Chapter 78a Training
Emergency Response, Secondary Containment, Reporting/Remediating Spills & Releases
August 24, 2016

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Tom Wolf, Governor
Patrick McDonnell, Acting Secretary
The purpose of this presentation is to discuss the existing and new regulations for Emergency Response / control and disposal planning, secondary containment and reporting and remediating spills and releases.
§ 78a.55 Control and disposal planning + emergency response for unconventional wells
Who is required to prepare & Implement site Specific PPC Plans?

Persons conducting oil and gas operations shall prepare and implement site specific PPC plans according to §§ 91.34 and 102.5(l)
Emergency Response Planning

*Oil and gas operations*—The term includes the following:

(i) Well site preparation, construction, drilling, hydraulic fracturing, completion, production, operation, alteration, plugging and site restoration associated with an oil or gas well.

(ii) Water withdrawals, residual waste processing, water and other fluid management and storage, used exclusively for the development of oil and gas wells.

(iii) Construction, installation, use, maintenance and repair of:

(A) Oil and gas gathering and transmission pipelines.

(B) Natural gas compressor stations.

(C) Natural gas processing plants or facilities performing equivalent functions.

(iv) Construction, installation, use, maintenance and repair of all equipment directly associated with activities in subparagraphs (i)—(iii) to the extent that the equipment is necessarily located at or immediately adjacent to a well site, impoundment area, oil and gas pipeline, natural gas compressor station or natural gas processing plant.

(v) Earth disturbance associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.
Emergency Response Planning

§ 91.34: PPC Plan outlining measures necessary to prevent polluting substances from directly or indirectly reaching Commonwealth Waters.

§ 102.5(l): Prepare & implement PPC plan when materials (polluting substances) are used, stored or transported from site during earth disturbance activity.
Emergency Response Planning

WELL OPERATOR REQUIREMENTS:

- Operator shall **prepare and develop a site specific PPC plan** prior to storing, using, or generating **regulated substances** on a well site from the drilling, alteration, production, plugging or other activity associated with a well or transporting those regulated substances to, on or from a well site.
Regulated substance – The term as defined in section 103 of Act 2 (35 P.S. § 6026.103) :

PPC PLAN REQUIREMENTS:

• Identify the control and disposal methods and practices utilized by the well operator.

• Include a pressure barrier policy developed by the operator that identifies barriers to be used during identified operations.
PPC PLAN REVISIONS & COPIES:

• Revise the PPC plan prior to implementing a change to the practices identified in the PPC plan.

• Copy of the well operator’s PPC plan shall be provided to the Department, the Fish and Boat Commission or the landowner upon request and shall be available at the site during drilling and completion activities for review.
PPC EMERGENCY CONTACTS:

- A **list** of **emergency contact phone numbers for the area** in which the well site is located must be included in the PPC plan.

- **LIST prominently displayed at the well site during drilling, completion or alteration activities.**
<table>
<thead>
<tr>
<th>Region</th>
<th>Emergency Phone</th>
<th>Counties Supervised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southeast</td>
<td>484-250-5900</td>
<td>Bucks, Chester, Delaware, Montgomery, Philadelphia</td>
</tr>
<tr>
<td>South-central</td>
<td>866-825-0208</td>
<td>Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York</td>
</tr>
<tr>
<td>North-central</td>
<td>570-327-3636</td>
<td>Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union</td>
</tr>
<tr>
<td>Southwest</td>
<td>412-442-4000</td>
<td>Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Washington, Westmoreland</td>
</tr>
<tr>
<td>Northwest</td>
<td>814-332-6945</td>
<td>Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango, Warren</td>
</tr>
<tr>
<td></td>
<td>After Hours: 800-373-3398</td>
<td></td>
</tr>
<tr>
<td>RCSOB</td>
<td>1-800-541-2050</td>
<td>Statewide and Interstate</td>
</tr>
</tbody>
</table>
PPC Guidelines:

- Guidelines for the Development and Implementation of Environmental Emergency Response Plans, Commonwealth of Pennsylvania, Department of Environmental Protection, No. 400-2200-001, as amended and updated, will be deemed to meet the requirements of this section.

Emergency Response Planning

Emergency Response for unconventional well sites

• Applicability: This subsection (i) under 78a.55 applies to unconventional wells.
UNCONVENTIONAL PPC PLAN MUST DESCRIBE:

- **Containment practices** to be utilized and the area of the well site where primary and secondary containment will be employed as required under § 78a.64a

- **Equipment** to be kept **onsite** during drilling and hydraulic fracturing operations that can be utilized to prevent a spill from leaving the well site.
§ 78a.64a. Secondary containment:

C (1) Secondary containment must 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.
WELL SITE REGISTRATION:

• Prior to construction of an access road to a well site, the operator of an unconventional well shall request a street address for the well site from the county or municipality responsible for assigning street addresses.

