

CHAPTER 78. CONVENTIONAL OIL AND GAS WELLS

Subchapter A. GENERAL PROVISIONS

§ 78.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise, or as otherwise provided in this chapter:

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Act 2—The Land Recycling and Environmental Remediation Standards Act (35 P.S. §§ 6026.101—6026.908).

Attainable bottom—The depth, approved by the Department, which can be achieved after a reasonable effort is expended to clean out to the total depth.

Brine—Fluids generated from or related to oil and gas production from a well, including, without limitation, fluids intended for use as a product. This term does not include:

(i) Fluids generated by coalbed methane wells or wells drilled in hydrogen sulfide areas.

(ii) Drilling fluids, hydraulic fracture stimulation flowback, plugging fluids.

(iii) Fluids generated from the production of a conventional oil and gas well mixed with well servicing or treatment fluids, except detergents.

(iv) Fluids generated from any “unconventional formation,” as that term is defined in 58 Pa. C.S. § 3203.

Barrel—A unit of volume equal to 42 US liquid gallons.

Casing seat—The depth to which casing is set.

Cement—A mixture of materials for bonding or sealing that attains a 7-day maximum permeability of 0.01 millidarcies and a 24-hour compressive strength of at least 500 psi in accordance with applicable standards and specifications.

Cement job log—A written record that documents the actual procedures and specifications of the cementing operation.

Centralized impoundment—A facility authorized by a Dam Permit for a Centralized Impoundment Dam for Oil and Gas Operations (DEP #8000-PM-OOGM0084).

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Condensate—A low-density, high-API gravity liquid hydrocarbon phase that generally occurs in association with natural gas. For the purposes of this definition, high-API gravity is a specific gravity scale developed by the American Petroleum Institute for measuring the relative density of various petroleum liquids, expressed in degrees.

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Floodplain—The area inundated by the 100-year flood as identified on maps and flood insurance studies provided by the Federal Emergency Management Agency, or in the absence of such maps or studies or any evidence to the contrary, the area within 100 feet measured horizontally from the top of the bank of a perennial stream or 50 feet from the top of the bank of an intermittent stream.

Freeboard—The vertical distance between the surface of an impounded or contained fluid and the lowest point or opening on a lined pit edge or open top storage structure.

Fresh groundwater—Water in that portion of the generally recognized hydrologic cycle which occupies the pore spaces and fractures of saturated subsurface materials.

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Gel—A slurry of clay or other equivalent material and water at a ratio of not more than 7 barrels of water to each 100 pounds of clay or other equivalent matter.

Inactive well—A well granted inactive status by the Department pursuant to 58 Pa.C.S. § 3214 (relating to inactive status) and § 78.101 (relating to general provisions).

Intermediate casing—A string of casing set after the surface casing and before production casing, not to include coal protection casing, that is used in the wellbore to isolate, stabilize or provide well control.

L.E.L.—Lower explosive limit.

Modular aboveground storage structure—An aboveground structure used to store wastewater that requires final assembly at a well site to function and which can be disassembled and moved to another well site after use.

Noncementing material—A mixture of very fine to coarse grained nonbonding materials, including unwashed crushed rock, drill cuttings, earthen mud or other equivalent material approved by the Department.

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Owner—A person who owns, manages, leases, controls or possesses a well or coal property. For purposes of sections 203(a)(4) and (5) and 210 of the act (58 P.S. §§ 601.203(a)(4) and (5) and 601.210), the term does not include those owners or possessors of surface real property on which

the abandoned well is located who did not participate or incur costs in the drilling or extraction operation of the abandoned well and had no right of control over the drilling or extraction operation of the abandoned well. The term does not apply to orphan wells, except where the Department determines a prior owner or operator benefited from the well as provided in section 210(a) of the act.

PPC plan—Preparedness, Prevention and Contingency plan—A written preparedness, prevention and contingency plan.

Perimeter area—An area that begins at the outside coal boundaries of an operating coal mine and extends within 1000 feet beyond those boundaries or an area within 1000 feet beyond the mine permit boundaries of a coal mine already projected and permitted but not yet being operated.

Permanently cemented—Surface casing or coal protective casing that is cemented until cement is circulated to the surface or is cemented with a calculated volume of cement necessary to fill the theoretical annular space plus 20% excess.

Pit—A natural topographic depression, manmade excavation or diked area formed primarily of earthen materials designed to hold fluids, semifluids or solids associated with oil and gas operations, including, but not limited to, fresh water, wastewater, flowback, mine influenced water, drilling mud and drill cuttings, that services a single well site.

Primary containment—A pit, tank, vessel, modular aboveground storage structure, temporary storage facility or other equipment designed to hold regulated substances including all piping and other appurtenant facilities located on the well site.

Private water supply—A water supply that is not a public water supply.

Process or processing—The term has the same meaning as “processing” as defined in section 103 of the Solid Waste Management Act (35 P.S. § 6018.103).

Production casing—A string of pipe other than surface casing and coal protective casing which is run for the purpose of confining or conducting hydrocarbons and associated fluids from one or more producing horizons to the surface.

Public water supply—A water system that is subject to the Pennsylvania Safe Drinking Water Act (35 P.S. §§ 721.1—721.17).

Regulated substance—The term as defined in section 103 of Act 2 (35 P.S. § 6026.103).

[Reportable release of brine—Spilling, leaking, emitting, discharging, escaping or disposing of one of the following:

(i) **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 concentration of the brine is equal or greater than 10,000 mg/l.**

(ii) **More than 15 gallons of brine within a 24-hour period on or into the ground at the well site where the total dissolved solids concentration of the brine is less than 10,000 mg/l.]**

Residual waste—The term as defined in § 287.1 (relating to definitions).

Retrievable—When used in conjunction with surface casing, coal protective casing or production casing, the casing that can be removed after exerting a prudent effort to pull the casing while applying a pulling force at least equal to the casing weight plus 5000 pounds or 120% of the casing weight, whichever is greater.

Seasonal high groundwater table—The saturated condition in the soil profile during certain periods of the year. The condition can be caused by a slowly permeable layer within the soil profile and is commonly indicated by the presence of soil mottling.

Secondary containment—A physical barrier specifically designed to minimize releases into the environment of regulated substances from primary containment, to prevent comingling of incompatible released regulated substances and to minimize the area of potential contamination, to the extent practicable.

Sheen—An iridescent appearance on the surface of the water.

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Subchapter C. ENVIRONMENTAL PROTECTION

PERFORMANCE STANDARDS

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§ 78.52a. Area of review.

(a) The operator of a conventional well requiring stimulation by hydraulic fracturing at any time shall establish an area of review prior to hydraulic fracturing based on the following distances:

(1) 200 feet or half of the well field spacing radially, whichever is greater, from the top hole location of a vertical oil well.

(2) 400 feet or half of the well field spacing radially, whichever is greater, from the top hole location of a vertical gas well.

