoundment shall install, operate and maintain a water quality monitoring system that can detect the entry of regulated substances into the groundwater or surface water. The water quality monitoring system shall accurately characterize groundwater flow, groundwater chemistry and flow systems on the site and adjacent area. The system shall include the following:

CONSOL Comment: The requirements in Subsection 78.59c(g) below would prevent the use of Best Available Technology. Due to the size of centralized impoundments (approximately 4 acres or less), a drainage layer beneath the impoundment with discrete monitoring points would provide complete coverage, provide leak information in the shortest possible time, and could be used as a control. The proposed subsection is too definitive for regulation and lacks necessary flexibility. At the very least, the language should be revised to allow alternatives.

The design and operating methods for monitoring wells are still developing to this day. Considering the inflexible, static nature of regulations, it does not make sense to include such detailed specifications. It is strongly recommended if the specifications for the design, construction, and operation of groundwater monitoring wells are included in regulation, that flexibility be included in every such provision.

In addition, the use of the term "regulated substance" in this subsection creates a confusing and perhaps impossible standard to meet. A centralized impoundment may have a system that detects leaks, but it is not clear what monitoring system could detect "the entry of regulated

substances into the groundwater or surface water" if those substances are not from the impoundment itself, and it is equally unclear why an operator would be obligated to detect the entry of all such substances.

(1) A minimum of one monitoring well at a point hydraulically upgradient from the impoundment area in the direction of increasing static head that is capable of providing representative data of groundwater not affected by the impoundment, except when the impoundment occupies the most upgradient position in the flow system. In that case, sufficient down gradient monitoring wells shall be placed to determine the extent of adverse effects on groundwater from the impoundment in the event of a liner system failure.

(2) A minimum of three monitoring wells at points hydraulically downgradient in the direction of decreasing static head from the area around a centralized impoundment. In addition to the downgradient wells, the Department may allow one or more springs for monitoring points if the springs are hydraulically downgradient from the impoundment, if the springs are developed and protected in a manner approved by the Department and if the springs otherwise meet the requirements of this subchapter.

(h) The upgradient and downgradient monitoring wells shall be:

(1) Sufficient in number, location and depth to accurately characterize water quality.

(2) Located so that they do not interfere with routine operations.

(3) Located within 200 feet of the permitted centralized impoundment and at least 100 feet closer to the centralized impoundment than the nearest private drinking water well, except as necessary to comply with paragraph (4).

(4) Upgradient monitoring wells shall be located so that they will not be affected by adverse effects on groundwater from the impoundment.

(5) Downgradient monitoring wells shall be located so that they will provide early detection of adverse effects on groundwater from the impoundment.

(6) The well equipment and materials shall be decontaminated prior to installation.

(i) Monitoring wells and casing of monitoring wells shall be constructed as follows:

(1) The casing shall maintain the integrity of the monitoring well borehole and shall be constructed of material that will not react with the groundwater being monitored.

(2) The minimum casing diameter shall be 4 inches unless otherwise approved by the Department in writing.

CONSOL Comment: A 2-inch diameter pipe can and is often used for groundwater monitoring wells. It is our understanding that a 4-inch diameter pipe is being specified solely to allow the well to be used as an extraction well point, if needed, for a future remediation. Since it is unlikely that the monitoring wells themselves would be used for this purpose, the added cost to drill a larger bore and for increased materials to construct a well are not reasonable. In addition, standard groundwater monitoring procedures include well purging. Use of a 2-inch well increases the likelihood of being able to collect a sample from a well. CONSOL recommends that the minimum well diameter be changed to 2-inches.