• The operator shall determine the GPS coordinates for both the well site and the entrance to the well site.
WELL SITE REGISTRATION:

Register following with PEMA, the Department, the Public Safety Answering Point and the county emergency management organization within the county where the well site is located:

• The well site name.
• The well site address.
• The GPS coordinates for the entrance and the well site.
The following shall be retained at the well site for reference when contacting emergency responders:

• The well site name.
• The well site address.
• The GPS coordinates for the entrance and the well site.
SIGNAGE:

• Prior to construction of the access road, the operator of an unconventional well shall display a reflective sign at the entrance.

• Retroreflective sheeting material meeting ASTM 4956 Type III.

• [Link to DOT website](http://www.dot.state.mn.us/trafficeng/signing/doc/retroreflectivesheetingIDguide.pdf)
SIGNAGE:

• May not be obstructed from view by vegetation, equipment, vehicles or other obstruction.

• During drilling operations, the American Petroleum Institute (API) permit numbers of the wells at the site may be posted on a non-reflective sign below the principal sign. The API sign may be removed after the well is completed, provided that it is not otherwise required to be posted.
SIGN REQUIREMENTS:

• White background with a 2-inch red border and black numbers and letters.

• Sign must be of sufficient size to accommodate the required information described in this section. The minimum size of a sign must be 36 inches in height and 48 inches in width.
Emergency Response Planning

(D) The sign must follow the format of Figure 1 and contain:

(I) The address number for the well site displayed horizontally on the first line of the sign in text no smaller than 4 inches in height.

(II) The full address of the entrance, including the county and municipality in which the entrance is located.

(III) The well operator’s company name.

(IV) The 24-hour contact telephone information for the operator of the well site.

(V) The GPS coordinates for the entrance.

(VI) The well site name.

(VII) The wording “In Case of Emergency Call 9-1-1.”

(iii) The sign must be mounted independently from other signage.

(iv) The bottom of the sign must be positioned a minimum of 3 feet above ground level.

(v) The sign may not contain other markings.
Well Site Signage

Two (2) Inch Contrasting Border

Well Site Street Address Numerals

Township and County of physical location of Well Site

Reflective Background

123

Company Name

WELL SITE NAME

123 MAIN ROAD

HOPEWELL TOWNSHIP

WASHINGTON COUNTY

ACCESS ROAD ENTRANCE: -77.246498, 41.362645

IN CASE OF EMERGENCY CALL 9-1-1

24 HOUR COMPANY CONTACT NUMBER: (123) 555-1234

Street Address

All Lettering Reflective

36" Minimum

GPS Coordinates of Well Entrance

48" Minimum

Pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION
EMERGENCY RESPONSE PLANS (ERP)

• Operator of an unconventional well shall develop and implement an emergency response plan that provides for equipment, procedures, training and documentation to properly respond to emergencies that threaten human health and safety for each well site. The plan shall incorporate National Incident Management System planning (NIMS).
ERP REQUIREMENTS:

• The emergency contact information, including phone numbers, for the well operator’s local representative for the well site and the well operator’s 24-hour emergency phone number.

• The emergency notification procedures that the operator shall utilize to contact emergency responders during an emergency.
ERP REQUIREMENTS:

• Description of the well site personnel’s response to the following:
  • Fire - Explosion or similar event.
  • Spill.
  • Medical emergency.
  • Security breach or other security event.
  • Any other incident that necessitates the presence of emergency responders.
ERP REQUIREMTS:

• Description of the procedure to be used to provide the most current information to emergency responders:

• Current **Material Safety Data Sheets** (now SDS)

• **location** of the SDS at the well site.

• **Name of the position** in the operator’s organization responsible for providing info above.
ERP REQUIREMENTS:

• **list** containing the location of any **fire** suppression and spill control equipment

• **Description** of any emergency equipment available to the operator located **off** the well site.

• **Summary** of the **risks and hazards** to the public within **1/2 mile** of the well site and the associated planning assumptions.

• **ER Training Plan**
ERP REQUIREMENTS:

• THE LOCATION OF AND MONITORING PLAN FOR ANY EMERGENCY SHUTOFF VALVES LOCATED ALONG WELL DEVELOPMENT PIPELINES IN ACCORDANCE WITH § 78a.68b (RELATING TO WELL DEVELOPMENT PIPELINES FOR OIL AND GAS OPERATIONS).
§ 78a.68b. Well development pipeline check valves:

- Well development pipelines used to transport fluids other than fresh ground/surface water, must have shut off valves, check valves or other methods of segmenting the pipeline placed at designated intervals, that prevent the discharge of more than 1,000 barrels of fluid. Shut off valves shall be installed on both sides of the temporary stream/wetland crossing.
ERP MAY CONSIST OF TWO PARTS:

• A **base plan** common to all of the operator’s well sites.