(3) Half of the well field spacing perpendicular to the stimulated lateral section of a horizontal well or radially from the total depth of a deviated well.

(b) Prior to hydraulic fracturing, the operator of a conventional well shall exercise due diligence to identify the location of any of the following within the area of review established in subsection (a):

(1) Active wells.

(2) Inactive wells.

(3) Orphan wells.

(4) Abandoned wells.

(5) Plugged wells.

(c) Identification of wells listed in subsection (b) shall be accomplished by the following:

(1) Conducting a review of the Department's publicly-accessible well databases.

(2) Conducting a review of accessible historical sources of information, such as applicable farm line maps.

(3) Field examination.

(d) The operator shall submit a report summarizing the review, including:

(1) A plat showing the location and GPS coordinates of all wells identified under subsection (c).

(2) A monitoring plan for wells required to be monitored under § 78.73a (relating to area of review notification, monitoring and remediation), including the methods the operator will employ to monitor these wells.

(3) To the extent that information is available, the depth of identified wells.

(4) The source of the information provided for identified wells.

(5) To the extent that information is available, surface evidence of failed well integrity for any identified well.

(e) The operator shall submit the report required by subsection (d) to the Department electronically through the Department's website at least 30 days prior to commencement of hydraulic fracturing.

(f) The Department may require other information necessary to review the report submitted pursuant to subsection (d). The Department may make a determination that additional measures are needed, on a case-by-case basis, to ensure protection of waters of the Commonwealth and public health and safety.

(g) 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 barrel of oil.

(h) Any previously unknown abandoned wells identified by the operator in the area of review shall be reported to the Department in accordance with section 3213(a.1) of the act (58 Pa.C.S.A. § 3213(a.1)).

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§ 78.55. Control and disposal planning.

(a) Preparation and implementation of plan *for oil and gas operations*. [Prior to generation of waste, the well operator shall prepare and implement a plan under § 91.34 (relating to activities utilizing pollutants) for 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.] Persons conducting oil and gas operations shall prepare and implement site specific PPC plans according to §§ 91.34 and 102.5(l) (relating to activities utilizing pollutants; and permit requirements).

(b) Preparation and implementation of plan for well sites. In addition to the requirements in subsection (a), the well operator shall prepare and develop a site specific PPC plan prior to storing, using, or generating regulated substances on a well site from the drilling, alteration, production, plugging or other activity associated with an oil or gas well or transporting those regulated substances to, on or from a well site.

[(b)] (c) Requirements. The **well operator's PPC** plan must **also** identify the control and disposal methods and practices utilized by the well operator and be consistent with the act, The Clean Streams Law (35 P.S. §§ 691.1—691.1001), the Solid Waste Management Act (35 P.S. §§ 6018.101—6018.1003) and §§ 78.54, 78.56—78.58 and 78.60—78.63. The **PPC** plan must also include a pressure barrier policy **developed by the operator** that identifies barriers to be used during identified operations.

[(c)] (d) Revisions. The **well** operator shall revise the **PPC** plan prior to implementing a change to the practices identified in the **PPC** plan **and when site-specific issues need to be addressed in the PPC plan. Such issues include, but are not limited to, emergency contacts, written directions, hospital locations, maps, wetlands and bodies of water.**

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

(f) Guidelines. With the exception of the pressure barrier policy required under subsection (c), a PPC plan developed in conformance with the 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.

[(e)] (g) 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 and be prominently displayed at the well site during drilling, completion or alteration activities.

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

(a) Except as provided in §§ 78.60(b) and 78.61(b) (relating to discharge requirements; and disposal of drill cuttings), the operator shall contain **[pollutional] regulated** substances **used at or generated at a well site in a single pit, tank, or series of tanks or other storage structures approved by the Department. A pit with a footprint area of 3,000 square feet or greater, or a total volume of 125,000 gallons or greater, may not be used for temporary containment without prior approval from the Department.** The operator shall install or construct and maintain the pit, tank or series of **[pits and] tanks or other approved storage structures** in accordance with the following requirements:

(1) The pit, tank **[or]**, series of **[pits and] tanks, or other approved storage structure** shall be constructed and maintained with sufficient capacity to contain all **[pollutional] regulated** substances and wastes which are used or produced during drilling, altering, completing, **recompleting, servicing** and plugging the well.

(2) Modular aboveground storage structures that exceed 20,000 gallons capacity may not be utilized to store regulated substances without prior Department approval. The Department will maintain a list of approved modular storage structures on its web site.

(3) The operator must obtain siting approval from the Department for site specific installation of all modular aboveground storage structures for each individual well site where use of the modular aboveground storage structure is proposed.

(4) Modular aboveground storage structures that exceed 20,000 gallons capacity must be constructed with secondary containment. Secondary containment must meet all of the following:

(i) Have a coefficient of permeability no greater than 1×10^{-7} cm/sec.

(ii) 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 being stored, must be compatible with the regulated substance and be resistant to physical, chemical and other failure during handling, installation and use. Liner compatibility must satisfy compatibility test methods as approved by the Department.

(iii) Methods of 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. Tanks that are manifolded together shall be designed in a manner to prevent the uncontrolled discharge of multiple manifolded tanks.

(vi) Regulated substances that escape from primary containment or are otherwise spilled onto secondary containment shall be removed as soon as possible. After removal of the regulated substances the operator shall 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 in accordance with § 78a.66 (relating to reporting and remediating spills and releases).

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

(vi) Documentation of chemical compatibility of secondary containment with material stored within the system shall be provided to the Department upon request.

(5) After obtaining approval to utilize a modular aboveground storage structure at a specific well site, the owner or operator shall notify the Department at least 3 business days before the beginning of construction of these storage structures. The notice shall be submitted electronically to the Department through its web site and include the date the storage structure installation will begin. If the date of installation is extended, the operator shall re-notify the Department with the date that the installation will begin, which does not need to be 3 business days in advance.

[(2)] (6) A pit shall be designed, constructed and maintained so that at least 2 feet of freeboard remain at all times. If open tanks **or open storage structures are used, the tanks **and storage structures** shall be maintained so that at least 2 feet of freeboard remain at all times unless the tank **or storage structure** is provided with an overflow system to a standby tank or pit with sufficient volume to contain all excess fluid or **[waste] regulated substances**. If an open standby tank **or standby open storage structure** is used, it shall be maintained with 2 feet of freeboard. If this subsection is violated, the operator immediately shall take the necessary measures to ensure the structural stability of the pit, or tank **or other storage structure**, prevent spills and restore the 2 feet of freeboard.**

[(3)] (7) Pits [and], tanks **and other approved storage structures** shall be designed, constructed and maintained to be structurally sound **in accordance with sound engineering practices adhering to Nationally-recognized industry standards and the manufacturer's specifications.** [and] **Pits, tanks, and other approved storage structures shall be** reasonably protected from unauthorized acts of third parties.

