

CASE 14521

*Application of Williams Production Co., LLC for Approval Of A Closed Loop System For The Rosa SWD Well No. 2 And For The **In-Place Burial Of Drilling Wastes At Another Well Location**, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of a closed loop system at the Rosa SWD Well No. 2 (API No. 30-039-30812) located in Section 25, Township 31 North, Range 5 West, NMPM, Rio Arriba County, New Mexico and to haul the waste to an approved temporary pit at the Rosa Unit Well No. 634B in Section 22, Township 31 North, Range 6 West, NMPM for on-site burial. Said area is located approximately 20 miles east of Navajo Dam, New Mexico.*

Testimony of Glenn von Gonten

- Overview of Pit Rule and Part 36
- Closed-loop systems
- 17.13 Closure
- Williams Proposal for Off-site Disposal
- Exceptions
- Part 36
- "On-site"
- Consequences

PIT RULE HIGHLIGHTS

The objective of the Pit Rule is:

“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.”

PART 36 HIGHLIGHTS

The objective of Part 36 is:

*“to regulate the **disposal of oil field waste** and the construction, operation and closure of surface waste management facilities.”*

Part 17

Part 17 requires operators to either dig and haul drilling waste to an OCD-approved facility or dispose of drilling waste in an on-site burial.

Operators who must dig and haul must take drilling waste to an OCD-approved facility. Operators may not dispose of drilling waste anywhere else.

PART 17 PITS, CLOSED-LOOP SYSTEMS, BELOW-GRADE TANKS AND SUMPS

- 19.15.17.6 OBJECTIVE:
- 19.15.17.7 DEFINITIONS:
- 19.15.17.8 PERMIT REQUIRED:
- 19.15.17.9 PERMIT APPLICATION:
- 19.15.17.10 SITING REQUIREMENTS:
- 19.15.17.11 DESIGN AND CONSTRUCTION SPECIFICATIONS:
- 19.15.17.12 OPERATIONAL REQUIREMENTS:
- 19.15.17.13 CLOSURE REQUIREMENTS:**
- 19.15.17.14 EMERGENCY ACTIONS:
- 19.15.17.15 EXCEPTIONS:**
- 19.15.17.16 PERMIT APPROVALS, CONDITIONS, DENIALS,
REVOCATIONS, SUSPENSIONS, MODIFICATIONS OR
TRANSFERS:
- 19.15.17.17 TRANSITIONAL PROVISIONS:

CLOSED-LOOP SYSTEMS

- Closed-loop systems consist of steel tanks used to manage drilling mud.
- Mud, gas, and solids are conditioned in a closed-loop system using shale shakers, degassers, desanders, desilters, cyclones, etc.
- Mud is circulated through closed-loop system and solids are discharged to either a temporary pit, drying pad, or haul-off bins.
- Pit Rule does not address haul-off bins.

CLOSED-LOOP SYSTEMS

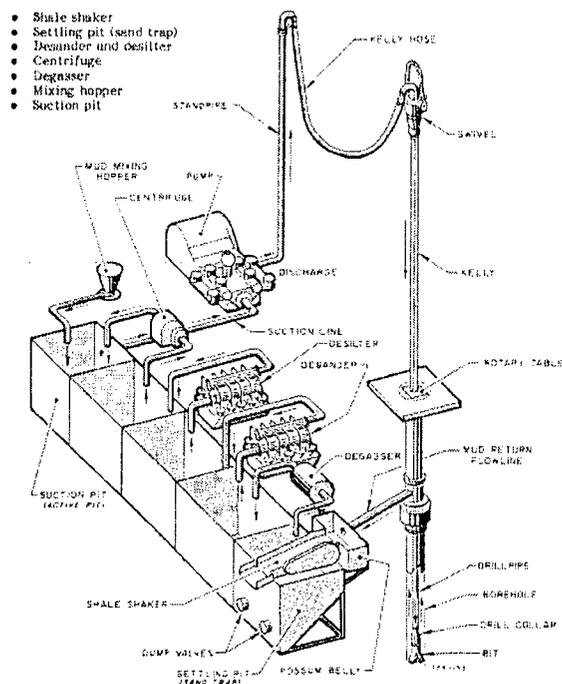


Figure 4-8. Mud Conditioning Equipment

"Hybrid Systems": Drilling/Workover Pits, Disposal Pits, Closed-Loop Systems, Drying Pads, & Haul-Off Bins

- The Pit Rule does not contemplate the use of "hybrid" systems that are currently being used by Operators.
- Operators may use temporary pits for drilling through shallow fresh ground water and may switch to closed-loop systems when they drill with brine or with oil-based mud.
- The Pit Rule also does not address haul-off bins.
- Forms C-144 and C-144 CLEZ do address haul-off bins.