(3) The well shall be constructed with a screen that meets the following requirements:

- (i) The screen shall be factory-made.**
- (ii) The screen may not react with the groundwater being monitored.**
- (iii) The screen shall maximize open area to minimize entrance velocities and allow rapid sample recovery.**
- (iv) The well shall be filter-packed with chemically inert clean quartz sand, silica or glass beads. The material shall be well rounded and dimensionally stable.**
- (v) The casing shall be clearly visible and protrude at least 1 foot above the ground, unless the Department has approved flush mount wells.**
- (vi) The annular space above the sampling depth shall be sealed to prevent contamination of samples and the groundwater.**
- (vii) The casing shall be designed and constructed in a manner that prevents cross contamination between surface water and groundwater.**
- (viii) Alternative casing designs for wells in stable formations may be approved by the Department.**

(4) Monitoring well casings shall be enclosed in a protective casing that shall:

- (i) Be of sufficient strength to protect the well from damage by heavy equipment and reasonably protected from the unauthorized acts of third parties.**
- (ii) Be installed for at least the upper 10 feet of the monitoring well, as measured from the well cap, with a maximum above grade surface of 3 feet, unless otherwise approved by the Department in writing.**

CONSOL Comment: Considering that conditions are often encountered where 10 feet of casing cannot be installed, this requirement should be removed. Guidance could be included in the Department's policy document for well construction.
Suggested deletion of subsection (4)(ii).

(iii) Be cemented and placed with a concrete collar at least 3 feet deep to hold it firmly in position.

(iv) Be numbered for identification with a label capable of withstanding field conditions and painted in a clearly visible color.

(v) Protrude above the monitoring well casing.

(vi) Have a lockable cap.

(vii) Be made of steel or another material of equivalent strength.

(5) Analyses of data collected shall be submitted to the Department within 60 calendar days of sampling or 15 calendar days after completion of analyses, whichever is sooner, unless the Department approves another time period.

(6) Water samples must be collected from monitoring wells on a minimum frequency of once per calendar quarter and at a minimum, analyzed for the following parameters:

(i) Total dissolved solids.

(ii) Total Chloride.

(iii) Total Sulfates.

(iv) pH.

(v) Specific conductance.

(vi) Total Iron, and

(vi) Other parameters specified by the Department.

(i) Plans, specifications and reports for site characterization and groundwater testing systems required by this section shall be prepared and sealed by a registered professional geologist.

CONSOL Comment: CONSOL suggests that an appropriately trained professional can prepare and certify plans, specifications and reports for site characterization and groundwater testing systems required by this section. Requiring preparation and certification (seal) from a registered professional geologist imposes an unnecessarily strict, and potentially expensive, requirement.

(k) The design engineer shall provide oversight for all aspects of impoundment construction to ensure that construction is completed in accordance with the design and quality assurance and quality control plan.

(l) Plans, specifications and reports for centralized impoundments required by this section shall reasonably ensure mechanical integrity of the structure and function, shall be prepared by a registered professional engineer and shall be affixed with the engineer's seal and a certification which shall read as follows:

I (name) do hereby state to the best of my knowledge, information and belief that the information contained in the plans specifications and reports have been prepared in accordance with accepted environmental practices and the design and construction standards for centralized impoundment dams and Chapters 105 and 78 of the Rules and Regulations of the Department of Environmental Protection and is true and correct.

(m) Upon completion of construction of the impoundment, a facility completion and final certification report must be submitted to the Department. The report must be completed and sealed by the licensed Pennsylvania professional engineer who provided oversight for construction and must contain the following items at a minimum:

- (1) A statement that the engineer provided oversight for all aspects of construction.
- (2) Soils classification testing results for the embankments.
- (3) Soil compaction testing results for the sub-base, and for the clay portion of the secondary liner if a natural or remolded clay liner is used.
- (4) As-built drawings noting any deviation from the original plans approved by the Department.
- (5) Quarry tickets for drain material.
- (6) Quality assurance and quality control test results.
- (7) Color photographs of the following at a minimum:
 - (i) The cleared and grubbed foundation.
 - (ii) Leak detection system installation.
 - (iii) Placement and compaction of fill.
 - (iv) The completed embankments.
 - (v) The completed sub-base.

(vi) The completed secondary liner

(8) The impoundment shall not be used until the facility completion and final certification report is received and approved by the Department. The Department shall make a determination on the facility completion and final notification report within 30 business days.

(n) Centralized impoundments shall be restored according to the following requirements:

(1) Within 9 months of completion of drilling the last well serviced by the impoundment, or the expiration of the last well permit that the impoundment was intended to service. The impoundment shall be restored by removing any impermeable membrane, concrete and earthen liner so that water movement to subsoils is achieved. A 2 year restoration extension may be requested pursuant to section 3216 (g) of the act.