[(4)] (8) A pit [or], tank **or other approved storage structure** that contains drill cuttings from below the casing seat, [pollutional] **regulated** substances[, wastes] or fluids other than topsoil water, fresh water and uncontaminated drill cuttings shall be impermeable **[and comply with the following:]**.

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

(i) **The liner must have** a coefficient of permeability of no greater than $1 \times [10^{-7}]$ **10⁻¹⁰** cm/sec **[and with sufficient strength and thickness to maintain the integrity of the liner].**

(ii) **The liner must be at least 30 mils thick unless otherwise approved by the Department. Approval may be granted if the manufacturer demonstrates that the alternative thickness is at least as protective as a 30-mil liner. A list of approved alternative liners shall be maintained on the Department's web site.**

(iii) The liner shall be designed, constructed and maintained so that the physical and chemical characteristics of the liner are not adversely affected by the [waste] **regulated substance stored therein** and the liner is resistant to physical, chemical and other failure during transportation, handling, installation and use. **Liner compatibility must satisfy ASTM Method D5747, Compatibility Test for Wastes and Membrane Liners, or other standards as approved by the Department for the duration the pit or other temporary storage structure is used.**

(iv) Adjoining sections of liners shall be sealed together to prevent leakage in accordance with the manufacturer's directions. **[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.] 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.**

[(ii)] (10) The pit shall be constructed so that the liner subbase is smooth, uniform and free from debris, rock and other material that may puncture, tear, cut or otherwise cause the liner to fail. **The pit must be structurally sound.** The liner subbase and subgrade shall be capable of bearing the weight of the material above the liner without settling that may affect the integrity of the liner. If the pit bottom or sides consist of rock, shale or other materials that may cause the liner to fail, a subbase of at least 6 inches of soil, sand or smooth gravel, or sufficient amount of an equivalent material, shall be installed over the area as the subbase for the liner.

[(iii)] **(11)** The bottom of the pit shall be at least 20 inches above the seasonal high groundwater table, unless the operator obtains approval under subsection (b) for a pit that exists only during dry times of the year and is located above groundwater.

(12) Stormwater must be diverted away from the pit.

(13) Prior to placing material in the pit, the liner shall be inspected for lack of uniformity, damage and other imperfections that may cause the liner to leak. The well operator shall correct damages or imperfections before placing the material in the pit and maintain the pit until closure of the pit.

[(iv)] **(14)** If a liner becomes torn or otherwise loses its integrity, the pit **or approved storage structure** shall be managed to prevent the [pit] contents from leaking [from the pit]. If repair of the liner or construction of another temporary pit **or approved storage structure** is not practical or possible, the [pit] contents shall be removed and disposed at an approved waste disposal facility or disposed on the well site in accordance with § 78.61, § 78.62 or § 78.63 (relating to disposal of residual waste—pits; and disposal of residual waste—land application).

[(v)] **(15) The liner shall be secured around the perimeter of the pit in a manner that does not compromise the integrity of the liner.** If the liner drops below the 2 feet of freeboard, the pit shall be managed to prevent the pit contents from leaking from the pit and the 2 feet of lined freeboard shall be restored.

(16) Condensate, whether separated or mixed with other fluids at a concentration greater than 1 percent by volume, may not be stored in any open top structure or pit. Aboveground tanks used for storing or separating condensate during well completion shall be monitored and have controls to prevent vapors from exceeding the lower explosive limits of the condensate outside the tank. Tanks used for storing or separating condensate shall be grounded.

(b) The operator may request to use practices other than those specified in subsection (a) which provide equivalent or superior protection by submitting a request to the Department for approval. The request shall be made **electronically to the Department through its website** on forms provided by the Department.

(c) Disposal of uncontaminated drill cuttings in a pit or by land application shall comply with § 78.61. A pit used for the disposal of residual waste, including contaminated drill cuttings, shall comply with § 78.62. Disposal of residual waste, including contaminated drill cuttings, by land application shall comply with § 78.63.

(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, the] **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) of the act (58 P.S. § 601.206(g))] **3216(g) of the act (relating**

to well site restoration) and § 78.65(d) (relating to site restoration). Pits used during servicing, plugging and recompleting the well shall be removed or filled within 90 calendar days of construction.

(e) The owner or operator shall notify the Department at least 3 business days before commencing construction of a pit with a footprint greater than 300 square feet to be used during servicing, plugging or recompleting the well. This notice shall be submitted electronically to the Department through its web site and include the date construction will commence. If the date of construction is extended, the operator shall re-notify the Department of the date of construction, which does not need to be 3 business days in advance. The Department may waive the notification requirements in the event of an emergency.

§ 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 may not be used to store brine and other fluids produced during operation of the well. An operator using a pit for storage of production fluids at the time of the effective date of these regulations shall report the use of the pit to the Department no later than *(Editor's note: the blank refers to a date six months from the effective date of this regulation)* and shall properly close the pit in accordance with appropriate restoration standards no later than *(Editor's note: the blank refers to a date one year from the effective date of this regulation)*. Any spills or leaks detected shall be reported and remediated in accordance with § 78.66 (relating to reporting and remediating spills and releases) prior to pit closure. 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. Unless separately permitted under the Solid Waste Management Act, no wastes may be stored at a well site unless the wastes are generated at or will be beneficially reused at that well site.

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

[(c) The operator may apply for approval from the Department to operate a pit as an impoundment under The Clean Streams Law, as indicated by the Department's issuance of a pit approval number in accordance with this section. No pit will be eligible for approval under this subsection unless the capacity of any one pit or of any two or more interconnected pits is less than 250,000 gallons, or the total capacity contained in pits on one tract or related tracts of land is less than 500,000 gallons. Compliance with this subsection does not relieve the operator from the obligation to comply with section 308 of

The Clean Streams Law (35 P.S. § 691.308) and the requirements for obtaining a permit for the erection, construction and operation of treatment works promulgated under that section.

(1) A request for approval under this subsection shall be made on forms furnished by the Department and, at a minimum, shall include the following:

(i) A description of the operator's plan that demonstrates compliance with this subsection for the construction or reconstruction of the pit.

(ii) A description of the operator's program for operation and maintenance of the pit.

(iii) A description of the method for subsequent disposal or reuse of the brine or other fluids produced during operation of the well.

(iv) A description of the operator's program for the closure of the pit and restoration of the site.

(2) The operator shall design, construct, operate and maintain the pit in accordance with the approval and the following:

(i) The pit approval number is posted at the pit in a legible and visible manner.

(ii) The pit is not located within 100 feet of a stream, wetland or body of water unless a waiver is granted by the Department.

(iii) The bottom of the pit is a minimum of 20 inches above the seasonal high groundwater table.

(iv) At least 2 feet of freeboard remain at all times.

(v) The pit is structurally sound and the inside slopes of the pit are not steeper than a ratio of 2 horizontal to 1 vertical.

