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May 19, 2015

Department of Environmental Protection
Policy Office
400 Market Street
P.O. Box 2063
Harrisburg, PA 17105-2063

Sent via email: RegComments@pa.gov

Re: Comments on Advance Notice of Final Rulemaking to 25 Pa. Code Chapters 78 & 78a,
Environmental Protection Performance Standards at Oil and Gas Well Sites [45 Pa.B. 1615]

To Whom It May Concern:

Range Resources - Appalachia, LLC ("Range Resources" or "Range") submits these comments on the proposed amendments to 25 Pa. Code Chapters 78 and 78a pursuant to an opportunity to comment offered in the Advanced Notice of Final Rulemaking (ANFR) published in the *Pennsylvania Bulletin* on April 4, 2015. These comments address the Draft Final Regulation as they appear on the Department's web site and as referenced in the ANFR noticed in the *Pennsylvania Bulletin* on April 4, 2015.

Range Resources is a leading independent operator with a leasehold position of over one million acres across western and north central Pennsylvania. Range is one of the top five producers of natural gas by volume in Pennsylvania and is the leading producer of natural gas liquids in the state. Range has drilled several hundred unconventional wells since drilling the first commercially viable Marcellus well in 2005. We also operate several thousand conventional wells in northwestern Pennsylvania.

Range Resources is a member of both the Marcellus Shale Coalition (MSC) and the Pennsylvania Independent Oil & Gas Association (PIOGA). We endorse and incorporate by reference the extensive comments submitted by both organizations. Rather than repeat those detailed comments, Range's comments herein will be limited to key provisions in Chapter 78a to which we wish to draw additional attention. Failure to comment on any section of either Chapter 78 or 78a of the Draft Final Regulation in this document should not be construed as agreement with the proposed language. We also incorporate and restate our comments submitted on March 13, 2014 in response to the Proposed Regulations. We request that the Department's comment response document required by the Regulatory Review Act (RRA) (71 P.S. §745.1 et seq.) address all of these comments.

Section 3202 of the 2012 Oil and Gas Act (58 Pa.C.S. §3202) declares the Legislative purpose of the Act to be to "Permit the optimal development of oil and gas resources...consistent with protections of health, safety, environment and property...". The Draft Final Regulations fail to further that legislative

purpose. When viewed in totality the Draft Final Regulations cannot be seen as anything other than an attempt to stifle the natural gas industry in Pennsylvania. The RRA requires an agency to consider the “least burdensome acceptable alternative” (71 P.S. §745.5(a)(12)). Given the wide-ranging rewrites to numerous provisions in the Draft Final Regulations, adding new requirements, and the multitude of new provisions, such an evaluation should have been included in the ANFR. Frankly, we doubt the statement required by the RRA could be made. The Draft Final Regulations are deficient in that: 1) many of the requirements are so ambiguous and subjective as to make it impossible to determine how to achieve compliance and leave judgment regarding compliance to the opinions of individual agency staff; 2) several sections impose standards and obligations more onerous than imposed on other industries for similar activities without any basis, ignoring already existing regulatory programs; 3) some provisions impose requirements that interfere with efficient operations without creating any substantive environmental benefit or, in some cases, without any nexus at all to the environment; and 4) several provisions plainly exceed the Department’s legal authority as determined by the Legislature and/or the courts, including a wholesale disregard for the Regulatory Review Act.

1. The ANFR:

An ANFR is not and cannot be a substitute for compliance with the RRA for new provisions added or radical changes made to the proposed regulations. Examples in the ANFR include a new definition of “other critical communities”; new standards for centralized storage tanks; new site remediation procedures; a prohibition on the use of centralized wastewater impoundments and pits; noise mitigation requirements and others discussed in greater detail below. In the ANFR, the Department itself notes that many of these provisions are new and/or significant changes on which it solicits comments. However, the call for comments cannot substitute for compliance with the RRA. As the Department is aware, agencies are generally prohibited from introducing new matters into a final rulemaking. Use of the ANFR process to evade these prohibitions and allowing an abbreviated opportunity for the public to comment without the benefit of the accompanying data and information the Department is required to generate, is not consistent with the letter or spirit of the RRA or the Commonwealth Documents Law and also allows these new provisions to evade review and comment by the legislative oversight committees and the IRRC.

