

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Oil and Gas Management**

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TITLE: Addressing Spills and Releases from Oil & Gas Wells and Related Operations

AUTHORITY: The Oil and Gas Act of 1984, Act of December 19, 1984, P.L. 1140, as amended, (58 P.S. §§601.101-601.607), The Clean Streams Law (35 P.S. §§691.1-691.1001), The Solid Waste Management Act (35 P.S. §§6018.101-6018.1003), and The Pennsylvania Land Recycling and Environmental Remediation Standards Act (35 P. S. §§ 6026.101 - 6026.908) (Act 2).

POLICY: Persons responsible for spills and/or releases from and related to oil and gas well operations should follow this policy in responding to those spills and releases to ensure protection of people and the environment.

PURPOSE: This policy is developed to facilitate a consistent and uniform general response by those working in and for the oil and gas industry to respond to spills and releases related to oil and gas well operations regulated by the Pennsylvania Department of Environmental Protection (DEP or Department).

APPLICABILITY: This policy applies to any and all parties responsible for spills and releases from oil and gas wells and related operations.

DISCLAIMER: The policies and procedures outlined in this guidance are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements. The policies and procedures herein are not adjudications or regulations. There is no intent on the part of DEP to give these policies and procedures that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

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Responding to a Spill or Release Related to Oil & Gas Operations

Before generating waste, oil and gas well operators are required by 25 Pa. Code § 78.55 (relating to control and disposal plans) to prepare and implement a control and disposal plan under 25 Pa. Code § 91.34 (relating to activities utilizing pollutants). The plan must address the control and disposal of fluids, residual waste and drill cuttings, including tophole water, brines, drilling fluids, additives, drilling muds, stimulation fluids, well servicing fluids, oil, production fluids and drill cuttings from the drilling, alteration, production, plugging or other activity associated with oil and gas wells.

Operators can meet these regulatory requirements and the requirements under 25 Pa. Code § 91.34 by developing and implementing a site specific Preparedness, Prevention and Contingency (PPC) Plan. A PPC Plan should identify the appropriate regional office contact numbers and procedures for reporting spills, releases and all emergencies to DEP as well as the immediate response and clean-up activities associated with such spills, releases and emergencies.

Copies of the plan(s) must:

- 1) Be provided to the Department upon request,
- 2) Be available at the well site during drilling, completion and alteration activities for use by those involved in those activities and for review by DEP, and
- 3) Include a list of emergency contact phone numbers for the area in which the well site is located. The emergency contact phone numbers must be prominently displayed at the well site during drilling, completion or alteration activities.

Regional Emergency Contact Numbers and the counties they serve are attached in Appendix A. For detailed information on preparation of PPC Plans, one can refer to the Department's technical guidance document, *Guidelines for the Development and Implementation of Environmental Emergency Response Plans* (document number 400-2200-001).

In accordance with the control and disposal plan and/or PPC plan, the person¹ responsible (Responsible Party) for a spill or release of a substance that creates a danger of pollution of the waters of the Commonwealth or damage to property (hereinafter "pollutional substance") should take immediate action to:

- 1) Cease the spill or release of the pollutional substance,
- 2) Prevent migration of the pollutional substance from the site of the spill or release, and
- 3) Prevent the pollutional substance from reaching or impacting surface water or groundwater.

Reporting a Spill or Release Related to Oil & Gas Operations

What Spills to Report to the Department

According to 25 Pa. Code §§ 91.33(a) and 78.66(a), a spill or release causing or threatening pollution of the waters of this Commonwealth must be reported to the Department. Pursuant to 25 Pa. Code § 78.66(b), if a reportable release of brine on or into the ground occurs at the well site, the Responsible

¹ For this policy, a "person" is any legal entity which is recognized by law with rights or duties.

Party must notify the Department. 25 Pa. Code § 78.1 defines “reportable release of brine” as the spilling, leaking, emitting, discharging, escaping or disposing of either:

- 1) More than 5 gallons of brine within a 24-hour period on or into the ground at the well site where the total dissolved solids (TDS) concentration of the brine is equal or greater than 10,000 mg/L, or
- 2) More than 15 gallons of brine within a 24-hour period on or into the ground at the well site where the TDS concentration of the brine is less than 10,000 mg/L.

Due to the requirements in § 78.66 and § 91.33 and the difficulty in ascertaining the exact quantity of a spill or release or the danger such a spill or release poses to the environment, the Responsible Party should report a spill or release of any polluttional substance to the Department regardless of the quantity spilled.