(2) The site shall be restored to approximate original conditions including preconstruction contours.

CONSOL Comment: There is no obligation under Act 13 or elsewhere to return impoundments to approximate original conditions or to preconstruction contours. Such sites should be restored in accordance with approved site restoration plans.

(3) The site shall support the land uses that existed prior to oil and gas activities to the extent practicable.

(4) Excavated impoundments shall be backfilled above finished grade to allow for settlement and so the impoundment will no longer impound water.

CONSOL Comment: Clarification is required for the phrase "above finished grade." The interpretation that could be made is that restoration fill must be placed to an elevation higher than the predevelopment contour. Replacement of fill may result in a soil density higher than the soil density prior to site development. Consequently, the soil could be packed into a smaller volume and never reach "finished grade."

Suggested amendatory language:

(4) During impoundment reclamation, backfill shall be placed to promote positive post-settlement drainage.

(o) The owner or operator may request approval from the Department to deviate from the requirements in this section in the permit application. The request shall demonstrate that the alternate practice provides equivalent or superior protection to the requirements of this section.

§78.60 Discharge requirements

(7) The area of land application is not within 200 feet of a water supply or within 100 feet of a [stream] watercourse[,] or body of water [or a wetland] unless approved as part of a waiver granted by the Department under section [205(b)] 3215(b) of the act [(58 P. S. § 601.205(b))] (58 Pa.C.S. § 3215(b)).

CONSOL Comment: The Pennsylvania Supreme Court invalidated Section 3215(b) in Act 13 in *Robinson Twp. et al v. Commonwealth of Pennsylvania et al.*

CONSOL suggests removing “or within 100 feet of a [stream] watercourse[,] or body of water [or a wetland] unless approved as part of a waiver granted by the Department under section [205(b)] 3215(b) of the act [(58 P. S. § 601.205(b))] (58 Pa.C.S. § 3215(b)).”

§ 78.66. Reporting and remediating releases.

(a) Scope - This section applies to reporting and remediating spills or releases of regulated substances on or adjacent to well sites and access roads.

[(a) A](b) Reporting releases -

(1) An operator or responsible party shall report the following spills and releases of regulated substances to the Department in accordance with paragraph (2):

(i) A spill or release of a regulated substance causing or threatening pollution of the waters of this Commonwealth, [shall comply with the following reporting and corrective action requirements; of § 91.33 (relating to incidents causing or threatening pollution).]

(ii) A spill or release of 5 gallons or more of a regulated substance over a 24-hour period that is not completely contained by a containment system.

(2) In addition to the notification requirements of 25 Pa. Code § 91.33, the operator or responsible party shall contact the appropriate regional Department office by telephone or call the Department's statewide toll free number 1-800-541-2050 as soon as practicable, but no later than 2 hours after discovering the spill or release. To the extent known, the following information shall be provided:

(i) The name of the person reporting the incident and telephone number where that person can be reached.

(ii) The name, address and telephone number of the responsible party.

(iii) The date and time of the incident or when it was discovered.

(iv) The location of the incident, including directions to the site, GPS coordinates or the 911 address, if available.

(v) A brief description of the nature of the incident and its cause, what potential impacts to public health and safety or the environment may exist, including any available information concerning the contamination of surface water, groundwater or soil.

(vi) The estimated weight or volume of each regulated substance spilled or released.

(vii) The nature of any injuries.

(viii) Remedial actions planned, initiated or completed.

CONSOL Comment: The proposed reporting obligation requires a description of "contamination" and an estimated weight or volume of "each regulated substance" spilled or released, which create an ambiguous and often impractical requirement to estimate impacts and constituents of spilled substances.

(3) Upon the occurrence of any spill or release, the operator or responsible party shall take necessary corrective actions to:

(i) Prevent the regulated substance from reaching the waters of the Commonwealth.

(ii) Prevent damage to property.

(iii) Prevent impacts to downstream users of waters of the Commonwealth.

