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**COMMENTS ON PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S PROPOSED REVISIONS TO 25 PA. CODE CHAPTER 78, SUBCHAPTER C**

RECEIVED
MAR 14 2014
INDEPENDENT REGULATORY REVIEW COMMISSION

March 14, 2014

Environmental Quality Board
Rachel Carson State Office Building, 16th Floor
400 Market Street
Harrisburg, PA 17101-2301

**Re: Comments on Proposed Amendments to 25 PA.CODE CH. 78, Environmental Protection Performance Standards at Oil and Gas Well Sites [43 Pa.B. 7377-7415]**

To Whom It May Concern:

Noble Energy, Inc. appreciates the opportunity to submit the following comments in response to Proposed Amendments to 25 PA.CODE CH. 78, Environmental Protection Performance Standards at Oil and Gas Well Sites. We also support in general the comments made by the Marcellus Shale Coalition and the oil and gas trade associations that have submitted comments on behalf of the industry.

Noble Energy, Inc. (Noble) is a leading independent energy company engaged in worldwide oil and gas exploration and production. We operate primarily in the Marcellus Basin, Rocky Mountains, and deepwater Gulf of Mexico areas in the United States, with key international operations offshore Israel and West Africa.

Noble has four general suggestions regarding the Pennsylvania Department of Environmental Protection's proposed revisions to 25 Pa. Code Chapter 78, Subchapter C: (1) the revisions should be more performance-oriented and less prescriptive; (2) they should include a streamlined approval process; (3) they should provide additional opportunities for variances; and (4) more attention should be devoted to their implementation. This list is not exhaustive, but is intended to highlight major issues that have received limited attention to date and are critical to the successful regulation of unconventional oil and gas development. Noble's suggestions are based upon its experience in other states as well as Pennsylvania and are supported by a variety of government directives and guidance documents.

From a regulatory standpoint, these four issues can create a number of unintended and adverse consequences for the Department. For example:

- the prescriptive nature of the revisions can discourage operators from seeking superior environmental solutions, impede the use of new practices and technologies, and foster resistance;
- the lack of a streamlined approval process can add unproductive costs, increase delay and frustration, and distract the Department and operators from equally or more important issues;
- the limited opportunities for variances can reduce flexibility, constrain innovation, and limit the Department's ability to better balance prescription and performance; and
- Insufficient attention to implementation can undermine compliance and create unnecessary disruption.

Noble's suggestions are intended to help avoid these problems and are further discussed below.

**Performance Oriented.**

There is widespread agreement that, to the extent feasible, regulations and standards should be performance oriented rather than prescriptive. As the Department's Policy for Development, Approval and Distribution of Regulations

explains: "To the extent possible, regulations should focus on achieving the desired level of environmental performance. Maximum flexibility to achieve the desired outcome should be encouraged rather than prescribing specific technologies or equipment." At the federal level, this approach is mandated by Executive Orders 13563 and 12866 ("to the extent feasible, specify performance objectives"); at the state level, it is reflected in the Interstate Oil & Gas Compact Commission's Adverse Impact Reduction Handbook ("individual approaches must be tailored to local or regional circumstances"); and at the international level it is touted in the International Energy Agency's Golden Rules Report ("performance-based regulation can work better in many areas, particularly for an industry in which technology is changing quickly"). As these authorities recognize, performance-oriented regulation can encourage efficiency and creativity and generate more win-win solutions. It can also maximize flexibility, facilitate lower cost solutions, respond better to market circumstances, and reduce resistance and resentment. This is particularly important for unconventional oil and gas development, where strategies for protecting the environment and minimizing impacts are constantly evolving as illustrated by recent developments in pit-less drilling, green completions, fluid recycling, and facility consolidation.

Although some of the Department's proposed revisions are performance oriented, many are highly prescriptive. For example, many of the waste management revisions impose detailed and specific requirements and mandate particular actions and equipment. Examples of these revisions include those proposed for sections 78.57 (production fluids), 75.59a (impoundment embankments), 78.59b (freshwater impoundments), 78.59c (centralized impoundments), 78.62 (residual waste disposal—pits), 78.64 (secondary containment), 78.68 (gathering lines), 78.68b (temporary pipelines), 78.70 (road-spreading of brine), and 78.70a (pre-wetting, anti-icing and de-icing). In addition to imposing unnecessarily specific requirements, some of these revisions may have unintended consequences. For example, the proposed revisions for centralized impoundments and temporary pipelines may impede the implementation of environmentally-beneficial measures such as fluid recycling and centralized water management. Modifying these revisions to make them more performance oriented would benefit all parties.

**Streamlining.**

Streamlining the approval process can likewise increase efficiency and reduce resistance and resentment. It can also avoid unnecessary delay, decrease costs, and allow operator and agency personnel to devote more attention to important issues. This too is particularly important for unconventional oil and gas development, which requires timely and reliable approvals because of the substantial investments and extensive work required. In its recent follow-up review of the Pennsylvania oil and gas regulatory program, the State Review of Oil and Natural Gas Environmental Regulations, Inc. ("STRONGER") recommends that the Department "consider developing a streamlined permitting process." This is consistent with STRONGER's current guidelines, which provide that similar requirements of multiple agencies should "be combined where feasible" and that the permitting process should "involve prompt consideration and response to applications." It is also consistent with Executive Order 13563, which directs federal agencies to promote "coordination, simplification, and harmonization" in their regulatory requirements.

The Department's proposed revisions add a number of new consultation, information- gathering, and submittal requirements, which could delay the approval process and make it less predictable. For example, section 78.15 (application requirements) would mandate consultation with the Pennsylvania Natural Heritage Program and various public resource agencies, section 78.52a (abandoned and orphaned well identification) would require review of farm line maps and submittal of a questionnaire to landowners for an unspecified period of time, section 78.55 (control and disposal planning) would necessitate filing a preparedness, prevention, and contingency plan, section 78.69 (water management plans) would mandate submittal of a water management plan, and various other regulations would require individual applications for various types of waste management. These revisions make it even more important for the Department to develop a streamlined and consolidated approval process, which simplifies applications and expedites approvals.

**Variances.**

Variances can enable operators to use new technologies and practices, which are more efficient and effective than what is prescribed by regulation. This can promote creativity and problem solving, avoid delay, and reduce costs, while still providing equivalent protection for the environment. Adding an appropriate variance process is also a way to create additional flexibility and make a prescriptive regulatory program more performance oriented. This is

important for unconventional oil and gas development for the reasons previously stated. The recent follow-up review by STRONGER notes that "the state program should have some flexibility" and recommends that the Department "clarify conditions under which variances will be considered." The current STRONGER guidelines similarly explain that "in order to accommodate regional, area-wide, or individual differences within a state, it is appropriate for site-specific waivers or variances to be allowed for good cause shown."