(vi) The pit is impermeable and is lined with a synthetic flexible liner or alternate material that has a coefficient of permeability of no greater than 1×10^{-7} cm/sec. The liner shall be of sufficient strength and thickness to maintain the integrity of the liner. The thickness of a synthetic liner shall be at least 30 mils. Adjoining sections of liners shall be sealed together in accordance with the manufacturer's directions to prevent leakage.

(vii) The physical and chemical characteristics of the liner shall be compatible with the waste and the liner is resistant to physical, chemical and other failure during transportation, handling, installation and use. Liner compatibility shall satisfy EPA Method 9090, *Compatibility Test for Wastes and Membrane Liners*, or other documented data approved by the Department.

(viii) The pit shall be constructed so that the liner subbase is smooth, uniform and free of debris, rock and other material that may puncture, tear, cut, rip or otherwise cause the liner to fail. The liner subbase and subgrade shall be capable of bearing the weight of the material above the liner without settling in an amount that will affect the integrity of the liner. If the pit bottom or sides consist of rock, shale or other material that may cause the liner to leak, a subbase of at least 6 inches of soil, sand or smooth gravel, or a sufficient amount of an equivalent material shall be installed over the area as the subbase for the liner.

(ix) Prior to placing brine or other fluids in the pit, the operator shall inspect the liner and correct all damage or imperfections that may cause the liner to leak.

(x) Surface water which may drain into the pit shall be diverted away from the pit.

(xi) The pit is reasonably protected from unauthorized acts of third parties.

(3) Upon abandonment of the well or revocation of the approval by the Department, the operator shall restore the pit in accordance with the following:

(i) The free liquid fraction of the pit contents shall be removed and disposed under § 78.60(a) and the remaining pit contents and liner shall be removed and disposed under §§ 78.62 and 78.63 (relating to disposal of residual waste—pits; and disposal of residual waste—land application), or the Solid Waste Management Act.

(ii) The pit shall be backfilled to the ground surface and graded to promote runoff with no depression that would accumulate or pond water on the surface. The stability of the backfilled pit shall be compatible with the adjacent land.

(iii) The surface of the backfilled pit area shall be revegetated to stabilize the soil surface and comply with § 78.53 (relating to erosion and sediment control). The revegetation shall establish a diverse, effective, permanent, vegetative cover which is capable of self-regeneration and plant succession. Where vegetation would interfere with the intended use of the surface by the landowner, the surface shall be stabilized against accelerated erosion.]

(c) Secondary containment.

(i) Secondary containment is required for all new, refurbished or replaced aboveground primary containment, including their associated manifolds, that contain brine and other fluids produced during operation of the well.

(ii) If one tank in a series of tanks is added, refurbished or replaced, secondary containment is required for the entire series of tanks.

(iii) The secondary containment area provided by dikes or other methods of secondary containment open to the atmosphere must have containment capacity sufficient to hold the

volume of the largest single aboveground tank, plus an additional 10% of volume for precipitation.

(iv) Compliance with § 78.64 (relating to secondary containment around oil and condensate tanks) or using double walled tanks capable of detecting a leak in the primary containment fulfill the requirements in this subsection.

(d) Primary containment used to store brine or other fluids produced during operation of the well shall be designed, constructed and maintained to be structurally sound in accordance with sound engineering practices adhering to Nationally recognized industry standards and the manufacturer's specifications. Tanks that are manifolded together shall be designed in a manner to prevent the uncontrolled discharge of multiple manifolded tanks.

(e) Underground or partially buried storage tanks used to store brine or other fluids produced during operation of the well shall be designed, constructed and maintained to be structurally sound in accordance with sound engineering practices adhering to nationally recognized industry standards and the manufacturer's specifications. A well operator utilizing underground or partially buried storage tanks as of _____, (Editor's Note: The blank refers to the effective date of adoption of this proposed rulemaking.) shall provide electronically to the Department a list of the well sites where the underground or partially buried storage tanks are located through its website by _____.

(Editor's Note: The blank refers to 6 months after the effective date of adoption of this proposed rulemaking.) A well operator shall register the location of an additional underground storage tank prior to installation. Registration shall utilize forms provided by the Department and be submitted electronically to the Department through its website.

(f) All new, refurbished or replaced aboveground tanks that store brine or other fluid produced during operation of the well must comply with the corrosion control requirements in §§ 245.531 – 245.534 (relating to corrosion and deterioration prevention), with the exception of use of Department-certified inspectors to inspect interior linings or coatings.

(g) All new, refurbished or replaced underground storage tanks that store brine or other fluid produced during operation of the well must comply with the corrosion control requirements in § 245.432 (relating to operation and maintenance including corrosion protection) with the exception of use of Department-certified inspectors to inspect interior linings.

(h) Tanks storing brine or other fluids produced during operation of the well must be inspected by the operator at least once per calendar quarter and documented. Deficiencies noted during the inspection shall be addressed and remedied. When substantial modifications are necessary to correct deficiencies, they shall be made in accordance with manufacturer's specifications and applicable engineering design criteria. Any deficiencies identified during the inspection must be reported to the Department electronically through

its website within 3 days of the inspection. Inspection records shall be maintained for 1 year and made available to the Department upon request.

**§ 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 or mine influenced water 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.

(b) Approval from the Department is not required for the following activities conducted at a well site:

(1) Mixing fluids with freshwater.

(2) Aerating fluids.

(3) Filtering solids from fluids.

(c) Activities described in subsection (b) must be conducted within secondary containment.

(d) An operator processing fluids or drill cuttings generated by the development, drilling, stimulation, alteration, operation or plugging of oil or gas wells shall develop an action plan specifying procedures for monitoring for and responding to radioactive material produced by the treatment processes, as well as related procedures for training, notification, recordkeeping and reporting. The action plan shall be prepared in accordance with the Department's "Guidance Document on Radioactivity Monitoring at Solid Waste Processing and Disposal Facilities," Commonwealth of Pennsylvania, Department of Environmental Protection, No. 250-3100-001, as amended and updated, or in a manner at least as protective of the environment, facility staff and public health and safety and which meets all statutory and regulatory requirements.

(e) The operator may request to process drill cuttings only at the well site where those drill cuttings were generated by submitting a request to the Department for approval. 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.

(f) Processing residual waste generated by the development, drilling, stimulation, alteration, operation or plugging of oil or gas wells other than as provided for in subsections (a), (b), and (e) shall comply with the Solid Waste Management Act (35 P.S. §§ 6018.101—6018.1003).

(g) Processing of fluids in a manner approved under subsection (a) will be deemed to be approved at subsequent well sites provided the operator notifies the Department of location of the well site where the processing will occur at least three business days prior to the beginning of processing operations. The notice shall be submitted electronically to the Department through its web site and include the date activities will begin.

(h) Sludges, filter cake or other solid waste remaining after the processing or handling of fluids under subsection (a) or (b), including solid waste mixed with drill cuttings, shall be characterized under § 287.54 (relating to chemical analysis of waste) before the solid waste leaves the well site.