(4) The Department may immediately approve temporary emergency storage or transportation methods necessary to prevent or mitigate harm to the public health, safety or the environment. Storage may be at the site of the incident or at a site approved by the Department.

CONSOL Comment: This section appears to be designed to facilitate emergency response measures by vesting PADEP with certain discretionary powers to approve temporary emergency storage or transportation methods. It is unclear why treatment is not included in this list given that emergency treatment activities may be part of a response action. While CONSOL supports the need for regulatory flexibility to facilitate emergency response actions, the provision does not go far enough. Specifically, the regulations should be clear that permits and other forms of formal authorization are not to be required where to do so would delay timely implementation of response actions. In that regard, Pennsylvania's regulations contain similar provisions to facilitate emergency response actions under other regulatory programs. See, e.g., 25 Pa. Code § 287.101(d).

Suggested amendatory language:

(4) The Department shall not require a permit or other formal authorization for temporary remediation methods necessary to prevent or mitigate harm to the public health, safety or the environment. Treatment and storage may be at the site of the incident or at an alternative appropriate site. The operator or responsible party shall promptly notify the Department if treatment or storage will take place at a location that is not the site of the incident.

(5) After responding to a spill or release, the operator shall decontaminate equipment used to handle the regulated substance, including storage containers, processing equipment, trucks and loaders, before returning the equipment to service.

Contaminated wash water, waste solutions and residues generated from washing or decontaminating equipment shall be managed as residual waste.

CONSOL Comment: This section is designed to address steps to decontaminate equipment used in responding to a spill or release. Section 77.66(b)(5) requires that all equipment, including storage containers, processing equipment, trucks and loaders, be decontaminated in all instances following a response to a spill or release. Decontamination of equipment may not be necessary if the equipment is going to be used for the same purpose where cross-contamination would not be an issue or pose a threat. This regulation as written is overly onerous. For example, if spilled diesel fuel is recovered and placed in a tank that is dedicated to holding diesel fuel, there would be little reason to empty and decontaminate the tank before putting more diesel fuel in the tank. To address this issue, CONSOL recommends revising Section 78.66(b)(5) as set forth below. In addition, the second sentence of Section 78.66(b)(5) describing how contaminated wash water, waste solutions and residues are to be managed is unnecessary.

Suggested amendatory language:

(5) After responding to a spill or release, the operator shall decontaminate equipment, including storage containers, processing equipment, trucks and loaders, where necessary and appropriate, before returning the equipment to service.

(c) Remediating releases - Remediation of an area affected by a spill or release is required. The operator or responsible party must remediate a release in accordance with one of the following:

(1) Spills or releases to the ground of less than 42 gallons at a well site that do not impact or threaten to pollute of waters of the Commonwealth may be remediated by removing the soil visibly impacted by the release and properly managing the impacted soil in accordance with the Department's waste management regulations. The operator or responsible party shall notify the Department of its intent to remediate a spill or release in accordance with this paragraph at the time the report of the spill or release is made. Completion of the cleanup should be documented through the process outlined in 25 Pa. Code § 250.707(b)(1)(ii)(B) (relating to statistical tests).

CONSOL Comment: With respect to the requirements for remediating small releases, Section 78.66(c) (1) provides that the operator or responsible party must notify PADEP of its intent to invoke the provisions of Section 78.66(c) (1) at the time the spill or release is reported. It is unclear whether an operator or responsible party may make such a determination later after it has

gathered additional information or the decision about a remediation approach must be made at the time of the initial notice (which is to be within two hours of discovering the release). CONSOL requests that Section 78.66(c) (1) be clarified to allow an operator or responsible party to select the approach under that provision at a time after the initial notice is made, provided that the predicates for using the approach are met (e.g., the spill or release is less than 42 gallons). In addition, it is unclear what is intended by the last sentence of Section 78.66(c) (1) which cross references sampling protocols for petroleum release sites that are attaining the statewide health standard under Act 2 and a full site characterization has not been performed. The thrust of Section 78.66(c) (1) is to allow physical removal of soils impacted by small releases at a well site that do not impact or threaten to pollute waters of the Commonwealth. The last sentence of Section 78.66(c) (1) appears to engraft upon those requirements the entire attainment process for the statewide health standard under Act 2. CONSOL requests that that sentence be removed

