Energy Development and Transmission Committee 02/11/2014

9:50 a.m. Presentation by the Legislative Council staff of a memorandum on the regulation of pipelines 9:55 a.m. Presentation by Mr. Lynn Helms, Director, Department of Mineral Resources, on underground gathering pipeline rules 10:25 a.m. Comments and questions by committee members



http://www.oilgas.nd.gov

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NDIC 2013-2014 Rulemaking

- 41 sections proposed
 - 16 due to statute changes
 - HB1134, HB1149, HB1198, HB1333, HB1348, SB2014
 - 11 apply to treating plants
 - 13 administrative or industry request
- Hearing October 1, 2013
- Comment period ended October 11, 2013
- Final NDIC approval December 19, 2013
- Effective date April 1, 2014?

43-02-03-29. WELL AND LEASE EQUIPMENT. Wellhead and lease equipment with a working pressure at least equivalent to the calculated or known pressure to which the equipment may be subjected shall be installed and maintained. Equipment on producing wells shall be installed to facilitate gas-oil ratio tests, and static bottom hole or other pressure tests. Valves shall be installed and maintained in good working order to permit pressure readings to be obtained on both casing and tubing.

All newly constructed underground gathering pipelines must be devoid of leaks and constructed of materials resistant to external corrosion and to the effects of transported fluids. All such pipelines installed in a trench must be installed in a manner that minimizes interference with agriculture, road and utility construction, the introduction of secondary stresses, the possibility of damage to the pipe, and tracer wire shall be buried with any nonconductive pipe installed. When a trench for an oil and gas underground gathering pipeline is backfilled, it must be backfilled in a manner that provides firm support under the pipe and prevents damage to the pipe and pipe coating from equipment or from the backfill material.

Basic Construction

- 1. Test the pipeline to make sure it doesn't leak.
- 2. Construct the pipeline out of materials that resist external corrosion as well as corrosion from the transported fluids.
- 3. Buried pipelines must minimize interference with agriculture, road and utility construction, the introduction of secondary stresses, and the possibility of damage to the pipe.
- 4. Buried pipelines made of a material that doesn't conduct electricity must have a tracer wire.
- 5. Trenches must be properly backfilled

43-02-03-29. WELL AND LEASE EQUIPMENT.

The operator of any underground gathering pipeline placed into service on August 1, 2011 to June 30, 2013, shall file with the director, by January 1, 2015, a geographical information system layer utilizing North American Datum 83 Geographic Coordinate System (GCS) and in an Environmental Systems Research Institute (Esri) Shape File format showing the location of the pipeline centerline. The operator of any underground gathering pipeline placed into service after June 30, 2013, shall file with the director, within one hundred and eighty days of placing into service, a geographical information system layer utilizing North American Datum 83 Geographic Coordinate System (GCS) and in an Environmental System layer utilizing North American Datum 83 Geographic Coordinate System (GCS) and in an Environmental Systems Research Institute (Esri) Shape File format showing the location of the pipeline centerline. An affidavit of completion shall accompany each layer containing the following information:

1. A statement that the pipeline was constructed and installed in compliance with section 43-02-03-29.

- 2. The pipeline specifications.
- 3. The anticipated operating pressure of the pipeline.
- 4. The type of fluid that will be transported in the pipeline and direction of flow.
- 5. Pressure to which the pipeline was tested prior to placing in service.
- 6. The minimum pipeline depth of burial.
- 7. Leak detection and monitoring methods that will be utilized after in service date.
- 8. In service date.
- 9. Pipeline name.
- 10. Accuracy of the geographical information system layer.

Construction Self Certification and Location

- Operator of any underground gathering pipeline placed into service from August 1, 2011 to June 30, 2013 (estimate 4,300 miles) file by January 1, 2015 and
- 2. Any underground gathering pipeline placed into service after June 30, 2013 (estimate 2,200 miles per year) file within 180 days of placing into service:
 - a) GIS layer showing the location of the pipeline centerline
 - b) An affidavit of completion
 - c) A statement that the pipeline was constructed and installed in compliance with 43-02-03-29
 - d) The pipeline specifications
 - e) The anticipated operating pressure of the pipeline
 - f) The type of fluid that will be transported in the pipeline and direction of flow
 - g) Pressure to which the pipeline was tested prior to placing in service
 - h) The minimum pipeline depth of burial
 - i) Leak detection and monitoring methods that will be utilized after in service date
 - j) In service date
 - k) Pipeline name
 - I) Accuracy of the geographical information system layer.
- 3. GIS layer is not required on buried piping utilized to connect flares, tanks, treaters, or other equipment located entirely within the boundary of a well site or production facility.