19.15.17.13

CLOSURE REQUIREMENTS:

17.13B. Closure methods for temporary pits.

- (1) Waste excavation and removal.
- (2) On-site burial.
- (3) Alternative closure methods.

17.13D. Closure methods for closed-loop systems (drying pads, haul-off bins).

- (1) Waste removal.
- (2) On-site burial.
- (3) Alternative closure methods.

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Paragraph 68. *Subsection C of 19.15.17.10 NMAC specifies those locations where an operator may not implement **on-site closure methods** (where the waste that is generated from the drilling or workover of the well is buried on or near the well pad). On-site closure includes **burial in-place in a temporary pit or trench burial in a lined trench constructed specifically for burial of the waste.** Many of the siting criteria are the same as those for temporary pits and below-grade tanks. Tr. 934 and 935.*

17.13F
ON-SITE CLOSURE METHODS

On-site closure methods include:

- 17.13F(2) **In-place burial** (burial in the existing temporary pit) for closure of a temporary pit or bury the contents of a drying pad in a temporary pit for disposal.
- 17.13F(3) **On-site trench burial.**

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Paragraph 71. *The Division's proposal would have prohibited on-site burial where there was a Division-approved disposal facility or an out-of-state waste management facility within a 100-mile radius of the site unless the operator obtained the Division's approval for an exception. The Commission does not adopt this requirement because on-site closure should be based on the level of various constituents in the waste and site specific information rather than on the distance to a disposal facility.*

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Paragraph 72. *NMCCAW, OGAP, and CRI proposed that no on-site burial of waste be allowed. The Commission does not adopt these proposals because the Commission finds there are circumstances where waste can be safely buried on-site. See Paragraph 75, 76, 77, and 79 below.*

17.13F

ON-SITE CLOSURE METHODS

17.13F(2) In-place burial.

(f) For burial of the contents from a **drying pad associated with a closed-loop system**, the operator shall construct a **temporary pit ... within 100 feet of the drying pad** associated with a closed-loop system, unless the appropriate division district office approves an alternative distance and location. **The operator shall use a separate temporary pit for closure of each drying pad associated with a closed-loop system.**

17.13F

ON-SITE CLOSURE METHODS

17.13F(2) clearly specifies that Operators may use an on-site closure method, but cuttings must be buried either "**in-place**" (burial in the existing temporary pit used for drilling or workover) or in a "**temporary**" pit that the operator constructs solely for disposal that is located **no more than 100 feet away from the drying pad**. Drilling wastes from two different closed-loop systems may not be commingled.

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Paragraph 217. *The location of the temporary pit **within 100 feet of the drying pad** limits additional **surface disturbance** and prevents the accumulation of multiple drying pads from other locations being buried on-site, in effect creating a **mini-landfill**. Tr. 1091, 1092, 1100, and 1101.*

17.13F

ON-SITE CLOSURE METHODS

17.13F(3) On-site trench burial.

(a) Where the operator meets the siting criteria ... an operator may use **on-site trench burial** for closure of a **drying pad** associated with a **closed loop system** or for closure of a **temporary pit** when the waste meets the criteria ... provided that the operator certifies to the division that it has given **written notice to the surface owner** that it intends to do so. **The operator shall use a separate on-site trench for closure of each drying pad associated with a closed-loop system or each temporary pit.**

17.13F

ON-SITE CLOSURE METHODS

17.13F(3) On-site trench burial.

(d) If the contents from a **drying pad** associated with a closed-loop system or from a temporary pit do not exceed the criteria ... the operator shall construct a **trench** lined with a geomembrane liner **located within 100 feet of the drying pad** associated with a closed-loop system or temporary pit

17.13F

ON-SITE CLOSURE METHODS

17.13F(3) clearly specifies that Operators may use the other on-site closure method, *i.e.*, **on-site trench burial**, but cuttings must be buried in a lined trench **located within 100 feet of the drying pad** associated with a closed-loop system or temporary pit.