The Department has a process for allowing waivers from certain setback distances and well casing, plugging, and equipping requirements. In addition, the proposed revision to section 78.56 (temporary storage) would allow the Department to approve alternative standards for such storage which provide equivalent or greater protection. However, there is no general variance provision that would apply to the other regulations in Chapter 78, Subchapter C. Nor do the other proposed revisions provide for the approval of alternative standards or practices, except with respect to setback distances. Adding a general variance process or incorporating variance language into more of the revisions would remedy this omission and help to make the regulations more performance oriented.

**Implementation.**

Responsible implementation of regulatory revisions is critical to achieving agency objectives, promoting industry compliance, minimizing economic disruption, and avoiding unintended consequences. Agencies need to implement major revisions in a thoughtful and deliberative manner, which may require them to phase in new requirements gradually, provide special training to staff, operators, and other stakeholders, issue guidance and interpretive documents, respond to new information, and develop and apply new metrics. Otherwise, regulatory revisions can create unnecessary confusion and conflict that harms both the regulatory program and the regulated industry. Pennsylvania Executive Order 1996-1 directs that "[c]ompliance shall be the goal of all regulations." This direction is echoed in the Department's Policy for Development, Approval and Distribution of Regulations, which also requires the Department to develop compliance assistance programs to help small businesses and to address the subject of compliance assistance in the regulatory preamble.

The Department's Draft Notice of Proposed Rulemaking provides only a cursory discussion of this subject. It states that the Department plans to schedule training sessions for the oil and gas industry and that the Department's field staff will provide technical assistance and field-level direction. But it does not address when the new requirements will be implemented, how the Department will ensure that they are applied consistently, what new guidance or training materials will be prepared, how the Department will address new issues that arise, or how the Department will measure its success in promoting compliance. More attention to and information on the implementation process would benefit both the Department and the industry.

Noble Energy, Inc. appreciates the opportunity to comment on the proposed revisions to 25 PA. Code Chapter 78, Subchapter C. Included with this letter, is an attachment outlining additional specific concerns and recommended revisions for the proposal for your review. Please feel free to contact Noble Energy Inc. should you have any questions or concerns.

Sincerely,

Kevin Hansford
EHSR Manager
Noble Energy, Inc.

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

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**Noble Energy, Inc. Specific Comments and Suggested Amendatory Language for the proposed Chapter 78 Regulation**

**§ 78.1 Definitions.**

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

The definition of "Borrow pit" as proposed would inadvertently classify all oil and gas activity locations as borrow pits, since any construction involves some level of earth disturbance. This would add additional and unnecessary permitting and bonding obligations under other applicable laws as referenced in the proposed Section 78.67. As such, Noble supports the MSC's suggested definition below:

> *"Borrow pit* – An area of earth disturbance activity where rock, stone, gravel, sand, soil, or similar material ix excavated for construction of well sites, access roads or facilities that are related to oil and gas development. This definition does not include specific well sites or activities otherwise permitted by the Department under the Oil and Gas Act."

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

As the proposed section 78.68(h) adds the applicability of the federal statue for gathering pipelines, to avoid inconsistencies between state and federal laws, Noble recommends the proposed definition be struck and instead incorporate by reference the definition in 49 CFR 192.3 and the guidance around jurisdiction for gathering lines in 49 CFR 192.8.

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***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. § 6020.103).**

This definition in Act 2 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). At a minimum, the definition must be further clarified by reference to some known list of substances, such as those found in Chapter 250.

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***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;**

Noble asks that the Department clarifies which activities the Department considers as part of "well location assessment." In addition, while this definition is provided, the similar phrase "oil and gas activities" is also used in numerous sections creating confusion as to whether different meanings are intended. Noble supports the MSC comments and suggested language regarding the need to clarify the use of the phrases "oil and gas operations" and "oil and gas activities."

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**[§ 78.15 Application Requirements. ]**

Noble is concerned that in this section the Department created an open-ended process, which lacks clear standards for implementation, and does not properly balance the cost of permit conditions to protect public resources against the benefits of these provisions. Noble concurs with MSC comments on this section and believes that the cost of consultation and mitigation will be orders of magnitude higher than the Department estimates and must be reconsidered.

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**78.15(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.**

Noble supports MSC's recommended modifications to this subsection in order to clarify the obligation of applicants:

> "(d) The applicant shall utilize the Pennsylvania Natural Diversity Inventory (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)."

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**78.15(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.**

Noble has significant concerns about this section. Act 13 did not include language or express intent to impose oil and gas development restrictions based on undefined and unknown "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 ecological basis for equating "communities" with individual "species." In addition, the term "special concern species" has no legislative or regulatory definition in Pennsylvania law; the Department has no statutory authority to define, designate or list any plant or animal as a special concern species; and lastly, no State or Federal agencies have used rulemaking to designate any species as "special concern species" in Pennsylvania. As such, the language should be modified to focus on the well-established concept of critical habitats of threatened and endangered species. Noble supports the suggested MSC's suggested amendatory language: "(iv) in a location that will impact critical habitats of State or Federal threatened or endangered species."

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**78.15(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.**

Noble is concerned that the proposed language of this section does not include any criteria, as required by Section 3215(e) of Act 13, for the Department to utilize in the imposition of permit conditions to protect public resources. The quality of the evidence required for the Department to determine that harm to a public resource is probable and impose a condition in the permit must be clear and convincing. As such, Noble supports MSC's suggested amendatory language for this section.

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**§ 78.52. Predrilling or prealteration survey.**

**78.52(d) An operator electing to preserve its defenses under sections [208(d)(1)] 3218(d)(1)(i) and 3218(d)(2)(i) of the act [(58 P. S. § 601.208 (d)(1))] (58 Pa.C.S. §§ 3218(d)(1)(i) and 3218 (d)(2)(i)) shall provide a copy of all the sample results taken as part of the survey to the Department by electronic means in a format determined by the Department, and to the landowner or water purveyor within 10-business days of [receipt of the results] completion of the survey. [Test]Survey results not received by the Department within 10 business days may not be used to preserve the operator's defenses under sections [208(d)(1)] 3218(d)(1)(i) and 3218(d)(2)(i) of the act [(58 P. S. § 601.208 (d)(1))] (58 Pa.C.S. §§ 3218(d)(1)(i) and 3218 (d)(2)(i)).**

Noble is concerned that the 10 day requirement is too short and will force additional unnecessary costs and that may actually decrease the reliability of the results. Typically these tests take two weeks for lab to run the necessary analysis, notwithstanding the time en route back and forth from the operator and then to the Department. In order for a prudent operator insure compliance with the deadline, it would be forced to have survey analyses "rushed," which typically increases the cost by a magnitude of four and tends to increase the number of lab errors and sample errors as well. Additionally, an operation such as Noble's, would require at least one dedicated Full Time Employee (FTE) to manage this process within the required time frame, and possibly more. It would be Noble's suggestion that the language be altered to say "10 business days upon receipt of results." In that case, additional language could be added clarifying that an operator cannot break ground until we have confirmed receipt that landowner received the results.