* * * * *

§ 78.59c. Centralized impoundments.

(a) An operator using a centralized impoundment at the time of the effective date of these regulations shall close the centralized impoundment in accordance with this section or obtain a permit in accordance with 25 Pa. Code Chapter 299 (relating to storage and transportation of residual waste). The closure plan shall be submitted electronically to the Department through its web site for review and approval no later than _____ (editor's note: the blank refers to a date six months from the effective date of this regulation). The operator shall properly close the centralized impoundment in accordance with the approved plan or obtain a permit in accordance with Subpart D, Article IX (relating to residual waste management) no later than _____ (Editor's Note: The blank refers to a date three years from the effective date of this regulation).

(b) The closure plan shall provide for the following:

(1) Removal of any impermeable membrane, concrete and earthen liner so that water movement to subsoils is achieved.

(2) Restoration of the site to approximate original conditions including preconstruction contours, and backfilling the impoundment to above finished grade to allow for settlement of fill and so the impoundment will no longer impound water.

(3) A plan for the removal of equipment, structures, wastes and related material from the facility.

(4) An estimate of when final closure will occur, including an explanation of the basis for the estimate.

(5) A description of the steps necessary for closure of the facility.

(6) A narrative description, including a schedule of measures that are proposed to be carried out in preparation for closure and after closure at the facility, including measures relating to the following:

(i) Water quality monitoring including but not limited to analyses of samples from the monitoring wells that were installed at the time of the construction of the centralized impoundment.

(ii) A soil sampling plan that explains how the operator will analyze the soil beneath the impoundment's liners. Analysis shall be based on a grid pattern or other method approved by the Department. Any spills or leaks detected shall be reported and remediated in accordance with § 78.66 (relating to reporting and remediating spills and releases) prior to impoundment closure.

(iii) Compliance with Chapter 102 including erosion and sediment control and post construction stormwater management.

(iv) Access control, including maintenance of access control.

(v) The name, address and telephone number at which the operator may be reached.

§ 78.60. Discharge requirements.

(a) The owner and operator may not cause or allow a discharge of a substance, **fill or dredged material** to the waters of this Commonwealth unless the discharge complies with this subchapter and Chapters 91—93, 95 [and], 102 **and 105**, The Clean Streams Law (35 P.S. §§ 691.1—691.1001), **the Dam Safety and Encroachments Act (32 P.S. §§ 693.1—693.27)** and the act.

(b) The owner and operator may not discharge topsoil water or water in a pit as a result of precipitation by land application unless the discharge is in accordance with the following requirements:

(1) No additives, drilling muds, **[pollutional materials] regulated substances** or drilling fluids other than gases or fresh water have been added to or are contained in the water, unless otherwise approved by the Department.

(2) The pH is not less than 6 nor greater than 9 standard units, or is characteristic of the natural background quality of the groundwater.

- (3) The specific conductance of the discharge is less than 1,000 $\mu\text{mHos/cm}$.
- (4) There is no sheen from oil and grease.
- (5) The discharge water shall be spread over an undisturbed, vegetated area capable of absorbing the tophole water and filtering solids in the discharge, and spread in a manner that prevents a direct discharge to surface waters and complies with § 78.53 (relating to erosion and sediment control).
- (6) Upon completion, the area complies with § 78.53.
- (7) The area of land application is not within 200 feet of a water supply or within 100 feet of a watercourse or body of water or within the floodplain.
- (8) If the water does not meet the requirements of paragraph (2) or (4), the Department may approve treatment prior to discharge to the land surface.

(c) Compliance with subsection (b) shall be documented by the operator and made available to the Department upon request while conducting activities under subsection (b) and submitted under § 78.65(e)(1)-(2) (relating to site restoration).

§ 78.61. Disposal of drill cuttings.

- (a) *Drill cuttings from above the surface casing seat—pits.* The owner or operator may dispose of drill cuttings from above the surface casing seat determined in accordance with [**§ 78.83(b)**] **§ 78.83(c)** (relating to surface and coal protective casing and cementing procedures) in a pit at the well site if the owner or operator satisfies the following requirements:
- (1) The drill cuttings are generated from the well at the well site.
 - (2) The drill cuttings are not contaminated with [**pollutional material**] **a regulated substance**, including brines, drilling muds, stimulation fluids, well servicing fluids, oil, production fluids or drilling fluids other than tophole water, fresh water or gases.
 - (3) The disposal area is not within 100 feet of a [**stream, body of water or a wetland**] **watercourse or body of water or within the floodplain** [unless approved as part of a waiver granted by the Department under section 205(b) of the act (58 P.S. § 601.205(b))].
 - (4) The disposal area is not within 200 feet of a water supply.
 - (5) The pit is designed, constructed and maintained to be structurally sound.
 - (6) The free liquid fraction of the waste shall be removed and disposed under § 78.60 (relating to discharge requirements).

(7) The pit shall be backfilled to the ground surface and graded to promote runoff with no depression that would accumulate or pond water on the surface. The stability of the backfilled pit shall be compatible with the adjacent land.

(8) The surface of the backfilled pit area shall be revegetated to stabilize the soil surface and comply with § 78.53 (relating to erosion and **[sedimentation] sediment** control). The revegetation shall establish a diverse, effective, permanent, vegetative cover which is capable of self-regeneration and plant succession. Where vegetation would interfere with the intended use of the surface of the landowner, the surface shall be stabilized against erosion.

(b) *Drill cuttings from above the surface casing seat—land application.* The owner or operator may dispose of drill cuttings from above the surface casing seat determined in accordance with **[§ 78.83(b)] § 78.83(c)** by land application at the well site if the owner or operator satisfies the following requirements:

(1) The drill cuttings are generated from the well at the well site.

(2) The drill cuttings are not contaminated with **[pollutional material] a regulated substance**, including brines, drilling muds, stimulation fluids, well servicing fluids, oil, production fluids or drilling fluids other than tophole water, fresh water or gases.

(3) The disposal area is not within 100 feet of a **[stream, body of water or a wetland] watercourse or body of water or within the floodplain [unless approved as part of a waiver granted by the Department under section 205(b) of the act (58 P.S. § 601.205(b))]**.

(4) The disposal area is not within 200 feet of a water supply.

(5) The soils have a minimum depth from surface to bedrock of 20 inches.

(6) The drill cuttings are not spread when saturated, snow covered or frozen ground interferes with incorporation of the drill cuttings into the soil.

(7) The drill cuttings are not applied in quantities which will result in runoff or in surface water or groundwater pollution.

(8) The free liquid fraction is disposed in accordance with § 78.60.

(9) The drill cuttings are spread and incorporated into the soil. **The loading and application rate of drill cuttings may not exceed a maximum of drill cuttings to soil ratio of 1:1.**

(10) The land application area shall be revegetated to stabilize the soil surface and comply with § 78.53. The revegetation shall establish a diverse, effective permanent vegetative cover which is capable of self-regeneration and plant succession. Where vegetation would interfere with the intended use of the surface by the landowner, the surface shall be stabilized against erosion.