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Paragraph 221. *The operator shall sample the contents to determine it meets the standards established for **trench burial**. If the contents do not exceed the established standards the operator shall construct the **trench with a geomembrane liner within 100 feet of the drying pad or temporary pit**, unless the appropriate district office approves another distance and location. The location of the trench **within 100 feet of the drying pad limits additional surface disturbance and prevents the accumulation of multiple drying pads from other locations being buried on-site; in effect creating a mini-landfill.** Tr. 1091, 1092, 1100, and 1101.*

CLOSURE OPTIONS

17.13B specifies three closure options for **temporary pits**: waste excavation and removal to a division-approved facility; on-site burial; or alternative closure methods.

17.13D specifies three closure options for **closed-loop systems**: waste removal to a division-approved facility; on-site burial; or alternative closure methods.

17.13F

ON-SITE CLOSURE METHODS

17.13F specifies two on-site closure methods. **In-place burial** (burial in the existing temporary pit used for drilling or workover) and **on-site trench burial** are both "**on-site**" **closure methods**. It is inconsistent to interpret "on-site" burial to mean disposal both in the existing temporary pit used for drilling and to also mean an off-site burial at a remote location in a trench or temporary pit constructed to dispose of waste from a closed-loop system.

WILLIAMS PROPOSAL

Williams is requesting approval from the Commission to close a closed-loop system at its Rosa Unit SWD No. 2 by waste removal and to dispose drill cuttings **off-site** in a disposal pit located more than 6 miles away at the Rosa Unit 634B. Williams is not proposing to remove the waste to a division-approved facility, nor is it proposing on-site burial. **Therefore, what it is proposing is an exception to the Pit Rule.**

WILLIAMS PROPOSAL

Some documents indicate that Williams also plans to commingle wastes from two wells into a single disposal pit located at the Rosa Unit 634B, some 6 miles away from the Rosa Unit SWD No. 2.

In its two denial letters, OCD clearly informed Williams that its proposal would be a **definite exception to the Pit Rule** and would also violate the requirement that Williams dispose of wastes off-site at a permitted **Part 36 surface waste management facility**.

19.15.17.15

EXCEPTIONS:

A. General exceptions.

(1) ... The environmental bureau in the division's Santa Fe office may grant an exception from a requirement or provision of 19.15.17 NMAC, if the **operator demonstrates** to the satisfaction of the environmental bureau in the division's Santa Fe office that the granting of **the exception provides equivalent or better protection of fresh water, public health and the environment**.

19.15.17.9

PERMIT APPLICATION:

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.

19.15.17.15

EXCEPTIONS:

- **Written notice** is required to:
 - surface owner and surface owners within 1/2 mile of location;
 - the county commission;
 - city officials if within city, ½ mile of city or within city's zoning jurisdiction;
 - affected federal or tribal governmental agencies;
 - and other persons as the Environmental Bureau directs.
- **Public notice** in a newspaper located in the same county as location
- Opportunity for any person to file **comments** or to request **hearing**.

19.15.17.15 EXCEPTIONS:

- None of Williams' five C-144 applications indicate that it was requesting an exception.
- Williams March 16, 2010 hearing application asked for exception in the alternative -- later Williams amended application to remove exception language.
- The Environmental Bureau twice reviewed and denied Williams' C-144 applications and explicitly stated that OCD although what Williams was requesting was an exception, OCD did not treat the applications as an exception request.
- Williams failed to submit an exception request to the Environmental Bureau despite being told that it must exhaust its administrative options before requesting a hearing.

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Paragraph 56. *Subsection D of 19.15.17.9 NMAC advises operators with which office they need to file their applications. This subsection is needed because the location depends upon the type of application filed. Applications for permanent pits or for **many exceptions** must be filed with the Division's **Environmental Bureau due to their technical complexity.** Tr. 903, 904, and 905.*

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Paragraph 246: *The **intent** of the exception provisions is to allow industry **to develop and apply new methods or practices** that protect fresh water, public health, and the environment, but that may not be addressed by the existing sections on design and construction, operations, and closure. Tr. 1139 and 1142.*

19.15.17.15

EXCEPTIONS:

- However, the Environmental Bureau would have rejected any such exception request because it would be in violation of Part 36 - Surface Waste Management Facilities Rule.
- Based on its review of Williams' C-144 applications, the Environmental Bureau determined that the proposed pit would be used solely for **off-site disposal** of oil field waste (*i.e.*; cuttings from the Rosa Unit SWD No. 2). The disposal of oil field waste at an **off-site location** is only allowable at a OCD-approved facility.

