

*LaBelle Rm., 1st Floor, LaSalle Bldg., 617 N. 3rd St.*

*November 26, 2013*

## **NOTICE OF INTENT**

### **Department of Natural Resources Office of Conservation**

#### **Class III (Solution-Mining) Injection Wells (LAC 43:XVII.Chapter 33)**

The Department of Natural Resources, Office of Conservation proposes to adopt LAC 43:XVII.Chapter 33 in accordance with the provisions of the Administrative Procedure Act, R.S. 49:950 et seq., and pursuant to the power delegated under the laws of the state of Louisiana. The proposed action will adopt Statewide Order No. 29-M-3, which provides comprehensive regulations for Class III (Solution-Mining) Injection Wells, as enacted by Act 368 and Act 369 of the 2013 Legislative Session.

#### **Title 43**

#### **NATURAL RESOURCES**

##### **Part XVII. Office of Conservation—Injection and Mining**

###### **Subpart 5. Statewide Order No. 29-M-3**

###### **Chapter 33. Class III (Solution-Mining) Injection Wells**

###### **§3301. Definitions**

*Act*—Part I, Chapter 1 of Title 30 of the Louisiana Revised Statutes.

*Active Cavern Well*—a solution-mining well that is actively being used, or capable of being used, to mine minerals, including standby wells. The term does not include an inactive cavern well.

*Application*—the filing on the appropriate Office of Conservation form(s), including any additions, revisions, modifications, or required attachments to the form(s), for a permit to operate a solution-mining well or parts thereof.

*Aquifer*—a geologic formation, groups of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

*Blanket Material*—sometimes referred to as a "pad." The blanket material is a fluid placed within a cavern that is lighter than the water in the cavern and will not dissolve the salt or any mineral impurities that may be contained within the salt. The function of the blanket is to prevent unwanted leaching of the cavern roof, prevent leaching of salt from around the cemented casing, and to protect the cemented casing from internal corrosion. Blanket material typically consists of crude oil, diesel, mineral oil, or some fluid possessing similar noncorrosive, nonsoluble, low density properties. The blanket material is placed between the cavern's outermost hanging string and innermost cemented casing.

*Brine*—water within a salt cavern that is completely or partially saturated with salt.

*Cap Rock*—the porous and permeable strata immediately overlying all or part of the salt stock of some salt structures typically composed of anhydrite, gypsum, limestone, and occasionally sulfur.

*Casing*—metallic pipe placed and cemented in the wellbore for the purpose of supporting the sides of the wellbore and to act as a barrier preventing subsurface migration of fluids out of or into the wellbore.

*Catastrophic Collapse*—the sudden or utter failure of the overlying strata caused by the removal or otherwise weakening of underlying sediments.

*Cavern Roof*—the uppermost part of a cavern being just below the neck of the wellbore. The shape of the salt cavern roof may be flat or domed.

*Cavern Well*—a well extending into the salt stock to facilitate the injection of fluids into a cavern.

*Cementing*—the operation (either primary, secondary, or squeeze) whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing.

*Closed Cavern Well*—a solution-mining well that is no longer used, or capable of being used, to solution mine minerals and is thus subject to the closure and post-closure requirements of §3337. The term does not include an inactive well or a previously closed cavern well.

*Circulate to the Surface*—the observing of actual cement returns to the surface during the primary cementing operation.

*Commissioner*—the Commissioner of Conservation for the State of Louisiana.

*Contamination*—the introduction of substances or contaminants into a groundwater aquifer, a USDW or soil in such quantities as to render them unusable of their intended purposes.

*Discharge*—the placing, releasing, spilling, percolating, draining, pumping, leaking, mixing, migrating, seeping, emitting, disposing, by-passing, or other escaping of pollutants on or into the air, ground, or waters of the state. A discharge shall not include that which is allowed through a federal or state permit.

*Dual-Bore Mining*—for the purposes of these rules, dual bore mining shall be defined as the solution mining process whereby fluid injection and brine extraction are accomplished through different permitted wells.

*Effective Date*—the date of final promulgation of these rules and regulations.

*Emergency Shutdown Valve*—a valve that automatically closes to isolate a solution-mining well from surface piping in the event of a specified condition that, if uncontrolled, may cause an emergency.

*Exempted Aquifer*—an aquifer or its portion that meets the criteria of the definition of underground source of drinking water but which has been exempted according to the procedures set forth in §3303.E.2.

*Existing Solution-Mining Well or Project*—a well, salt cavern, or project permitted to solution-mine prior to the effective date of these regulations.

*Evacuation- (mandatory or forced) residents, campers, or landowners* are asked to leave their homes for safety reasons. An evacuation is considered to be an evacuation effective immediately up to 60 days. On day 61, it will be considered a relocation.

*Facility or Activity*—any facility or activity, including land or appurtenances thereto, that is subject to these regulations

*Fluid*—any material or substance which flows or moves whether in a semisolid, liquid, sludge, gas or any other form or state.

*Ground Subsidence*—the downward settling of the Earth's surface with little or no horizontal motion in response to natural or manmade subsurface actions.

**EXHIBIT**

**6-A**

*Groundwater Aquifer*—water in the saturated zone beneath the land surface that contains less than 10,000 mg/l total dissolved solids.

*Groundwater Contamination*—the degradation of naturally occurring groundwater quality either directly or indirectly as a result of human activities.

*Hanging String*—casing whose weight is supported at the wellhead and hangs vertically in a larger cemented casing or another larger hanging string.

*Improved Sinkhole*—a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface.

*Inactive Cavern Well*—a solution-mining well that is capable of being used to mine minerals but is not being so used, as evidenced by the filing of a written notice with the Office of Conservation in accordance with §3309.1.3.

*Injection and Mining Division*—the Injection and Mining Division of the Louisiana Office of Conservation within the Department of Natural Resources.

*Injection Well*—a well into which fluids are being injected other than fluids associated with active drilling operations.

*Injection Zone*—a geological formation, group of formations or part of a formation receiving fluids through a well.

*Leaching*—the process whereby an undersaturated fluid is introduced into a cavern thereby dissolving additional salt and increasing the volume of the salt cavern.

*Mechanical integrity*—an injection well has mechanical integrity if there is no significant leak in the casing, tubing, or packer and there is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore.

*Migrating*—any movement of fluids by leaching, spilling, discharging, or any other uncontained or uncontrolled manner, except as allowed by law, regulation, or permit.

*New Cavern Well*—a solution-mining well permitted by the Office of Conservation after the effective date of these rules.

*Office of Conservation*—the Louisiana Office of Conservation within the Department of Natural Resources.

*Open Borehole*—that portion of a well below the production casing and above the solution-mining cavern.

*Operator*—the person recognized by the Office of Conservation as being responsible for the physical operation of the facility or activity subject to regulatory authority under these rules and regulations.

*Owner*—the person recognized by the Office of Conservation as owning the facility or activity subject to regulatory authority under these rules and regulations.

*Permanent Conclusion*—No additional solution-mining activities will be conducted in the cavern. This term will not apply to caverns that are being converted to hydrocarbon storage.

*Permit*—an authorization, license, or equivalent control document issued by the commissioner to implement the requirements of these regulations. Permit includes, but is not limited to, area permits and emergency permits. Permit does not include UIC authorization by rule or any permit which has not yet been the subject of final agency action, such as a draft permit.

*Person*—an individual, association, partnership, public or private corporation, firm, municipality, state or federal agency

and any agent or employee thereof, or any other juridical person.

*Previously Closed Cavern Well*—a solution-mining well that is no longer used, or capable of being used, to solution mine minerals and was closed prior to the effective date of these regulations.

*Produced Water*—liquids and suspended particulate matter that is obtained by processing fluids brought to the surface in conjunction with the recovery of oil and gas from underground geologic formations, with underground storage of hydrocarbons, or with solution mining for brine.

*Public Water System*—a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves at least 25 individuals. Such term includes:

1. any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and

2. any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system.

*Release*—the accidental or intentional spilling, pumping, leaking, pouring, emitting, leaching, escaping, or dumping of pollutants into or on any air, land, groundwater, or waters of the state. A release shall not include that which is allowed through a federal or state permit.

*Relocation*—an evacuation will be turned into relocation on day 61. The buyout process should begin immediately. Residents can release their homes for a buyout but reserve the future rights to seek further damages not associated with the buyout of their home. Such as but not limited to the cost of moving, mental anguish, etc.

*Salt Dome*—a diapiric, typically circular structure that penetrates, uplifts, and deforms overlying sediments as a result of the upward movement of a salt stock in the subsurface. Collectively, the salt dome includes the salt stock and any overlying uplifted sediments.

*Salt Stock*—a typically cylindrical formation composed chiefly of an evaporite mineral that forms the core of a salt dome. The most common form of the evaporite mineral is halite known chemically as sodium chloride (NaCl). Cap rock shall not be considered a part of the salt stock.

*Schedule of Compliance*—a schedule or remedial measures included in a permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the act and these regulations.

*Site*—the land or water area where any facility or activity is physically located or conducted including adjacent land used in connection with the facility or activity.

*Solution-Mined Cavern*—a cavity created within the salt stock by dissolution with water.

*Solution-Mining Well*—a Class III well; a well which injects fluids for extraction of minerals or energy.

*State*—the state of Louisiana.

*Subsidence*—see *ground subsidence*.

*Surface Casing*—the first string of casing installed in a well, excluding conductor casing.

*UIC*—the Louisiana State Underground Injection Control Program.

*Unauthorized Discharge*—a continuous, intermittent, or one-time discharge, whether intentional or unintentional,

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Class III (Solution-Mining) Injection Wells  
(LAC 43:XVII.Chapter 33)

Docket No. IMD-2013-7

3309. Application Content

B.1. Method to determine Financial responsibility. The owner or operator shall canvas a two mile radius of the proposed cavern and determine the number of:

- homes
- business
- schools
- churches
- hospitals
- vacant lots
- rental properties
- other facilities

Using the above information, complete worksheet 3309.B.1 to determine financial responsibility required of the owner or operator. The amount of funds available shall be no less than the amount identified in worksheet 3309.B.1

Method of Determining Financial Responsibility			
Affected Areas	Occurrence	Cost p/occurrence (150)	Total
Replacement Value-Homes avg. (\$225,000. x 1.5)	150	\$337,500.00	\$50,625,000.00
Schools			
Churches			
hospitals			
Business	2	\$50,000.00	\$100,000.00
Vacant lot/ property	3	\$1,000,000.00	\$3,000,000.00
Rental properties			
Other facilities			
Resident (150) x \$1134 weekly assistance checks	68.0	\$170,100.00	\$11,566,800.00
Personal Damage (Mental Anguish) Adult	300	\$195,500.00	\$58,650,000.00
Personal Damage (Mental Anguish) Child	30	\$79,670.00	\$2,390,100.00
			\$126,331,900.00

Pipeline termination - (Crosstex)	476	\$275,000.00	\$130,900,000.00
Pipeline relocation - (Crosstex)	1	\$30,000,000.00	\$30,000,000.00
Pipeline termination - (Acadian)	476	\$175,000.00	\$83,300,000.00
Pipeline relocation - (Crosstex)	1	\$25,000,000.00	\$25,000,000.00
Assumption Parish recovery cost			\$470,802.28
State Recovery cost			\$8,000,000.00
Environmental Restoration	1	\$100,000,000.00	\$100,000,000.00
DOTD - feasibility study of route around sinkhole	1	\$500,000.00	\$500,000.00
DOTD - (install ) subsidence or movement monitors - La. 70	1	\$1,200,000.00	\$1,200,000.00
DOTD - (annual operating cost ) subsidence or movement monitors - La. 70	1	\$230,000.00	\$230,000.00
<b>worksheet 3309.B.1</b>			\$379,600,802.28
		<b>Financial Responsibility</b>	<b>\$505,932,702.28</b>

3309.B.3 Renewal of Financial Responsibility. Any approved instrument of financial responsibility coverage shall be renewed yearly or when an existing solution-mining cavern with less than 400 feet of salt separation at any point between the cavern walls and the periphery of the salt stock is found. As required in 3315.B.3.b. Financial security shall remain in effect until release thereof is granted by the commissioner pursuant to written request by the operator. Such release shall only be granted after plugging and abandonment and associated site restoration is completed and inspection thereof indicates compliance with applicable regulations or upon transfer of such well.

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Docket No. IMD-2013-7

3309. Application Content

3309.F.2 The operator shall immediately notify the Office of Conservation of any unauthorized escape, discharge, or release of any material from the solution-mining well, cavern, and related facility, or parts thereof and address those violation of any state or federal permit or which is not incidental to normal operations, with a corrective action plan. The plan shall address the cause, delineate the extent, and determine the overall effects on the environment and the general public resulting from the escape, discharge, or release. The Office of Conservation shall require the operator to formulate a plan to remediate the escaped, discharged, or released material if the material is thought to have entered or has the possibility of entering an underground source of drinking water and how to reduce or eliminate the impact to the general public.

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Docket No. IMD-2013-7

3309 Regulation Changes proposed by Nick Romero

**3309.F.3.a.1 Weekly assistance to residents.** During the evacuation period a weekly assistance check of \$1134.00 will be paid by the operator causing the evacuation to each resident, including renters living in the evacuated area and \$324.00 to any camp owners in the evacuated area. The \$1134.00 is for two (2) adults for hotel, meals and laundry for seven (7) days. Hotel cost should be adjusted to current pricing in the area. This weekly assistance check can be adjusted by completing worksheet 3309.3.a.1. This weekly assistance will be paid to all residents, renters and property owners in the evacuated area regardless of whether they evacuated or not.

**3309.F.3.a.1.a Vacant rental property.** Property owner will provide proof of the last monthly rental rate. That rate will be divided by 4 and paid each week as assistance to the property owner.

**3309.F.3.a.1.b Schools, Churches, Hospitals , Business and etc;** during the evacuation period each school, church, hospital, business and etc. in the evacuation area is to be paid weekly assistance that covers staff salaries, revenue loss and other expenses or losses occurred because of the evacuation.

**3309.F.3.b.1 Relocation Process.** An evacuation period that extends past two months would trigger an automatic relocation process in which the operator will immediately began a buyout process that would be completed by the end of the fifth month. The buyout will be replacement value.