Suggested amendatory language:

(1) Spills or releases to the ground of less than 42 gallons at a well site that do not impact or threaten to pollute waters of the Commonwealth may be remediated by removing the soil visibly impacted by the release and properly managing the impacted soil in accordance with the Department's waste management regulations. The operator or responsible party shall notify the Department of its intent to remediate a spill or release in accordance with this paragraph at the time a report of the spill or release is made or thereafter when such a determination is made.

(2) For spills or releases to the ground of more than 42 gallons or that impact or threaten pollution of waters of the Commonwealth, the operator or responsible person may satisfy the requirements of this subsection by demonstrating attainment of one or more of the standards established by Act 2 and 25 Pa. Code Chapter 250 (relating to administration of land recycling program).

CONSOL Comment: Neither Act 2 nor 25 Pa. Code Chapter 250 includes a statewide health standard for chlorides in soil. While brine releases or spills from oil and gas activities occur infrequently, when they do occur there are significant unnecessary complications and costs related to the remediation of these releases or spills that result from the lack of a chloride standard, therefore our interpretation of this language would allow the Operator to utilize the background methodology referenced in Chapter 250. While this flexibility exists, CONSOL disagrees with the Departments requirement for oil and gas industry to clean-up to a standard otherwise intended as a voluntary program to release the landowner from liability. Oftentimes, the Operator is not the landowner and therefore would not benefit from the expense of an Act 2 site investigation and eventual release.

(3) For releases of more than 42 gallons or that impact or threaten pollution waters of the Commonwealth, as an alternative to (2), the responsible party may remediate a spill or release using the Act 2 background or Statewide health standard in the following manner:

(i) Within 15 business days of the spill or release, the operator or responsible party shall provide an initial written report that includes, to the extent that the information is available, the following:

- (A) The regulated substance involved.**
- (B) The location where the spill or release occurred.**
- (C) The environmental media affected.**
- (D) Impacts to water supplies, buildings or utilities, and**
- (E) Interim remedial actions planned, initiated or completed.**

(ii) The initial report shall also include a summary of the actions the operator or responsible party intends to take at the site to address the spill or release such as a schedule for site characterization, to the extent known, and the anticipated timeframes within which it expects to take those actions. After the initial report, any new impacts identified or discovered during interim remedial actions or site characterization shall also be reported in writing to the Department within 15 calendar days of their discovery.

(iii) Within 180 calendar days of the spill or release, the operator or responsible party must perform a site characterization to determine the extent and magnitude of the contamination and submit a site characterization report to the appropriate Department Regional Office describing the findings. The report shall include a description of any interim remedial actions taken. For a background standard remediation, the site characterization shall contain information required by 25 Pa.Code § 250.204(b)-(e) (relating to final report). For a Statewide health standard remediation, the site characterization shall contain information required by 25 Pa.Code § 250.312(a) (relating to final report).

(iv) This report may be a final remedial action report if the interim remedial actions meets all of the requirements of an Act 2 background or Statewide health standard remediation or combination thereof. Remediation conducted under this section shall not be required to meet the notice and review provisions of these standards except as described in this section.

(v) If the site characterization indicates that the interim remedial actions taken did not adequately remediate the release the operator or responsible party must develop and submit a remedial action plan to the appropriate Regional Office of the Department for approval. The plan is due within 45 calendar days of submission of the site characterization to the Department. Remedial action plans should contain the elements outlined in 25 Pa.Code § 245.311(a) (relating to remedial action plan).

(vi) Once the remedial action plan is implemented, the responsible party must submit a final report to the appropriate Department Regional Office for approval. The Department will review the final report to ensure that the remediation has met all the requirements of the background or Statewide health standard or combination thereof, except the notice and review provisions. Relief from liability will not be available to the responsible party, property owner or person participating in the cleanup.

(vii) An operator or responsible party remediating a release pursuant to this paragraph may elect to utilize Act 2 at any time.