43-02-03-29. WELL AND LEASE EQUIPMENT.

When an oil and gas underground gathering pipeline or any part of such a pipeline is abandoned, the operator shall leave such pipeline in a safe condition by conducting the following:

1. Disconnect and physically isolate the pipeline from any operating facility or other pipeline.

2. Cut off the pipeline or the part of the pipeline to be abandoned below surface at pipeline level.

3. Purge the pipeline with fresh water, air or inert gas in a manner that effectively removes fluid contaminates.

4. Remove cathodic protection from the pipeline.

5. Permanently plug or cap all open ends by mechanical means or welded means.

Basic Abandonment and Reclamation Rules

When an oil and gas underground gathering pipeline or any part of such a pipeline is abandoned, the operator is now required to leave the pipeline in a safe condition.

- 1. Disconnected and isolated from any operating facilities or other pipelines.
- 2. Cut off below surface at pipeline level.
- 3. Purged with fresh water, air or inert gas to remove fluid contaminates.
- 4. Cathodic protection removed.
- 5. Permanently plug or cap all open ends by mechanical means or welded means.

43-02-03-29. WELL AND LEASE EQUIPMENT.

Within one hundred eighty days of completing the abandonment of an underground gathering pipeline the operator of the pipeline shall file with the director a geographical information system layer utilizing North American Datum 83 Geographic Coordinate System (GCS) and in an Environmental Systems Research Institute (Esri) Shape File format showing the location of the pipeline centerline and an affidavit of completion containing the following information:

1. A statement that the pipeline was abandoned in compliance with section 43-02-03-29.

2. The type of fluid used to purge the pipeline.

The requirement to submit a geographical information system layer is not to be construed to be required on buried piping utilized to connect flares, tanks, treaters, or other equipment located entirely within the boundary of a well site or production facility.

Abandonment Self Certification and Location

Within 180 days of completing the abandonment of an underground gathering pipeline (estimate 12,700 miles pre-2011 + 4,300 miles August 2011-June 2013 + 2,200 miles per year July 2013-Dec 2020 = 35,700 miles) the operator of the pipeline shall file:

- 1. GIS layer showing the location of the pipeline centerline
- 2. An affidavit containing the following information:

A. A statement that the pipeline was abandoned in compliance with 43-02-03-29.

B. The type of fluid used to purge the pipeline.

3. GIS layer not required on buried piping utilized to connect flares, tanks, treaters, or other equipment located entirely within the boundary of a well site or production facility.

Energy Development and Transmission Committee 02/11/2014

1:30 p.m. Presentation by Mr. Helms on the permitting, regulation, and citing of oilfield waste pits **2:00** p.m. Comments and questions by committee members



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• 1951 – 1984

- 10,424 wells drilled
- Unlined reserve pits
- 99% drilled with salt saturated mud
- Pits trenched and buried



• EPA Review and Recommendations completed in 1987

- Clean Water Act 1972
- Safe Drinking Water Act 1974
- Resource Conservation and Recovery Aact 1976
- Toxic Substances Control Act 1976
- Comprehensive Environmental Response Compensation and Liability Act 1980 also known as Superfund
- Emergency Planning and Community Right-to-Know Act 1986
- Oil Pollution Act 1990
- revisited and reaffirmed in 1993

SEPA United States Environmental Protection Agency

Exemption of Oil and Gas Exploration and Production Wastes from Federal Hazardous Waste Regulations



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\mathbf{S} cope of the Exemption

In December 1978, EPA proposed hazardous waste management standards that included reduced requirements for several types of large volume wastes. Generally, EPA believed these large volume "special wastes" are lower in toxicity than other wastes being regulated as hazardous waste under RCRA. Subsequently, Congress exempted these wastes from the RCRA Subtitle C hazardous waste regulations pending a study and regulatory determination by EPA. In 1988, EPA issued a regulatory determination stating that control of E&P wastes under RCRA Subtitle C regulations is not warranted. Hence, E&P wastes have remained exempt from Subtitle C regulations. The RCRA Subtitle C exemption, however, did not preclude these wastes from control under state regulations, under the less stringent RCRA Subtitle D solid waste regulations, or under other federal regulations. In addition, although they are relieved from regulation as hazardous wastes, the exemption does not mean these wastes could not present a hazard to human health and the environment if improperly managed.