It is obvious that the ANFR process fails to provide an updated and accurate cost of compliance; fails to include a statement of need to the new and radically rewritten provisions; fails to provide information on the multitude of forms that must be utilized; and fails to consider the least burdensome alternative approach, rather seeking out the most burdensome. The Draft Final Regulations make such fundamental changes from the Proposed Regulations that they should not become final form regulations without full compliance with the RRA. At a minimum, the Department should not proceed to finalize the new Sections 78a.15(1)(f)(vii) and (viii) (new public resources), 78a.41 (Noise), 78a.57a (Centralized Tank Storage); the new definitions of “Other Critical Communities” and “Public Resource Agency”; and the

totally rewritten Sections 78a.59c (Centralized Impoundments), 78a.65 (Site Restoration) and 78a.69 (Water Management Plans) but should withdraw those provisions and proceed with a separate proposed rulemaking in order to fully and properly comply with the RRA.

The Department should not rush forward with problematic regulations. No void in environmental protections will be created if the Department elects to start over with these regulations. The enhanced environmental protections in Act 13 are largely self-implementing and do not need to be repeated in regulations and existing regulations covering such area as residual waste, tanks and spill remediation already effectively regulate these areas. Rather than make radical changes and additions at the end of the process, the Department should engage in the consultation that was strongly recommended by IRRC in its April 14, 2014 letter (page 4).

2. Landowner Rights and Contractual Obligations:

Chapter 78a fails to consider the ongoing relationship between the operator and landowner and the contractual agreements to perform or not perform certain activities on a landowner's property. The relationships between operators and private landowners are governed by the terms of lease, easement, and right-of-way agreements that are negotiated between the private parties. Some of the proposed requirements do not appear to accommodate such contractual constraints. For example, without the right to enter a landowner's property, an operator cannot carry out the requirements to visually monitor an abandoned or orphaned well as required by the proposed §78a.73(c). Similarly, a landowner may not want an operator to restore his or her land to approximate original conditions or apply 70% perennial vegetative cover when final restoration is occurring after decades of production and the private landowner's needs may change - often there will be a different landowner entirely. However, the proposed §78a.65 does not appear to provide a flexible path forward for the landowner on how he or she wishes to use the private property. Additionally, §78a.65(b)(5) requires site restoration to meet "meadow in good condition". Restoration to "meadow in good condition" will often be a better condition than what was on the site prior to pad construction and may not be possible. In addition, once a site is permanently restored, the landowner may wish to utilize the property in various ways, none of which equal "meadow in good condition". This section should be deleted.

3. Species and Public Resources:

The Department's approach to regulating the potential impact on public resources and protected species creates confusion and uncertainty and exceeds its legal authority. In maintaining the language from Section 205(c) of the Oil and Gas Act of 1984 ("Act 223") in Act 13, which expressly included the term "other critical communities," it does not seem likely or consistent that the Pennsylvania Legislature intended for this language to be expanded to include ALL "plant and animal species that are not listed as threatened or endangered." Range Resources is concerned that this language in the proposed definition of "Other Critical Communities" (§78a.1) does not lead to an objective definition from which to

garner a meaning for the limitations of this definition and, therefore, does not allow for the added definition to be used as an effective compliance tool. The regulated community and the DEP permit reviewers are left with substantial questions as to how to manage this term as it relates to permit conditions. The definition should be reworked to limit its scope to a list of species that is readily known, available to the industry and prepared through a rulemaking process; or it should be eliminated.

More fundamentally, the Department's authority to regulate the potential impact on public resources derives from Section 3215(c) of Act 13. In fact, the term "other critical communities" is used in that subsection and nowhere else in Act 13. However, in the Robinson Township decision (*Robinson Twp. et al v. Commonwealth*, 83 A.3d 901 (PA 2013)) the Supreme Court enjoined the application of Section 3215(c). Accordingly, the Department lacks the authority to regulate with regard to "other critical communities" specifically, and lacks the legal authority to implement Section 3215(c) in its entirety. Section 78a.15(f) should be stricken.

While Range recognizes its obligation to protect threatened or endangered species, the Department's approach creates great uncertainty and exceeds its legal authority. The definition of **Threatened or Endangered Species** seeks to include species proposed for listing under the Endangered Species Act. These species should not be included in this definition. Species can be listed as proposed for a period of years and then a decision could be made not to list them at all. Proposed species have no legal protection under the ESA or the relevant Pennsylvania statutes. The legislature has not granted any authority to DEP to designate T&E species. Rather that authority is granted to DCNR, the Fish and Boat Commission and the Game Commission. None of those Pennsylvania enabling statutes, nor the federal act, provides authority to regulate species that are merely proposed for listing. The last sentence of the definition which refers to proposed species should be eliminated.