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**78.52(g) The operator of an unconventional well must provide written notice to the landowner or water purveyor indicating that the presumption established under section 3218(c) of the act (58 Pa.C.S. § 3218(c)) may be void if the landowner or water purveyor refused to allow the operator access to conduct a predrilling or prealteration survey. Proof of written notice to the landowner or water purveyor shall be provided to the Department for the operator to retain the protections under sections 3218(d)(1)(ii) and 3218(d)(2)(ii) of the act (58 Pa.C.S. §§ 3218(d)(1)(ii) and 3218(d)(2)(ii)). Proof of written notice shall be presumed if provided in accordance with section 3212(a) of the act (58 Pa.C.S. § 3212(a)).**

In order to avoid undue delays from non-responsive landowners, the rule should provide a time frame by which a landowner must respond to an operator's notification of the desire conduct water sampling. Noble would recommend that a language be added specifying that a landowner must act within 7 days of receipt of intent by certified mail after which, refusal shall be presumed.

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**§ 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.**

**(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 under subsection (b) and proof of notification that the operators submitted questionnaires under subsection (b)(3).**

Noble is concerned that the Department's database is not presently a reliable source on which a regulatory requirement can be based. The database does not have field GPS location coordinates for a large number of wells, some coordinates have been derived from old maps and are inaccurate. Similarly, a requirement to consult "applicable farm line maps, where accessible" in order to identify wells lacks the clarity required for a regulation. If the Department's database could be sufficiently enhanced, a review of the database should be an adequate obligation for well identification. However, the regulatory obligation should be focused on only those which appear on the Department's database and which have a total depth that extends within 500 feet of the target zone to be perforated or isolated for hydraulic fracturing. Lastly, it is unclear how responses to such questionnaires as proposed language in § 78.52a(b)(3) would be directed and what obligations might fall on operators to verify information received.

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

Noble recommends that the Department updates its oil and gas operators manual or develop guidelines specifically for oil and gas that better reflects its current practice of requiring site specific information within a PPC plan and/or tailor a template for oil and gas specific PPC plans. Much of the "Guidelines for the Development and Implementation of Environmental Emergency Response Plans" document is outdated and does not necessarily apply to oil and gas development.

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**§ 78.56. [Pits and tanks for t]Temporary [containment] storage**

**78.56 (2) Modular aboveground storage structures that are assembled on site may not be utilized to store regulated substances without Department approval. The Department shall maintain a list of approved modular storage structures on its website. The owner or operator shall notify the Department at least 3 business days before the commencement of construction of these storage structures. This notice shall be submitted electronically to the Department through its website and include the date the storage structure installation will commence. If the date of installation is extended, the operator shall re-notify the Department with the date that the installation will commence which need not be 3 business days in advance.**

As previously referenced in our general comments about the drawbacks of overly prescriptive language, it is Noble's suggestion that the Department strikes the language saying "The Department shall maintain a list of approved modular storage structures on its website" and instead establish minimum requirements for modular aboveground storage structures. This would maintain the Department's desired standard, but allow operators flexibility to determine the best available options at any given time for their circumstances. Additionally, Noble asks that the Department issues guidance as to the approval process required for modular above ground storage structures assembled on site.

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**78.56(a)(6) Unless an individual is continuously present at the well site, operators shall equip all tank valves and access lids to regulated substances with reasonable measures to prevent unauthorized access by third parties such as locks, open end plugs, removable handles, retractable ladders or other measures that prevent access by third parties. Tanks storing freshwater, fire prevention materials and spill response kits are excluded from the requirements of this paragraph.**

As previously referenced in our general comments about the drawbacks of overly prescriptive language, it is Noble's suggestion that the phrase "such as locks, open end plugs, removable handles, retractable ladders or other measures that prevent access by third parties" be stricken. The requirement that operators take reasonable measures to prevent third party access provides clear direction while allowing operators flexibility to determine the best protections for their specific circumstances.

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**78.56(a)(7) The operator of an unconventional well site shall display a sign on or near the tank or other approved storage structure identifying the contents, and containing an appropriate warning of the contents such as flammable, corrosive or a similar warning.**

As previously referenced in our general comments about the benefits of streamlined program, Noble suggests that the Department strikes the language in 78.56(a)(7) which is duplicative of federal regulation. Operators are already required by the Occupational Safety and Health Administration's Hazard Communication Standard, which aligns to the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Standard, and requires operators to provide hazard information by putting labels on containers and preparing safety data sheets.

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**78.56(a)(9)[(i) The pits] Pits shall be constructed with a synthetic flexible liner that covers the bottom and sides of the pit. [The] [l]Liners used in a pit or other approved storage structures shall comply with the following:**

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> **(iv) Adjoining sections of liners shall be sealed together to prevent leakage in accordance with the manufacturer's directions. The integrity of all seams of the adjoining sections of liner shall be tested prior to use. Results of the tests shall be available upon request. [If the operator seeks to use a liner material other than a synthetic flexible liner, the operator shall submit a plan identifying the type and thickness of the material and the installation procedures to be used, and shall obtain approval of the plan by the Department before proceeding.]**

As previously referenced in our general comments about the drawbacks of overly prescriptive language, it is Noble's suggestion that the entire prescriptive pit section be stricken and replaced with a specification that pits should be lined with impervious liners with bottom above the measured groundwater table. That requirement provides clear direction while allowing operators flexibility to determine the best impermeable liner for their site specific circumstances. In addition, the language in the proposed Section 78.56(a)(9)(iv) requiring that all liner seams be tested and available to the Department upon request would be challenging to implement.

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**78.56(a)(16) The unconventional well operator shall notify the Department at least 3 business days before the installation of the pit liner. This notice shall be submitted electronically to the Department through its website and include the date the liner will be installed. If the date of installation is extended, the operator shall re-notify the Department with the date of installation which need not be 3 business days in advance. Notice is not required if the licensed professional engineer or geologist that designed the well site submits a statement on forms provided by the Department certifying that the pit and the pit liner, as built, are compliant with this section. This certification shall be submitted within 10 business days of installation of the pit liner.**

It is unclear why an operator would be asked to notify the Department before the installation of the pit liner as it does not add any environmental protection, but does add additional process burden on the operator and on the Department. Noble suggests striking the language or at a minimum, that the Department provides clear explanation of the benefit of this requirement that justifies the additional obligation for the operator.