• A **site-specific plan** containing the remaining required elements.
The ERP and subsequent updates shall be submitted to:

- PEMA.
- The Department.
- The county emergency management agency.
- The Public Safety Answering Point with jurisdiction over the well site.
Emergency Response Planning

• A copy of the ERP shall be available at the well site during all phases of operation.
• The ERP must address response actions for the following stages of operation at the well site:
  Preparation of access road and well site.
  Drilling of the well.
  Hydraulic fracturing/stimulation of the well.
  Production
  Restoration
  Plugging
§ 78a.64 Containment around Oil & Condensate tanks
APPLICABILITY:

• Tank or tanks with a **combined capacity of at least 1,320 gallons** to contain **oil or condensate** produced from a well

• Owner or operator **shall construct and maintain a dike or other method of secondary containment** which satisfies the requirements under 40 CFR Part 112
Secondary Containment - Tanks

REQUIREMENTS:

• The secondary containment provided by the dikes or other method of secondary containment shall have containment capacity sufficient to hold the volume of the largest single tank, plus a reasonable allowance for precipitation based on local weather conditions and facility operation.
Secondary Containment - Tanks
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Secondary Containment - Tanks

REQUIREMENTS:

• Prior to drainage of accumulated precipitation from secondary containment, the secondary containment shall be inspected and accumulations of oil picked up and returned to the tank or disposed of in accordance with approved methods.
REQUIREMENTS:

**Drainage** of secondary containment is acceptable if:

- Secondary containment **consists of only precipitation** directly to the secondary containment and drainage **will not cause a harmful discharge and/or a sheen.**
- The secondary containment **drain valve is opened and resealed,** or other drainage procedure, as applicable, is conducted under responsible supervision.
EXISTING CONDENSATE TANKS:

An owner or operator who installed a tank or tanks with a combined capacity of at least 1,320 gallons prior to _____ (effective date of adoption of proposed rulemaking.) to store condensate produced from a well shall meet the requirements of this section when a tank is replaced, refurbished or repaired or by _______ (date two years from the effective date of adoption of proposed rulemaking.), whichever is sooner.
§ 78a.64a Secondary Containment at unconventional well sites
REQUIREMENTS:

• **Unconventional Well sites** shall be designed and constructed using secondary containment.

• **All regulated substances**, including solid wastes and other regulated substances in equipment or vehicles, **shall be managed within secondary containment**.
Well Site Secondary Containment

REQUIREMENTS:

Secondary containment 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.

- 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.
REQUIREMENTS:

- Secondary containment must have coefficient of permeability no greater than $1 \times 10^{-10}$ cm/sec.

- Liner compatibility shall satisfy compatibility test methods as approved by the Department.
REQUIREMENTS:

- The physical and chemical characteristics of all liners, coatings or other materials used as part of the secondary containment, that could potentially come into direct contact with regulated substances **must be compatible** and be **resistant** to physical, chemical and other failure during handling, installation and use.
Well Site Secondary Containment

REQUIREMENTS:

• Secondary containment open to the atmosphere must have storage capacity sufficient to **hold the volume of the largest single aboveground primary containment, plus an additional 10% of volume for precipitation**.

• Using double walled tanks capable of detecting a leak in the primary containment fulfills the requirements in this subsection.
Well Site Secondary Containment

REQUIREMENTS:

• **Stormwater** that comes into contact with **regulated substances** stored within the secondary containment shall be managed as residual waste.

• Inspection reports and maintenance records shall be available at the well site for review by the Department.

• Documentation of chemical compatibility of secondary containment with material stored within the system shall be provided to the Department upon request.
Well Site Secondary Containment

REQUIREMENTS:

• Regulated substances that escape from primary containment or are otherwise spilled onto secondary containment shall be removed ASAP.

• After removal of the regulated substances inspect the secondary containment.

• If the secondary containment did not completely contain the material, the operator shall notify the Department and remediate the affected area.
REQUIRED INSPECTIONS & ACTIONS:
• All secondary containment shall be inspected weekly to ensure integrity.
• If the secondary containment is damaged or compromised, repair the secondary containment as soon as practicable.
• 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.
Well Site Secondary Containment
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Well Site Secondary Containment
§ 78a.66 Reporting and remediating spills and releases
This section applies to reporting and remediating spills or releases of regulated substances on or adjacent to well sites and access roads.
REPORTING RELEASES:

- An operator or other responsible party shall report the following spills and releases of regulated substances

- A spill or release of a regulated substance causing or threatening pollution of the waters of this Commonwealth, in the manner required by § 91.33 (relating to incidents causing or threatening pollution).
PA Code Title 25 Ch. § 91.33(a):

- Incidents causing or threatening pollution: Requires responsible party to **immediately notify DEP by telephone** when Waters of the Commonwealth are polluted or threatened.