(c) *Drill cuttings from below the surface casing seat.* After removal of the free liquid fraction and disposal in accordance with § 78.60, drill cuttings from below the surface casing seat determined in accordance with [~~§ 78.83(b)~~] § 78.83(c) may be disposed of as follows:

(1) In a pit that meets the requirements of [~~§ 78.62(a)(5)—(18)~~] § 78.62(a)(5)—(16) and (b) (relating to disposal of residual waste—pits).

(2) By land application in accordance with § 78.63(a)(5)—(20) and (b) (relating to disposal of residual waste—land application).

(d) The owner or operator may request to use solidifiers, dusting, unlined pits, attenuation or other alternative practices for the disposal of uncontaminated drill cuttings by submitting a request to the Department for approval. The request shall be made on forms provided by the Department and shall demonstrate that the practice provides equivalent or superior protection to the requirements of this section. **The Department will maintain a list of approved solidifiers on its web site. The operator does not need to request approval from the Department for use of approved solidifiers.**

(e) A pit used for the disposal of residual waste, including contaminated drill cuttings, shall comply with § 78.62. Land application of residual waste, including contaminated drill cuttings, shall comply with § 78.63.

(f) The owner or operator shall notify the Department at least 3 business days before disposing of drill cuttings under this section. This notice shall be submitted electronically to the Department through its web site and include the date the cuttings will be disposed. If the date of disposal is extended, the operator shall re-notify the Department of the date of disposal, which does not need to be 3 business days in advance. The owner or operator shall also provide notice of disposal to the surface landowner, including the location of the disposed drill cuttings, within ten business days of completion of disposal.

§ 78.62. Disposal of residual waste—pits.

(a) After the removal and disposal of the free liquid fraction of the waste under § 78.60(a) (relating to discharge requirements), the owner or operator may dispose of residual waste, including contaminated drill cuttings, in a pit at the well site if the owner or operator satisfies the following requirements:

(1) The **residual** waste is generated by the drilling [~~or production~~] **or stimulation** of an oil or gas well that is located on the well site where the **residual** waste is disposed.

(2) The well is permitted under section [~~201 of the act (58 P.S. § 601.201)~~] **3211 of the act (relating to well permits)** or registered under section [~~203 of the act (58 P.S. § 601.203)~~] **3213 of the act (relating to well registration and identification).**

(3) The requirements of section [215 of the act (58 P.S. § 601.215)] 3225 of the act (relating to bonding) are satisfied by filing a surety or collateral bond for wells drilled on or after April 18, 1985.

(4) Compliance is maintained with the act and this title.

(5) The owner or operator shall notify the Department at least 3 business days before disposing residual waste according to this section. This notice shall be submitted electronically to the Department through its web site and include the date the residual waste will be disposed. If the date of disposal changes, the operator shall re-notify of the new proposed date of disposal. The owner or operator shall also provide notice of disposal to the surface landowner, including the location of the disposed residual waste, within ten business days of completion of disposal.

[(5)] (6) The disposal area is not within 200 feet measured horizontally from an existing building, unless the current owner thereof has provided a written waiver consenting to the disposal closer than 200 feet. The waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the current owner.

[(6)] (7) The disposal area is not within 100 feet of a [stream,] watercourse or body of water [or wetland] or within the floodplain.

[(7)] (8) The disposal area is not within 200 feet of a water supply.

[(8)] (9) The bottom of the pit is a minimum of 20 inches above the seasonal high groundwater table. **The well operator shall determine that the pit bottom is at least 20 inches above the seasonal high groundwater table prior to using the pit. The determination shall be made by a soil scientist or other similarly trained person using accepted and documented scientific methods. The individual's determination shall contain a statement certifying that the pit bottom is at least 20 inches above the seasonal high groundwater table according to observed field conditions. The name, qualifications and statement of the individual making the determination and the basis of the determination shall be provided to the Department upon request.**

[(9)] (10) The pit is designed, constructed and maintained to be structurally sound and impermeable.

[(10)] The pit is lined with a synthetic flexible liner that is compatible with the waste and has a coefficient of permeability of no greater than 1×10^{-7} cm/sec. The liner shall be of sufficient strength and thickness to maintain the integrity of the liner. The liner thickness shall be at least 30 mils. Adjoining sections of liners shall be sealed together in accordance with the manufacturer's directions to prevent leakage. The operator may use an alternate liner or natural materials, if the material and the installation procedure to be used are approved by the Department. Notice of the approved liners and installation procedures will be published by the Department in the *Pennsylvania Bulletin*.

(11) The liner shall be designed, constructed and maintained so that the physical and chemical characteristics of the liner are not adversely affected by the waste and the liner is resistant to physical, chemical and other failure during transportation, handling, installation and use. Liner compatibility shall satisfy EPA Method 9090, *Compatibility Test for Wastes and Membrane Liners*, or other documented data approved by the Department.

(12) The pit shall be constructed so that the liner subbase is smooth, uniform and free of debris, rock and other material that may puncture, tear, cut, rip or otherwise cause the liner to fail. The liner subbase and subgrade shall be capable of bearing the weight of the material above the liner without settling. If the pit bottom or sides consist of rock, shale or other material that may cause the liner to fail and leak, a subbase of at least 6 inches of soil, sand or smooth gravel, or sufficient amount of an equivalent material shall be installed over the area as the subbase for the liner.

(13) Prior to placing material in the pit, the liner shall be inspected for lack of uniformity, damage and other imperfections that may cause the liner to leak. The owner or operator shall correct damages or imperfections before placing waste in the pit, and shall maintain the pit until closure of the pit.]

(11) The pit and liner meet the requirements of § 78.56(a)(7)—(10) (relating to temporary storage).

[(14)] (12) Prior to encapsulating the **residual** waste within the liner, the free liquid fraction of the **residual** waste shall be removed and disposed under § 78.60(a).

[(15)] (13) The liner shall be folded over, or an additional liner shall be added, to completely cover the **residual** waste and the **residual** waste is shaped so that water does not infiltrate the liner and is not confined above the liner.

[(16)] (14) Puncturing or perforating the liner is prohibited.

[(17)] (15) The pit shall be backfilled to at least 18 inches over the top of the liner and graded to promote runoff with no depressions that would accumulate or pond water on the surface. The stability of the backfilled pit shall be compatible with the adjacent land.

[(18)] (16) The surface area of the backfilled pit area shall be revegetated to stabilize the soil surface and comply with § 78.53 (relating to erosion and [sedimentation] **sediment** control). The revegetation shall establish a diverse, effective permanent vegetative cover which is capable of self-regeneration and plant succession. Where vegetation would interfere with the intended use of the surface by the landowner, the surface shall be stabilized against erosion.