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**78.56(a)(17)(d) [Unless a permit under The Clean Streams Law (35 P. S. §§ 691.1—691.1001) or approval under § 78.57 or § 78.58 (relating to control, storage and disposal of production fluids; and existing pits used for the control, storage and disposal of production fluids) has been obtained for the pit,] [t]The owner or operator shall remove or fill the pit within 9 months after completion of drilling, or in accordance with the extension granted by the Department under section [206(g)] 3216(g) of the act [(58 P. S. § 601.206(g))] (58 Pa.C.S. 3216(g)) and § 78.65(d). Pits used during servicing, plugging and recompleting the well shall be removed or filled within 90 days of construction.**

To account for the dynamics of an operation like Noble's where with one rig move we drill and complete every well on a pad in sequence, Noble asks that this section should be clarified to read, "9 months after completion of the last permitted well." Additionally this subsection should acknowledge that pits used for onsite disposal of drill cuttings or residual waste in accordance with 78.61 or 78.62 do not have to be removed and filled under this paragraph (d).

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**§ 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.**

Noble has significant concern with this section which could be interpreted as excluding the use of centralized impoundments (§ 78.59c). Centralized impoundments play a critical role in facilitating the economics to allow for a robust water recycling program that provides relief to water use and disposal demands in the region. It has been a stated goal for the Commonwealth to promote the responsible recycling and reuse of oil and gas wastes to reduce the demand on fresh water resources for oil and gas development and operations. Conversely, if forced to abandon the use of centralized impoundments for collecting produced water to stage for reuse, companies would have to supplant that storage with a series of storage tanks that total a much larger footprint or turn to a greater use of freshwater. Instead, Noble would recommend the MSC's suggested language below:

> "(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 of the well in a tank or a series of tanks, centralized impoundment, 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 with the exception of centralized impoundments permitted under §78.59c. 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."

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**78.57(g) All new, refurbished or replaced tanks storing brine or other fluids produced during operation of the well shall be reasonably protected from unauthorized acts of third parties. Unless the tank is surrounded by a fence, tank valves and access lids shall utilize locks, open end plugs or removable handles and ladders on tanks shall be retractable or other measures that prevent access by third parties.**

As previously referenced in our general comments about the drawbacks of overly prescriptive language, it is Noble's suggestion that the prescriptive language be stricken. The requirement for reasonable protection from unauthorized acts of third parties should suffice while allowing the operator the flexibility to determine the best approach for each particular circumstance that avoids inadvertently creating occupational safety concerns.

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**§ 78.58. [Existing pits used for the control, storage and disposal of production fluids.] Onsite processing.**

**[For pits in existence on July 29, 1989, the operator may request approval for an alternate method of satisfying the requirements of § 78.57(c)(2)(iii) (relating to control, storage and disposal of production fluids), the angle of slope requirements of § 78.57(c)(2)(v) and the liner requirement of § 78.57(c)(2)(vi)—(viii) by affirmatively demonstrating to the Department's satisfaction, by the use of monitoring wells or other methods approved by the Department, that the pit is impermeable and that the method will provide protection equivalent or superior to that provided by § 78.57. The operator shall request approval under § 78.57(c)(1).] (a) The operator may request approval by the Department to process fluids generated by the development, drilling, stimulation, alteration, operation or plugging of oil or gas wells at the well site where the fluids were generated or at the well site where all of the fluid is intended to be beneficially used to develop, drill or stimulate a well. The request shall be submitted on forms provided by the Department and demonstrate that the processing operation will not result in pollution of land or waters of the Commonwealth.**

The Department has maintained on several occasions that it is a goal for the Commonwealth to promote the responsible recycling and reuse of oil and gas wastes to reduce the demand on fresh water resources for oil and gas well development and operations. Noble shares this goal and believes regulations that encourage and facilitate this practice will ultimately protect public health, safety and the environment, as well as be a benefit to the oil and gas industry. As such, Noble suggests the language below to clarify that operators may conduct processing, recycling and beneficial reuse activities at well sites and related operations under the jurisdiction of the Department's Office of Oil and Gas Management.

"(a) The Department supports the processing, recycling, and beneficial reuse of fluids and other materials generated by the development, drilling, stimulation, alteration, operation or plugging of oil or gas wells, where the processing of the fluids or other materials for recycling or beneficial reuse will not result in pollution of land or waters of the Commonwealth.

(b) Approval from the Department is not required for the following activities conducted at permitted sites related to oil and gas development operations:

(1) mixing fluids with freshwater;
(2) aerating fluids;
(3) filtering solids from fluids;
(4) physical removal of free phase hydrocarbons;
(5) the addition of biocides to reuse fluids; or
(6) any other activity approved by the Department and posted on its website."

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**§ 78.59a. Impoundment embankments.**

**Embankments constructed for freshwater and centralized impoundments for oil and gas activities must meet the following requirements:**

The Department is proposing new regulations for activities that have been implemented through forms, approvals, and policies for several years. As previously referenced in our general comments section, Noble believes strongly that a regulation must have flexibility to address changes that may become necessary to address unforeseen issues that may arise in the future including improvements in technology. If the rulemaking under these sections proceeds to a final rule, Noble supports the MSC's suggested language to instill performance based standards which allow flexibility for innovation while maintaining desired performance.

**§ 78.59b. Freshwater impoundments**

Noble is concerned that the proposed regulations have extensive new requirements for impoundments storing freshwater that are often unnecessary and go beyond those any other industry must follow for storing fresh water. Regulating freshwater impoundments for only the oil and gas industry, despite their use by many other industries, is arbitrary and capricious. Noble suggests that freshwater impoundments either be removed from the proposed oil and gas regulations, or Title 25 needs to be revised to regulate all persons, groups, or industries equally.

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**78.59(e) The bottom of the impoundment shall be at least 20 inches above the seasonal high groundwater table. The applicant may maintain the required separation distance of 20 inches by artificial means such as an under-drain system throughout the lifetime of the impoundment. In no case shall the regional groundwater table be affected. The operator shall document the depth of the seasonal high groundwater table, the manner in which the depth of the seasonal high groundwater table was ascertained, the distance between the bottom of the impoundment and the seasonal high groundwater table, and the depth of the regional groundwater table if the separation between the impoundment bottom and seasonal high groundwater table is maintained by artificial means. The operator shall submit records demonstrating compliance with this subsection to the Department upon request.**

This section requires the same groundwater table determination practices for freshwater pits as for produced water pits. These practices are not necessary for freshwater, provide no tangible benefit, and will add additional cost in time, resources, and capital funding to perform the studies required by this subsection. Noble suggests that the section be removed.

**78.59b(f) Freshwater impoundments shall be restored by the operator so that the impoundment is registered to by removing excess water and the synthetic liner and returning the site to approximate original conditions, including preconstruction contours, and can support the land uses that existed prior to oil and gas activities to the extent practicable within nine months of completion of drilling the last well serviced by the impoundment. A two-year restoration extension may be requested pursuant to section 3216(g) of the act (58 Pa.C.S. § 3215(g)). If written consent is obtained from the landowner, the requirement to return the site to approximate original contours may be waived by the Department if the liner is removed from the impoundment.**

Freshwater impoundments, when not needed for operations and not wanted by the surface owner, should be restored in accordance with applicable site restoration plans. Additionally, to account for the dynamics of an operation like Noble's where with one rig move we drill and complete every well on a pad in sequence, Noble asks that the phrase "completion of drilling" be changed to "completion of last well." Lastly, Section 3216(g) does not address freshwater impoundments.

