

TITLE 19 NATURAL RESOURCES AND WILDLIFE
CHAPTER 15 OIL AND GAS
PART 17 PITS, CLOSED-LOOP SYSTEMS, BELOW-GRADE TANKS AND SUMPS

19.15.17.1 ISSUING AGENCY: Energy, Minerals and Natural Resources Department, Oil Conservation Division.
[19.15.17.1 NMAC - N, 6/16/08]

19.15.17.2 SCOPE: 19.15.17 NMAC applies to persons engaged in oil and gas development and production within New Mexico.
[19.15.17.2 NMAC - N, 6/16/08]

19.15.17.3 STATUTORY AUTHORITY: 19.15.17 NMAC is adopted pursuant to the Oil and Gas Act, NMSA 1978, Section 70-2-6, Section 70-2-11 and Section 70-2-12.
[19.15.17.3 NMAC - N, 6/16/08]

19.15.17.4 DURATION: Permanent.
[19.15.17.4 NMAC - N, 6/16/08]

19.15.17.5 EFFECTIVE DATE: June 16, 2008, unless a later date is cited at the end of a section.
[19.15.17.5 NMAC - N, 6/16/08]

19.15.17.6 OBJECTIVE: To regulate pits, closed-loop systems, below-grade tanks and sumps used in connection with oil and gas operations for the protection of public health, welfare and the environment.
[19.15.17.6 NMAC - N, 6/16/08]

19.15.17.7 DEFINITIONS:

A. "Alluvium" means detrital material that water or other erosional forces have transported and deposited at points along a watercourse's flood plain. It typically is composed of sands, silts and gravels; exhibits high porosity and permeability; and generally carries fresh water.

B. "Closed-loop system" means a system that uses above ground steel tanks for the management of drilling or workover fluids without using below-grade tanks or pits.

C. "Division-approved facility" means a division-permitted surface waste management or injection facility, a facility permitted pursuant to 20.6.2 NMAC, a facility approved pursuant to 19.15.35.8 NMAC or other facility that the division specifically approves for the particular purpose. The division shall not approve any facility not otherwise permitted unless it finds that the facility's use for the specified purpose will protect fresh water, public health and the environment and comply with other applicable federal or state statutes, federal regulations, state rules and local ordinances.

D. "Emergency pit" means a pit that is constructed as a precautionary matter to contain a spill in the event of a release.

E. "Permanent pit" means a pit, including a pit used for collection, retention or storage of produced water or brine that is constructed with the conditions and for the duration provided in its permit, and is not a temporary pit.

F. "Restore" means to return a site to its former condition, in the manner and to the extent required by applicable provisions of 19.15.17 NMAC.

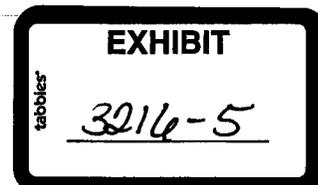
G. "Significant watercourse" means a watercourse with a defined bed and bank either named on a USGS 7.5 minute quadrangle map or a first order tributary of such watercourse.

H. "Sump" means an impermeable vessel, or a collection device incorporated within a secondary containment system, with a capacity less than 500 gallons, which remains predominantly empty, serves as a drain or receptacle for de minimis releases on an intermittent basis and is not used to store, treat, dispose of or evaporate products or wastes.

I. "Temporary pit" means a pit, including a drilling or workover pit, which is constructed with the intent that the pit will hold liquids for less than six months and will be closed in less than one year.
[19.15.17.7 NMAC - N, 6/16/08; A, 12/1/08]

19.15.17.8 PERMIT REQUIRED:

19.15.17 NMAC



A. A person shall not construct or use a pit or below-grade tank except in accordance with a division-issued permit. Only an operator may apply for a division-issued permit. Facilities permitted pursuant to 19.15.36 NMAC or WQCC rules are exempt from 19.15.17 NMAC. After June 16, 2008, an unlined permanent pit is prohibited and the division shall not issue a permit for an unlined permanent pit.

B. In lieu of using a pit or below-grade tank in accordance with 19.15.17 NMAC, an operator may use a closed-loop system or other division-approved alternative method. However, an operator may not conduct operations using a closed-loop system or proposed alternative method except in accordance with a division-issued permit. An operator requesting a permit for a closed-loop system that uses a temporary pit shall comply with the requirements for temporary pits specified in 19.15.17 NMAC.