**3309.F.3.b.2 Moving and utilities connection cost.** The operator would pay each house hold the following should the evacuation trigger an automatic relocation: a minimum of \$2000 for moving cost, \$150 for utilities connection fees,

**3309.F.3.b.3 Resident damages compensation.** The operator will pay each house hold, renter, or camp member damages.. Each adult in the evacuated area will be paid as outlined in schedule 3309.3.b.3 (Individual Adult Damages) and each child will be paid as outlined in schedule 3309.3.b.3.a (Individual Child Damages), Renters will be paid as outlined in schedule 3309.3.b.3.b, camp owners will be paid according to schedule 3309.3.b.3.c, and Land Owners will be paid according to schedule 3309.3.b.3.d.

**3309.F.3.b.4 Federal and States Taxes on settlement.** The operator will pay any State and or Federal taxes that would be accessed to the award. The award value will not be reduced because of taxes.

**3309.F.3.b.5 Diminished value.** Those residents wanting to stay if the area is deemed safe would be paid a diminished value of 50% of the appraised value of the property prior to the incident causing the evacuation and b.3, b.4, and b.6.

**3309.F.3.b.6 Attorney fees and expenses.** Should any resident hire an attorney to capture any or all parts of 3309.F.3.a.1, b.2, b.3, b.4, b.5 or 3309.F.3.a.1, 3.a.1.a 3.c, the operator will pay all attorney fees and expenses.

**3309.F.3.c Loss work days.** When a resident in the evacuation area misses a day of work, whether it is stress of dealing with the evacuation, having to meet with an attorney or any reason a loss work day is related to the evacuation. The resident will be paid \$200.00 or their daily salary or hourly compensation whichever is greater for each loss work day or any part of a work day. Any state and or federal taxes will be paid by the operator.

**3309.F.3.d Forced Evacuation.** Should a forced evacuation occur, if the relocation process has not been triggered, the relocation process will begin on the fourth day of the forced evacuation.

**3309.F.3.e Security and Protection .** 24 Hour Patrol and Monitoring of the effected neighborhood and homes should be provided to the evacuated area by an independent security company. All vehicles should be stopped when entering the evacuated area to find out their intent. These cost of the private security service should be paid by the operator, as well as any additional cost that local law enforcement attains.

**3309.F.3.f Failure to comply timely.** Failure to comply timely to 3.a.1-e and 3.h-h.1 will result in penalties of \$50,000 per day.

**3309.F.3.h Subsidence.** A subsidence survey will be conducted once a year of the 2 mile radius area of the cavern. A community meeting will be held within 30 days of receiving the results of the survey and a copy of the subsidence survey will be given and explained to those present.

**3309.F.3.h.1** Should a sinkhole or other hazard occur in which an evacuation is ordered, the following subsidence survey points will be added (all corners of every structure within the 2 mile radius of the cavern) and a survey will be conducted immediately.

## Weekly Assistance (worksheet: 3309.3.a.1)

	No.	Miles	Cost	Cost Daily	Cost Weekly	Description
per day	7			\$ 100.00	\$ 700.00	Hotel
per day	0			\$ 15.00	\$ -	Baby sitter
(p/day) Round trip:	5	0	0.56	\$ -	\$ -	Mileage to work
(p/day) Round trip:	5	0	0.56	\$ -	\$ -	Mileage to school
(p/day) Round trip:	1	0	0.56	\$ -	\$ -	Mileage (supermarket)
(p/day) Round trip:		0	0.56	\$ -	\$ -	Mileage (doctor)
(p/day) Round trip:		0	0.56	\$ -	\$ -	Mileage (other)
1 adult (p/day)	2			\$ 30.00	\$ 420.00	Meals
1 teen child (p/day)	0			\$ 30.00	\$ -	Meals
1 child (p/day)				\$ 20.00	\$ -	Meals
per day	7			\$ 2.00	\$ 14.00	Laundry
			<b>\$ 197.00</b>			
				<b>\$ 1,134.00</b>	<b>Weekly assistance</b>	

Individual Adult Damages (schedule: 3309.3.b.3)					
EVACUATION DAYS		4 Week Daily Cost Increase	Penalty Cost/ day	7 day period	Damage Payout p/ adult family member
1	7		\$ 800.00	\$ 5,600.00	\$ 5,600.00
8	14		\$ 800.00	\$ 5,600.00	\$ 11,200.00
15	21		\$ 800.00	\$ 5,600.00	\$ 16,800.00
22	28		\$ 800.00	\$ 5,600.00	\$ 22,400.00
29	35	\$ 200.00	\$ 1,000.00	\$ 7,000.00	\$ 29,400.00
36	42		\$ 1,000.00	\$ 7,000.00	\$ 36,400.00
43	49		\$ 1,000.00	\$ 7,000.00	\$ 43,400.00
50	56		\$ 1,000.00	\$ 7,000.00	\$ 50,400.00
57	63	\$ 225.00	\$ 1,225.00	\$ 8,575.00	\$ 58,975.00
64	70		\$ 1,225.00	\$ 8,575.00	\$ 67,550.00
71	77		\$ 1,225.00	\$ 8,575.00	\$ 76,125.00
78	84		\$ 1,225.00	\$ 8,575.00	\$ 84,700.00
85	91	\$ 250.00	\$ 1,475.00	\$ 10,325.00	\$ 95,025.00
92	98		\$ 1,475.00	\$ 10,325.00	\$ 105,350.00
99	105		\$ 1,475.00	\$ 10,325.00	\$ 115,675.00
106	112		\$ 1,475.00	\$ 10,325.00	\$ 126,000.00
113	119	\$ 275.00	\$ 1,750.00	\$ 12,250.00	\$ 138,250.00
120	126		\$ 1,750.00	\$ 12,250.00	\$ 150,500.00
127	133		\$ 1,750.00	\$ 12,250.00	\$ 162,750.00
134	140		\$ 1,750.00	\$ 12,250.00	\$ 175,000.00
141	147	\$ 300.00	\$ 2,050.00	\$ 14,350.00	\$ 189,350.00
148	154		\$ 2,050.00	\$ 14,350.00	\$ 203,700.00
155	161		\$ 2,050.00	\$ 14,350.00	\$ 218,050.00
162	168		\$ 2,050.00	\$ 14,350.00	\$ 232,400.00
169	175	\$ 325.00	\$ 2,375.00	\$ 16,625.00	\$ 249,025.00
176	182		\$ 2,375.00	\$ 16,625.00	\$ 265,650.00
183	189		\$ 2,375.00	\$ 16,625.00	\$ 282,275.00
190	196		\$ 2,375.00	\$ 16,625.00	\$ 298,900.00
197	203	\$ 350.00	\$ 2,725.00	\$ 19,075.00	\$ 317,975.00
204	210		\$ 2,725.00	\$ 19,075.00	\$ 337,050.00
211	217		\$ 2,725.00	\$ 19,075.00	\$ 356,125.00
218	224		\$ 2,725.00	\$ 19,075.00	\$ 375,200.00
225	231	\$ 375.00	\$ 3,100.00	\$ 21,700.00	\$ 396,900.00
232	238		\$ 3,100.00	\$ 21,700.00	\$ 418,600.00
239	245		\$ 3,100.00	\$ 21,700.00	\$ 440,300.00
246	252		\$ 3,100.00	\$ 21,700.00	\$ 462,000.00
253	259	\$ 400.00	\$ 3,500.00	\$ 24,500.00	\$ 486,500.00
260	266		\$ 3,500.00	\$ 24,500.00	\$ 511,000.00
267	273		\$ 3,500.00	\$ 24,500.00	\$ 535,500.00
274	280		\$ 3,500.00	\$ 24,500.00	\$ 560,000.00
281	287	\$ 425.00	\$ 3,925.00	\$ 27,475.00	\$ 587,475.00
288	294		\$ 3,925.00	\$ 27,475.00	\$ 614,950.00
295	301		\$ 3,925.00	\$ 27,475.00	\$ 642,425.00
302	308		\$ 3,925.00	\$ 27,475.00	\$ 669,900.00
309	315	\$ 450.00	\$ 4,375.00	\$ 30,625.00	\$ 700,525.00
316	322		\$ 4,375.00	\$ 30,625.00	\$ 731,150.00
323	329		\$ 4,375.00	\$ 30,625.00	\$ 761,775.00
330	336		\$ 4,375.00	\$ 30,625.00	\$ 792,400.00
337	343	\$ 475.00	\$ 4,850.00	\$ 33,950.00	\$ 826,350.00
344	350		\$ 4,850.00	\$ 33,950.00	\$ 860,300.00
351	357		\$ 4,850.00	\$ 33,950.00	\$ 894,250.00
358	364		\$ 4,850.00	\$ 33,950.00	\$ 928,200.00
365	371	\$ 500.00	\$ 5,350.00	\$ 37,450.00	\$ 965,650.00

Individual Child Damages (schedule: 3309.3.b.3.a)					
EVACUATION DAYS		4 Week Daily Cost Increase	Penalty Cost/ day	7 day period	Damage Payout p/ adult family member
1	7		\$ 450.00	\$ 3,150.00	\$ 3,150.00
8	14		\$ 450.00	\$ 3,150.00	\$ 6,300.00
15	21		\$ 450.00	\$ 3,150.00	\$ 9,450.00
22	28		\$ 450.00	\$ 3,150.00	\$ 12,600.00
29	35	\$ 10.00	\$ 460.00	\$ 3,220.00	\$ 15,820.00
36	42		\$ 460.00	\$ 3,220.00	\$ 19,040.00
43	49		\$ 460.00	\$ 3,220.00	\$ 22,260.00
50	56		\$ 460.00	\$ 3,220.00	\$ 25,480.00
57	63	\$ 25.00	\$ 485.00	\$ 3,395.00	\$ 28,875.00
64	70		\$ 485.00	\$ 3,395.00	\$ 32,270.00
71	77		\$ 485.00	\$ 3,395.00	\$ 35,665.00
78	84		\$ 485.00	\$ 3,395.00	\$ 39,060.00
85	91	\$ 50.00	\$ 535.00	\$ 3,745.00	\$ 42,805.00
92	98		\$ 535.00	\$ 3,745.00	\$ 46,550.00
99	105		\$ 535.00	\$ 3,745.00	\$ 50,295.00
106	112		\$ 535.00	\$ 3,745.00	\$ 54,040.00
113	119	\$ 100.00	\$ 635.00	\$ 4,445.00	\$ 58,485.00
120	126		\$ 635.00	\$ 4,445.00	\$ 62,930.00
127	133		\$ 635.00	\$ 4,445.00	\$ 67,375.00
134	140		\$ 635.00	\$ 4,445.00	\$ 71,820.00
141	147	\$ 150.00	\$ 785.00	\$ 5,495.00	\$ 77,315.00
148	154		\$ 785.00	\$ 5,495.00	\$ 82,810.00
155	161		\$ 785.00	\$ 5,495.00	\$ 88,305.00
162	168		\$ 785.00	\$ 5,495.00	\$ 93,800.00
169	175	\$ 200.00	\$ 985.00	\$ 6,895.00	\$ 100,695.00
176	182		\$ 985.00	\$ 6,895.00	\$ 107,590.00
183	189		\$ 985.00	\$ 6,895.00	\$ 114,485.00
190	196		\$ 985.00	\$ 6,895.00	\$ 121,380.00
197	203	\$ 250.00	\$ 1,235.00	\$ 8,645.00	\$ 130,025.00
204	210		\$ 1,235.00	\$ 8,645.00	\$ 138,670.00
211	217		\$ 1,235.00	\$ 8,645.00	\$ 147,315.00
218	224		\$ 1,235.00	\$ 8,645.00	\$ 155,960.00
225	231	\$ 350.00	\$ 1,585.00	\$ 11,095.00	\$ 167,055.00
232	238		\$ 1,585.00	\$ 11,095.00	\$ 178,150.00
239	245		\$ 1,585.00	\$ 11,095.00	\$ 189,245.00
246	252		\$ 1,585.00	\$ 11,095.00	\$ 200,340.00
253	259	\$ 400.00	\$ 1,985.00	\$ 13,895.00	\$ 214,235.00
260	266		\$ 1,985.00	\$ 13,895.00	\$ 228,130.00
267	273		\$ 1,985.00	\$ 13,895.00	\$ 242,025.00
274	280		\$ 1,985.00	\$ 13,895.00	\$ 255,920.00
281	287	\$ 425.00	\$ 2,410.00	\$ 16,870.00	\$ 272,790.00
288	294		\$ 2,410.00	\$ 16,870.00	\$ 289,660.00
295	301		\$ 2,410.00	\$ 16,870.00	\$ 306,530.00
302	308		\$ 2,410.00	\$ 16,870.00	\$ 323,400.00
309	315	\$ 450.00	\$ 2,860.00	\$ 20,020.00	\$ 343,420.00
316	322		\$ 2,860.00	\$ 20,020.00	\$ 363,440.00
323	329		\$ 2,860.00	\$ 20,020.00	\$ 383,460.00
330	336		\$ 2,860.00	\$ 20,020.00	\$ 403,480.00
337	343	\$ 475.00	\$ 3,335.00	\$ 23,345.00	\$ 426,825.00
344	350		\$ 3,335.00	\$ 23,345.00	\$ 450,170.00
351	357		\$ 3,335.00	\$ 23,345.00	\$ 473,515.00
358	364		\$ 3,335.00	\$ 23,345.00	\$ 496,860.00
365	371	\$ 500.00	\$ 3,835.00	\$ 26,845.00	\$ 523,705.00