- Report location and nature of the danger and, if reasonably possible to do so, **notify downstream users of the waters**.
REPORTING RELEASES:

- A spill or release of **5 gallons or more** of a **regulated substance** over a 24-hour period that is not completely contained by secondary containment
REPORTING RELEASES:

• In addition to meeting the notification requirements of § 91.33, the operator or other responsible party shall contact the appropriate Regional Department office by telephone or call the Department’s Statewide toll free number as soon as practicable, but no later than 2 hours after discovering the spill or release.
REPORTING RELEASES - REQUIRED INFORMATION:

- The name of the person reporting the spill or release and telephone number.
- The name, address and telephone number of the operator or other responsible party.
- The date & time of the spill or release or when it was discovered.
- The location of the spill or release, including directions to the site, GPS coordinates or the 911 address, if available.
REPORTING RELEASES – REQUIRED INFORMATION:

• Estimated weight or volume of substance spilled
• The nature of any injuries.
• Remedial actions planned, initiated /completed.
• Description of the nature of the spill or release and its cause, potential impacts to public health, safety or environment including any available information concerning the pollution or threatened pollution of surface water, groundwater or soil.
Reporting and Remediating Spills
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WATER SUPPLY INVESTIGATIONS:

• The operator or other responsible party shall **identify and sample water supplies** that have been polluted or for which there is a potential for pollution in a reasonable and systematic manner.

• Operator or other responsible party shall provide a copy of the **sample results** to the water supply owner and the department within 5 business days of receipt of the sample results from the laboratory.
WATER SUPPLY REPLACEMENT:

• The operator or other responsible party shall restore or replace a polluted water supply in accordance with § 78a.51.
Reporting and Remediating Spills
Reporting and Remediating Spills
REMEDIATION REQUIREMENTS:

• 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.
REMEDIATION REQUIREMENTS:

• **Decontaminate equipment** used to handle the regulated substance, including storage containers, processing equipment, trucks and loaders, before returning equipment to service.

• Contaminated wash water, waste solutions and residues generated from washing or decontaminating shall be managed as residual waste.
REMEDIATION REQUIREMENTS:

• Spills or releases to the ground of less than 42 gallons at a well site that do not pollute or threaten to pollute waters of the Commonwealth may be remediated by removing the soil visibly impacted by the spill.

• Department notification required at the time the report of the spill or release is made for intent to remediate a spill or release in this manner.
REMEDIATION REQUIREMENTS:

• For spills or releases to the ground of greater than or equal to 42 gallons or that pollute or threaten to pollute waters of the Commonwealth, the operator or other responsible person must demonstrate attainment of one or more of the standards established by Act 2 and Chapter 250.
INITIAL REPORT REQUIREMENTS:

• **Within 15 business days** of the spill or release, the operator or OTHER responsible party shall provide an **initial written report**
INITIAL REPORT REQUIREMENTS:

• The regulated substance involved.
• The location where the spill or release occurred.
• The environmental media affected.
• Pollution or threatened pollution of water supplies.
• Impacts to buildings or utilities.
• Interim remedial actions planned, initiated or completed.
INITIAL REPORT REQUIREMENTS:

• **A summary of the actions** the operator or other responsible party intends to take at the site **to address the spill or release** such as a **schedule** for site characterization, to the extent known, and the anticipated timeframes within which it expects to take those actions.
SITE CHARACTERIZATION REPORT REQUIREMENTS:

- **Within 180 calendar days** of the spill or release, the operator or other responsible party **shall** perform a site characterization & submit Report to determine the extent and magnitude of the pollution & any interim remedial actions taken.

- This report **may be considered to be a final remedial action completion report** if the interim remedial actions meet all of the requirements of an Act 2 cleanup standard.
SITE CHARACTERIZATION REPORT REQUIREMENTS:

- After the initial report, any new pollution or other impacts identified or discovered during interim remedial actions or site characterization shall also be reported in writing to the Department within 15 business days of their discovery.
If the site characterization indicates that the interim remedial actions taken did not adequately remediate the spill or release:

• Submit a **remedial action plan** to the appropriate Department regional office for **approval**. The plan is due within **45 calendar days** of submission of the site characterization to the Department. Remedial action plans shall contain the **elements outlined in § 245.311(a)** as well as a schedule for the submission of remedial action progress reports.
245.311 & 313 Remedial Action Plans & Reports:
The remedial action plan must be complete and concisely organized and contain the following elements, as necessary, based on the nature, extent, type, volume or complexity of the release.

http://www.pacode.com/secure/data/025/chapter245/s245.311.html
http://www.pacode.com/secure/data/025/chapter245/s245.313.html
Questions?

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