C. The division may issue a single permit for all pits, below-grade tanks, closed-loop systems or division-approved alternative methods associated with a single application for permit to drill.
[19.15.17.8 NMAC - Rn, 19.15.2.50 NMAC & A, 6/16/08]

19.15.17.9 PERMIT APPLICATION:

A. An operator shall use form C-144 to apply to the division for a permit to construct or use a pit, closed-loop system, below-grade tank or proposed alternative method to which 19.15.17 NMAC applies. The operator shall submit the form C-144 either separately or as an attachment to a permit application for a facility with which the pit, closed-loop system, below-grade tank or proposed alternative method will be associated. For upstream facilities, the operator may submit form C-144 separately or as an attachment to an application for a well permit (form C-101 or C-103).

B. The permit application shall include a detailed plan as follows.

(1) Permanent pits. A registered professional engineer shall certify engineering, design and construction specifications as contained in the plan for permanent pits. The plan shall include:

- (a)** a quality control/quality assurance construction and installation plan;
- (b)** operating and maintenance procedures;
- (c)** a closure plan;
- (d)** a hydrogeologic report that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the environmental bureau in the division's Santa Fe office to evaluate the actual and potential effects on soils, surface water and ground water;
- (e)** detailed information on dike protection and structural integrity; and leak detection, including an adequate fluid collection and removal system;
- (f)** liner specifications and compatibility;
- (g)** freeboard and overtopping prevention;
- (h)** prevention of nuisance or hazardous odors, including H₂S;
- (i)** an emergency response plan, unless the permanent pit is part of a facility that has an integrated contingency plan;
- (j)** type of oil field waste stream;
- (k)** climatological factors, including freeze-thaw cycles;
- (l)** a monitoring and inspection plan;
- (m)** erosion control; and
- (n)** other pertinent information the environmental bureau in the division's Santa Fe office

requests.

(2) Temporary pits. The plan for a temporary pit shall use appropriate engineering principles and practices and follow applicable liner manufacturers' requirements. The plan shall include operating and maintenance procedures, a closure plan and hydrogeologic data that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the appropriate division district office to evaluate the actual and potential effects on soils, surface water and ground water and compliance with the siting criteria of 19.15.17.10 NMAC. The plan for a temporary pit may incorporate by reference a standard design for multiple temporary pits that the operator files with the application or has previously filed with the appropriate division district office.

(3) Closed-loop systems. The plan for a closed-loop system shall use appropriate engineering principles and practices and follow applicable manufacturers' requirements. The plan shall include operating and maintenance procedures and a closure plan. The plan for a closed-loop system may incorporate by reference a standard design for multiple projects that the operator files with the application or has previously filed with the appropriate division district office. If the operator proposes to bury the contents of a drying pad associated with a closed-loop system in an on-site trench, the operator shall provide sufficient information and detail on the site's

topography, soils, geology, surface hydrology and ground water hydrology to enable the appropriate division district office to evaluate the actual and potential effects on soils, surface water and ground water and compliance with the siting criteria of 19.15.17.10 NMAC.

(4) Below-grade tanks. The plan for a below-grade tank shall use appropriate engineering principles and practices and follow applicable manufacturers' requirements. The plan shall include operating and maintenance procedures, a closure plan and a hydrogeologic report that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the appropriate division district office to evaluate the actual and potential effects on soils, surface water and ground water and compliance with the siting criteria of 19.15.17.10 NMAC. The plan for a below-grade tank may incorporate by reference a standard design for multiple below-grade tanks that the operator files with the application or has previously filed with the appropriate division district office.

C. Closure plans. A closure plan that an operator submits in a plan required in Subsection B of 19.15.17.9 NMAC, or any other closure plan required pursuant to 19.15.17 NMAC, shall describe the proposed closure method and the proposed procedures and protocols to implement and complete the closure.

(1) If the operator proposes an on-site closure method, the operator shall also propose other methods to be used if the initial method does not satisfy the on-site closure standards specified in Subsection F of 19.15.17.13 NMAC or, if applicable, other on-site closure standards that the environmental bureau in the division's Santa Fe office approves.