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**§ 78.59c. Centralized impoundments.**

As previously referenced in our general comments Noble believes this section is an example where regulations and standards should be performance oriented rather than prescriptive. The prescriptive nature of this section limits operator the flexibility to determine the best approach for each particular circumstance.

**78.59c(c) Centralized impoundments shall not be constructed in any portion of the following areas:**
**(1) In a floodplain of waters of this Commonwealth as defined in section 3215(f)(5) of the act (58 Pa.C.S. § 3215(f)(5)).**
**(2) In or within 100 feet measured horizontally of a wetland greater than 1 acre in size.**
**(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.**

Sections 78.59c(c)(2-7) contains multiple references directing measurements, but clarity is needed as to the measurement points. For example, between what to points should horizontal measurements be taken? Additionally, section 78.59c(c)(3) appears to have been copied from Pennsylvania's Solid Waste Regulations, which include this provision due to the acidic nature of landfill leachate. 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. It is Noble's suggestion that subsection (c)(3) be deleted.

**78.59c(c)(4) Within 500 feet measured horizontally from an occupied dwelling without the written consent of the owner of the building.**

See previous comment about the need for a measurement reference point. Additionally, the term "occupied dwelling" needs to be explained as to whether it refers only to buildings occupied by human inhabitants or also agriculture buildings which may house livestock, for example.

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**78.59c(c)(e) Centralized impoundments shall be constructed with a liner system composed of the following components:**
**(1) A sub-base that meets the following:**

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. Noble supports MSC's suggested language for this section which reads, "A sub-base that meets the following, or is otherwise approved by the Department:"

**78.59c(c)(e)(1)(vii) Is constructed of a natural clay material and include an upper 6 inches that meets the following:**
**(A) Is free of coarse rock fragments greater than 0.75" in diameter.**
**(B) Is hard, uniform, smooth and free of debris, rock fragments, plant materials and other foreign material.**
**(C) Is no more permeable than 1.0 x 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.**

Noble is concerned that the both the soil compaction and the soil permeability testing and frequency in the proposed subsection are excessive. Noble supports MSC's suggested amendatory language below:

"§78.59c(e)(vii) (C) No more permeable than 1.0 x 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."

**78.59c(c)(e)(2)(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.**

The requirement that centralized impoundment lines be installed under the supervision of an authorized representative of the manufacturer in sections 78.59c(e)(2)(vi) and 78.59c(e)(4)(xii) raises a significant concern for an operator's ability to comply without potentially causing significant delays. It is unknown how many manufacturer representatives exist and are available to perform this supervision. Noble suggests that this requirement be removed and replaced with the requirement that installation be performed under the direction of an appropriately trained professional.

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**78.59c(c)(e)(3) A leak detection system that meets the following:**

*****(vii) Create a flow zone between the secondary liner and the primary liner equal to, or more permeable than 1.0 x $10^{-2}$ cm/sec., based on laboratory testing and, when required by the Department, field testing.**

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. As such, Noble supports MSC's suggested amendatory language which reads: "(vii) Creates a flow zone between the secondary liner and the primary liner equal to, or more permeable than, 1.0 x 10-2 cm/sec., based on manufacturer/supplier's published specifications."

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**78.59c(c)(e)(3)(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.**

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. To allow flexibility and alternative equivalency Noble's supports MSC's suggested amendatory language which reads: "(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."

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**78.59c(c)(e)(3)(ix)(D)**

*****(4) A primary liner that meets the following:**

*****(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.**

The requirement that centralized impoundment lines be installed under the supervision of an authorized representative of the manufacturer in sections 78.59c(e)(2)(vi) and 78.59c(e)(4)(xii) raises a significant concern for an operator's ability to comply without potentially causing significant delays. It is unknown how many

manufacturer representatives exist and are available to perform this supervision. Noble suggests that this requirement be removed.

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**78.59c(c)(e)(3)(ix)(D)(4) (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.available to the Department upon request.**

Noble is concerned that the requirement that operators document leakage rates weekly is overly burdensome. Additionally, the language refers to making available upon request twice – redundant and one should be deleted.

***

**78.59c(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.**

> *****(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.**

Noble asks that the Department clarifies its expectations with the requirement that an operator perform a second "round" of hydrogeologic investigation. "Round" needs to be defined for example; is it referring to 1 additional set of samples?

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**78.59c(f)(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 25 Pa. Code §§ 289.121-123 (relating to phase I application requirements – site analysis) must be followed and the groundwater monitoring period must be extended to four quarterly tests.**

Noble is concerned that the requirement for an extension of four quarterly tests if soil mottling is apparent is burdensome and could add a year to the already lengthy permitting process. Soil mottling does not provide conclusive evidence of the seasonal high water table. As such, Noble supports the MSC's suggested amendatory language below:

> "(4) If during the groundwater elevation study, groundwater elevation determined by surface water or wells, or soil mottling in the absence of surface water or well data, 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 25 Pa. Code §§ 289.121-123 (relating to phase I application requirements – site analysis) must be followed and the groundwater elevations data must be collected within the first five months of the year."

***

**78.59c(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:**

As previously referenced in our general comments Noble believes this section is an example where regulations and standards should be performance oriented and flexible rather than prescriptive. The prescriptive nature of this section prevents the use of Best Available Technology. It is Noble's belief that the language should be revised to allow alternatives. 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. As such, Noble supports MSC's suggested amendatory language below:

> "(g) An operator that operates a centralized impoundment shall install, operate and maintain a water quality monitoring system that can detect the entry of substances contained in the impoundment 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:"

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**78.59c(i) Monitoring wells and casing of monitoring wells shall be constructed as follows:**
***** (2) The minimum casing diameter shall be 4 inches unless otherwise approved by the Department in writing.**

Typically a 2-inch diameter pipe is 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. However, it is unlikely that a monitoring well itself would be used for this purpose. Noble is concerned that the added cost to drill a larger bore and for increased materials to construct a well are not reasonable. Noble recommends that the minimum well diameter be changed to 2-inches.

***

**78.59c(i)(4) Monitoring well casings shall be enclosed in a protective casing that shall:**
*****(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.**

Conditions are often encountered where 10 feet of casing cannot be installed, therefore it is Noble's suggestion that this requirement be removed. Guidance could be included in the Department's policy document for well construction.

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**78.59c(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.**

Noble has significant concerns with this section. Requiring oversight by "the design engineer" unnecessarily restricts the flexibility of operators to manage the construction of centralized impoundments. As such, Noble supports MSC's suggested amendatory language below:

> "(k) The design engineer, or an appropriately trained professional, 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."