In §78a.15(d), the Department proposes that operators consult PNDI regarding the presence of a federal or state threatened or endangered species where a well site or access road is proposed. It then states that the operator must "make a demonstration as to how an impact will be avoided or minimized and mitigated . . . to the satisfaction of the applicable Public Resource Agency." This language fails to establish any cogent regulatory standard, apparently leaving the decision to the whim of another agency. Range Resources, therefore, proposes that the DEP expressly limit this determination to be made by one agency, the DEP, and define clearly what type of impacts trigger this requirement and what would constitute a sufficient demonstration of avoidance, minimization, or mitigation. Such clarification will help to assure uniform consultation between the DEP and operators throughout the various DEP Regions.

4. Noise Mitigation:

This brand new section represents a prime example of the deficiencies of the ANFR. DEP is proposing an entirely new requirement as a final regulation without complying with the RRA. None of the

requirements of the RRA, such as statement of need or estimate of cost have been followed. Nor has the IRRC or standing committees had an opportunity to review and comment on this provision. This section should be withdrawn from the Draft Final Regulation.

As currently written, the proposed §78a.41 states that operators must implement a “site specific noise mitigation plan to minimize noise during drilling . . .” It further provides the DEP discretion to suspend operations should the DEP determine that the plan is inadequate to minimize noise. The phrase “minimize noise” is narrative and does not act as an effective compliance tool. Noise mitigation, by definition, is the action of reducing the intensity of noise. In order for a mitigation plan to be effective in minimizing noise, there must be a mitigation objective (i.e., an established limit on intensity permitted). The current version of §78a.41 should be eliminated.

Range Resources recommends that the DEP work with industry to establish a uniform limitation and that the mitigation plan only be necessary if sounds in excess of the established limit are present. Results from a sound impact assessment should be used preliminarily to determine whether the proposed operations will exceed the established sound limit. A plan to mitigate sounds which exceed the established limit should be prepared and implemented. Range Resources welcomes the opportunity to work with the DEP to perform the necessary further analysis on this issue. As an example of a more appropriate approach, we have included more extensive comments and suggestions in the **Addendum** attached to this letter.

Finally, the Department needs to be clear how any standard it develops will interrelate with municipal noise ordinances. If DEP is not prepared to occupy the field and preempt local noise ordinances relating to noise at oil and gas operations, then it should not proceed with any noise standard and should leave that matter to municipal ordinances. Unlike DEP’s approach, municipal noise ordinances are of general applicability and do not single out only oil and gas operations. New noise standards applicable only to oil and gas operations should not be added on top of those municipal requirements.

5. Water Supplies:

The proposed change in §78a.51(d)(2) again sets a standard that may be impossible to achieve. Section 3218(a) of Act 13 provides that: “The department shall ensure that the quality of a restored or replaced water supply meets the standards established under the Act of May 1, 1984 (P.L.206, No.43), known as the Pennsylvania Safe Drinking Water Act (PSDWA), or is comparable to the quality of the water supply before it was affected by the operator if that water supply exceeded those standards.” It is unclear how the term “exceeded” is to be applied in this context. The long-standing policy of the Department has been to require that a replacement water supply meet only those PSDWA quality standards that the water supply met prior to being impacted. This policy is only logical, as in many areas of the Commonwealth naturally occurring groundwater simply does not meet all secondary MCLs. Since the Department has no standard for determining impact from drilling operations, this interpretation

could lead to using a line by line comparison on pre-drill and post-drill water supply samples to determine if there has been an impact. This would be disastrous, as there is no possible way, given seasonal and day-to-day variation in natural groundwater quality, that analyses of two separate samples will yield the identical results, even when no contamination has occurred. 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. Accordingly, the industry will be required to meet a degree of water quality that may not have truly existed prior to drilling. 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.

We suggest this section should read: “(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 these standards.” This language is more consistent with the legislative language which requires replacement water to be “comparable to the quality” not to “meet” the prior quality. The Department’s language improperly changes the statutory language.

Section **78a.52** has been changed to require submission of pre-drilling water well sample results within ten days of assignment of an API number to the well. There seems to be no logical reason for this change. The API number is assigned by the Department during the permit application process, prior to permit issuance. We understand that this typically occurs within 10 days of application submittal, and more than 30 days prior to permit issuance, but at a specific time we are unaware of. We do not understand how we could conceivably meet this requirement. In addition, this would frequently be well in advance of drilling and even well site construction. The purpose of a pre-drill survey is to determine baseline water quality in advance of drilling, preferably as close to the commencement of drilling as practical. Frequently pre-drill surveys are not completed prior to permit issuance. There seems to be no purpose served by the proposed change. Reference to assignment of the API number should be deleted from this section to allow for a timely pre-drill survey.