(b) A person may not dispose of **residual** waste, including contaminated drill cuttings, at the well site unless the **residual** waste meets the following requirements:

(1) The concentration of contaminants in the leachate from the **residual** waste does not exceed 50% of the maximum concentration in [§ 261.24 Table I (relating to characteristic of

toxicity)] 40 CFR 261.24 Table 1 (relating to maximum concentration of contaminants for the toxicity characteristic).

(2) The concentration of contaminants in the leachate from the **residual** waste does not exceed 50 times the primary maximum contaminant level in effect under § 109.202 (relating to State MCLs, MRDLs and treatment technique requirements).

(3) For other health related contaminants, the concentration of contaminants in the leachate from the **residual** waste does not exceed 50 times the safe drinking water level established by the Department.

(4) Leachate characteristics are determined in accordance with methods approved by the Department.

(c) The owner or operator may request to use solidifiers or other alternate practices for the disposal of residual waste, including contaminated drill cuttings, by submitting a request to the Department for approval. The request shall be made on forms provided by the Department and shall demonstrate that the practice provides equivalent or superior protection to the requirements of this section.

§ 78.63. Disposal of residual waste—land application.

(a) The owner or operator may dispose of residual waste, including contaminated drill cuttings, at the well site by land application of the waste if the owner or operator satisfies the following requirements:

(1) The **solid fraction of residual** waste is generated by the drilling [**or production**] of an oil or gas well that is located on the well [**side**] **site**.

(2) The well is permitted under section [**201 of the act (58 P.S. § 601.201)**] **3211 of the act (relating to well permits)** or registered under section [**203 of the act (58 P.S. § 601.203)**] **3213 of the act (relating to well registration and identification)**.

(3) The requirements of section [**215 of the act (58 P.S. § 601.215)**] **3225 of the act (relating to bonding)** are satisfied by filing a surety or collateral bond for wells drilled on or after April 18, 1985.

(4) Compliance with the act and this title is maintained.

(5) The owner or operator shall notify the Department **electronically through its web site** at least 3 [**working**] **business** days before the land application activity is to occur. **The notification must include the date on which the land application is to occur. If the date of land application is extended, the operator shall re-notify the Department of the new proposed date, which does not need to be 3 business days in advance. The owner or operator shall also provide notice of disposal to the surface landowner, including the location of the disposed residual waste, within ten business days of completion of disposal.**

- (6) The waste application area is not within 200 feet measured horizontally from an existing building, unless the current owner thereof has provided a written waiver consenting to the application closer than 200 feet. The waiver shall be knowingly made and separate from a lease or deed, unless the lease or deed contains an explicit waiver from the current owner.
- (7) The waste application area is not within 100 feet of a stream, body of water or wetland.
- (8) The waste application area is not within 200 feet of a water supply and is not within 1,000 feet upgradient from an uncased well or spring being used as a water supply.
- (9) At a minimum, the seasonal high groundwater table is 20 inches from the surface.
- (10) The soils located within and immediately adjacent to the application area shall fall within the United States Department of Agriculture textural classes of sandy loam, loam, sandy clay loam, silty clay loam or silt loam.
- (11) The soils have a minimum depth from surface to bedrock of 20 inches.
- (12) Ground slopes to be utilized for waste applications do not exceed 25%.
- (13) The waste is not spread when the ground is saturated, or when snow or frozen ground would interfere with incorporation of the waste into the soil.
- (14) Prior to land application of the waste, the free liquid fraction of the waste is removed and disposed under § 78.60(a) (relating to discharge requirements).
- (15) The waste is not applied in quantities which will result in surface or groundwater pollution.
- (16) The waste is not applied in quantities that will adversely affect the intended use of the vegetation.
- (17) The waste is spread and incorporated into the top layer of the soil to a depth of at least 6 inches.
- (18) The loading and application rate of waste is consistent with the Departmental guidelines for the proposed operation and may not exceed a maximum waste to soil ratio of 1:1.
- (19) To determine compliance with this section, the Department may require the owner or operator to conduct soil surveys, monitoring or chemical analysis.
- (20) The land application area shall be revegetated to stabilize the soil surface and comply with **[§ 78.53] Chapter 102** (relating to erosion and **[sedimentation] sediment** control). The revegetation shall establish a diverse, effective permanent vegetative cover which is capable of self-regeneration and plant succession. Where vegetation would interfere with the intended use of the surface by the landowner, the surface shall be stabilized against erosion.

(21) If [a chemical] **additional** analysis **conducted under paragraph (19)** fails to show compliance with [paragraph (18)] **this section**, the owner or operator shall remediate the land application area until compliance is demonstrated.

(b) A person may not dispose of **the solid fraction of** residual waste, including contaminated drill cuttings, at the well site unless the concentration of contaminants in the leachate from the waste does not exceed the maximum concentration stated in [**§ 261.24 Table I (relating to characteristic of toxicity)**] **40 CFR 261.24 Table 1 (relating to maximum concentration of contaminants for the toxicity characteristic)**.

(c) The owner or operator may request to dispose of **the solid fraction of** residual waste, including contaminated drill cuttings, in an alternate manner from that required in subsection (a) by submitting a request to the Department for approval. The request shall be made **electronically to the Department through its web site** on forms provided by the Department and shall demonstrate that the practice provides equivalent or superior protection to the requirements of this section.

(d) The operator shall document compliance with subsection (b). The records shall be made available to the Department upon request while conducting activities under subsection (a) and submitted under § 78.65(e)(5) (relating to site restoration).

§ 78.63a. Alternative waste management.

An operator seeking to manage waste on a well site in any manner other than provided in §§ 78.56 – 78.63 shall submit a request electronically to the Department through its web site describing the alternate management practice and shall demonstrate that the practice provides equivalent or superior protection to the requirements in these sections.

§ 78.64. **Secondary containment** [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 **Part** 112 (relating to oil pollution prevention) around the tank or tanks which will prevent the tank contents from entering waters of this Commonwealth.

(b) The **secondary** containment [**area**] 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.

(c) Prior to drainage of accumulated precipitation from [**containment structures**] **secondary containment**, the [**containment area**] **secondary containment** shall be inspected and

accumulations of oil picked up and returned to the tank or disposed of in accordance with approved methods.

(d) After complying with subsection (c), drainage of **secondary** containment [facilities] is acceptable if:

(1) The accumulation in the **secondary** containment [facility] consists of only precipitation directly to the **secondary** containment [facility] and drainage will not cause a harmful discharge or result in a sheen.

(2) The **secondary** containment drain valve is opened and resealed, or other drainage procedure, as applicable, is conducted under responsible supervision.

(e) 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 _____ (Editor's Note: The blank refers to the effective date of adoption of this 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 _____ (Editor's Note: The blank refers to a date two years from the effective date of adoption of this proposed rulemaking.), whichever is sooner.

* * * * *

§ 78.66. Reporting **and remediating spills and** releases.

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

(b) If a reportable release of brine on or into the ground occurs at the well site, the owner or operator shall notify the appropriate regional office of the Department as soon as practicable, but no later than 2 hours after detecting or discovering the release.