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**78.59c(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:**

Subsections 78.59c(m)(5-7) list detailed requirements for the impoundment construction final certification report. As the engineer is required to certify already, Noble contends that for the purpose of this section, the engineer stamp should suffice.

**78.79c(m)(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.**

Noble suggests that the requirement prohibiting an impoundments use until certification is received by the Department be limited to "wastewater" as there is no reason, nor environmental exposure associated with an impoundments use for fresh water storage.

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**78.59c(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.**

Noble suggests that the language be modified to allow for an existing temporary impoundment to be reused for a new well pad location. Allowing for reuse can help facilitate less a water storage program that is less impactful on the landscape. Otherwise a larger operation would be forced to build more impoundments. Noble also requests clarification on the Department's expectations for an operator to maintain records of existing well permits or well servicing activities. Additionally, in subsections 78.59c(n)(2-4) regarding restoration of temporary impoundment sites, Noble believes language should be modified to allow for circumstances where a landowner does not wish to have the land returned to preconstruction contours or original condition.

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**§ 78.64a. Containment around oil and condensate tanks.**

**(a) If an owner or operator uses a tank with a capacity of at least 660 gallons or tanks with a combined capacity of at least 1,320 gallons to contain oil or condensate produced from a well, the owner or operator shall construct and maintain a dike or other method of secondary containment which satisfies the requirements under 40 CFR 112 (relating to oil pollution prevention) around the tank or tanks which will prevent the tank contents from entering waters of this Commonwealth.**

Noble contends that the 660 reference is an antiquated number which was changed in the federal Spill Prevention and Counter Control regulations several years ago. To maintain consistency between federal and state, Noble recommends the language read "If an owner or operator uses a tank with a combined capacity of at least 1320 gallons..." Additionally, the requirement with respect to "regulated substances" is overly broad. Act 13, specifies a list of six materials that must be in containment systems when stored on unconventional well sites. See Section 3218.2(c). As such, Noble supports MSC's suggested amendatory language below:

"(b) Well sites shall be designed and constructed using containment systems and practices that prevent spills of regulated substances to the ground surface and to prevent spills from leaving the well site during drilling and hydraulic fracturing operations."
"(c) Containment systems shall be used when drilling mud, hydraulic oil, diesel fuel, drilling mud additives, hydraulic fracturing additives, or hydraulic fracturing flowback is stored on an unconventional well site. This subsection does not apply to fuel stored in equipment or vehicle fuel tanks unless the equipment or vehicle is being refueled at the well site."

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**78.64a(e) Containment systems shall meet all of the following:**

As previously referenced in our general comments about the drawbacks of overly prescriptive language, it is Noble's suggestion that the language be modified to allow for flexibility. As such, Noble supports the MSC suggested language which reads "(e) Unless otherwise approved by the Department, containment systems shall meet all of the following:"

**78.64a(e)(1) Be used on the well site when any equipment that will be used for any phase of drilling, casing, cementing, hydraulic fracturing or flowback operations is brought onto a well site and when regulated substances including drilling mud, drilling mud additives, hydraulic oil, diesel fuel, hydraulic fracturing additives or flowback are brought onto or generated at the well site.**

Noble is concerned that this proposed subsection is overly broad, would apply to cement in cement trucks, and conflicts with Act 13, which provides a specified list of materials that require storage in containment systems which are addressed in a previous subsection. As such, Noble suggests deleting subsection (e)(1).

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**78.64a(f) *Secondary containment:* An operator shall utilize secondary containment when storing additives, chemicals, oils or fuels. The secondary containment shall have sufficient containment capacity to hold the volume of the largest container within the secondary containment area plus 10% to allow for precipitation, unless the container is equipped with individual secondary containment such as a double walled tank. Tanks that are manifolded together shall be designed in a manner to prevent the uncontrolled discharge of multiple manifolded tanks. A well site liner that is not used in conjunction with other containment systems does not constitute secondary containment for the purpose of this subsection.**

Per 3218.2(d) of Act 13, there is no mandatory secondary containment requirement when storing additives, chemicals, oils or fuels. We recommend striking the first sentence. The final sentence of this subsection is vague and potentially contrary to Act 13 which has no such prohibition. As we understand, the Department's concern is that an impervious berm be used with the liner to provide sump capacity. As such, Noble suggests stating this directly as in the MSC's suggested amendatory language below:

"(f) The secondary containment shall have sufficient containment capacity to hold the volume of the largest container within the secondary containment area plus 10% to allow for precipitation, unless the container is equipped with individual secondary containment such as a double walled tank. Tanks that are manifolded together shall be designed in a manner to prevent the uncontrolled discharge of multiple manifolded tanks. A well site liner that is not used in conjunction with an impervious berm does not constitute secondary containment for the purpose of this subsection."

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**78.64a(g) Subsurface secondary containment systems may be employed at the well site. Subsurface secondary containment shall meet the following requirements:**

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As previously referenced in our general comments about the drawbacks of overly prescriptive language, it is Noble's suggestion that the language be modified to allow for flexibility. As such, Noble supports the MSC suggested language which reads, "(g) Subsurface secondary containment systems may be employed at the well site. Unless otherwise approved by the Department, subsurface secondary containment shall meet the following requirements:"

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**78.64a(h) All surface containment systems shall be inspected weekly to ensure integrity. If the containment system is damaged or compromised, the well operator shall repair the containment system as soon as practicable. The well operator shall maintain records of any repairs until the well site is restored. Stormwater shall be removed as soon as possible and prior to the capacity of secondary containment being reduced by 10% or more.**

To avoid unnecessary compliance stringency, the requirement for removing stormwater should be changed from "as soon as possible" to "as soon as practicable," which in combination with the additional requirement to ensure it is removed prior to the secondary containment capacity being reduced by 10% will meet the intended goal. As such, Noble supports the MSC's suggested amendatory language for the last sentence of (h) which reads,"(h) Stormwater shall be removed as soon as practicable and prior to the capacity of secondary containment being reduced by 10% or more."

**78.64a(i) Regulated substances that escape from primary containment or are otherwise spilled onto a containment system shall be removed as soon as possible. After removal of the regulated substances the operator shall inspect the containment system. A Department approved leak detection system capable of rapidly detecting a leak shall satisfy the requirement to inspect the integrity of a subsurface containment system. Groundwater monitoring wells shall not constitute a leak detection system for the purpose of this subsection. If the containment system did not completely contain the material, the operator shall notify the Department and remediate the affected area in accordance with §78.66.**

The reference to "regulated substance" is unnecessary and unclear in this subsection and as such Noble suggests striking the term "regulated." Additionally, operators clean up spills to containment as a standard. If a spill escapes containment, the provisions of Sections 91.33 and 78.66 will apply.