6. Mine Influenced Water:

The proposed definition appears to include all waters impaired by mine drainage. Given this breadth, the definition would include seemingly all surface waters throughout the Commonwealth, including sections of 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 seems overly broad, does not provide any guidance and lends itself to arbitrary application. Storage and use of such a broad universe of waters should not be subject to the special approval requirements of **§78a.59b(h)** for storing such water in a freshwater impoundment or of **§78a.58(a)** for mixing such water with other fluids on the well site. To allow for the beneficial reuse of waters previously impacted by acid mine

drainage, Range Resources recommends narrowing the definition to state: "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."

7. Area of Review for Other Wells:

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 as provided for in §78a.52. A vertical isolation distance of 1,500 feet above wellbore perforations in an unconventional well and 500 feet above wellbore perforations in any other well is a reasonable isolation distance that exceeds the normally expected vertical growth of induced fractures. Operators, including Range Resources, do their best to obtain all information regarding potential orphaned and abandoned wells in the vicinity of a planned unconventional well. However, a requirement to review "HISTORICAL SOURCES OF INFORMATION, SUCH AS applicable farm line maps, where accessible" in order to identify wells lacks 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. Rather than promulgating a rule that utilizes such a broad scope of review, Range Resources asks that the DEP make all available data easily accessible to the industry from one comprehensive source or that the DEP create a specific list of sources to be consulted to establish the standard required for identifying abandoned and orphaned wells.

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. Range Resources encourages prompt digitization and accessibility of identification resources prior to the implementation of Chapter 78a. If a comprehensive source cannot be established by the DEP, Range Resources asks that the DEP consider removing terms such as "other available well databases" and "historical sources of information such as . . ." Both of these phrases are arbitrary depending on the well or operator at issue; thus, making the successful development and implementation of this project difficult. Identifying abandoned and orphaned wells before hydraulic fracturing is good standard practice; however, the rule as currently proposed does not provide operators with enough clarity and flexibility to properly identify and plan operations where such abandoned and orphaned wells may be present.

Section 78a.73(c), requires monitoring of identified wells, which is something that operators already do. However, as drafted it presents several difficulties. First, it does not address possible issues of operator inaccessibility to the abandoned and orphaned wells. Proposed subsections (c) and (d) require operators to physically inspect orphaned and abandoned wells identified under proposed §78a.52a during hydraulic fracturing activities that likely penetrate a formation intended to be stimulated during

hydraulic fracturing. However, access may be denied to the property on which abandoned and orphaned wells are located making it impossible for operators to comply with the provision. Range Resources asks the DEP to rewrite this section to address an alternative for operators when surface access is not achievable.

Further, §78a.73(c) proposes to require operators to notify the Department of “any changes” to those wells, to “take action to prevent pollution of waters of the Commonwealth or discharges to the surface,” and to “visually monitor” orphaned and abandoned wells during stimulation activities. These phrases are ambiguous. Without specification as to what constitutes a “change” and appropriate “action” to “prevent,” and to “visually monitor” in terms of scope and timing, Range Resources is concerned that the proposal will likely result in the unintended consequence of further causing unreasonable burdens and distracting from the shared objective of the DEP and the regulated community of mitigating impacts from the existing landscape of oil and gas wells in Pennsylvania.

Lastly, §78a.73(c) proposes to require operators to presume that all wells with an unknown true vertical depth within a given area of review be presumed to penetrate within 1,500 feet of the formation intended to be stimulated. Range Resources requests that the presumption language be removed from this section, and it be rewritten to state: “Orphaned and abandoned wells identified as part of an area of review survey conducted under §78a.52a (relating to area of review) that likely penetrate within 1,500 feet measured vertically of a formation intended to be stimulated . . .”

Range Resources requests this amendment because there are numerous published reports and other private records of such early drilling that describe technologies employed and depths drilled of wells in the commercially developed fields over time. Many of these reports were compiled by the PA Geological Survey and US Geological Survey that worked with the oil and gas operators at various points in time. These reports confirm that early exploration and field development was conducted at depths generally less than 3,000 feet, with very few exceptions. The first significant “deep” drilling in Pennsylvania occurred between 1930 and 1950, targeting the Oriskany sandstone, located just beneath the Marcellus Shale. For example, there are numerous detailed reports that document this early deep drilling in Tioga, Potter, and surrounding counties. The PA Geologic Survey, the agency that compiled many of these deep drilling reports, constructed a database of deep well records that is quite complete. That information could be relied upon and given sufficient weight in determining that the prior well was not likely to penetrate within 1500 feet of the target formation.