(c) The notice required under subsection (b) shall be by telephone and describe:

(1) The name, address and telephone number of the company and person reporting the incident.

(2) The date and time of the incident or when it was detected.

(3) The location and cause of the incident.

(4) The quantity of the brine released.

(5) Available information concerning the contamination of surface water, groundwater or soil.

(6) Remedial actions planned, initiated or completed.

(d) If, because of an accident, an amount of brine less than the reportable amount as described in § 78.1 (relating to definitions), spills, leaks or escapes, that incident does not have to be reported.

(e) Upon the occurrence of any release, the owner or operator shall take necessary corrective actions to:

(1) Prevent the substance from reaching the waters of this Commonwealth.

(2) Recover or remove the substance which was released.

(3) Dispose of the substance in accordance with this subchapter or as approved by the Department.]

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

(b) Reporting releases.

(1) An operator or other 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, in the manner required by § 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 secondary containment.

(2) In addition to meeting the notification requirements of § 91.33 (relating to incidents causing or threatening pollution), 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. To the extent known, the following information shall be provided:

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

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

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

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

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

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

(vii) The nature of any injuries.

(viii) Remedial actions planned, initiated or completed.

(3) The operator or other responsible party shall take necessary interim corrective actions to prevent:

(i) The regulated substance from polluting or threatening to pollute the waters of the Commonwealth.

(ii) Damage to property.

(iii) Impacts to downstream users of waters of the Commonwealth.

(4) 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. The operator or other responsible party shall restore or replace a polluted water supply in accordance with § 78.51 (relating to protection of water supplies). The 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.

(5) 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.

(6) After responding to a spill or release, the operator or other responsible party 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.

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

(1) 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 or release and properly managing the impacted soil in accordance with the Department's waste management regulations. For spills or releases of greater than five gallons over a twenty-four hour period, the operator or responsible party shall notify the Department of its intent to remediate a spill or release in accordance with this paragraph at the time the report of the spill or release is made.

(2) 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 (relating to administration of land recycling program) in the following manner:

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

(A) The regulated substance involved.

(B) The location where the spill or release occurred.

(C) The environmental media affected.

(D) Pollution or threatened pollution of water supplies.

(E) Impacts to buildings or utilities.

(F) Interim remedial actions planned, initiated or completed.

(G) 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.

(ii) 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.

(iii) Within 180 calendar days of the spill or release, the operator or other responsible party shall perform a site characterization to determine the extent and magnitude of the pollution and submit a site characterization report to the appropriate Department regional office describing the findings. The time to submit the site characterization report may be extended by the Department. The report must include a description of any interim remedial actions taken.

(iv) The report under paragraph (iii) may be considered to be a remedial action completion report if the interim remedial actions meet all of the requirements of an Act 2 cleanup standard. In accordance with sections 302(e)(4) and 303(h)(4) of Act 2, 35 P.S. §§ 6026.302(e)(4), 6026.303(h)(4), notices provided for those sections are not required to be made or published if the person conducting the remediation submits the report demonstrating attainment of the background or Statewide health standard, respectively, within 90 days of the release.

(v) If the site characterization indicates that the interim remedial actions taken did not adequately remediate the spill or release, the operator or other responsible party shall develop and 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) (relating to remedial action plan), as well as a schedule for the submission of remedial action progress reports. The responsible party may include bioremediation in the remedial action plan so long as that method of remediation will attain the chosen Act 2 standard and the other requirements of § 245.311 are met.

(vi) Within 45 days after the selected remediation standard has been attained, the operator or other responsible party shall submit a remedial action completion report to the appropriate Department regional office for approval. Remedial action completion reports must contain the elements outlined in § 245.313(b) (relating to remedial action completion report).

Subchapter D. WELL DRILLING, OPERATION AND PLUGGING

GENERAL

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§ 78.72. Use of safety devices—blow-out prevention equipment.

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(i) Well drilling and completion operations requiring pressure barriers, as identified by the operator under [**§ 78.55(b) (relating to control and disposal plan)**] **§ 78.55(c) (relating to control and disposal planning)**, shall employ at least two mechanical pressure barriers between the open producing formation and the atmosphere that are capable of being tested. The mechanical pressure barriers shall be tested according to manufacturer specifications prior to operation. If during the course of operations the operator only has one functioning barrier, operations must cease until additional barriers are added and tested or the redundant barrier is repaired and tested. Stripper rubber or a stripper head may not be considered a barrier.

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§ 78.73a. Area of review notification, monitoring and remediation.

(a) Operators who have identified active, inactive, abandoned and plugged wells as part of an area of review survey conducted pursuant to § 78.52a (relating to area of review) shall provide notice to adjacent operators or owners in accordance with the following provisions:

(1) The operator shall notify all adjacent operators or owners of active, inactive, abandoned and plugged wells that are reasonably expected to penetrate within 500 feet of notches or stimulation perforations.

(2) Notice shall be provided at least 30 days prior to hydraulic fracturing.

(b) Operators who have identified orphan, abandoned, and plugged wells identified as part of an area of review survey that have no owner or operator and are reasonably expected to penetrate within 500 feet of notches or stimulation perforations shall visually monitor such wells during hydraulic fracturing by the operator conducting stimulation activities.

(c) The operator shall visually monitor wells in accordance with subsection (b) by conducting the following before, during and after hydraulic fracturing activities, as appropriate:

(1) Periodic visual inspections of the identified wells.

(2) Using instrumentation or other equipment to remotely monitor the identified wells.

(3) Monitoring pump pressures and volumes at the well undergoing stimulation to assess for changes indicative of abnormal fracture propagation.

(d) If an operator identifies a reportable well communication incident, the operator shall cease stimulation, take action to prevent pollution or a threat of pollution to waters of the Commonwealth and ensure public health and safety, and notify the Department within 24 hours. For the purposes of this subsection, reportable communication incidents include, but are not limited to, the following:

(1) Incidents which pollute or threaten to pollute the waters of the Commonwealth or impact workable coal resources.

(2) Incidents which pose a threat to public health or safety.

(3) Incidents which impair the mechanical integrity of another oil or gas well.

(e) If an operator identifies a reportable well communication incident, the operator may not resume hydraulic fracturing of the well that is required to cease stimulation in accordance with subsection (d) or discontinue visual monitoring of any impacted well identified in subsection (b) prior to submission of an electronic incident summary report through the Department's website and Department approval of the proposed action plan.

(e) If cessation of hydraulic fracturing is required under subsection (d), the operator may not resume hydraulic fracturing of the well that is the subject of the area of review survey or discontinue monitoring prior to submission of an electronic incident summary report and proposed action plan through the Department's website and Department approval of the proposed action plan.

(f) An operator that alters an orphan, abandoned or plugged well by hydraulic fracturing shall plug the altered well in accordance with this Chapter, or the operator may adopt the altered well and place it into production.

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