Exempt E&P Wastes

- Produced water
- Drilling fluids
- Drill cuttings
- Rigwash
- Drilling fluids and cuttings from offshore operations disposed of onshore
- Geothermal production fluids
- Hydrogen sulfide abatement wastes from geothermal energy production
- Well completion, treatment, and stimulation fluids
- Basic sediment, water, and other tank bottoms from storage facilities that hold product and exempt waste
- Accumulated materials such as hydrocarbons, solids, sands, and emulsion from production separators, fluid treating vessels, and production impoundments
- Pit sludges and contaminated bottoms from storage or disposal of exempt wastes
- Gas plant dehydration wastes, including glycol-based compounds, glycol filters, and filter media, backwash, and molecular sieves
- Workover wastes
- Gases from the production stream, such as hydrogen sulfide and carbon dioxide, and volatilized hydrocarbons
- Materials ejected from a producing well during blowdown

- Cooling tower blowdown
- Gas plant sweetening wastes for sulfur removal, including amines, amine filters, amine filter media, backwash, precipitated amine sludge, iron sponge, and hydrogen sulfide scrubber liquid and sludge
- Spent filters, filter media, and backwash (assuming the filter itself is not hazardous and the residue in it is from an exempt waste stream)
- Pipe scale, hydrocarbon solids, hydrates, and other deposits removed from piping and equipment prior to transportation
- Produced sand
- Packing fluids
- Hydrocarbon-bearing soil
- Pigging wastes from gathering lines
- Wastes from subsurface gas storage and retrieval, except for the non-exempt wastes listed on page 11
- Constituents removed from produced water before it is injected or otherwise disposed of
- Liquid hydrocarbons removed from the production stream but not from oil refining
- Waste crude oil from primary field operations
- Light organics volatilized from exempt wastes in reserve pits, impoundments, or production equipment

• 1984 – 1994

- 3,313 wells drilled
- Lined reserve pits
- 75% drilled with salt saturated mud 25% with oil based mud
- Liquids removed to disposal, solids buried



- 1994 2012
 - 6,539 wells drilled
 - Lined reserve pits
 - 90% drilled with oil based mud 10% with salt saturated mud
 - Liquids removed to disposal, cuttings stabilized and buried



• 2012 – present

- 6,388 wells drilled
- 2,129 lined cuttings pits
- 98% drilled with oil based mud
- Cuttings stabilized, encapsulated, and buried







• 2012 – present

- 6,388 wells drilled
- 2,129 lined cuttings pits
- 98% drilled with oil based mud
- Cuttings stabilized, encapsulated, and buried
- Industrial Commission Rules
 - NDAC 43-02-03-19.2 Waste Material
 - NDAC 43-02-03-19.3 Earthen Pits and Open Receptacles
 - NDAC 43-02-03-19.4 Drilling Pits
 - NDAC 43-02-03-19.5 Reserve Pits
- All stabilization materials must be leach tested
- Sample leach test for stabilized drill cuttings



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LABORATORY ANALYTICAL REPORT