(2) An operator of an existing unlined permanent pit that is permitted by or registered with the division, or an existing, lined or unlined, permanent pit not permitted by or registered with the division, identified under Paragraphs (1) or (2) of Subsection A of 19.15.17.13 NMAC, shall submit the respective closure plan required under the transitional provisions of Subsection B of 19.15.17.17 NMAC to the environmental bureau in the division's Santa Fe office.

(3) An operator of an existing unlined, temporary pit or an existing below-grade tank, identified under Paragraphs (3) or (4) of Subsection A of 19.15.17.13 NMAC, shall submit the respective closure plan required under the transitional provisions of Subsection B of 19.15.17.17 NMAC to the appropriate division district office.

D. Filing of permit application.

(1) Permanent pits and exceptions requested pursuant to 19.15.17.15 NMAC. An operator shall file an application, form C-144, and all required attachments with the environmental bureau in the division's Santa Fe office to request approval to use or construct a permanent pit or request an exception pursuant to 19.15.17.15 NMAC and shall provide a copy to the appropriate division district office.

(2) Temporary pits, closed-loop systems and below-grade tanks. To request approval to use or construct a temporary pit, closed-loop system or below-grade tank, an operator shall file an application, form C-144, and all required attachments with the appropriate division district office. If the operator plans to use a temporary pit, the operator shall provide the proposed pit location on form C-102.

[19.15.17.9 NMAC - Rn, 19.15.2.50 NMAC & A, 6/16/08]

19.15.17.10 SITING REQUIREMENTS:

A. Except as otherwise provided in 19.15.17 NMAC.

(1) An operator shall not locate a temporary pit or below-grade tank:

(a) where ground water is less than 50 feet below the bottom of the temporary pit or below-grade tank, unless the operator is using a pit solely to cavitate a coal bed methane well and the appropriate division district office finds based upon the operator's demonstration that the operator's proposed operation will protect ground water during the temporary pit's use;

(b) within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the appropriate division district office approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;

(c) within 300 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application;

(d) within 500 feet of a private, domestic fresh water well or spring used by less than five households for domestic or stock watering purposes, or within 1000 feet of any other fresh water well or spring, in existence at the time of initial application;

(e) within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended, unless the municipality specifically approves;

- (f) within 500 feet of a wetland;
 - (g) within the area overlying a subsurface mine, unless the appropriate division district office specifically approves the proposed location based upon the operator's demonstration that the temporary pit's or below-grade tank's construction and use will not compromise the subsurface integrity;
 - (h) within an unstable area, unless the operator demonstrates that it has incorporated engineering measures into the design to ensure that the temporary pit's or below-grade tank's integrity is not compromised; or
 - (i) within a 100-year floodplain.
- (2) An operator shall not locate a permanent pit:
- (a) where ground water is less than 50 feet below the bottom of the permanent pit;
 - (b) within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the environmental bureau in the division's Santa Fe office approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;
 - (c) within 1000 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application;
 - (d) within 500 feet of a private, domestic fresh water well or spring used by less than five households for domestic or stock watering purposes, or within 1000 feet of any other fresh water well or spring, in existence at the time of initial application;
 - (e) within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended, unless the municipality specifically approves;
 - (f) within 500 feet of a wetland;
 - (g) within the area overlying a subsurface mine, unless the environmental bureau in the division's Santa Fe office specifically approves the proposed location based upon the operator's demonstration that the permanent pit's construction and use will not compromise subsurface integrity;
 - (h) within an unstable area, unless the operator demonstrates that it has incorporated engineering measures into the design to ensure that the permanent pit's integrity is not compromised; or
 - (i) within a 100-year floodplain.
- (3) An operator shall not locate material excavated from the pit's construction:
- (a) within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the division approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;
 - (b) within 500 feet of a wetland; or
 - (c) within a 100-year floodplain.
- B. An emergency pit is exempt from the siting criteria of 19.15.17 NMAC.
- C. An operator shall not implement an on-site closure method:
- (1) where ground water is less than 50 feet below the bottom of the buried waste;
 - (2) where ground water is between 50 and 100 feet below the bottom of the buried waste, unless the operator buries the waste in-place and the treated or stabilized waste, which shall not be combined with soil or other material at a mixing ratio of more than 3:1 soil or other material to waste, does not exceed the criteria in Subparagraph (c) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC;
 - (3) where ground water is more than 100 feet below the bottom of the buried waste, unless the operator buries the waste in-place and the treated or stabilized waste, which shall not be combined with soil or other material at a mixing ratio of more than 3:1 soil or other material to waste, does not exceed the criteria in Subparagraph (d) of Paragraph (2) of Subsection F of 19.15.17.13 NMAC;
 - (4) where ground water is more than 100 feet below the bottom of the buried waste, unless the operator buries the waste in a trench and the treated or stabilized waste, which shall not be combined with soil or other material at a mixing ratio of more than 3:1 soil or other material to waste, does not exceed the criteria listed in Subparagraph (c) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC;
 - (5) within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole or playa lake (measured from the ordinary high-water mark), unless the division approves an alternative distance based upon the operator's demonstration that surface and ground water will be protected;