RENTER DAMAGES (schedule 3309.3.b.3.b)						
Example	Monthly Rent	\$ 900.00				
	Daily	\$ 32.14				
EVACUATION DAYS		Rent/ day	7 day period	Cumulative Rental Cost	NO. OF PROPERTYS	TOTAL PAYOUT
1	7	\$ 32.14	\$ 225.00	\$ 225.00	1	\$ 225.00
8	14	\$ 32.14	\$ 225.00	\$ 450.00	1	\$ 450.00
15	21	\$ 32.14	\$ 225.00	\$ 675.00	1	\$ 675.00
22	28	\$ 32.14	\$ 225.00	\$ 900.00	1	\$ 900.00
29	35	\$ 32.14	\$ 225.00	\$ 1,125.00	1	\$ 1,125.00
36	42	\$ 32.14	\$ 225.00	\$ 1,350.00	1	\$ 1,350.00
43	49	\$ 32.14	\$ 225.00	\$ 1,575.00	1	\$ 1,575.00
50	56	\$ 32.14	\$ 225.00	\$ 1,800.00	1	\$ 1,800.00
57	63	\$ 32.14	\$ 225.00	\$ 2,025.00	1	\$ 2,025.00
64	70	\$ 32.14	\$ 225.00	\$ 2,250.00	1	\$ 2,250.00
71	77	\$ 32.14	\$ 225.00	\$ 2,475.00	1	\$ 2,475.00
78	84	\$ 32.14	\$ 225.00	\$ 2,700.00	1	\$ 2,700.00
85	91	\$ 32.14	\$ 225.00	\$ 2,925.00	1	\$ 2,925.00
92	98	\$ 32.14	\$ 225.00	\$ 3,150.00	1	\$ 3,150.00
99	105	\$ 32.14	\$ 225.00	\$ 3,375.00	1	\$ 3,375.00
106	112	\$ 32.14	\$ 225.00	\$ 3,600.00	1	\$ 3,600.00
113	119	\$ 32.14	\$ 225.00	\$ 3,825.00	1	\$ 3,825.00
120	126	\$ 32.14	\$ 225.00	\$ 4,050.00	1	\$ 4,050.00
127	133	\$ 32.14	\$ 225.00	\$ 4,275.00	1	\$ 4,275.00
134	140	\$ 32.14	\$ 225.00	\$ 4,500.00	1	\$ 4,500.00
141	147	\$ 32.14	\$ 225.00	\$ 4,725.00	1	\$ 4,725.00
148	154	\$ 32.14	\$ 225.00	\$ 4,950.00	1	\$ 4,950.00
155	161	\$ 32.14	\$ 225.00	\$ 5,175.00	1	\$ 5,175.00
162	168	\$ 32.14	\$ 225.00	\$ 5,400.00	1	\$ 5,400.00
169	175	\$ 32.14	\$ 225.00	\$ 5,625.00	1	\$ 5,625.00
176	182	\$ 32.14	\$ 225.00	\$ 5,850.00	1	\$ 5,850.00
183	189	\$ 32.14	\$ 225.00	\$ 6,075.00	1	\$ 6,075.00
190	196	\$ 32.14	\$ 225.00	\$ 6,300.00	1	\$ 6,300.00
197	203	\$ 32.14	\$ 225.00	\$ 6,525.00	1	\$ 6,525.00
204	210	\$ 32.14	\$ 225.00	\$ 6,750.00	1	\$ 6,750.00
211	217	\$ 32.14	\$ 225.00	\$ 6,975.00	1	\$ 6,975.00
218	224	\$ 32.14	\$ 225.00	\$ 7,200.00	1	\$ 7,200.00
225	231	\$ 32.14	\$ 225.00	\$ 7,425.00	1	\$ 7,425.00
232	238	\$ 32.14	\$ 225.00	\$ 7,650.00	1	\$ 7,650.00
239	245	\$ 32.14	\$ 225.00	\$ 7,875.00	1	\$ 7,875.00
246	252	\$ 32.14	\$ 225.00	\$ 8,100.00	1	\$ 8,100.00
253	259	\$ 32.14	\$ 225.00	\$ 8,325.00	1	\$ 8,325.00
260	266	\$ 32.14	\$ 225.00	\$ 8,550.00	1	\$ 8,550.00
267	273	\$ 32.14	\$ 225.00	\$ 8,775.00	1	\$ 8,775.00
274	280	\$ 32.14	\$ 225.00	\$ 9,000.00	1	\$ 9,000.00
281	287	\$ 32.14	\$ 225.00	\$ 9,225.00	1	\$ 9,225.00
288	294	\$ 32.14	\$ 225.00	\$ 9,450.00	1	\$ 9,450.00
295	301	\$ 32.14	\$ 225.00	\$ 9,675.00	1	\$ 9,675.00
302	308	\$ 32.14	\$ 225.00	\$ 9,900.00	1	\$ 9,900.00
309	315	\$ 32.14	\$ 225.00	\$ 10,125.00	1	\$ 10,125.00
316	322	\$ 32.14	\$ 225.00	\$ 10,350.00	1	\$ 10,350.00
323	329	\$ 32.14	\$ 225.00	\$ 10,575.00	1	\$ 10,575.00
330	336	\$ 32.14	\$ 225.00	\$ 10,800.00	1	\$ 10,800.00
337	343	\$ 32.14	\$ 225.00	\$ 11,025.00	1	\$ 11,025.00
344	350	\$ 32.14	\$ 225.00	\$ 11,250.00	1	\$ 11,250.00
351	357	\$ 32.14	\$ 225.00	\$ 11,475.00	1	\$ 11,475.00
358	364	\$ 32.14	\$ 225.00	\$ 11,700.00	1	\$ 11,700.00
365	371	\$ 32.14	\$ 225.00	\$ 11,925.00	1	\$ 11,925.00

Camp Owner Damages (schedule: 3309.3.b.3.c)					
EVACUATION DAYS		PENALTY COST/ DAY	7 DAY PERIOD	NO. OF PROPERTIES	TOTAL PAYOUT PER FAMILY MEMBER
1	7	\$ 50.00	\$ 350.00	1	\$ 350.00
8	14	\$ 50.00	\$ 350.00	1	\$ 700.00
15	21	\$ 50.00	\$ 350.00	1	\$ 1,050.00
22	28	\$ 50.00	\$ 350.00	1	\$ 1,400.00
29	35	\$ 50.00	\$ 350.00	1	\$ 1,750.00
36	42	\$ 50.00	\$ 350.00	1	\$ 2,100.00
43	49	\$ 50.00	\$ 350.00	1	\$ 2,450.00
50	56	\$ 50.00	\$ 350.00	1	\$ 2,800.00
57	63	\$ 50.00	\$ 350.00	1	\$ 3,150.00
64	70	\$ 50.00	\$ 350.00	1	\$ 3,500.00
71	77	\$ 50.00	\$ 350.00	1	\$ 3,850.00
78	84	\$ 50.00	\$ 350.00	1	\$ 4,200.00
85	91	\$ 50.00	\$ 350.00	1	\$ 4,550.00
92	98	\$ 50.00	\$ 350.00	1	\$ 4,900.00
99	105	\$ 50.00	\$ 350.00	1	\$ 5,250.00
106	112	\$ 50.00	\$ 350.00	1	\$ 5,600.00
113	119	\$ 50.00	\$ 350.00	1	\$ 5,950.00
120	126	\$ 50.00	\$ 350.00	1	\$ 6,300.00
127	133	\$ 50.00	\$ 350.00	1	\$ 6,650.00
134	140	\$ 50.00	\$ 350.00	1	\$ 7,000.00
141	147	\$ 50.00	\$ 350.00	1	\$ 7,350.00
148	154	\$ 50.00	\$ 350.00	1	\$ 7,700.00
155	161	\$ 50.00	\$ 350.00	1	\$ 8,050.00
162	168	\$ 50.00	\$ 350.00	1	\$ 8,400.00
169	175	\$ 50.00	\$ 350.00	1	\$ 8,750.00
176	182	\$ 50.00	\$ 350.00	1	\$ 9,100.00
183	189	\$ 50.00	\$ 350.00	1	\$ 9,450.00
190	196	\$ 50.00	\$ 350.00	1	\$ 9,800.00
197	203	\$ 50.00	\$ 350.00	1	\$ 10,150.00
204	210	\$ 50.00	\$ 350.00	1	\$ 10,500.00
211	217	\$ 50.00	\$ 350.00	1	\$ 10,850.00
218	224	\$ 50.00	\$ 350.00	1	\$ 11,200.00
225	231	\$ 50.00	\$ 350.00	1	\$ 11,550.00
232	238	\$ 50.00	\$ 350.00	1	\$ 11,900.00
239	245	\$ 50.00	\$ 350.00	1	\$ 12,250.00
246	252	\$ 50.00	\$ 350.00	1	\$ 12,600.00
253	259	\$ 50.00	\$ 350.00	1	\$ 12,950.00
260	266	\$ 50.00	\$ 350.00	1	\$ 13,300.00
267	273	\$ 50.00	\$ 350.00	1	\$ 13,650.00
274	280	\$ 50.00	\$ 350.00	1	\$ 14,000.00
281	287	\$ 50.00	\$ 350.00	1	\$ 14,350.00
288	294	\$ 50.00	\$ 350.00	1	\$ 14,700.00
295	301	\$ 50.00	\$ 350.00	1	\$ 15,050.00
302	308	\$ 50.00	\$ 350.00	1	\$ 15,400.00
309	315	\$ 50.00	\$ 350.00	1	\$ 15,750.00
316	322	\$ 50.00	\$ 350.00	1	\$ 16,100.00
323	329	\$ 50.00	\$ 350.00	1	\$ 16,450.00
330	336	\$ 50.00	\$ 350.00	1	\$ 16,800.00
337	343	\$ 50.00	\$ 350.00	1	\$ 17,150.00
344	350	\$ 50.00	\$ 350.00	1	\$ 17,500.00
351	357	\$ 50.00	\$ 350.00	1	\$ 17,850.00
358	364	\$ 50.00	\$ 350.00	1	\$ 18,200.00
365	371	\$ 50.00	\$ 350.00	1	\$ 18,550.00

LAND OWNER DAMAGES (schedule: 3309.3.b.3.d)						
EVACUATION DAYS		4 Week Daily Cost Increase	Penalty Cost/ day	7 day period	NO. OF PROPERTYS	TOTAL PAYOUT
1	7		\$ 20.00	\$ 140.00	1	\$ 140.00
8	14		\$ 20.00	\$ 140.00	1	\$ 280.00
15	21		\$ 20.00	\$ 140.00	1	\$ 420.00
22	28		\$ 20.00	\$ 140.00	1	\$ 560.00
29	35	\$ 10.00	\$ 30.00	\$ 210.00	1	\$ 770.00
36	42		\$ 30.00	\$ 210.00	1	\$ 980.00
43	49		\$ 30.00	\$ 210.00	1	\$ 1,190.00
50	56		\$ 30.00	\$ 210.00	1	\$ 1,400.00
57	63	\$ 20.00	\$ 50.00	\$ 350.00	1	\$ 1,750.00
64	70		\$ 50.00	\$ 350.00	1	\$ 2,100.00
71	77		\$ 50.00	\$ 350.00	1	\$ 2,450.00
78	84		\$ 50.00	\$ 350.00	1	\$ 2,800.00
85	91	\$ 30.00	\$ 80.00	\$ 560.00	1	\$ 3,360.00
92	98		\$ 80.00	\$ 560.00	1	\$ 3,920.00
99	105		\$ 80.00	\$ 560.00	1	\$ 4,480.00
106	112		\$ 80.00	\$ 560.00	1	\$ 5,040.00
113	119	\$ 40.00	\$ 120.00	\$ 840.00	1	\$ 5,880.00
120	126		\$ 120.00	\$ 840.00	1	\$ 6,720.00
127	133		\$ 120.00	\$ 840.00	1	\$ 7,560.00
134	140		\$ 120.00	\$ 840.00	1	\$ 8,400.00
141	147	\$ 50.00	\$ 170.00	\$ 1,190.00	1	\$ 9,590.00
148	154		\$ 170.00	\$ 1,190.00	1	\$ 10,780.00
155	161		\$ 170.00	\$ 1,190.00	1	\$ 11,970.00
162	168		\$ 170.00	\$ 1,190.00	1	\$ 13,160.00
169	175	\$ 60.00	\$ 230.00	\$ 1,610.00	1	\$ 14,770.00
176	182		\$ 230.00	\$ 1,610.00	1	\$ 16,380.00
183	189		\$ 230.00	\$ 1,610.00	1	\$ 17,990.00
190	196		\$ 230.00	\$ 1,610.00	1	\$ 19,600.00
197	203	\$ 70.00	\$ 300.00	\$ 2,100.00	1	\$ 21,700.00
204	210		\$ 300.00	\$ 2,100.00	1	\$ 23,800.00
211	217		\$ 300.00	\$ 2,100.00	1	\$ 25,900.00
218	224		\$ 300.00	\$ 2,100.00	1	\$ 28,000.00
225	231	\$ 80.00	\$ 380.00	\$ 2,660.00	1	\$ 30,660.00
232	238		\$ 380.00	\$ 2,660.00	1	\$ 33,320.00
239	245		\$ 380.00	\$ 2,660.00	1	\$ 35,980.00
246	252		\$ 380.00	\$ 2,660.00	1	\$ 38,640.00
253	259	\$ 90.00	\$ 470.00	\$ 3,290.00	1	\$ 41,930.00
260	266		\$ 470.00	\$ 3,290.00	1	\$ 45,220.00
267	273		\$ 470.00	\$ 3,290.00	1	\$ 48,510.00
274	280		\$ 470.00	\$ 3,290.00	1	\$ 51,800.00
281	287	\$ 100.00	\$ 570.00	\$ 3,990.00	1	\$ 55,790.00
288	294		\$ 570.00	\$ 3,990.00	1	\$ 59,780.00
295	301		\$ 570.00	\$ 3,990.00	1	\$ 63,770.00
302	308		\$ 570.00	\$ 3,990.00	1	\$ 67,760.00
309	315	\$ 110.00	\$ 680.00	\$ 4,760.00	1	\$ 72,520.00
316	322		\$ 680.00	\$ 4,760.00	1	\$ 77,280.00
323	329		\$ 680.00	\$ 4,760.00	1	\$ 82,040.00
330	336		\$ 680.00	\$ 4,760.00	1	\$ 86,800.00
337	343	\$ 120.00	\$ 800.00	\$ 5,600.00	1	\$ 92,400.00
344	350		\$ 800.00	\$ 5,600.00	1	\$ 98,000.00
351	357		\$ 800.00	\$ 5,600.00	1	\$ 103,600.00
358	364		\$ 800.00	\$ 5,600.00	1	\$ 109,200.00
365	371	\$ 130.00	\$ 930.00	\$ 6,510.00	1	\$ 115,710.00

*LaBelle Rm., 1st Floor, LaSalle Bldg., 617 N. 3rd St.*

Class III (Solution-Mining) Injection Wells  
(LAC 43:XVII.Chapter 33)

Docket No. IMD-2013-07

3315 Regulation Changes proposed by Nick Romero

3315.A.1 New caverns must use the latest technology to determine the edge of the salt and the contour of it. The cavern must maintain a minimum of 400 feet from the edge of the salt. The additional 100 feet is needed to address any error factors (+ or -) in the technology.