8. Centralized Tank Storage:

The entire §78a.57a is duplicative of 25 Pa. Code §299.122 and WMGR123 which fall under the Residual Waste Management Regulations and the Authority of the Department’s Bureau of Waste Management. All of the criteria following in this section are unnecessary. Since a regulatory framework is already established this entire section should be stricken or should simply provide a cross-

reference to the residual waste regulation framework. New or additional requirements for tanks storing oil and gas wastewaters are not warranted.

9. Centralized Impoundments:

The majority of §78a.59c has been removed thereby disallowing centralized impoundments through the Oil & Gas and Dams & Waterways programs and requiring closure of existing impoundments. This severely impacts operators' abilities to reuse water, minimize disposal, minimize dependence on freshwater withdrawals, and minimize water truck traffic. Substantial increased costs will be incurred by operators for alternative storage systems. Additionally original capital and subsequent capital improvements by operators to these existing systems and systems in process are now wasted capital totaling millions of dollars.

The Department has not provided an adequate statement of need or estimate of cost to the regulated community pursuant to the requirements of Pennsylvania's Regulatory Review Act. The ANFR is not a substitute for an agency to fulfill any of the formal steps of the Regulatory Review Act or the accompanying requirements imposed on the promulgating agency. Accordingly the Department should not proceed to finalize this totally rewritten provision regarding centralized impoundments, but should withdraw §78a.59c and proceed with a separate proposed rulemaking in order to fully and properly comply with the RRA. At a minimum those impoundments that have recently been upgraded to engineering standards that meet or exceed those for residual waste storage impoundments or pending applications for new impoundments meeting those engineering standards should be allowed to proceed and continue in service for their useful life.

Large volume storage is needed to get close to 100% recycling of flowback and produced water. The volume of water we generate, the level of our activity, the general nature of our operations, logistics, and state regulations on handling reuse water are the key drivers for our ability to reuse 100% of our flowback and produced water.

Piping water to well locations is preferable from a traffic volume and safety perspective and typically more economical but can be limited by volume of reuse water storage. The availability of an adequately sized storage facility within the distance limitation of a pad being developed is critical in that it must provide adequate storage to be sufficiently front-loaded with water prior to the well completion. If the storage facility is not large enough, little or no advantage is gained as opposed to trucking reuse water directly to a location.

There is a misconception that above ground steel tanks offer better environmental protection than in-ground impoundments. While tank farms certainly can be constructed to operate safely, placing a large volume of reuse water above grade with hydrostatic heads up to 36" does warrant some attention. This provides potential energy from the hydrostatic head that, in the event of a piping leak or other equipment

failure could result in a catastrophic, large volume release to the environment. Further, steel tanks and piping are susceptible to corrosion and leakage over time, enhanced by salt in flowback and produced water. For properly constructed in-ground impoundments, there is no above-grade hydrostatic potential, therefore no risk of catastrophic leakage. Plastic liners in in-ground impoundments are not susceptible to corrosion. Leak potential from impoundments is limited to the types of very low volume leaks that various operators have experienced over the past several years which will be significantly reduced using current construction and operating methods.

Centralized tank facilities have a much larger footprint on the land than centralized impoundments. Based on 13.5 million gallons, the footprint of a tank farm made up of 1 million gallon tanks is 7 acres versus 4 acres for one centralized impoundment. In addition, a comparable capacity tank farm will cost nearly seven times as much to construct as a centralized impoundment. The 1 million gallon tanks likely to be used are approximately 36' high and 70' in diameter. Thirteen to fourteen tanks of this size would be much more visible than an earthen impoundment. The tanks would resemble a fuel tank farm or other similar industrial facility. Several of these highly visible tank farms would be required to replace the multiple impoundments currently used by Range.

There is no rational basis to essentially ban centralized impoundments, especially those holding pre-treated water. Anecdotal complaints and apocryphal reports do not support this action. The Department should revert to the prior version of this section or withdraw the section for further collaboration with stakeholders.