CONSOL Comment: The Alternate Remediation process proposed by the Department was intended to establish a simplified, expedited procedure for properly responding to a spill where Act 2 liability protection was not desired. Instead the Department has fashioned a process that is more onerous than the full Act 2 process because of the restrictive timetables that apply.

§78.69. Water management plans.

(a) WMPs for unconventional well operators. An unconventional well operator shall obtain a Department approved WMP pursuant to section 3211 (m) of the act (58 Pa. C.S. § 3211(m)) prior to withdrawal or use of water sources for drilling or completing an unconventional well.

(b) Implementation. The requirements imposed by the Susquehanna River Basin Commission pertaining to:

(1) posting of signs at water withdrawal locations,

(2) monitoring of water withdrawals or purchases,

(3) reporting of withdrawal volumes, in-stream flow measurements and water source purchases and,

(4) record keeping shall be implemented in the Ohio River Basin. Reports required in all river basins of the Commonwealth shall be submitted electronically to the Department.

(c) Reuse plan. An unconventional well operator submitting a WMP application shall develop a reuse plan for fluids that will be used to hydraulically fracture wells. A wastewater source reduction strategy in compliance with 25 Pa. Code Chapter 95.10(b) will satisfy the reuse plan requirement. An unconventional well operator shall make the reuse plan available for review by the Department upon request.

(d) When applicable, the requirements of this section are presumed to be achieved for those portions of a WMP for which there is an approval from the Susquehanna River Basin Commission, the Delaware River Basin Commission or the Great Lakes Commission. Nothing in this subparagraph shall effect the requirement in (a) for a WMP approved by the Department.

(e) Expiration. Individual water sources within a WMP are valid for 5 years.

(f) Renewal. A WMP renewal application shall be submitted at least 6 months prior to the expiration of the 5 year term for withdrawal or use of a water source under a WMP.

CONSOL Comment: An administrative extension should be granted in cases where the Department does not review the renewal application in a timely manner. If the WMP renewal application is not reviewed within six months the operator shall continue to work under the current WMP until the Department reviews the renewal application. Additional language noting that a water management plan is not needed for water source locations outside of Pennsylvania should be added. This section should also be modified to make it clear that the entire section applies only to unconventional well operations.

§ 78.73. General provision for well construction and operation.

- (a) The operator shall construct and operate the well in accordance with this chapter and ensure that the integrity of the well is maintained and health, safety, environment and property are protected.
- (b) The operator shall prevent gas, oil, brine, completion and servicing fluids, and any other fluids or materials from below the casing seat from entering fresh groundwater, and shall otherwise prevent pollution or diminution of fresh groundwater.
- (c) Orphaned or abandoned wells identified pursuant to section 78.52a that likely penetrate a formation intended to be stimulated shall be visually monitored during stimulation activities. The operator shall immediately notify the Department of any change to the orphaned or abandoned well being monitored and take action to prevent pollution of waters of the Commonwealth or discharges to the surface.

CONSOL Comment: The DEP's database of wells may not be accurate as a result of using older resources to identify their coordinates, making it difficult to verify the wells that may need monitored during stimulation activities. Some wells may be challenging to locate due to inaccurate coordinates and may not even exist. Furthermore, this statement does not take into account surface owner permissions and access rights. An operator may not have been granted access to a well site requiring visual monitoring. If an operator is denied access to a property, the regulation needs to clearly define the operator's alternative obligation.

More guidance needs to be provided regarding the visual monitoring of orphaned and abandoned wells. The regulation does not clearly define the specifics of the visual monitoring or the notification procedure in the event of a change to an orphaned or abandoned well. A maximum needs to be established as to how many wells can be visually monitored at once, and potentially plugged. The regulation is ambiguous and does not provide a clear direction for the industry.

Additional General Comments:

CONSOL Suggests that the Department have all proposed forms, database reporting requirements, e-permitting considerations (Greenport) finalized prior to effective date of the regulations. Incomplete forms, and inflexible/unavailable on-line reporting and permitting functionality add levels of complexity and confusion when Operators are trying to comply with new regulations and requirements.