3315.B.2 Change 300 feet to 400 feet. Change last sentence to: For solution mining caverns permitted prior to the effective date of these regulations and which is already within 400 feet of any other manmade structure within the salt stock, the Commissioner of Conservation will issue an order to stop mining the cavern and follow the guidelines in 3315.B.3.c.

3315.B.2.a The minimum vertical separation between adjacent structures within the Salt. As measured in any direction is 1000 feet.

3315.B.3.a Change 300 feet to 400 feet.

3315.B.3.b An existing solution-mining cavern with less than 400 feet of salt separation at any point between the cavern walls and the periphery of the salt stock shall provide the Office of Conservation with a newly completed worksheet 3309.B.1 (Method to determine financial responsibility). New evidence of financial responsibility shall be by submission of a surety bond, a letter of credit, certificate of deposit, or other instruments acceptable to the Office of Conservation. The amount of funds available shall be no less than the amount identified in newly completed worksheet 3309.B.1. The owner or operator shall provide an enhanced monitoring plan that has provisions for ongoing monitoring of the structural stability of the cavern and salt through methods that may include, but are not limited to, increased frequency of sonar caliper surveys, vertical seismic profiles, micro-seismic monitoring, increased frequency of subsidence monitoring, mechanical integrity testing, continuous cavern pressure data monitoring, etc. A combination of enhanced monitoring methods may be proposed where appropriate. Once approved, the owner or operator shall implement the enhanced monitoring plan.

3315.B.3.c Change 300 feet to 400 feet.

**II. ESTIMATED EFFECT ON REVENUE COLLECTIONS OF STATE OR LOCAL GOVERNMENTAL UNITS (Summary)**

There is no anticipated effect on revenue collections of state or local government units as a result of this rule change.

**III. ESTIMATED COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS OR NONGOVERNMENTAL GROUPS (Summary)**

The proposed rule will result in increased costs to the regulated community. The specific costs incurred by the operators include costs related to mechanical integrity tests, sonar surveys, subsidence monitoring requirements, and casing inspection log. Operators will be required to perform a mechanical integrity test (MIT) on each cavern. While many operators currently perform a liquid interface MIT, operators who have not run a MIT in the previous 10 years will now be required to run this test every 5 years. The requirement to perform a MIT using a nitrogen-brine interface test costs approximately \$32,000 including wireline logs, nitrogen, pressure equipment and labor. Additional costs to approximately 15 operators will result from the regularly required sonar surveys, which is estimated to cost \$2,000 a year. Subsidence monitoring requirements, a new obligation for operators on four salt domes in the state that continues post-closure monitoring, is estimated to cost \$35,000 yearly per salt dome in addition to a one-time installation expense of \$85,000 per salt dome. This cost is expected to be shared among dome operators. A majority of cavern operators and/owners are currently meeting the new regulations as required by specific provisions of permits issued by the Office of Conservation. One significant increased expense to all operators will be the casing inspection log, which is required within 5 years of the effective date of the proposed new regulations and then every 10 years thereafter. While this increased cost will be spread out over 5 to 10 years, the Office of Conservation estimates that approximately 70 wells will need casing inspection logs as a result of the proposed regulations, which cost between \$8,000 to \$17,000.

Updated maps and cross sections of caverns in relation to the periphery of salt stock and other manmade structures within the salt stock are required to be submitted every 5 years to the Office of Conservation. In most situations where little or no new information is available for use in this update, the cost will be approximately \$5,000 per operator. If additional well control exists for use in this update the cost will be approximately \$20,000. In the rare event that 3-D seismic data is required for an update by an operator, the cost to interpret this data may reach as high as \$200,000.

Several economic benefits are expected to impact non-governmental groups. Louisiana has numerous consultants, contractors and professionals who will benefit economically from being hired by the regulated community to perform the increased monitoring, testing and reporting required in these proposed regulations. The proposed regulations are designed to prevent emergency situations and environmental disasters thus preventing substantial economic costs that could reach into the millions of dollars to the regulated community, individual businesses, and the public at large.

**IV. ESTIMATED EFFECT ON COMPETITION AND EMPLOYMENT (Summary)**

The proposed rule will have no anticipated effect on competition and employment.

James H. Welsh  
Commissioner  
1310#049

Evan Brasseaux  
Staff Director  
Legislative Fiscal Office

**NOTICE OF INTENT**

**Department of Natural Resources  
Office of Conservation**

**Hydrocarbon Storage Wells in Salt Dome Cavities  
(LAC 43:XVII.Chapter 3)**

The Department of Natural Resources, Office of Conservation proposes to amend LAC 43:XVII.Chapter 3 in accordance with the provisions of the Administrative Procedure Act, R.S. 49:950 et seq., and pursuant to the power delegated under the laws of the state of Louisiana. The proposed action will adopt Statewide Order No. 29-M (Revision 3), which provides comprehensive regulations for hydrocarbon storage wells in salt dome cavities, and will amend existing Statewide Order No. 29-M, as enacted by Act 368 and Act 369 of the 2013 Legislative Session.

**Title 43**

**NATURAL RESOURCES**

**Part XVII. Office of Conservation—Injection and Mining**

**Subpart 3. Statewide Order No. 29-M (Rev. 3)**

**Chapter 3. Hydrocarbon Storage Wells in Salt Dome Cavities**

**§301. Definitions**

*Act*—part I, chapter 1 of title 30 of the *Louisiana Revised Statutes*.

*Active Cavern Well*—a storage well or cavern that is actively being used or capable of being used to store liquid, liquefied, or gaseous hydrocarbons, including standby wells. The term does not include an *inactive cavern well*.

*Application*—the filing on the appropriate Office of Conservation form(s), including any additions, revisions, modifications, or required attachments to the form(s), for a permit to operate a hydrocarbon storage well or parts thereof.

*Aquifer*—a geologic formation, groups of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

*Blanket Material*—sometimes referred to as a "pad." The *blanket material* is a fluid placed within a cavern that is lighter than the water in the cavern and will not dissolve the salt or any mineral impurities that may be contained within the salt. The function of the blanket is to prevent unwanted leaching of the cavern roof, prevent leaching of salt from around the cemented casing, and to protect the cemented casing from internal corrosion. *Blanket material* typically consists of crude oil, diesel, mineral oil, or some fluid possessing similar noncorrosive, nonsoluble, low-density properties. The *blanket material* is placed between the cavern's outermost hanging string and innermost cemented casing.

*Brine*—water within a salt cavern that is saturated partially or completely with salt.

*Cap Rock*—the porous and permeable strata immediately overlying all or part of the salt stock of some salt structures typically composed of anhydrite, gypsum, limestone, and occasionally sulfur.

*Casing*—metallic pipe placed and cemented in the wellbore for the purpose of supporting the sides of the wellbore and to act as a barrier preventing subsurface migration of fluids out of or into the wellbore.

*Catastrophic Collapse*—the sudden failure of the overlying strata caused by the removal or otherwise weakening of underlying sediments.

*Cavern Roof*—the uppermost part of a cavern being just below the neck of the wellbore. The shape of the salt cavern roof may be flat or domed.

*Cavern Well*—a well extending into the salt stock to facilitate the injection and withdrawal of fluids into a salt cavern.

*Cementing*—the operation (either primary, secondary, or squeeze) whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing.

*Circulate to the Surface*—the observing of actual cement returns to the surface during the primary cementing operation.

*Closed Cavern Well*—a storage well or cavern that is no longer used or capable of being used to store liquid, liquefied, or gaseous hydrocarbons and is thus subject to the closure and post-closure requirements of §337. The term does not include an inactive well or a previously closed well.

*Commissioner*—the *commissioner* of conservation of the state of Louisiana.

*Contamination*—the introduction of substances or contaminants into a groundwater aquifer, a USDW or soil in such quantities as to render them unusable of their intended purposes.

*Discharge*—the placing, releasing, spilling, percolating, draining, pumping, leaking, mixing, migrating, seeping, emitting, disposing, by-passing, or other escaping of pollutants on or into the air, ground, or waters of the state. A *discharge* shall not include that which is allowed through a federal or state permit.

*Effective Date*—the date of final promulgation of these rules and regulations.

*Emergency Shutdown Valve*—a valve that automatically closes to isolate a salt cavern well from surface piping in the event of a specified condition that, if uncontrolled, may cause an emergency.

*Evacuation- (mandatory or forced) residents, campers, or landowners are asked to leave their homes for safety reasons. An evacuation is considered to be an evacuation effective immediately up to 60 days. On day 61, it will be considered a relocation.*

*Exempted Aquifer*—an aquifer or its portion that meets the criteria of the definition of underground source of drinking water but which has been exempted according to the procedures set forth in §303.E.2.

*Existing Cavern Well or Storage Project*—a well, salt cavern, or project permitted to store liquid, liquefied, or gaseous hydrocarbons before the effective date of these regulations.

*Facility or Activity*—any *facility* or *activity*, including land or appurtenances thereto, that is subject to these regulations

*Fluid*—any material or substance that flows or moves whether in a semisolid, liquid, sludge, gas or any other form or state.

*Ground Subsidence*—the downward settling of the earth's surface with little or no horizontal motion in response to natural or manmade subsurface actions.

*Groundwater Aquifer*—water in the saturated zone beneath the land surface that contains less than 10,000 mg/l total dissolved solids.

*Groundwater Contamination*—the degradation of naturally occurring groundwater quality either directly or indirectly as a result of human activities.

*Hanging String*—casing whose weight is supported at the wellhead and hangs vertically in a larger cemented casing or another larger *hanging string*.

*Hydrocarbon Storage Cavern*—a salt cavern created within the salt stock by solution mining and used to store liquid, liquefied, or gaseous hydrocarbons.

*Improved Sinkhole*—a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface.

*Inactive Cavern Well*—a storage well or cavern that is capable of being used to store liquid, liquefied, or gaseous hydrocarbons but is not being so used, as evidenced by the filing of a written notice with the Office of Conservation in accordance with §309.I.3 and §331.

*Injection and Mining Division*—the *Injection and Mining Division* of the Louisiana Office of Conservation within the Department of Natural Resources.

*Injection Well*—a well into which fluids are injected other than fluids associated with active drilling operations.

*Injection Zone*—a geological formation, group of formations or part of a formation receiving fluids through an injection well.

*Leaching*—the process of introducing an under-saturated fluid into a salt cavern thereby dissolving additional salt and increasing the volume of the salt cavern.

*Mechanical Integrity*—an injection well has *mechanical integrity* if there is no significant leak in the casing, tubing, or packer and there is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore.

*Migrating*—any movement of fluids by leaching, spilling, discharging, or any other uncontaminated or uncontrolled manner, except as allowed by law, regulation, or permit.

*New Cavern Well*—a storage well or cavern permitted after the effective date of these regulations.

*Office of Conservation*—the Louisiana *Office of Conservation* within the Department of Natural Resources.

*Open Borehole*—that portion of a well below the production casing and above the salt cavern.

*Operator*—the person recognized by the Office of Conservation as being responsible for the physical operation of the facility or activity subject to regulatory authority under these rules and regulations.

*Owner*—the person recognized by the Office of Conservation as owning the facility or activity subject to regulatory authority under these rules and regulations.

*Permit*—an authorization, license, or equivalent control document issued by the commissioner to implement the requirements of these regulations. *Permit* includes, but is not limited to, area *permits* and emergency *permits*. *Permit* does not include UIC authorization by rule or any *permit* which has not yet been the subject of final agency action, such as a draft *permit*.

*Person*—an individual, association, partnership, public or private corporation, firm, municipality, state or federal agency and any agent or employee thereof, or any other juridical *person*.

*Post-Closure Care*—the appropriate monitoring and other actions (including corrective action) needed following cessation of a storage project to ensure that USDWs are not endangered.

*Previously Closed Cavern Well*—a storage well or cavern that is no longer used or capable of being used to store liquid, liquefied, or gaseous hydrocarbons and was closed prior to the effective date of these regulations.

*Produced Water*—liquids and suspended particulate matter that is obtained by processing fluids brought to the surface in conjunction with the recovery of oil and gas from underground geologic formations, with underground storage of hydrocarbons, or with solution mining for brine.

*Public Water System*—a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves at least 25 individuals. Such term includes:

1. any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and
2. any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system.

*Project*—a group of wells or salt caverns used in a single operation.

*Release*—the accidental or intentional spilling, pumping, leaking, pouring, emitting, leaching, escaping, or dumping of pollutants into or on any air, land, groundwater, or waters of the state. A *release* shall not include that which is allowed through a federal or state permit.

**Relocation- an evacuation will be turned into relocation on day 61. The buyout process should begin immediately. Residents can release their homes for a buyout but reserve the future rights to seek further damages not associated with the buyout of their home. Such as but not limited to the cost of moving, mental anguish, etc**

*Salt Dome*—a diapiric, typically circular structure that penetrates, uplifts, and deforms overlying sediments as a result of the upward movement of a salt stock in the subsurface. Collectively, the *salt dome* includes the salt stock and any overlying uplifted sediments.

*Salt Stock*—a typically cylindrical formation composed chiefly of an evaporite mineral that forms the core of a salt dome. The most common form of the evaporite mineral is halite known chemically as sodium chloride (NaCl). Cap rock shall not be considered a part of the *salt stock*.

*Schedule of Compliance*—a schedule or remedial measures included in a permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the act and these regulations.

*Site*—the land or water area where any facility or activity is physically located or conducted including adjacent land used in connection with the facility or activity.

*Solution-Mined Salt Cavern*—a cavity or cavern created within the salt stock by dissolution with water.

*Solution Mining Injection Well*—a well used to inject fluids, other than fluids associated with active drilling operations, for the extraction of minerals or energy.

*State*—the state of Louisiana.

*Subsidence*—see *ground subsidence*.

*Surface Casing*—the first string of casing installed in a well, excluding conductor casing.

*UIC*—the Louisiana State Underground Injection Control Program.

*Unauthorized Discharge*—a continuous, intermittent, or one-time discharge, whether intentional or unintentional, anticipated or unanticipated, from any permitted or unpermitted source which is in contravention of any provision of the Louisiana Environmental Quality Act (R.S. 30:2001 et seq.) or of any permit or license terms and conditions, or of any applicable regulation, compliance schedule, variance, or exception of the commissioner of conservation.