- (6) within 300 feet from a permanent residence, school, hospital, institution or church in existence at the time of initial application;
 - (7) within 500 feet of a private, domestic fresh water well or spring used by less than five households for domestic or stock watering purposes or within 1000 feet of any other fresh water well or spring, existing at the time the operator files the application for exception;
 - (8) within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended, unless the municipality specifically approves;
 - (9) within 500 feet of a wetland;
 - (10) within the area overlying a subsurface mine, unless the division specifically approves the proposed location based upon the operator's demonstration that subsurface integrity will not be compromised;
 - (11) within an unstable area, unless the operator demonstrates that it has incorporated engineering measures into the design to ensure that the on-site closure method will prevent contamination of fresh water and protect public health and the environment; or
 - (12) within a 100-year floodplain.
- [19.15.17.10 NMAC - Rn, 19.15.2.50 NMAC & A, 6/16/08]

19.15.17.11 DESIGN AND CONSTRUCTION SPECIFICATIONS:

- A. General specifications. An operator shall design and construct a pit, closed-loop system, below-grade tank or sump to contain liquids and solids and prevent contamination of fresh water and protect public health and the environment.
- B. Stockpiling of topsoil. Prior to constructing a pit or closed-looped system, except a pit constructed in an emergency, the operator shall strip and stockpile the topsoil for use as the final cover or fill at the time of closure.
- C. Signs. The operator shall post an upright sign not less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the pit, closed-loop system or below-grade tank, unless the pit, closed-loop system or below-grade tank is located on a site where there is an existing well, signed in compliance with 19.15.16.8 NMAC, that is operated by the same operator. The operator shall post the sign in a manner and location such that a person can easily read the legend. The sign shall provide the following information: the operator's name; the location of the site by quarter-quarter or unit letter, section, township and range; and emergency telephone numbers.
- D. Fencing.
 - (1) The operator shall fence or enclose a pit or below-grade tank in a manner that prevents unauthorized access and shall maintain the fences in good repair. Fences are not required if there is an adequate surrounding perimeter fence that prevents unauthorized access to the well site or facility, including the pit or below-grade tank. During drilling or workover operations, the operator is not required to fence the edge of the pit adjacent to the drilling or workover rig.
 - (2) The operator shall fence or enclose a pit or below-grade tank located within 1000 feet of a permanent residence, school, hospital, institution or church with a chain link security fence, at least six feet in height with at least two strands of barbed wire at the top. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not on-site. During drilling or workover operations, the operator is not required to fence the edge of the temporary pit adjacent to the drilling or workover rig.
 - (3) The operator shall fence any other pit or below-grade tank to exclude livestock with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level. The appropriate division district office may approve an alternative to this requirement if the operator demonstrates that an alternative provides equivalent or better protection. The appropriate division district office may impose additional fencing requirements for protection of wildlife in particular areas.
- E. Netting. The operator shall ensure that a permanent pit or a permanent open top tank is screened, netted or otherwise rendered non-hazardous to wildlife, including migratory birds. Where netting or screening is not feasible, the operator shall on a monthly basis inspect for, and within 30 days of discovery, report discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and to the appropriate division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.
- F. Temporary pits. The operator shall design and construct a temporary pit in accordance with the following requirements.
 - (1) The operator shall design and construct a temporary pit to ensure the confinement of liquids to prevent unauthorized releases.