Section 78a.59c would also require that centralized impoundments be permitted as residual waste disposal impoundments. The definition of Residual Waste Disposal Impoundment in Chapter 287.1 is a facility for disposing of residual waste by impoundment. Material is not being disposed of by placing it into an impoundment nor is that the intent, so this is not applicable. Fluid holding or storage is the appropriate description in that the fluids are only being held until they can be used again. Since this is the case, Chapter 299 would be a more applicable regulatory framework for these operations. If future centralized impoundments are required to obtain residual waste permits they should only be required to meet the residual waste storage impoundment regulation, as are applicable to all other forms of residual waste.

10. Site Restoration:

The totally rewritten §78a.65 has many defects as specifically noted in the comments submitted by the MSC and PIOGA. However, we wish to call specific attention to §78a.65(a)(1)(iv)(D) regarding safety buffers. Safety buffers should not be limited to the area surrounding the equipment that is physically cordoned off. In order to safely operate a well, there needs to be sufficient area to 1) safely maneuver long trucks that access the site to remove fluids and for maintenance 2) maintain safe distances between various pieces of equipment on the site (described in API report 500 and the National Electric Code) 3)

allow space for equipment that may be needed in the future 4) allow space for wells that may be drilled in the future. As drafted this subsection reflects a lack of understanding of safety procedures at a well site. DEP should not attempt to dictate what safety buffers are necessary. This subsection should be amended to read: “(D) Areas needed to safely conduct operations on the pad, consistent with normal industry practices and applicable safety codes.”

11. Well Development Pipelines:

Section **78a.68b** imposes significant restrictions on “well development pipelines,” a term with much broader coverage than “temporary pipelines” – the term originally used in this section. Among the restrictions is an apparent ban on subsurface installation. Once again there is no explanation for this change. Oil & Gas water pipelines should be subject to the same regulatory framework as other industries operating within PA (mining, chemical, municipal sewage lines, etc). There are no industry specific permits or prohibitions in place for any other industrial underground pipelines regardless of the material they convey. These pipelines allow significant truck traffic to be removed from the roads. They should be encouraged, not discouraged.

There may be instances where culverts, casing, or apparatuses which could be construed as culverts were previously installed for the specific purpose of installing temporary piping under impediments. Permits should not be required in such instances where these structures do not convey water as **§78a.68b(c)** currently requires. We would suggest the following: “(c) Temporary pipelines cannot be installed through existing stream culverts, storm drain pipes or under bridges without approval by the Department pursuant to § 105.151 (relating to permit application for construction or modification of culverts and bridges); except where such structures were previously specifically installed for this purpose.”

Section **78a.68b(d)** requires the installation of shut off valves on either side of a temporary crossing. Placing shutoff valves at both ends of a stream crossing may seem like good practice, but it is not. This would essentially place a minimum of four (4) mechanical joints/couplings in very close proximity to stream crossings which would increase environmental risk. Additionally, the valves would provide little to no protection to the stream if there was a line failure as they could not be actuated until an operator manually isolated the subject valves. Shutoff valves at both ends of the line (impoundment or tank and pad) would be adequate and more protective of the environment.

The 12 month limitation on the use of a well development pipeline (**§78a.68b(j)**) is unnecessary and potentially disruptive to landowners due to repeated installation and removal of pipelines. Given the requirement to periodically empty and test these lines their suitability will be constantly tested. The 12 month limitation should be removed.

Lastly, the requirement in §78a.55(i)(5)(i)(I) to note the location of the shut off valves is not feasible. The locations of the emergency shutoff valves are not known until approximately 1 week prior to commencement of hydraulic fracturing of the well, long after the plan would be required by §78a.55(b). This sentence should be changed to clearly allow addition of the location information when it becomes known.

12. Conclusion:

If Range has incorrectly judged that the Draft Final Regulations are an intentional attempt to stifle the natural gas industry in the Commonwealth, then the Department has inadvertently arrived at the same result. The Draft Final Regulations introduce such a combination of over-regulation coupled with vague and ambiguous terms and requirements into Chapter 78a that operators will be subject to uncertainty and arbitrariness – factors that make continuing investment in Pennsylvania problematic. If it is not the intent of the Department to shut down this industry, we urge you to convene meaningful dialogue with the industry so that the Department can truly meet the legislative directive to balance optimal development of natural gas with necessary environmental protections.

We would appreciate your consideration of our comments. Please contact me at tbossert@rangeresources.com or 724-754-4003 with any questions or concerns.