*Underground Source of Drinking Water*—an aquifer or its portion:

1. which supplies any public water system; or
2. which contains a sufficient quantity of groundwater to supply a public water system; and
  - a. currently supplies drinking water for human consumption; or
  - b. contains fewer than 10,000 mg/l total dissolved solids; and which is not an exempted aquifer.

*USDW*—see underground source of drinking water.

*Waters of the State*—both surface and underground waters within the state of Louisiana including all rivers, streams, lakes, ground waters, and all other water courses and waters within the confines of the state, and all bordering waters, and the Gulf of Mexico.

*Well*—a bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; or, a dug hole whose depth is greater than the largest surface dimension; or an improved sinkhole; or, a subsurface fluid distribution system.

*Well Plug*—a fluid-tight seal installed in a borehole or well to prevent the movement of fluids.

*Well Stimulation*—several processes used to clean the well bore, enlarge channels, and increase pore space in the interval to be injected thus making it possible for injection fluids to move more readily into the formation, and includes such actions as:

1. surging;
2. jetting;
3. blasting;
4. acidizing;
5. hydraulic fracturing.

*Workover*—to perform one or more of a variety of remedial operations on an injection well, such as cleaning, perforation, changing tubing, deepening, squeezing, plugging back, etc.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:4 et seq.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of Conservation, LR 3:310 (July 1977), amended LR 40:

307.E

6. surface site diagram(s) of the facility in which the hydrocarbon storage well is located, including but not limited to surface pumps, piping and instrumentation, controlled access roads, fenced boundaries, field offices, monitoring and safety equipment, etc.;

7. unless already obtained, a proposed formation testing program to obtain the geomechanical properties of the salt stock;

8. proposed injection and withdrawal procedures;

9. plans and procedures for operating the hydrocarbon storage well, cavern, and related surface facility to include at a minimum:

a. average and maximum daily rate and volume of fluid to be injected;

b. average and maximum injection pressure; and

c. the cavern design requirements of §315, including, but not limited to cavern spacing requirements;

d. enhanced monitoring plan implementation for any existing cavern within the mandatory setback distance location of §315.B.3;

e. the well construction and completion requirements of §317, including, but not limited to open borehole surveys, casing and cementing, casing and casing seat tests, cased borehole surveys, hanging strings, and wellhead components and related connections;

f. the operating requirements of §319, including, but not limited to cavern roof restrictions, blanket material, remedial work, well recompletion, multiple well caverns, cavern allowable operating pressure and rates, and disposition of extracted cavern fluid for pressure management.

g. the safety requirements of §321, including, but not limited to an emergency action plan, controlled site access, facility identification, personnel, wellhead protection and identification, valves and flowlines, alarm systems **which can be clearly heard throughout the communities despite any natural interferences such as wind and other variables such as traffic on the highway**, emergency shutdown valves, systems test and inspections, and surface facility retaining walls and spill containment, contingency plans to cope with all shut-ins as a result of noncompliance with these regulations or well failures to prevent the migration of contaminating fluids into underground sources of drinking water;

h. the monitoring requirements of §323, including, but not limited to equipment requirements such as pressure gauges, pressure sensors and flow sensors, continuous recording instruments, and subsidence monitoring, as well as a description of methods that will be undertaken to monitor cavern growth;

i. the pre-operating requirements of §325, specifically the submission of a completion report, and the information required therein;

j. the mechanical integrity pressure and leak test requirements of §327, including, but not limited to frequency of tests, test methods, submission of pressure and leak test results, and notification of test failures;

k. the cavern configuration and capacity measurement procedures of §329, including, but not limited to sonar caliper surveys, frequency of surveys, and submission of survey results;

l. the requirements for inactive caverns in §331;

m. the reporting requirements of §333, including, but not limited to the information required in monthly operation reports;

n. the record retention requirements of §335;

o. the closure and post-closure requirements of §337, including, but not limited to closure plan requirements, notice of intent to close, standards for closure, and post-closure requirements;

p. assistance to residents of areas deemed to be at immediate potential risk in the event of a sinkhole developing or other incident that requires an evacuation if the potential risk or evacuation is associated with the operation of the solution-mining well or cavern;

**p.1 During the evacuation period a weekly assistance check of \$1134.00 will be paid by the operator causing the evacuation to each resident, including renters living in the evacuated area and \$324.00 to any camp owners in the evacuated area. The \$1134.00 is for two (2) adults for hotel, meals and laundry for seven (7) days. Hotel cost should be adjusted to current pricing in the area. This weekly assistance amount can be adjusted by completing worksheet 3309.3.a.1. This weekly assistance will be paid to all residents, renters and property owners in the evacuated area regardless of whether they evacuated or not.**

**p.1.a Vacant rental property. Property owner will provide proof of the last monthly rental rate. That rate will be divided by 4 and paid each week as assistance to the property owner.**

**p.1.b Schools, Churches, Hospitals, Business and other facilities; during the evacuation period each school, church, hospital, business or facility in the evacuation area is to be paid weekly assistance that covers staff salaries, revenue loss and other expenses or losses occurred because of the evacuation.**

**p.1.c Relocation Process. An evacuation period that extends past two months would trigger an automatic relocation process in which the operator will immediately began a buyout process that would be completed by the end of the fifth month. The buyout will be replacement value.**

**p.1.d The operator would pay each house hold the following should the evacuation trigger an automatic relocation: a minimum of \$2000 for moving cost and \$150 for utilities connection fees.**

**p.1.e The operator will pay each house hold member damages. Each adult in the evacuated area will be paid as outlined in schedule 3309.3.b.3 (Individual Adult Damages) and each child will be paid as outlined in schedule 3309.3.b.3.a (Individual Child Damages), rental owners will be paid as outlined in schedule 3309.3.b.3.b (Rental Damages), camp owners will be paid according to schedule 3309.3.b.3.c (Camp Owner Damages) and land owners will be paid according to schedule 3309.3.b.3.d (Land Owner Damages).**

**p.1.f The operator will pay any State and or Federal taxes that would be accessed on the award. The award value will not be reduced because of taxes.**

**p.1.g Those residents wanting to stay if the area is deemed safe would be paid a diminished value of 50% of the appraised value of the property prior to the incident causing the evacuation and 307.9.p.1, 307.9.p.1.a, c-f, h-j.**

E.Department of Natural Resources  
Office of Conservation  
Hydrocarbon Storage Wells in Salt Dome Cavities  
(LAC 43:XVII.Chapter 3)

Title 43

NATURAL RESOURCES

Part XVII. Office of Conservation—Injection and Mining  
Subpart 3. Statewide Order No. 29-M (Rev. 3)

Chapter 3. Hydrocarbon Storage Wells in Salt Dome Cavities

Docket No. IMD-2013-8

307.E.9. p.1 During the evacuation period a weekly assistance check of \$1134.00 will be paid by the operator causing the evacuation to each resident, including renters living in the evacuated area and \$282.30 to any camp owners in the evacuated area. The \$1134.00 is for two (2) adults for hotel, meals and laundry for seven (7) days. Hotel cost should be adjusted to current pricing in the area. This weekly assistance amount can be adjusted by completing worksheet 3309.3.a.1. This weekly assistance will be paid to all residents, renters and property owners in the evacuated area regardless of whether they evacuated or not.

p.1.a Vacant rental property. Property owner will provide proof of the last monthly rental rate. That rate will be divided by 4 and paid each week as assistance to the property owner.

p.1.b Schools, Churches, Hospitals or Business.; during the evacuation period each school, church, hospital or business in the evacuation area is to be paid weekly assistance that covers staff salaries, revenue loss and other expenses or losses occurred because of the evacuation.

p.1.c Relocation Process. An evacuation period that extends past two months would trigger an automatic relocation process in which the operator will immediately began a buyout process that would be completed by the end of the fifth month. The buyout will be replacement value.

p.1.d The operator would pay each house hold the following should the evacuation trigger an automatic relocation: a minimum of \$2000 for moving cost and \$150 for utilities connection fees.

p.1.e The operator will pay each house hold member damages. Each adult in the evacuated area will be paid as outlined in schedule 3309.3.b.3 (Individual Adult Damages) and each child will be paid as outlined in schedule 3309.3.b.3.a (Individual Child Damages).

p.1.f The operator will pay any State and or Federal taxes that would be accessed on the award. The award value will not be reduced because of taxes.

p.1.g Those residents wanting to stay if the area is deemed safe would be paid a diminished value of 50% of the appraised value of the property prior to the incident causing the evacuation and 307.9.p.1, 307.9.p.1.a, c-f, h-j.

p.1.h Should any resident hire an attorney to capture any or all parts of 307.9.p.1.a-j, the operator will pay all attorney fees and expenses.

p.1.i Loss work days. When a resident in the evacuation area misses a day of work, whether it is stress of dealing with the evacuation, having to meet with an attorney or any reason a loss work day is related to the evacuation th resident will be paid \$200.00 or their daily salary or hourly compensation whichever is greater for each loss work day of which any state and or federal taxes will be paid by the operator.

p.1.j Forced Evacuation. Should a forced evacuation occur, if the relocation process has not been triggered, the relocation process will begin on the fourth day of the forced evacuation.

p.1.k Security and Protection . 24 Hour Patrol and Monitoring of the effected neighborhood and homes should be provided to the evacuated area by an independent security company. All vehicles should be stopped when entering the evacuated area to find out their intent. These cost of the private security service should be paid by the operator, as well as any additional cost that local law enforcement attains.

p.1.l Failure to comply timely to p.1, p.1.a-k and p.1.m-n will result in penalties of \$50,000 per day.

p.1.m Subsidence. A subsidence survey will be conducted once a year of the 2 mile radius of the cavern. The results will be presented at a community meeting and a copy of the subsidence survey will be given to those present.

p.1.n Should a sinkhole or other hazard occur in which an evacuation is ordered, the following subsidence survey points will be added (all corners of every structure within the 2 mile radius of the cavern) and a survey will be conducted immediately.

**E. Department of Natural Resources**  
**Office of Conservation**  
**Hydrocarbon Storage Wells in Salt Dome Cavities**  
**(LAC 43:XVII.Chapter 3)**  
**Title 43**  
**NATURAL RESOURCES**  
**Part XVII. Office of Conservation—Injection and Mining**  
**Subpart 3. Statewide Order No. 29-M (Rev. 3)**

**Chapter 3. Hydrocarbon Storage Wells in Salt Dome Cavities**

Docket No. IMD-2013-8

309.B.2 Renewal of Financial Responsibility. Any approved instrument of financial responsibility coverage shall be renewable yearly or when an existing solution-mining cavern or converted storage cavern with less than 400 feet of salt separation at any point between the cavern walls and the periphery of the salt stock is found. As required in 315.B.3.c. Financial security shall remain in effect until release thereof is granted by the commissioner pursuant to written request by the operator. Such release shall only be granted after plugging and abandonment and associated site restoration is completed and inspection thereof indicates compliance with applicable regulations or upon transfer of such well approved by the commissioner.

cross sections based upon best available information depicting the locations of its own caverns and proposed caverns in relation to each other, in relation to the periphery of the salt stock, and in relation to other operators' salt caverns (including solution mining caverns, disposal caverns, storage caverns) in the salt stock. Also, refer to §313 and §315.

2. As a part of the five year permit review, the well operator shall review the closure and post-closure plan and associated cost estimates of §337 to determine if the conditions for closure are still applicable to the actual conditions.

L. Schedules of Compliance. The permit may specify a schedule of compliance leading to compliance with the act and these regulations.

1. Time for Compliance. Any schedules of compliance under this Section shall require compliance as soon as possible but not later than three years after the effective date of the permit.

2. Interim Dates. Except as provided in Subparagraph b below, if a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.

a. The time between interim dates shall not exceed one year.

b. If the time necessary for completion of any interim requirements (such as the construction of a control facility) is more than one year and is not readily divisible into stages for completion, the permit shall specify interim dates for submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

3. The permit shall be written to require that progress reports be submitted no later than 30 days following each interim date and the final date of compliance.

#### M. Area or Project Permit Authorization

1. The commissioner may issue a hydrocarbon storage well or cavern permit on an area basis, rather than for each well or cavern individually, provided that the permit is for wells or caverns:

a. described and identified by location in permit applications if they are existing wells, except that the commissioner may accept a single description of wells or caverns with substantially the same characteristics;

b. within the same salt dome, storage facility site, or storage project; and

c. operated by a single owner or operator.

#### 2. Area permits shall specify:

a. the area within which hydrocarbon storage is authorized; and

b. the requirements for construction, monitoring, reporting, operation, and abandonment, for all wells authorized by the permit.

3. The area permit may authorize the operator to construct and operate, convert, or plug and abandon wells within the permit area provided:

a. the operator notifies the commissioner at such time as the permit requires;

b. the additional well satisfies the criteria in §309.M.1 and meets the requirements specified in the permit under §309.M.2; and

c. the cumulative effects of drilling and operation of additional hydrocarbon storage wells are considered by the

commissioner during evaluation of the area permit application and are acceptable to the commissioner.

4. If the commissioner determines that any well constructed pursuant to §309.M.3 does not satisfy any of the requirements of §309.M.3.a and b, the commissioner may modify the permit under §311.K.3, terminate under §311.K.6, or take enforcement action. If the commissioner determines that cumulative effects are unacceptable, the permit may be modified under §311.K.3.

N. Recordation of Notice of Existing Solution-Mined Caverns. The owner or operator of an existing solution-mined storage cavern shall record a certified survey plat of the well location for the cavern in the mortgage and conveyance records of the parish in which the property is located. Such notice shall be recorded no later than six months after the effective date of these rules and the owner or operator shall furnish a date/file -stamped copy of the recorded notice to the Office of Conservation within 15 days of its recording. If an owner or operator fails or refuses to record such notice, the commissioner may, if he determines that the public interest requires, and after due notice and an opportunity for a hearing has been given to the owner and operator, cause such notice to be recorded.