19.15.36

SURFACE WASTE MANAGEMENT FACILITY:

Part 36.8A specifies that ***“No person shall operate a surface waste management facility except pursuant to and in accordance with the terms and conditions of a division-issued surface waste management facility permit.”***

19.15.36

SURFACE WASTE MANAGEMENT FACILITY:

36.8C. Part 36 Application Requirements include:

- detailed description of the facility,
- engineering designs, certified by a registered professional engineer,
- oil field waste management plan,
- inspection and maintenance plan,
- best management practice plan,
- waste tracking for commercial facilities,
- ground water monitoring programs,
- and long-term closure plans.

19.15.36

SURFACE WASTE MANAGEMENT FACILITY:

36.9A NOTICE REQUIREMENTS

- surface owners
- county commission
- city officials
- affected federal, tribal or pueblo governmental agencies.

19.15.36

SURFACE WASTE MANAGEMENT FACILITY:

36.9A NOTICE REQUIREMENTS

- Division notice
- Public comment
- Division determination
- Applicant notice

19.15.36

SURFACE WASTE MANAGEMENT FACILITY:

- **36.10** PUBLIC COMMENTS AND HEARING ON APPLICATION:

- **36.11** FINANCIAL ASSURANCE REQUIREMENTS:

19.15.36

SURFACE WASTE MANAGEMENT FACILITY:

- **36.12** PERMIT APPROVAL, DENIAL, REVOCATION, SUSPENSION, MODIFICATION OR TRANSFER:

- **36.13** SITING AND OPERATIONAL REQUIREMENTS APPLICABLE TO ALL PERMITTED SURFACE WASTE MANAGEMENT FACILITIES:

19.15.36

SURFACE WASTE MANAGEMENT FACILITY:

36.14 SPECIFIC REQUIREMENTS APPLICABLE TO LANDFILLS:

- A. General operating requirements.
- B. Ground water monitoring program.
- C. Landfill design specification.
- D. Liner specifications and requirements.
- E. Requirements for the soil component of composite liners.
- F. The leachate collection and removal system
- G. Landfill gas control systems.
- H. Landfill gas response.

19.15.36

SURFACE WASTE MANAGEMENT FACILITY:

36.18 CLOSURE AND POST CLOSURE:

- A. Surface waste management facility closure by operator.
- B. Release of financial assurance.
- C. Surface waste management facility closure initiated by the division. Forfeiture of financial assurance.
- D. Surface waste management facility and cell closure and post closure standards.

19.15.36

SURFACE WASTE MANAGEMENT FACILITY:

Summary: There is no comparison to the design, construction, and operational standards and the closure of a centralized OCD-permitted landfill with an in-place burial or on-site trench burial.

The Commission determined to allow on-site closure of pit wastes because of the Pit Rule closure standards prohibits the construction of "**mini-landfills**" scattered across New Mexico.

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Paragraph 217. *The location of the temporary pit **within 100 feet of the drying pad** limits additional **surface disturbance** and prevents the accumulation of multiple drying pads from other locations being buried on-site, in effect creating a **mini-landfill**. Tr. 1091, 1092, 1100, and 1101.*

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Paragraph 221. ... *The location of the trench within 100 feet of the drying pad limits additional surface disturbance and prevents the accumulation of multiple drying pads from other locations being buried on-site, in effect creating a mini-landfill.* Tr. 1091, 1092, 1100, and 1101.

PROBLEMS WITH WILLIAMS APPLICATION

Williams proposal to dispose of its drilling waste **off-site** can only be done pursuant to a Part 36 permit for a centralized landfill.

OCD in general would **support either a centralized or commercial landfill** in the Northwest, but if Operators get exceptions to the Pit Rule which allows commingling of pit wastes off-site in "mini-landfills," then there never will be an economic incentive for a OCD-permitted landfill.

"ON-SITE"

On-site means just what it says. On the site at which the activity occurs.

"On-site" - Done or located at the site, as of a particular activity (American Heritage Dictionary of the English Language).

"On-site" - Accomplished or located at the site of a particular activity or concern" (Random House Webster's College Dictionary).