If secondary containment is in place when the spill or release occurs on a well site, including a competent well pad liner, the Responsible Party should notify the Department if the quantity of material exceeds 42 gallons. If the secondary containment is sufficient to contain the spill or release, the Responsible Party should remove the spilled/released material from the secondary containment within 24 hours. Once removed, the Responsible Party should properly store and/or dispose of the material in accordance with applicable law and regulations.

When to Notify the Department

The Responsible Party must immediately notify the Department of a spill or release causing or threatening pollution of waters of this Commonwealth in accordance with 25 Pa Code §§ 91.33(a) and 78.66(a). Pursuant to 25 Pa. Code § 78.66(b), the Responsible Party must notify the Department of a reportable release of brine as soon as practicable, but no later than two hours after detecting or discovering the release.

The Responsible Party should report all other spills and releases, including spills to secondary containment and those spills and releases related to transportation of oil and gas wastes, to the Department as soon as practicable, but no later than two hours after detecting or discovering the spill or release.

How to Notify the Department

The Responsible Party should notify the Department by telephone. The Department does not consider voicemail messages, e-mails or text messages to fulfill this notification requirement. Mailed letters or communications from a third party also are not acceptable forms of initial notification.

Spills and releases should be reported to the appropriate DEP Regional Office listed in Appendix A. The Department also maintains a statewide toll free number: 1-800-541-2050. This number serves as a backup to the regional numbers and also supports a reporting mechanism for people who do not know which regional office is responsible for a particular area.

Responsible Parties should be advised that the notification procedures outlined above are in addition to those requirements outlined in the Oil and Gas Act, Solid Waste Management Act, Waste Transportation Safety Act, Clean Streams Law, and related regulations. Under certain circumstances, as specified under

applicable law and in accordance with the control and disposal plan and/or PPC plan, the Responsible Party must immediately notify emergency responders (including, but not limited to state or local police and the County emergency management official), federal authorities, other state authorities and downstream users of impacted or threatened waters.

Remediation of a Spill or Release Related to Oil & Gas Operations

In General

Remediation of an area affected by a spill or release related to oil and gas operations is required.

The Responsible Party must remediate the affected area by demonstrating attainment of one of the remediation standards available under the Act 2/Land Recycling Program regulations in Chapter 250 of Title 25 of the Pennsylvania Code. For remediation purposes, not all regulated substances have a published numeric standard. In situations where there is no Statewide health standard for a regulated substance, one of the other standards must be selected for that substance. For example, chlorides have a Statewide health standard for releases to groundwater, but do not have a Statewide health standard for releases in soil. For those chloride releases to soil, either the background or site-specific standard must be achieved in order to demonstrate attainment under Act 2.

The Responsible Party must appropriately remove and dispose of waste from the spill or release.

The Department has the authority to order the Responsible Party to remediate the spill or release utilizing the Act 2 process.² The Department will exercise enforcement discretion and issue such orders where:

- 1) A spill or release poses a substantial threat of harm to the environment or public health or where a Responsible Party demonstrates a lack of intention to appropriately remediate a spill or release; or
- 2) The Responsible Party does not conduct the remediation in accordance with one of the following processes.

Small Spills

For spills of less than 42 gallons at a well site that do not pollute waters of the Commonwealth or threaten pollution of these waters, the Responsible Party should remove the soil visibly impacted by the spill upon discovery of the spill and should dispose of the impacted soil by a method permitted by law. The Responsible Party should notify the Department of its intent to remediate a spill in this manner at the time notification of the spill is made.

Act 2

If the Responsible Party voluntarily chooses to utilize Act 2, the Responsible Party should notify the Department of this decision in writing within 15 days of the spill or release. The notification should also include a brief summary of the actions the Responsible Party has taken and intends to take at the site to address the spill or release (e.g., a schedule for site characterization, to the extent known).

² 25 Pa. Code § 250.2(b)

The Responsible Party will then be required to follow the administrative process set forth in Act 2, including publication of submission to DEP of a Notice of Intent to Remediate (NIR) and municipal notification of submission to DEP of a Final Report demonstrating attainment of the selected standard. However, the submission and publication of an NIR and public notification regarding the Final Report are not necessary for cleanups conducted under the Act 2 background or Statewide health standard if the Final Report is submitted to the Department within 90 days of the spill or release.³ If the Department approves the Final Report, Act 2 provides the Responsible Party relief from cleanup liability for the contamination identified in the site reports submitted to and approved by the Department.

The forms for completing the NIR, Final Report Summary, and examples of the public notice language are available on the Department's website at

<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=552033&mode=2>.

Alternative Process

Where a Responsible Party does not elect to utilize Act 2, the Responsible party may remediate a spill or release in the following manner.