O. Additional Conditions. The Office of Conservation may, on a case-by-case basis, impose any additional conditions or requirements as are necessary to protect the environment, the health, safety and welfare of the public, underground sources of drinking waters, oil, gas, or other mineral deposits (excluding the salt), and preserve the integrity of the salt dome.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:4 et seq.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of Conservation, LR 40:

#### §311. Permitting Process

A. Applicability. This Section has procedures for issuing and transferring permits to operate a hydrocarbon storage well and cavern. Any person required to have a permit shall apply to the Office of Conservation as stipulated in §305. The Office of Conservation shall not issue a permit before receiving an application form and any required supplemental information showing compliance with these rules and regulations, and that is administratively and technically complete to the satisfaction of the Office of Conservation.

#### B. Notice of Intent to File Application

1. The applicant shall make public notice that a permit application is proposed for filing with the Office of Conservation. A notice of intent shall be published in state and local newspapers at least weekly for a period of 6 weeks at least 90 days but not more than 180 days before filing the permit application with the Office of Conservation. This period would allow residents and land owners to research, plan, submit questions or grievances prior to a final decision concerning the permits are made. Without exception, the applicant shall publish a new notice of intent following these same guidelines if the application is not received by the Office of Conservation within the filing period.

2. The notice shall be published once weekly for a period of 6 weeks in the legal advertisement sections in the official state journal and in the official journal of the parish of the proposed project location. In addition to the publication, certified letters should be sent out to all residents living within

a 3 mile radius. Information should include all information listed in a,b,c,d,e, and f as noted below. The cost for publishing the notices is the responsibility of the applicant and shall contain the following minimum information:

- a. name and address of the permit applicant and, if different, the facility to be regulated by the permit;
- b. the geographic location of the proposed project;
- c. name and address of the regulatory agency to process the permit action where interested persons may obtain information concerning the application or permit action; and
- d. a brief description of the business conducted at the facility or activity described in the permit application.

e. specific information about the type of hydrocarbon or any other materials which may be stored as well as the amount that will be stored.

f. provide verification of insurance which would be used to protect residents in the event of a disaster

3. The applicant shall submit the proof of publication of the notice of intent when submitting the application.

#### C. Application Submission and Review

1. The applicant shall complete, sign, and submit one original paper application form, with required attachments and documentation, and one copy of the same to the Office of Conservation. The complete application shall contain all information to show compliance with applicable state laws and these rules and regulations. In addition to submitting the application on paper, the applicant shall submit an exact duplicate of the paper application in an electronic format approved by the commissioner. The commissioner may request additional paper copies of the application, either in its entirety or in part, as needed. The electronic version of the application shall contain the following certification statement.

"This document is an electronic version of the application titled (Insert Document Title) dated (Insert Application Date). This electronic version is an exact duplicate of the paper copy submitted in (Insert the Number of Volumes Comprising the Full Application) to the Louisiana Office of Conservation."

2. The applicant shall be notified if a representative of the Office of Conservation decides that a site visit is necessary for any reason in conjunction with the processing of the application. Notification may be either oral or written and shall state the reason for the visit.

3. If the Office of Conservation deems an application to be incomplete, deficient of information, or requires additional data, a notice of application deficiency indicating the information necessary to make the application complete shall be transmitted to the applicant.

4. The Office of Conservation shall deny an application if an applicant fails, refuses, is unable to respond adequately to the notice of application deficiency, or if the Office of Conservation determines that the proposed activity cannot be conducted safely.

a. The Office of Conservation shall notify the applicant by certified mail of the decision denying the application.

b. The applicant may appeal the decision to deny the application in a letter to the commissioner who may call a public hearing through §311.D.

D. Public Hearing Requirements. A public hearing for new well applications shall not be scheduled until administrative and technical review of an application has been completed to the satisfaction of the Office of Conservation.

#### 1. Public Notice of Permit Actions

a. Upon acceptance of a permit application as complete and meeting the administrative and technical requirements of these rules and regulations, the commissioner shall give public notice that the following actions have occurred:

- i. an application has been received;
- ii. a draft permit has been prepared under §311.E; and
- iii. a public hearing has been scheduled under §311.D.

b. No public notice or public hearing is required for additional wells drilled or for conversion under an approved area permit or when a request for permit modification, revocation and reissuance, or termination is denied under §311.K.

#### 2. Public Notice by Office of Conservation

a. Public notice shall be published by the Office of Conservation in the legal advertisement section of the official state journal and the official journal of the parish of the proposed project location not less than 10 days before the scheduled hearing.

b. The Office of Conservation shall provide notice of the scheduled public hearing by forwarding a copy of the notice by mail or e-mail to:

- ii. the applicant;
- iii. all property owners within a 2 mile radius of the hydrocarbon storage facility's property boundary;
- iv. operators of existing projects located on or within the salt stock of the proposed project;
- v. United States Environmental Protection Agency;
- vi. Louisiana Department of Wildlife and Fisheries;
- vii. Louisiana Department of Environmental Quality;
- viii. Louisiana Office of Coastal Management;
- ix. Louisiana Office of Conservation, Pipeline Division;
- x. Louisiana Department of Culture, Recreation and Tourism, Division of Archaeology;
- xii. the governing authority for the parish of the proposed project; and
- xiii. any other interested parties.

3. Public Notice Contents. The public notices shall contain the following minimum information:

a. name and address of the permit applicant and, if different, the facility or activity regulated by the permit;

b. name and address of the regulatory agency processing the permit action;

c. name, address, and phone number of a person within the regulatory agency where interested persons may obtain information concerning the application or permit action;

d. a brief description of the business conducted at the facility or activity described in the permit application;

e. a statement that a draft permit has been prepared under §311.E;

f. a brief description of the public comment procedures;

g. a brief statement of procedures whereby the public may participate in the final permit decision;

h. the time, place, and a brief description of the nature and purpose of the public hearing;

i. a reference to the date of any previous public notices relating to the permit;

shall be conducted using methods that simulate the proposed operating conditions of the cavern. Test methods shall be selected to define the deformation and strength properties and characteristics of the salt stock under cavern operating conditions.

E. Area-of-Review. A thorough evaluation shall be undertaken of both surface and subsurface activities in the defined area-of-review of the individual hydrocarbon storage well or project area (area permit) that may influence the integrity of the salt stock, hydrocarbon storage well, and cavern, or contribute to the movement of injected fluids outside the cavern, wellbore, or salt stock.

1. Surface Delineation

a. The area-of-review for individual hydrocarbon storage wells shall be a fixed radius around the wellbore of not less than 1320 feet.

b. The area-of-review for wells in a hydrocarbon storage project area (area permit), shall be the project area plus a circumscribing area the width of which is not less than 1320 feet.

c. Exception shall be noted as in Subparagraphs 2.c and d below.

2. Subsurface Delineation. At a minimum, the following shall be identified within the area-of-review:

a. all known active, inactive, and abandoned wells within the area-of-review with known depth of penetration into the cap rock or salt stock;

b. all known water wells within the area-of-review;

c. all salt caverns within the salt stock regardless of use, depth of penetration, or distance to the proposed hydrocarbon storage well or cavern;

d. all conventional (dry or room and pillar) mining activity either active or abandoned occurring anywhere within the salt stock regardless of distance to the proposed hydrocarbon storage well or cavern.

F. Corrective Action

1. For manmade structures identified in the area-of-review that penetrate the salt stock and are not properly constructed, completed, or plugged and abandoned, the applicant shall submit a corrective action plan consisting of such steps, procedures, or modifications as are necessary to prevent the movement of fluids outside the cavern or into underground sources of drinking water.

a. Where the plan is adequate, the provisions of the corrective action plan shall be incorporated into the permit as a condition.

b. Where the plan is inadequate, the Office of Conservation shall require the applicant to revise the plan, or prescribe a plan for corrective action as a condition of the permit, or the application shall be denied.

2. Any permit issued for an existing hydrocarbon storage well for which corrective action is required shall include a schedule of compliance for complete fulfillment of the approved corrective action procedures. If the required corrective action is not completed as prescribed in the schedule of compliance, the permit shall be suspended, modified, revoked and possibly reissued, or terminated according to these rules and regulations.

3. No permit shall be issued for a new hydrocarbon storage well until all required corrective action obligations have been fulfilled.

4. The commissioner may require as a permit condition that injection pressure be so limited that pressure in the injection zone does not cause the movement of fluids into a underground source of drinking water through any improperly completed or abandoned well within the area-of-review. This pressure limitation shall satisfy the corrective action requirement. Alternatively, such injection pressure limitation can be part of a compliance schedule and last until all other corrective action has been taken.

5. When setting corrective action requirements for hydrocarbon storage wells, the commissioner shall consider the overall effect of the project on the hydraulic gradient in potentially affected underground sources of drinking water, and the corresponding changes in potentiometric surface(s) and flow direction(s) rather than the discrete effect of each well. If a decision is made the corrective action is not necessary, the monitoring program required in §323 shall be designed to verify the validity of such determination.

6. In determining the adequacy of proposed corrective action and in determining the additional steps needed to prevent fluid movement into underground sources of drinking water, the following criteria and factors shall be considered by the commissioner:

- a. nature and volume of injection fluid;
- b. nature of native fluids or by-products of injection;
- c. potentially affected population;
- d. geology;
- e. hydrology;
- f. history of the injection operation;
- g. completion and plugging records;
- h. abandonment procedures in effect at the time the well was abandoned; and
- i. hydraulic connections with underground sources of drinking water.

7. The Office of Conservation may prescribe additional requirements for corrective action beyond those submitted by the applicant.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:4 et seq.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of Conservation, LR 40:

**§315. Cavern Design and Spacing Requirements**

A. This Section provides general standards for design of caverns to ensure that project development can be conducted in a reasonable, prudent, and a systematic manner and shall stress physical and environmental safety. The owner or operator shall continually review the design throughout the construction and operation phases taking into consideration pertinent additional detailed subsurface information and shall include provisions for protection from damage caused by hydraulic shock. If necessary, the original development and operational plans shall be modified to conform to good engineering practices.

B. Cavern Spacing Requirements

1. Property Boundary

a. Existing Hydrocarbon Storage Caverns. No part of a hydrocarbon storage cavern permitted as of the date these regulations are promulgated shall extend closer than 100 feet to the property of others without consent of the owner(s). Continued operation without this consent of an existing hydrocarbon storage cavern within 200 feet to the property of others may be allowed as follows.

315.B.1 i. The operator of the cavern shall make a good faith effort to provide notice in a form and manner approved by the commissioner to the adjacent property owner(s) of the location of its cavern.

ii. The commissioner shall hold a public hearing at Baton Rouge if an adjacent owner whose property line is within 200 feet objects to the cavern's continued operation. Following the public hearing the commissioner may approve the cavern's continued operation upon a determination that the continued operation of the cavern has no adverse effects to the rights of the adjacent property owner(s).

iii. If no objection from an adjacent property owner is received within 120 days of the notice provided in accordance with Subparagraph 1.a.i above, then the commissioner may approve the continued operation of the cavern administratively.

315.B.1.b. New Hydrocarbon Storage Caverns. No part of a newly permitted hydrocarbon storage cavern shall extend closer than 200 feet to the property of others and 400 feet between hydrocarbon storage caverns and brining caverns, inactive caverns and P&A caverns. Newly permitted hydrocarbon storage cavern shall not extend closer than 800 feet between other hydrocarbon storage caverns.

2. Adjacent Structures within the Salt. As measured in any direction, the minimum separation between walls of adjacent caverns or between the walls of the cavern and any manmade structure within the salt stock shall not be less than 400 feet. The absolute minimum distance between Storage caverns should not be less than 400' from any other cavern that is either in use or verified by monthly pressure tests to insure they are still capable of holding pressure.

a. If a cavern is used for storage, there can be no other storage caverns within 800 feet of that cavern and no P & A caverns in that radius (nearest edge to nearest edge of the caverns). If a storage cavern falls within these acceptable criteria and is subsequently used for storage, should any brining wells within that radius fail MIT or are P&A for any reason at a later date, then the storage cavern must be emptied of its contents as soon as possible (not to exceed a 60 day time frame) and no longer be used for storage.

b. A storage cavern may be closer than 800' to a non-storage cavern or a cavern that is no longer operating, provided that the non-storage cavern is verified to be mechanically sound, but that cavern must also fall outside the 400 feet minimum.

c. Storage Caverns must be operated in a manner that ensures the walls between any storage cavern maintain the minimum separation of 800 feet and any other cavern whether brining, inactive or P&A and any manmade structure maintain the minimum separation of 400 feet.

d. For hydrocarbon storage caverns permitted prior to the effective date of these regulations and which are already within 400 feet of any other manmade structure or 800 feet of another hydrocarbon storage cavern within the salt stock, the Commissioner of Conservation will issue an order to stop all storage activity at the cavern and follow the guidelines in 315.B.3.c.

### 3. Salt Periphery

a. Without exception or variance to these rules and regulations, at no time shall the minimum separation between

the cavern walls at any point and the periphery of the salt stock for a newly permitted hydrocarbon storage cavern be less than 300 feet.

b. An existing hydrocarbon storage cavern with less than 300 feet of salt separation at any point between the cavern walls and the periphery of the salt stock shall provide the Office of Conservation with an enhanced monitoring plan that has provisions for ongoing monitoring of the structural stability of the cavern and salt through methods that may include, but are not limited to, increased frequency of sonar caliper surveys, vertical seismic profiles, micro-seismic monitoring, increased frequency of subsidence monitoring, mechanical integrity testing, continuous cavern pressure data monitoring, etc. A combination of enhanced monitoring methods may be proposed where appropriate. Once approved, the owner or operator shall implement the enhanced monitoring plan.

c. Without exception or variance to these rules and regulations, an existing hydrocarbon storage cavern with cavern walls 400 feet or less from the periphery of the salt stock shall be removed from hydrocarbon storage service immediately and permanently. An enhanced monitoring plan of Subparagraph b above shall be prepared and submitted to the Office of Conservation. Once approved, the owner or operator shall implement the enhanced monitoring plan.