***

**78.64a(k) Inspection reports and maintenance records shall be available at the well site for review by the Department.**

For many operators, it is not practical to store hard copies of inspection reports and maintenance records at the well site. Often these records are maintained and made available electronically by operators to various parties working on the well site. It is Noble suggestion that the language be amendment to instead require that inspection reports and maintenance records be available for review upon request.

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**§78.65 Site restoration.**

*****(d) *Restoration after drilling* — Within nine months after completion of drilling a well, the owner or operator shall restore the well site, remove or fill all pits used to contain produced fluids or residual wastes and remove all drilling supplies, equipment and containment systems not needed for production. When multiple wells are drilled on a single well site, post drilling restoration is required within nine months after completion of drilling all permitted wells on the well site or 30 days after the expiration of all existing well permits on the well site, whichever occurs later in time. Drilling supplies and equipment not needed for production may only be stored on the well site if express written consent of the surface landowner is obtained and the supplies or equipment are maintained in accordance with § 78.64a.**

To account for the dynamics of an operation like Noble's where with one rig move we drill and complete every well on a pad in sequence, Noble suggests that the section read "Restoration after completion" and refer to restoration after completion of a well and rather than restoration after "drilling" or "completion of drilling." Additionally, Noble contends 9 months is an aggressive target and would request the Department allows 2 years for restoration after completion in alignment with other states in the region.

***

**78.65(d)(1)(iii) All areas of the site not needed to safely operate the well are restored to approximate original conditions, including preconstruction contours, and can support the original land uses to the extent practicable. The areas needed to safely operate the well include to the following:**
**(A) Areas used for service vehicle and rig access.**
**(B) Areas used for storage tanks and secondary containment facilities.**
**(C) Areas used for wellhead(s) and appurtenant processing facilities.**
**(D) Area used for any necessary safety buffer limited to the area surrounding equipment that is physically cordoned off to protect the facilities.**
**(E) Area used to store any supplies or equipment consented to by the surface landowner.**
**(F) Area used for operation and maintenance of long-term PCSM best management practices.**

Noble has significant concerns with this section, in particular the requirement to restore a pad to preconstruction contours. Returning portions of a pad to preconstruction contours after drilling but before plugging would require the use of earth moving equipment, presenting a risk to pad stability on an actively producing pad, not to mention the dangers of working with that type of equipment around live well heads. This interim earth work would mean unnecessarily re-exposing soil to erosion and sediment control risks. Additionally, there may be instances where a landowner may not want a site restored to its original state that should be provided for. Noble requests that the Department strikes the requirement to restore to preconstruction contours in this section. Noble is also concerned with subsection (A), referring to an exclusion for areas used for service vehicle(s) and rig access. Noble requests that the Department adds language to clarify that this would include area needed for refracturing and workovers.

***

**78.65(d)(1)(iii)(3) The demonstration under paragraph (2) shall be submitted on forms provided by the Department six months after the completion of drilling, for approval by the Department. The demonstration must include all of the following:**

To account for the dynamics of an operation like Noble's where with one rig move we drill and complete every well on a pad in sequence Noble suggests that the section read "six months after completion of last well" or "drilling of last well" rather than "after the completion of drilling." Also, the deadline for submitting forms for an extension should align with the time frame triggering the restoration period, rather than an arbitrary 6 months after completion.

***

**78.65(d)(1)(iii)(3) (F) Return the portions of the site not occupied by production facilities or equipment to approximate original conditions, including preconstruction contours, and can support the original land uses to the extent practicable.**

As previously stated in 78.65(d)(1)(iii), Noble has significant concerns with the requirement to restore a pad to preconstruction contours at this stage of the process. Noble requests that the Department strikes the reference to preconstruction contours in this section. Additionally, Noble believes language should be modified to specify that restoration requirements be according to the conditions in the permit to account for those circumstances where a landowner does not want land returned to its original state.

**78.65(d)(1)(iii)(4) Written consent of the landowner on forms provided by the Department satisfies the restoration requirements of this section provided the operator develops and implements a site restoration plan that complies with paragraph 3(i)(A)-(E) and all PCSM requirements in 25 Pa. Code Chapter 102.**

There is an inconsistency in this section as it allows for a written consent from a landowner to deviate from the regulations' restoration requirements, but then the language then reiterates that restoration has to comply with the regulation. There are instances where a landowner may want something other than what the regulation prescribes. Noble believes this section should allow the landowner consent forms in lieu of the regulation's restoration requirements.

**78.65(e) Restoration after plugging—Within nine months after plugging a well, the owner or operator shall remove all production or storage facilities, supplies and equipment and restore the well site to approximate original conditions, including preconstruction contours, and can support the original land uses to the extent practicable.**

This language should include exception language for instances where a landowner wants something done with the land other than what the regulation prescribes. Additionally, to allow for operations like Nobles where with one rig move we drill and complete every well on a pad in sequence, this section should read "after plugging the **last well on a pad.**" Lastly, this section seems to have the same requirements as the Erosion Sediment and Control General Permit 2 for closing the permit. Noble asks that the Department clarifies the necessity of having redundant conditions in a permit and in the regulation to restore a site or else remove the superfluous requirement.

Requests for extension that include the information described in Act 13 should be approved, denied, or deemed to be approved within 90 days of submission to the Department. The regulation should be structured to allow for renewable two year extensions of the restoration deadline provided the site restoration plan and appropriate PCSM measures are fully implemented. This extension process is critical to avoid unnecessary earth moving activities for reconstruction of a well pad should an operator plan to drill and produce additional wells on the same pad location at some later time in the future. The risk of accelerated erosion and resulting sedimentation is much greater during earth moving activities that would take place if a pad would be made smaller or expanded, possibly multiple times in the future. As such, Noble supports MSC suggested language for this section.

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**§ 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.**

Noble requests that the Department clarifies how far outside the Limit of Disturbance is considered "adjacent to well sites."

**78.66(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.**

Sections 78.66(b)(1) above and (2) below create 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, as well as the numerous federal reporting requirements under CERCLA, CAA, and EPCRA 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. Noble recommends that this additional requirement be clarified and limited to reporting substances that are expressly listed in 25 Pa. Code Chapter 250 and brine. Additionally, Noble supports the MSC's suggested language below:

"(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 as required by § 91.33 (relating to incidents causing or threatening pollution); or

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

***

**78.66(b)(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.**

This section requires necessary corrective actions that are to be taken following a spill or release. However, provisions of this section are phrased as broad objectives to be achieved, and would potentially create liability where factors beyond the control of the operator prevent the attainment of the listed goals. As such, Noble supports MSC's suggested amendatory language below:

"(3) Upon the occurrence of any spill or release, the operator or responsible party shall take appropriate action 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."