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"On-site" is not defined in the Pit Rule; however, the Commission found the following:

Paragraph 68. *Subsection C of 19.15.17.10 NMAC specifies those locations where an operator may not implement **on-site closure methods (where the waste that is generated from the drilling or workover of the well is buried on or near the well pad)**. On-site closure includes burial in-place in a temporary pit or trench burial in a lined trench constructed specifically for burial of the waste. Many of the siting criteria are the same as those for temporary pits and below-grade tanks. Tr. 934 and 935.*

"ON-SITE"

The Rulebook uses "on-site" **at least 40 times**, mostly in the Pit Rule. Here are several citations that use the term "on-site."

(e) a facility located at an oil and gas production facility and used for temporary storage of oil field waste generated **on-site** from normal operations, if the facility does not pose a threat to fresh water, public health, safety or the environment;

"ON-SITE"

(d) Training and drills. The hydrogen sulfide contingency plan shall provide for training and drills, including training in the responsibilities and duties of essential personnel and periodic **on-site** or classroom drills or exercises that simulate a release, and shall describe how the person will document the training, drills and attendance....

"ON-SITE"

(2) The operator shall fence 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**.

"ON-SITE"

(2) The operator shall remove the pit liner system, if applicable, and dispose of it in a division-approved facility. If there **is on-site equipment** associated with permanent pit, the operator shall remove the equipment, unless the equipment is required for some other purpose.

Note: the Rulebook uses "**on-site equipment**" at least twice.

"ON-SITE"

(2) if gas recovery is proposed, the design of the proposed gas recovery system and the system's major **on-site components**, including storage, transportation, processing, treatment or disposal measures required in the management of generated gases, condensates or other residues;

"ON-SITE"

The Rulebook uses:

"on-site trench" at least eight times;
"on-site closure" at least 11 times; and,
"on-site burial" at least 14 times.

"ON-SITE"

In the Pit Rule deliberations, the Commission used "on-site" approximately 40 times.

In Order R-12939, the Commission used "on-site" approximately 51 times.

In Order R-12939-A, the Commission used "on-site" approximately 12 times.

"ON-SITE"

Paragraph 74. *Because waste constituents over time will leach to ground water, the **waste should only be buried on-site** if the constituents in the waste are at levels that will not result in ground water contamination. This is particularly important given that there are hundreds of wells drilled each year and the wells are located over large areas. **The dispersed on-site closure of temporary pits that contain waste with levels of constituents that will likely result in contamination of ground water is not preferable to disposing of the waste in a limited, known number of commercial landfills.** Dispersed burial sites increase the potential number of sites where ground water contamination may occur, increase the number of sites that require regulatory oversight, and make it more difficult to determine the source of contamination. Tr. 220, 221, 261, 349, 691, and 692.*

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Paragraph 217. *The location of the temporary pit within 100 feet of the drying pad limits additional surface disturbance and prevents the accumulation of multiple drying pads from other locations being buried on-site, in effect creating a mini-landfill.* Tr. 1091, 1092, 1100, and 1101.

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Paragraph 221. *The operator shall sample the contents to determine it meets the standards established for trench burial. If the contents do not exceed the established standards the operator shall construct the trench with a geomembrane liner within 100 feet of the drying pad or temporary pit, unless the appropriate district office approves another distance and location. **The location of the trench within 100 feet of the drying pad limits additional surface disturbance and prevents the accumulation of multiple drying pads from other locations being buried on-site, in effect creating a mini-landfill.*** Tr. 1091, 1092, 1100, and 1101.

FREQUENTLY ASKED QUESTIONS

FAQ 40. 19.15.17.13 F (3) NMAC How many on-site disposal trenches are allowed at a single well site?

*A: Part 17 specifies one trench per drying pad or temporary pit. An operator could request an exception for more than one trench or one for closure of more than one drying pad or temporary pit from the same well site with proper justification. **Operators cannot bury pit contents from another well in an off-site trench burial.***

CONSEQUENCES

- If the Commission approves Williams application, then other Operators will begin disposing of pit contents at the nearest convenient location.
- Pit waste could be disposed of at sites at which there is no present drilling or workover activities.
- Exhibit 23 indicates that the going rate would be \$500 per disposal pit. Many small landowners would welcome the opportunity to operate "mini-landfills."

CONSEQUENCES

- The protections afforded by the Pit Rule and Part 36 would be lessened - No exception process, no notice, no opportunity for hearing.
- Operators could acquire land to bury waste.
- More road traffic if cheaper to haul waste further.
- More waste sites since don't have to bury on-site or haul to a disposal facility