C. Cavern Coalescence. The Office of Conservation may permit the use of coalesced caverns for hydrocarbon storage, but only for hydrocarbons that are liquid at standard temperature and pressure. It shall be the duty of the applicant, owner, or operator to demonstrate that operation of coalesced caverns under the proposed cavern operating conditions can be accomplished in a physical and environmentally safe manner and that the stability and integrity of the cavern and salt stock shall not be compromised. The intentional subsurface coalescing of adjacent caverns must be requested by the applicant, owner, or operator in writing and be approved by the Office of Conservation before beginning or resumption of hydrocarbon storage operations. If the design of adjacent caverns should include approval for the subsurface coalescing of adjacent caverns, the minimum spacing requirement of §315.B.2 shall not apply to the coalesced caverns.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:4 et seq.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of Conservation, LR 40:

### §317. Well Construction and Completion

#### A. General Requirements

1. All materials and equipment used in the construction of the hydrocarbon storage well and related appurtenances shall be designed and manufactured to exceed the operating requirements of the specific project. Consideration shall be given to depth and lithology of all subsurface geologic zones, corrosiveness of formation fluids, hole size, anticipated ranges and extremes of operating conditions, subsurface temperatures and pressures, type and grade of cement, and projected life of the hydrocarbon storage well, etc.

2. All hydrocarbon storage wells and caverns shall be designed, constructed, completed, and operated to prevent the escape of injected materials out of the salt stock, into or between underground sources of drinking water, or otherwise create or cause pollution or endanger the environment or public safety. All phases of design, construction, completion,

Gloria Conlin  
November 26, 2013

In an article in the Advocate newspaper, Proposed salt-dome regulations are under fire. State officials say there is no indication elsewhere of problems similar to those that caused Texas Brine's Oxy Geismar 3 cavern to collapse.

"To date no other cavern facility has been found to demonstrate the type of warning signs that would indicate impending structural failure of the nature experienced by Texas Brine's Oxy Geismar 3," said the communications director for the state Department of Natural Resources.

In the Five Island Salt Dome Group where Jefferson Island is located, 2 other salt domes have had geological problems. Weeks Island home to one of the Strategic Petroleum Reserve had cavern storage failure and privately owned, Avery Island has a large sinkhole. Lake Peigneur above Jefferson Island suffered from a geologic catastrophe in 1980.

The Department of Natural Resources, Office of Coastal Management, has already issued one permit to expand and add 2 natural gas storage caverns to Jefferson Island Storage & Hub under Lake Peigneur in Vermilion/Iberia parishes without an Environmental Impact Statement, Federal standard, no seismic studies, bubbling in the lake with cause unknown, Chicot aquifer problems and already one horrific disaster there.

I am all for the oil and gas industries, but what has happened to the people in Bayou Corne should not be forgotten. Louisiana officials need to protect people's lives and make sure that rules and regulations are followed. Other companies are made to follow rules and laws, why should the oil & gas companies be exempt?

<http://theadvocate.com/home/5366499-125/proposed-salt-dome-regulations-coming-under>

Proposed salt-dome regulations under fire

By David J. Mitchell

November 23, 2013

EXHIBIT

6-B



# Save Lake Peigneur, Inc.

Nara Crowley, President  
P.O. Box 465,  
Erath, LA 70533  
cell (337) 380-0435  
[sossullivan@bellsouth.net](mailto:sossullivan@bellsouth.net)

November 26, 2013

Comments:

Hydrocarbon Storage Wells in Salt Dome Cavities  
Amendments to rules 29-M  
Docket No. IMD-2013-8

DNR quotes or referral in **BLACK**  
Save Lake Peigneur, Inc., notes and comments in **Blue** and **Red**

We would like to begin by stating that we appreciate the Office of Conservation and DNR for taking steps to improve the regulations. We are truly sorry for communities that have had to suffer from disasters and for ourselves the battle began in 1994 when the first two hydrocarbon storage caverns were put into the Jefferson Island Salt Dome Under Lake Peigneur.

In the Five Island Salt Dome Group where Jefferson Island is located, 2 other salt domes have had geological insults. Weeks Island home to one of the Strategic Petroleum Reserve had cavern storage failure and privately owned, Avery Island has a large sinkhole. Lake Peigneur above Jefferson Island suffered from a geologic catastrophe in 1980. Unknown bubbling in Lake Peigneur above the salt dome raises the question, are there geological anomalies that have resulted from the catastrophe?

Our quest has been simple. We have asked the DNR to demand that the industry not take short cuts and destroy our earth and life. We have watched millions of dollars spent fighting us when all we have asked for is a federal standard Environmental Impact Statement (EIS) because the states' regulations are inadequate.

The measures set forth in the new policies and regulations of the Department of Natural Resources, Office of Conservation are a beginning.

Arguments that financial gains will be affected by the new changes does not reflect sensitivity to the pain and losses suffered by families whose lives have been destroyed by **unenforced, inadequate regulations.**

EXHIBIT  
6-C

Per written correspondence from Injection & Mining Director, Joe Ball, we understand that no permit is required to expand existing caverns. Where in the policies and regulations is this written since it is not in the NOI (Notice of Intent) LAC 43:XVII. Chap 3? Since this pertains to hydrocarbon storage why was it not in the revision document?

### 311. H. 6.

*Approval or granting of a permit to construct or “convert” a hydrocarbon storage well.*

Does “convert” refer to changing the storage product or convert the size of the cavern thus requiring a permit?

1. Existing caverns that can be expanded without permits open the door for geological problems as what occurred in Bayou Corne.
2. **EXISTING AND ANY HYDROCARBON STORAGE CAVERN EXPANSION SHOULD REQUIRE A PERMIT.**
  - a. Geological changes might have occurred since the storage cavern was built.
  - b. The use of drinking water to create the storage caverns can be used indiscriminately without monitoring.

## 303. General Provisions

### Applicability

#2. “ 10 day notice for public hearing – **A MINIMUM OF 30 DAY NOTICE FOR A PUBLIC HEARING FOR ALL SOLUTION MINING AND HYDROCARBON STORAGE ISSUES.**

# 2. a. *That the area of the salt dome sought to be used for the injection, storage, and withdrawal of liquid, liquefied, or gaseous hydrocarbons is suitable and feasible ..*

Instead of vague terminology of “suitable and feasible” this should be replaced with, “**Shall meet the requirements set forth in 305.**

## 307. Application Content

### 9. p.

*Assistance to residents of areas deemed to be at immediate potential risk in the event of a sinkhole developing or other incident that requires an evacuation if the potential risk or evacuation is associated with the operation of the solution mining or cavern.*

As noted in the document presentation by Nick Romero from Bayou Corne. We concur and have attached the same documentation to be used for both Solution Mining and Hydrocarbon Storage.

## Area or Project Permit Authorization

*The commissioner may issue a hydrocarbon storage well or cavern permit on an area basis, rather than for each well or cavern individually, provided that the permit is for well or caverns.*

Reference: 311 D.

*b. No public notice or public hearing is required for additional wells drilled or for conversion under an approved area permit or when request for conversion under an approved area permit or when a request for permit modification, revocation and reissuance, or termination denied under 311 K.*

### **ABSOLUTELY NO AREA PERMITS.**

Giving an area permit is unconscionable.

This regulation allows the creation of limitless hydrocarbon storage through the use of one permit.

This is an unregulated process giving sole permission to the owner or operator to convert storage product to any product of choice. All hydrocarbon and chemical storage has a risk of contamination and danger. However, some products carry more fatal effects more quickly without oversight and protection to the public. How is the natural resource, such as water and the public being protected with this regulation?

### **THIS REGULATION NEEDS TO BE REMOVED.**

## 311. Public Hearing Requirements

3. iii. This is in reference to Public Hearing Notification to "property owners within 1320 feet hydrocarbon storage **facility**'s property boundary"

Most evacuation areas resulting from an accident, such as an explosion, are at a minimum, one mile.

**ALL PUBLIC NOTICES TO PROPERTY OWNERS INVOLVING ANY RELATIONSHIP TO SOLUTION MINING AND HYDROCARBON STORAGE SHOULD BE WITHIN A TWO-MILE RADIUS FROM THE PROPOSED AND EXISITNG BOUNDARIES.**

311. F.

2. *The fact sheet may include.*

Fact sheet should REQUIRE all information listed.

311.

I. Permit Application Denial

4. c. there is a showing that issues not previously considered **should be examined** so as to dispose of the matter; or

The terminology "should be examined" is not definitive.

Change terminology to:

All issues not previously considered SHALL BE examined.

313. Site Assessment

E. Area-of-Review

1.1 Surface Delineation

- a. The area-of-review for an individual hydrocarbon storage wells shall be a **fixed radius** around the wellbore of not less than of **1320** feet.

The evacuated Bayou Corne residents were over 2000' from the storage cavern that failed.

Jefferson Island – existing unknown bubbling throughout Lake Peigneur, previous catastrophic injuries to a salt dome. The lake is approximately one mile in diameter.

The area-of-review for an individual hydrocarbon storage wells **shall be radius of no less than 2640 feet.**

If there has been catastrophic injury to a salt dome, current geological and hydrological data is required.

### **§315. Cavern Design and Spacing Requirements**

A. This Section provides general standards for design of caverns to ensure that project development can be conducted in a reasonable, prudent, and a systematic manner and shall stress physical and environmental safety. The owner or operator shall continually review the design throughout the construction and operation phases taking into consideration pertinent additional detailed subsurface information and shall include provisions for protection from damage caused by hydraulic shock. If necessary, the original development and operational plans shall be modified to conform to good engineering practices.

#### **B. Cavern Spacing Requirements**

##### **1. Property Boundary**

a. Existing Hydrocarbon Storage Caverns. No part of a hydrocarbon storage cavern permitted as of the date these regulations are promulgated shall extend closer than 100 feet to the property of others without consent of the owner(s). Continued operation without this consent of an existing hydrocarbon storage cavern within 200 feet to the property of others may be allowed as follows.

315.B.1 i. The operator of the cavern shall make a good faith effort to provide notice in a form and manner approved by the commissioner to the adjacent property owner(s) of the location of its cavern.

ii. The commissioner shall hold a public hearing at Baton Rouge if an adjacent owner whose property line is within 200 feet objects to the cavern's continued operation. Following the public hearing the commissioner may approve the cavern's continued operation upon a determination that the continued operation of the cavern has no adverse effects to the rights of the adjacent property owner(s).

iii. If no objection from an adjacent property owner is received within 120 days of the notice provided in accordance with Subparagraph 1.a.i above, then the commissioner may approve the continued operation of the cavern administratively.

315.B.1.b. New Hydrocarbon Storage Caverns. No part of a newly permitted hydrocarbon storage cavern shall extend closer than 200 feet to the property of others and 400 feet between hydrocarbon storage caverns and brining caverns, inactive caverns and P&A caverns. Newly permitted hydrocarbon storage cavern shall not extend closer than 800 feet between other hydrocarbon storage caverns.

2. Adjacent Structures within the Salt. As measured in any direction, the minimum separation between walls of adjacent caverns or between the walls of the cavern and any manmade structure within the salt stock shall not be less than 400 feet. The absolute minimum distance between Storage caverns should not be less than 400' from any other cavern that is either in use or verified by monthly pressure tests to insure they are still capable of holding pressure.

a. If a cavern is used for storage, there can be no other storage caverns within 800 feet of that cavern and no P & A caverns in that radius (nearest edge to nearest edge of the caverns). If a storage cavern falls within these acceptable criteria and is subsequently used for storage, should any brining wells within that radius fail MIT or are P&A for any reason at a later date, then the storage cavern must be emptied of its contents as soon as possible (not to exceed a 60 day time frame) and no longer be used for storage.

b. A storage cavern may be closer than 800' to a non-storage cavern or a cavern that is no longer operating, provided that the non-storage cavern is verified to be mechanically sound, but that cavern must also fall outside the 400 feet minimum.

c. Storage caverns must be operated in a manner that ensures the walls between any storage cavern maintain the minimum separation of 800 feet and any other cavern whether brining, inactive or P&A and any manmade structure maintain the minimum separation of 400 feet.

d. For hydrocarbon storage caverns permitted prior to the effective date of these regulations and which are already within 400 feet of any other manmade structure or 800 feet of another hydrocarbon storage cavern within the salt stock, the Commissioner of Conservation will issue an order to stop all storage activity at the cavern and follow the guidelines in 315.B.3.c.

### 3. Salt Periphery

- a. Without exception or variance to these rules and regulations, at no time shall the minimum separation between the cavern walls at any point and the periphery of the salt stock for a newly permitted hydrocarbon storage cavern be less than 300 feet.
- b. An existing hydrocarbon storage cavern with less than 300 feet of salt separation at any point between the cavern walls and the periphery of the salt stock shall provide the Office of Conservation with an enhanced monitoring plan that has provisions for ongoing monitoring of the structural stability of the cavern and salt through methods that may include, but are not limited to, increased frequency of sonar caliper surveys, vertical seismic profiles, micro-seismic monitoring, increased frequency of subsidence monitoring, mechanical integrity testing, continuous cavern pressure data monitoring, etc. A combination of enhanced monitoring methods may be proposed where appropriate. Once approved, the owner or operator shall implement the enhanced monitoring plan.
- c. Without exception or variance to these rules and regulations, an existing hydrocarbon storage cavern with cavern walls **400** feet or less from the periphery of the salt stock shall be removed from hydrocarbon storage service immediately and permanently. An enhanced monitoring plan of Subparagraph b above shall be prepared and submitted to the Office of Conservation. Once approved, the owner or operator shall implement the enhanced monitoring plan.

C. Cavern Coalescence. The Office of Conservation may permit the use of coalesced caverns for hydrocarbon storage, but only for hydrocarbons that are liquid at standard temperature and pressure. It shall be the duty of the applicant, owner, or operator to demonstrate that operation of coalesced caverns under the proposed cavern operating conditions can be accomplished in a physical and environmentally safe manner and that the stability and integrity of the cavern and salt stock shall not be compromised. The intentional subsurface coalescing of adjacent caverns must be requested by the applicant, owner, or operator in writing and be approved by the Office of Conservation before beginning or resumption of hydrocarbon storage operations. If the design of adjacent caverns should include approval for the subsurface coalescing of adjacent caverns, the minimum spacing requirement of §315.B.2 shall not apply to the coalesced caverns.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:4 et seq.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of Conservation, LR 40:

## **§317. Well Construction and Completion**

### A. General Requirements

1. All materials and equipment used in the construction of the hydrocarbon storage well and related appurtenances shall be designed and manufactured to exceed the operating requirements of the specific project. Consideration shall be given to depth and lithology of all subsurface geologic zones, corrosiveness of formation fluids, hole size, anticipated ranges and extremes of operating conditions, subsurface temperatures and pressures, type and grade of cement, and projected life of the hydrocarbon storage well, etc.
2. All hydrocarbon storage wells and caverns shall be designed, constructed, completed, and operated to prevent the escape of injected materials out of the salt stock, into or between underground sources of drinking water, or otherwise create or cause pollution or endanger the environment or public safety. All phases of design, construction, completion,

## 317. Well Construction and Completion

2.

a. Where the hydrocarbon storage well penetrates an underground source of drinking water in an **area subject to subsidence or catastrophic collapse, an adequate number of monitoring wells shall be completed...**

b. The following criteria **shall be considered...**

Who and what will determine if the area is subject to subsidence or catastrophic collapse? A definitive number based on population and current usage **SHALL** be the determining factor as noted on b.