Customer Name:	National Oilfield Varco Fluid Control						Order ID:	1202	2105	
Project ID:	ND-WY Leachate Report D							: 2/27	2012	
Lab ID:	12022105-13							Date	e 1	Time
Customer Sample ID:	True 32, James Hill 10-0112H, 9,320' C						Collection:	1/31/20	012	
Matrix:	Soil						Received:	2/21/20	012 10:	25 AM
Notes:	Depth: 9,320', Company: EOG-Envirodry/JPO									
Analyses		Result	Units	RL	Qual. Met	hod	Analy	sis Dat	e/Time	Analyst
General Parameters										
pН		11.32	s.u.	1	WR	EP-125: S-1.10	2/22	/2012	17:47	KF
Total Dissolved Solids		750	mg/L	5	SM 2	510 B	2/22	/2012	17:51	EJ
Total Metals										
Arsenic		< 0.01	mg/L	0.01	EPA	200.7	2/22	/2012	11:48	СН
Barium		0.16	mg/L	0.001	EPA	200.7	2/22	/2012	11:48	CH
Cadmium		< 0.03	mg/L	0.03	EPA	200.7	2/22	/2012	11:48	СН
Chromium		< 0.01	mg/L	0.01	EPA	200.7	2/22	/2012	11:48	СН
Lead		< 0.02	mg/L	0.02	EPA	200.7	2/22	/2012	11:48	CH
Mercury		0.20	mg/L	0.01	EPA	200.7	2/22	/2012	11:48	CH
Selenium		< 0.06	mg/L	0.06	EPA	200.7	2/22	/2012	11:48	CH
Silver		0.28	mg/L	0.02	EPA	200.7	2/22	/2012	11:48	СН
Organics										
Total Petroleum Hydrocarbons (HEM)		1.0	mg/L	1	EPA	EPA 1664 A		/2012	10:00	JP
	Wyomi	Wyoming Oil and Gas Conservation Commission Li								
		Param	Parameter		Limit	Units				
		pH			6.0-9	0 s.u.				
	Total Dissolved Solids			< 5,00	0 mg/L					
	Arsenic			< 5.0	mg/L					
	Barium			< 100	mg/L					
	Cadmium			< 1.0	mg/L					
	Chromium			< 5.0	mg/L					
	Leau			< 5.0	mg/L					
	Selenium			< 5.0 < 5.0	mg/L					
	Total Petroleum Hydrocarbons			~ J.U Is < 10	mg/L					
	rotari euoleuni nyulocalbons				- 10	mg/L				

Definitions:

ND-Not Detected at the reporting limit

RL-Analyte Reporting Limit

S-Spike Recovery outside accepted recovery limits J-Analyte detected below quantitation limits M-Matrix Effect D-Diluted out of recovery limits L-Analyzed by a contract laboratory

H-Holding times for preparation or analysis exceeded

Documentation will be kept for five (5) years.

• New Mexico Experience

ORDER OF THE COMMISSION AND STATEMENT OF REASONS FOR AMENDING NMAC TITLE 19, CHAPTER 15, PART 17

- THIS MATTER comes before the Oil Conservation Commission ("Commission") on the Application ("NMOGA Application") of the New Mexico Oil And Gas Association ("NMOGA") for Amendment of Certain Provisions of Title 19, Chapter 15 of the New Mexico Administrative Code Concerning Pits, Closed-Loop Systems, Below Grade Tanks and Sumps, and Other Alternative Methods Related to the Foregoing Matters, Statewide, assigned Case No. 14784, and on the Application ("Application Filed By IPANM") of the Independent Petroleum Association of New Mexico ("IPANM") for the Amendment of Certain Provisions of Title 19, Chapter 15 of the New Mexico Administrative Code Concerning Pits, Closed-Loop Systems, Below Grade Tanks and Sumps, and Amending Other Special Rules Related to the Foregoing Matters, Statewide, assigned Case No. 14785. Together, the NMOGA Application and the Application Filed By IPANM may be referred to herein as the "Filed Applications." The Filed Applications seek to amend NMAC Title 19, Chapter 15, Part 17, as promulgated in June, 2008 and amended in July, 2009 (the 2008 regulation, as amended in 2009, may sometimes be referred to herein as the "2009 Pit Rule"). The Commission, after hearing testimony, argument and public comment and deliberating, and having carefully considered the evidence, pleadings, comments and other materials submitted related to the Filed Applications now enters this Order.
- NOW THEREFORE, Title 19, Chapter 15 Part 17 NMAC, as adopted on June 16, 2008 and as amended from time to time is hereby **REPEALED** and **REPLACED** by Title 19, Chapter 15 Part 17 NMAC that is Attachment A and Title 19, Chapter 15 Part 17 NMAC that is Attachment A is hereby **ADOPTED**. Division staff is instructed to secure prompt publication of the referenced rule changes in the New Mexico Register. The Commission retains jurisdiction of this matter for entry of such further orders as may be necessary. **IT IS SO ORDERED**.