Within 15 days of the spill or release, the Responsible Party should provide a brief written report that includes, to the extent that is available, the following information:

- 1) The pollutional substance involved,
- 2) Where the spill or release occurred,
- 3) The environmental media affected,
- 4) Any impacts to water supplies, buildings or sewers, and
- 5) Interim remedial actions planned, initiated or completed.

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

Within 180 days of the spill or release, the Responsible Party must perform a site characterization to determine the extent and magnitude of the contamination and submit a site characterization report to the appropriate DEP Regional Office outlining the findings. The report should also include discussion on any interim remedial actions taken. This report may be the last report submitted to the Department where interim remedial actions adequately address the spill or release and attains an Act 2 standard.

If the site characterization indicates that the interim remedial actions taken did not adequately address the spill or release to attainment of an Act 2 standard, the Responsible Party must develop and submit a remedial action plan to the appropriate DEP Regional Office. In instances where the background or Statewide health standard has been selected, the plan is due within 45 days of the site characterization.

³ 35 P.S. §§ 6026.302(e) and 6026.303(h)

For site-specific standard remediations, the plan is due within 45 days after approval of the site characterization report.

Once the remedial action plan is implemented, the Responsible Party must submit a remedial action completion report to the appropriate DEP Regional Office. The Department will review the completion report to ensure that the remediation has achieved one of the three Act 2 standards. Because the Act 2 process was not followed, however, Act 2 cannot provide the Responsible Party relief from cleanup liability for the contamination.

Restoration and Revegetation of Areas Impacted by a Spill or Release Related to Oil & Gas Operations

Any areas impacted by a spill or release should be restored in a timely manner. In addition to the cleanup requirements for a spill or release in accordance with the Solid Waste Management Act, the Clean Streams Law, Act 2 and 25 Pa. Code § 91.33, well owners or operators are required to restore the well site under Section 206 of the Oil and Gas Act, 58 P.S. § 601.206. According to subsection (a) of that provision, well owners and operators are required to restore the land surface within the area disturbed in siting, drilling, completing and producing a well. The Department considers an area impacted by a spill or release at the well site to have been disturbed and to require restoration. Under Section 206(c), well site restoration must be undertaken within 9 months after the completion of drilling any well. Therefore, if a spill occurs at a well pad and any of the spilled material leaves the well pad, the off-pad area impacted by the spill must also be restored within 9 months of completion of drilling.

Spills that occur on the unrestored area of the well pad must be remediated as soon as possible. Areas affected by a spill or release that are not on a well site should be restored and revegetated as soon as possible during the growing season and within a time period specified by the Department if outside the growing season.

The Responsible Party is expected to consult with the landowner of any area affected by a spill or release. Restoration and revegetation should insure that the restored area is capable of supporting the type of vegetation that was present before the release. The Department considers a well site to be restored under the Oil and Gas Act when the well site is restored to conditions that support the same potential uses of the land that existed prior to the spill or release, including the vegetation of those areas.

Restoration, including revegetation, is especially important with respect to substances that are not particularly toxic to humans, but that may exhibit phytotoxic properties, such as flowback fluids and production fluids containing chlorides. Plant species vary in their susceptibility to toxic effects of chlorides, and the appropriate levels for restoration and revegetation in many cases will depend on the particular use to be restored. For example, a concentration of 1,000 – 1,500 mg/kg of chlorides in soil may be considered a benchmark for some agricultural crops, but other sensitive crop species may be impacted at levels of 500 – 800 mg/kg.

Appendix A
DEP Regional Emergency Contact Numbers

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| <p>Northwest Region 230 Chestnut Street Meadville, PA 16335-3481 814-332-6945 (8:00 a.m. to 4:30 p.m. M-F) 1-800-373-3398 (After hours, weekends and holidays) Counties: <i>Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango and Warren</i></p> | <p>Northcentral Region 208 W. Third Street, Suite 101 Williamsport, PA 17701 570-327-3636 (24-hour number including weekends and holidays) Counties: <i>Bradford, Cameron, Clearfield, Centre, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga and Union</i></p> | <p>Northeast Region 2 Public Square Wilkes-Barre, PA 18701-1915 570-826-2511 (24-hour number including weekends and holidays) Counties: <i>Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne and Wyoming</i></p> |
| <p>Southwest Region 400 Waterfront Drive Pittsburgh, PA 15222 412-442-4000 (24-hour number including weekends and holidays) Counties: <i>Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland</i></p> | <p>Southcentral Region 909 Elmerton Avenue Harrisburg, PA 17110 877-333-1904 (24-hour number including weekends and holidays) Counties: <i>Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry and York</i></p> | <p>Southeast Region 2 East Main Street Norristown, PA 19401 484-250-5900 (24-hour number including weekends and holidays) Counties: <i>Bucks, Chester, Delaware, Montgomery and Philadelphia</i></p> |