Sincerely,



Terry R. Bossert
VP, Legislative & Regulatory Affairs

Enclosure: Addendum – Noise Mitigation

Addendum – Noise Mitigation

§78a.41 Noise Mitigation

Range Comment:

Well development operations make sound. This fact is independent of the proximity to a sound receiver (i.e. listener). The difference between sound and noise depends upon the receiver and the circumstances. Since 'noise' can be defined simply as 'unwanted sound', there is a subjective element to determining whether well development sounds should be classified as noise.

(a) PRIOR TO PREPARATION AND CONSTRUCTION OF THE WELL SITE OR ACCESS ROAD, THE OPERATOR SHALL PREPARE AND IMPLEMENT A SITE SPECIFIC NOISE MITIGATION PLAN TO MINIMIZE NOISE DURING DRILLING, STIMULATION AND SERVICING ACTIVITIES.

Range Comment:

Since the definition of 'noise' is relative to a receiver, any mitigation plan must first demonstrate what needs to be mitigated. This can be done by establishing an objective not to exceed sound limit, measured at a residential receiver (i.e. residential structure). Range recommends establishing a limit of 60dBA.

Noise mitigation, by definition, is the action of reducing the intensity of noise. In order for a mitigation plan to be fully successful, there must be a mitigation objective (i.e. the established limit).

A mitigation plan should only be necessary if sounds in excess of the established limit are present. This regulation seems to require a mitigation plan for all wells. Results from a sound impact assessment should be used preliminarily to determine whether the proposed operations will exceed the established sound limit. A plan to mitigate sounds which exceed the established limit should be prepared and implemented.

In many instances, it may not be possible to prepare a mitigation plan prior to construction of the well site. The specific equipment used to drill and complete the well may be unknown at that time. The language should be changed to "prior to drilling"

Suggested language:

(a) PRIOR TO DRILLING, THE OPERATOR SHALL PREPARE A SITE SPECIFIC SOUND IMPACT ASSESSMENT (SIA). IF RESULTS OF THE SIA PREDICT SOUND LEVELS IN EXCESS OF THE ESTABLISHED LIMIT, THE OPERATOR SHALL PREPARE AND IMPLEMENT A SITE SPECIFIC SOUND MITIGATION PLAN TO MINIMIZE SOUNDS AT NEARBY RESIDENTIAL RECEIVERS DURING DRILLING, STIMULATION AND SERVICING ACTIVITIES.

(b) THE PLAN SHALL INCLUDE THE FOLLOWING:

(1) AN ASSESSMENT OF BACKGROUND NOISE IN THE AREA OF THE WELL SITE.

Range Comment:

It is necessary to define methods, parameters and objectives for the “background noise assessment”.

Suggested Language:

(1) AN AMBIENT SOUND LEVEL SURVEY (72-HOUR) IN THE AREA OF THE WELL SITE; IN LIEU OF ESTABLISHING THE 72-HOUR AMBIENT SOUND LEVEL, THE OPERATOR MAY ASSUME A DEFAULT AMBIENT SOUND LEVEL OF 55 dBA;

(2) AN ASSESSMENT OF KNOWN AND POTENTIAL NOISE FROM DRILLING, STIMULATION AND SERVICING ACTIVITIES, TAKING INTO CONSIDERATION THE INTERESTS OF NEARBY RESIDENTS, INCLUDING THE AFFECTS ON INDOOR NOISE LEVELS FOR RESIDENTS NEAR THE WELL SITE.

Range Comment:

Operational sound data, gathered during live operational sound surveys, can be used to predict site specific sound levels at nearby residential receivers.

How are the interests of nearby residents considered? Interests vary on an individual basis. Residential indoor sound levels can vary considerably.

Suggested Language:

(2) AN EVALUATION OF THE PREDICTED SOUND LEVELS AT ALL RESIDENCES WITHIN A 2000’ RADIUS OF THE PROPOSED WELL. THE ASSESSMENT SHOULD PROVIDE AN EVALUATION OF THE PREDICTED SOUND LEVELS WITH RESPECT TO THE ALLOWABLE LIMIT. IF THE ALLOWABLE LIMIT IS EXCEEDED, THE OPERATOR SHOULD PREPARE AND IMPLEMENT A SITE SPECIFIC SOUND MITIGATION PLAN

(3) A DESCRIPTION OF THE OPERATOR’S PLANS TO MITIGATE NOISE. OPERATORS MUST ADOPT AND INCORPORATE A BEST PRACTICES APPROACH TO NOISE MANAGEMENT INTO THEIR DRILLING, STIMULATION AND SERVICING ACTIVITIES PROCEDURES.