DONE in Santa Fe, New Mexico, this 6th day of June, 2013. STATE OF NEW MEXICO OIL CONSERVATION COMMISSION ROBERT BALCH, Member GREGORY BLOOM, Member JAMI BAILEY, Chair S E A L

- 1,100 to 2,700 wells/year = 2,000 expected
- The New Mexico Model would do the following:
 - 25 to 30 semi loads of drill cuttings per well
 - 50,000 to 60,000 additional semi loads per year hauled 50 to 100 miles
 - Overwhelm special waste landfill capacity with high volume low toxicity material

• New Mexico Experience – 15 of 19 superfund sites still listed

Superfund's Biggest Mess May Be in the Courthouse :

July 10, 1994 | MELISSA HEALY | TIMES STAFF WRITER

WASHINGTON — In the lucrative world of corporate law, the word inspires dreams of shiny new BMWs, of vacations to Cancun and of billable hours mounting year after prosperous year.

The word is Superfund. It is the nickname given the 1980 law designed to clean up thousands of polluted sites across the nation--from abandoned landfills to manufacturing sites, mines and even federal facilities. For many lawyers, who have been called "wizards of ooze" because of their roles in litigating Superfund cases, the law has been mother's milk.

By the best available estimate--that of the Santa Monica-based RAND Corp. think tank--fully 40 cents of every dollar spent on such projects has gone not to clean up toxic waste but to pay lawyers' fees and other costs of litigation. And those dollars are staggering: The federal government alone spends nearly \$1.6 billion annually on Superfund. And private industry is believed to spend several times that amount. Even more demonstrative of the problem: The House Banking, Finance and Urban Affairs Committee estimated in 1990 that the insurance industry and its clients spend about \$500 million in legal costs annually wrangling over liability for Superfund cleanups. Critics of the system--including the Clinton Administration--contend that the slow pace of the work is directly attributable to the tangled web of litigation that can stall progress on a project for years while it ensnares the federal government, corporate polluters, insurance companies and--occasionally—hapless bystanders. So far, only 237 of the 1,344 toxic waste sites deemed in need of emergency cleanup have been declared clean and safe. In coming weeks, Congress, prodded by the Administration, is moving to complete a sweeping reform of Superfund law. And while the effort is designed to tackle an array of perceived problems, the primary focus is on stemming unintended legal costs. The purveyors of reform argue that the stakes are enormous. One out of four Americans lives within four miles of a toxic waste site slated for cleanup under the program. California, with 96 sites on the Superfund list, has one of the largest shares of polluted sites in the country. Besides the health of citizens, jobs also hang in the balance--not just for high-priced lawyers but for entire communities, the Administration contends. Almost 20% of Superfund projects are located in urban areas. But even after such sites have been declared clean, they remain legally poisonous to many potential buyers because, under current Superfund law, purchasers of such sites assume liability

As a result, most of these sites remain fenced off, while surrounding neighborhoods--many in minority communities--go without the jobs they need desperately. Meanwhile, businesses looking for operating sites are moving out to suburban "greenways," where woods and open farmland are cleared--and then lost--to establish new industrial sites.

Horror stories about the legal entanglements of Superfund cases abound.

* In Kalamazoo, Mich., the Upjohn Co., a major pharmaceuticals firm, was named by the Environmental Protection Agency as the party responsible for the \$20-million cost of cleaning up a toxic landfill. Hoping to spread the cost among other polluters, Upjohn wrote letters threatening to sue 741 parties that had dumped trash in the landfill. They ranged from Flipse's Flower Shop to the Milwood Little League. Even the mother of William Parfet, Upjohn's president at the time, couldn't escape the company's dragnet. Martha Parfet, chairwoman of Gilmore Bros. department store in downtown Kalamazoo, received a letter from Upjohn notifying her that the trash the store had put out on the curb could make it liable for a share of the cleanup.

* In the case of the Hardage Landfill in Criner, Okla., attorneys for a group of 350 firms held responsible for the cleanup stretched across the nation and read like a "Who's Who" of Superfund law, according to one participant. The cleanup itself was expected to cost \$70 million. But over nearly a decade, lawyers earned more than \$45 million in legal fees in the case and several suits are still unresolved. At one point, a tiny office of the Oklahoma State District Court became a defendant in the case. Its alleged misdeed? The office had disposed of a box of poisoned cookies--crumbs of evidence in an old criminal case --in the landfill.

* At one of the earliest and most notorious Superfund sites--a 63-acre landfill in New Jersey--more than 400 parties have sued and countersued, hoping to spread the \$52-million cleanup cost. Attorneys involved in the case spent more than \$80,000 a year on Federal Express deliveries alone, according to congressional testimony.

North Dakota

0 superfund sites since April 1997