**78.66(b)(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.**

Noble supports the need for regulatory flexibility to facilitate emergency response actions, however in this case, it believes that 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, 25 Pa. Code § 287.101(d). As such, Noble supports MSC's suggested amendatory language below:

(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.

**78.66(b)(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.**

Noble is concerned that this section, designed to address steps to decontaminate equipment used in responding to a spill or release, is unnecessarily restrictive. Decontamination of equipment may be necessary if the equipment may not be needed is some cases. 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. As such, Noble supports MSC's suggested language below:

> "(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."

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**78.66(c)(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).**

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 industry 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.

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**§ 78.68. Oil and gas gathering lines.**

**(a)All earth disturbance activities associated with oil and gas gathering line installations and supporting facilities shall be limited to the construction right-of-way, work space areas, pipe storage yards, borrow and disposal areas, access roads and other necessary areas identified on the erosion and sediment control plan.**

The Department's proposed language in this subsection would not be necessary in light of MSC's proposed change to Section 78.53 which Noble supports. Gathering line construction is an "oil and gas operation", as defined in Act 13, and erosion and sediment control requirements for oil and gas operations are addressed in Section 78.53. It would be Noble's suggestion that the Department deletes subsection 78.68(a). If the Department insists on the proposed section, Noble asks that it clarify what would qualify as "supporting facilities."

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**78.68(d) Backfilling of the gathering line trench shall be conducted in a manner that minimizes soil compaction to ensure that water infiltration rates of the soil have not been decreased.**

Noble requests that the Department clarifies how an operator would demonstrate compliance with this subsection.

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**78.68(e) Equipment shall not be refueled within the jurisdictional floodway of any watercourse or within 50 feet of any body of water.**

Noble asks that the Department provide exception language for when materials staging for gathering line installations outside of 50 feet may not be possible and clarification on what is meant by "jurisdictional floodway."

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**78.68(g) The gathering line operator shall maintain the pipeline right-of-way, service roads and points of access to minimize the potential for accelerated erosion and sedimentation and to manage post construction stormwater and minimize impacts to existing riparian buffers in accordance with 25 Pa. Code Chapter 102.**

The Department's proposed language would not be necessary in light of MSC's proposed change to Section 78.53 above. Gathering line construction is an "oil and gas operation", as defined in Act 13, and erosion and sediment control requirements for oil and gas operations are addressed in Section78.53. Noble supports MSC's suggested amendatory language and in turn deleting this subsection 78.68(g).

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**78.68(h). All buried metallic gathering lines shall be installed and placed in operation in accordance with 49 CFR Pt. 192 or 195 (relating to the requirements for corrosion control).**

To avoid inconsistencies between state and federal laws, Noble recommends the proposed definition language in 78.1 for "Gathering Pipeline" language be struck and instead incorporate by reference the definition in 49 CFR 192.3 and the guidance around jurisdiction for gathering lines in 49 CFR 192.8.

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**§ 78.68b. Temporary pipelines that transport fluids other than fresh ground water, surface water, water from water purveyors or approved sources, shall be installed aboveground except when crossing pathways, roads or railways where the pipeline may be installed below ground surface.**

Noble contends that the language needs to be modified to allow for instances where it may be more practical and/or less invasive to cross watercourses and/or bodies of water below ground surface. Noble supports MSC's suggested language for this section:

> "(b) Temporary pipelines that transport fluids other than fresh ground water, surface water, water from water purveyors or approved sources, shall be installed aboveground except when crossing pathways, roads, railways, watercourses, or bodies of water where the pipeline may be installed below ground surface."

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**§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.**

Noble suggests this section be modified to note that a water management plan is not needed for water source locations outside of Pennsylvania. Noble also requests that the Department identifies a process by which an operator can amend an approved WMP for insubstantial changes.

**78.69(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.**

The SRBC "requirements" that the Department would impose under this section are ambiguous as written. Some SRBC requirements are part of individual water withdrawal docket conditions and could not be implemented outside of the SRBC. In addition, the Department would impose conditions on water withdrawals or purchases solely by this industry in the Ohio River basin without imposing such conditions on other industries withdrawing

or purchasing water. This proposal to adopt SRBC requirements lack specificity and cannot be implemented as written. Noble supports the MSC suggestion that 78.69(b) should be deleted.

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**§ 78.73. General provision for well construction and operation.**

**78.73(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.**

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 lat/long 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. The obligation to visually monitor wells is subjective and it may not be possible to get permission to access the surface near an abandoned well. It is not practical to continuously monitor wells over long periods of time. The use of electronic monitoring may be possible in some cases. Noble supports the MSC's suggested language for this section below:

> "§ 78.73. General provision for well construction and operation.
>
> (c) Orphaned or abandoned wells in the vicinity of a well which is hydraulically fractured that are identified pursuant to section 78.52a(c) and that can be located on the ground using reasonable efforts shall be monitored during periods of actual fluid pumping operations, provided that surface access to such wells can be obtained. Such monitoring shall include a visual inspection of the well at least every four hours, or following each stage of hydraulic fracturing, whichever is shorter, or other monitoring arrangement approved by the Department. The operator shall immediately notify the Department of any change to the well being monitored and take action to prevent pollution of waters of the Commonwealth or discharges to the surface."

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**§ 78.122. Well record and completion report.**

**(a) For each well that is drilled or altered, the operator shall keep a detailed drillers log at the well site available for inspection until drilling is completed. Within 30 calendar days of cessation of drilling or altering a well, the well operator shall submit a well record to the Department on a form provided by the Department that includes the following information:**

Noble contends that 30 days from "cessation of drilling" is a confusing trigger and a short time frame for a multi-well site. The information required in the reports is difficult to obtain the in 30 days on a multi-well site. Noble suggests the language be modified to require reports "90 days from rig release" or "90 days from the end of a completion of a well."

* * *

**78.122(a)(12) The country of origin and manufacture of tubular steel products used in the construction of the well.**

Noble recommends that the Department strikes requirements to report country of origin and manufacture of tubular steel products used in the construction of the well. This requirement serves no protective environmental purpose and is difficult to obtain.

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noble energy

**78.122(b) Within 30 calendar days after completion of the well, when the well is capable of production, the well operator shall arrange for the [submit] submission of a completion report to the Department on a form provided by the Department that includes the following information:**

Noble suggests that the Department clarifies for Sections 78.122(b)(6)(iii,iv,v) whether submission to FracFocus covers the reporting requirement.

* * *

**§ 78.123. Logs and additional data.**

**(a) If requested by the Department within 90 calendar days after the completion [of drilling] or recompletion of drilling [of a well], the well operator shall submit to the Department a copy of the electrical, radioactive or other standard industry logs run on the well.**

To avoid confusion, the Department should strike "recompletion of drilling" and insert "recompletion of a well." Additionally, Noble supports that inclusion of a 2 year confidentiality clause to prevent the sharing of an operator's logs and data, both of which represent a significant capital investment and competitive advantage.