Range Comment:

A sound mitigation plan should only be necessary if sounds in excess of the established limit are present. Results from the sound impact assessment should be used preliminarily to determine whether the proposed operations will exceed the established sound limit. A plan to mitigate sounds which exceed the established limit should be prepared.

Suggested Language:

(3) IF NECESSARY, A DESCRIPTION OF THE OPERATOR’S PLANS TO MITIGATE SOUND.

(c) IF THE DEPARTMENT DETERMINES DURING DRILLING, STIMULATION AND SERVICING ACTIVITIES THAT THE PLAN IS INADEQUATE TO MINIMIZE NOISE, THE DEPARTMENT MAY ORDER THE OPERATOR TO SUSPEND OPERATIONS AND TO MODIFY THE PLAN AND OBTAIN DEPARTMENT APPROVAL.

Range Comment:

Plan adequacy can only be measured by demonstrating that the allowable limit has not been exceeded.

There are times during drilling, stimulation and servicing activities when it would not be safe to “suspend operations”. This term should be deleted or defined to allow for continued operations in order to maintain a safe operation.

Suggested Language:

(c) IF THE DEPARTMENT DETERMINES DURING DRILLING, STIMULATION AND SERVICING ACTIVITIES THAT THE ALLOWABLE SOUND LIMITS ARE EXCEEDED, THE DEPARTMENT MAY ORDER THE OPERATOR TO DEVELOP AND IMPLEMENT A REVISED SOUND MITIGATION PLAN WHICH RESULTS IN THE REQUIRED SOUND LEVEL REDUCTIONS

(d) THE OPERATOR SHALL PERFORM REGULAR, FREQUENT AND COMPREHENSIVE SITE INSPECTIONS TO EVALUATE THE EFFECTIVENESS OF ANY NOISE MITIGATION MEASURES.

Range Comment:

An effective mitigation measure is one that achieves its objectives. If objective reductions of mitigation are not clearly defined, the effectiveness of the mitigation cannot be measured. If an allowable sound limit (i.e. an objective) is established, periodic sound checks to demonstrate compliance with the limit can be readily performed.

Suggested Language:

(d) THE OPERATOR SHALL PERFORM REGULAR, FREQUENT AND COMPREHENSIVE SITE INSPECTIONS TO EVALUATE THE EFFECTIVENESS OF ANY SOUND MITIGATION MEASURES.

(e) AN OPERATOR SHALL PROMPTLY ADDRESS AND CORRECT PROBLEMS AND DEFICIENCIES DISCOVERED IN THE COURSE OF INSPECTIONS PERFORMED UNDER PARAGRAPH (d).

Range Comment:

What are deficiencies defined as? A deficiency of a mitigation measure can only be defined if the mitigation measure fails to achieve its objective reductions.

Suggested Language:

(e) IF DURING THE COURSE OF INSPECTIONS PERFORMED UNDER PARAGRAPH (d), IT IS DETERMINED THAT ALLOWABLE SOUND LEVELS ARE EXCEEDED AT RESIDENTIAL RECEIVERS, THE OPERATOR SHALL PROMPTLY ADDRESS AND CORRECT THE MITIGATION PLAN DEFICIENCY.

(f) THE NOISE MITIGATION PLAN SHALL BE MAINTAINED BY THE OPERATOR AT THE WELL SITE WHILE DRILLING, STIMULATION AND SERVICING ACTIVITIES ARE BEING CONDUCTED AND SHALL BE MADE AVAILABLE TO THE DEPARTMENT UPON REQUEST.

Range Comment:

A sound mitigation plan should only be developed and implemented if the sound impact assessment determines that it is necessary.

Suggested Language:

(f) IF APPLICABLE, THE SOUND MITIGATION PLAN SHALL BE MAINTAINED BY THE OPERATOR AT THE WELL SITE WHILE DRILLING, STIMULATION AND SERVICING ACTIVITIES ARE BEING CONDUCTED AND SHALL BE MADE AVAILABLE TO THE DEPARTMENT UPON REQUEST.

Suggested ADDITIONAL language:

(g) SOUND MITIGATION REQUIREMENTS DESCRIBED IN CHAPTER 78A.41(A)-78A.41(F) MAY BE WAIVED IF THE OWNER OF THE AFFECTED RESIDENCE PROVIDES WRITTEN CONSENT, ACKNOWLEDGING THAT SOUND LEVELS IN EXCESS OF THE ALLOWABLE SOUND LIMIT MAY BE OBSERVED FROM THE RESIDENTIAL RECEIVER.