Who will determine the adequate number?

## 321. Safety

C. Personnel. Personnel shall be on duty at the storage facility 24 hours a day. During periods of stored product or injection withdrawal, trained personnel shall be stationed at the storage well, facility's onsite local control room, or other facility control location at the storage site. **If the storage facility chooses to use an offsite monitoring and control automated telemetry surveillance system, approved by the commissioner, provisions shall be made for trained personnel to be on-call at all times and 24 hours a day staffing of the facility may not be required.**

Remote monitoring is acceptable **IN ADDITION TO**, 2 personnel at all times. The 2 personnel will be technically trained and certified to operate a hydrocarbon storage facility and authorized to make decisions.

I. Safety Systems Test. The operator shall function-test all critical systems of control and safety **once every six months.**

**The operator shall function-test all critical systems of control and safety once every month.**

The document addresses serious concerns and issues. Parts of the document does not render true solutions. Vague solutions in reference to environmental concerns, i.e, specifically vague terminology,

“suitable and feasible”

“may”

“should be examined”

“ further consideration”

Vague terminology leaves the determination process to subjective determination not objective. We recommend a panel incorporating industry representatives, geological and hydrological experts, not industry related representatives chosen by their community or organizations to assist in creating policies that are unbiased and objective.

**CURRENTLY, WHILE EXTENSIVE CHANGES HAVE BEEN MADE TO THE POLCIES THEY REMAIN INADEQUATE IN PROTECTING OUR CONSTITUTIONAL RIGHTS, LIFE, NATURAL RESOURCES AND ENVIRONMENT.**



November 26, 2013

Public comments:

Hydrocarbon Storage Wells in Salt Dome Cavities

Amendments to rules 29-M

Docket No. IMD-2013-8

My name is Sandy Rosenthal and I have spent more than eight years urging government officials to admit when they have made a mistake and to become instrumental in fixing the damage done on their watch.

More specifically, I founded the grassroots group, Levees.org because I was driven to lead a team that would show that—in New Orleans—the natural disaster thought of as “Katrina” was in fact, the worst civil engineering disaster in U.S. history. Levees.org has helped government officials understand that the culprit in the flooding disaster of New Orleans was levees and flood walls that were improperly, and in some cases, egregiously misdesigned.

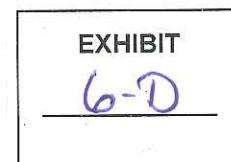
I am here today to support the efforts of the Save Lake Peigneur campaign.

Government officials must admit that regulations of the Hydrocarbon Storage Cavern Industry are unenforced and inadequate. Government officials should go even further and:

- Require permits for both constructing and expanding caverns,
- Require public notice and public hearings for additional wells drilled or converted,
- In the event of subsidence or catastrophic collapse, a definitive number based on population and current usage should be the determining factor,
- Require remote monitoring, and
- Require that the Safety Systems Tester should conduct testing once each month.

These changes to regulations will save our environment and therefore, our children.

Sandy Rosenthal  
Founder, Levees.org  
1421 Soniat Street  
New Orleans, LA 70115  
504-891-8437



**BEFORE THE  
LOUISIANA DEPARTMENT OF NATURAL RESOURCES**

IN THE MATTER OF:

**Proposed Amendments to  
LAC 43:XVII.Chapters 3 and 33**

PROCEEDINGS UNDER THE  
ADMINISTRATIVE PROCEDURE  
ACT, LA. R.S. § 49:950, ET SEQ.

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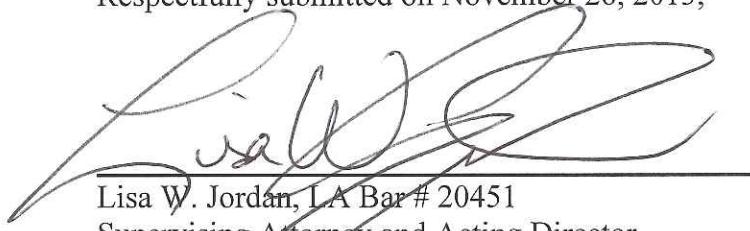
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**SUPERVISING ATTORNEY'S INTRODUCTION OF STUDENT  
ATTORNEY AND NOTICE OF APPROVAL OF STUDENT  
APPEARANCE**

---

NOW BEFORE THIS TRIBUNAL comes undersigned counsel, who respectfully introduces student attorney Aminta Conant to this tribunal as authorized to practice under Supreme Court Rule XX. As Ms. Conant's supervising attorney, I approve of her appearance in this matter on behalf of Mr. Roger Stelly. Mr. Stelly's written consent to representation by a student attorney in this matter is attached.

Respectfully submitted on November 26, 2013,



Lisa W. Jordan, LA Bar # 20451  
Supervising Attorney and Acting Director  
Tulane Environmental Law Clinic  
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*Counsel for Save Lake Peigneur, Inc., LEAN, and  
Roger Stelly*

EXHIBIT

6-E

Int. Ref. No. 999-115

**CLIENT'S WRITTEN CONSENT FOR STUDENT ATTORNEY APPEARANCE**

I hereby grant my consent for student attorneys from the Tulane Environmental Law Clinic to appear on my behalf in any matter in which the Tulane Environmental Law Clinic represents me, whether in Court or before an administrative tribunal.

Dated: 12-21-10

[signed:]  
[name:]

Roger Stith  
Roger S. Stith

# Louisiana Environmental Action Network

Helping to make Louisiana safe for future generations



**LEAN**

November 26, 2013

To: Mr. Tyler Gray  
Office of Conservation  
P. O. Box 94275  
Baton Rouge, LA 70804-9725

From: Wilma Subra *(ws)*  
Technical Advisor  
LEAN  
[subracom@aol.com](mailto:subracom@aol.com)

EXHIBIT

6-F

Re: Docket No. IMD-2013-07  
LAC 43:XVII.Chapter 33  
Statewide Order No. 29-M-3  
Class III, Solution Mining Injection Well

On behalf of Louisiana Environmental Action Network, the following comments are submitted in response to the proposed rules for Class III Solution Mining Injection Wells.

### **3301. Definitions**

The definition of Catastrophic Collapse is "the sudden or utter failure of the overlying strata caused by the removal or otherwise weakening of underlying sediments." The definition should be expanded to include the collapse of the side strata.

### **3303.A. General Provisions, Applicability**

In the General Provisions of the Hydrocarbon Storage Wells in Salt Dome Cavities, there is a requirement (303.A.2.e.) for a finding of fact that requires the documentation that due consideration has been given to alternative sources of water for leaching of cavities. This requirement must be added the Solution Mining Injection Well rules under section 3303.A. In addition, the specific information required to be provided by the applicant needs to be more detailed to protect water resources.

### **3303.B.2. General Provisions, Prohibition of Unauthorized Injection**

Under section 3303.B.2. the proposed rule states “For existing solution-mining wells that are in compliance with Statewide Order No. 29-N-1, but not in compliance with Statewide Order No. 29-M-3 as of the effective date of these rules, they may continue to operate for one year under Statewide Order No. 29-N-1.” Within that year, the owner or operator must submit required information to meet the requirements of Statewide Order No. 29-M-3. During the review period until a final determination is made, the affected solution-mining well may continue to operate in compliance.

The lack of an appropriate time period for the owner or operator to submit the required information for their solution mining wells to be in compliance with Statewide Order No. 29-M-3 within one year and the lack of a specific time for the Office of Conservation to render decisions on the required information, is not acceptable. The review period could stretch on for a number of years and the requirements of the rules set forth in Statewide Order No. 29-M-3 would not be implemented. It is critical to have a set time period for the submittal of the required information by the owner or operator and a set time period for total compliance with the proposed rules. The Office of Conservation should have sufficient staff available to perform the appropriate reviews and render decisions within the one year time period. If not, the longest compliance period should be within 18 months of the authorization date of the rule, no longer.

### **3303.B.3. General Provisions, Prohibition of Unauthorized Injection**

Under Section 3303.B.3. the proposed rule states: By no later than one year after authorization of these rules the owner or operator shall provide for review documentation of any variances previously authorized by the Office of Conservation. Once again the affected solution-mining well can continue to operate in compliance with the variances. The lack of an appropriate time period for the owner or operator to submit the required

information on variances for their solution mining wells to be in compliance with Statewide Order No. 29-M-3 within one year and the lack of a specific time for the Office of Conservation to render decisions on the required information, is not acceptable. It is critical to have a set time period for the submittal of the required information by the owner or operator and a set time period for total compliance with the proposed rule.

### **3309.F.3. a. and b. Legal Permit Conditions, Proper Operation and Maintenance**

Sections 3309.F.3.a. and b. require that the operator provide assistance to residents of areas deemed to be at immediate potential risk in the event of sinkhole developing or other incidents that require an evacuation in association with the operation of the solution-mining well or cavern and reimbursement to the state or any political subdivision of the state for reasonable and extraordinary costs incurred in response to or mitigating a disaster or emergency due to a violation of this subsection.

The residence of the Bayou Corne area will provide specific recommendations they feel are appropriate to be include in the topic of assistance to residents in the area.

The proposed rule needs to specify that assistance to residents will be effective from the day the proposed rule goes into effect.

In addition, the requirement for reimbursement to the state or any political subdivision must include the establishment of a time period following the approval by the director of the Governor's Office of Homeland Security for the permit holder to reimburse the state or any political subdivision of the state.

Timely assistance to residents and timely reimbursement to the state or any political subdivision of the state is critical to maintaining response activities, supplying needed resources and somewhat lessening the stress levels associated with an incident.

These assistance and reimbursement requirements have not been included in the proposed revisions to Statewide Order No. 29-M (Docket No. IMD-2013-08), Hydrocarbon Storage Wells in Salt Dome Cavities, Legal Permit Conditions, Proper Operation and Maintenance Conditions, Section 309.F. These requirements must be added to section 309.F. of the Hydrocarbon Storage Well modified proposed rules as well as the addition of the requirements that the assistance to residents is effective from the date the proposed rule goes into effect and requirements for timely reimbursements are specified for state and other potential subdivisions.

### **3309.I.8. Legal Permit Conditions, Notification Requirements, Twenty-Four Hour Reporting**

This section of the proposed rule requires the operator to report to the Office of Conservation within 24 hours, any noncompliance that may endanger the environment, or the health, safety and welfare of the public. Within five days of the operator becoming aware of the situation or circumstances, the operator must provide a written reply to the Office of Conservation.

The section requires the submittal of specific information to the Office of Conservation. This noncompliance event or situation may endanger the environment or the health, safety and welfare of the public. However, there is no mechanism to notify the potentially impacted public.

The proposed rule should be modified to require the operator to notify the public within three miles of the solution-mining well as well as the parish local emergency response agency, and the local elected officials at the same time the within 24 hours and five day notifications occur. The Office of Conservation should be required to notify other state agencies such as the La Department of Environmental Quality, Department of Health and Hospitals, and the Department of Wildlife and Fisheries of the situation immediately after receiving the notification from the operator.

### **3311.D.2. Permitting Process, Public Hearing Requirements**

The requirements for Public Notice by the Office of Conservation for Hydrocarbon Storage wells in Salt Dome Cavities (311.D.2.) requires the Office of Conservation to notify all property owners within 1,320 feet of the facilities boundary and operators of existing projects located on or within the salt stock of a scheduled public hearing. These same requirements should be added to the public notice requirements for Class III, Solution Mining Injection Wells (3311.D.2.).

### **3311.H.4. and I.2. Permitting Process, Public Comments**

Under the Public Comment section of the Permitting Process, the proposed rule states “A final permit decisions shall be effective on the date of issuance.” (3311.H.4.) Under Permit Application Denial (3311.I.2.) the proposed rules provide information to the applicant on requesting a review of the Office of Conservation’s decision to deny the permit application. The proposed rules should also contain information on how the public can appeal the granting of the permit and how the appeal of the granted permit impacts the effective date of the permit.

### **3313.B.1.c. Site Assessment, Geologic Studies and Evaluation**

Under Geologic Studies and Evaluations, the proposed rules require an assessment of the impact of possible anomalous zones (salt spines, shear planes) on the solution mining well or cavern. The evaluation of shear planes or shear zones between salt spines is extremely important in evaluating the locations and impacts on solution-mining wells and caverns.

### **3315.B.2. and 3. Cavern and Surface Facility Design, Cavern Spacing Requirements**

The cavern spacing requirements 3315.B.2. and 3. establishes a 200 foot minimum separation between walls of adjacent caverns or man made structures and minimum separation of 300 feet between caverns walls and the periphery of the salt stock. These separation distances are too small

and not adequate to protect the integrity of the caverns. In addition, 3315.B.2. provides for the continued operation of existing caverns within 200 feet of other man made structures. One again, such continued operations of the caverns within 200 feet of other man made structures is not acceptable. Section 3315.B.3. allows for the continued operation of solution-mining caverns with less than 300 feet of salt separation. The continued operation of such solution-mining caverns is unacceptable, even with enhanced monitoring requirements.

The proposed rules lack requirements and spacing restrictions for vertical separation of solution mining of caverns. Such requirements and spacing should be required.

### **3315.B.3.c. Caverns and Surface Facility Design**

Solution-mining cavern walls within 100 feet or less from the periphery of the salt stock shall be removed from service (3315.B.3.c.). It is appropriate that these caverns be removed from service. In addition, all solution-mining caverns within at least 300 feet of the periphery of the salt or man made structures should also be removed from service.

### **3315.C. Cavern Design, Cavern Coalescence**

Section 3315.C. allows for the continued operation of coalesced caverns and the permitting of new coalesced caverns with appropriate information. The continued use of coalesced caverns and the permitting of new solution-mining caverns that will coalesce are totally unacceptable.

### **3317.F. Well Construction, Hanging Strings**

According to section 3317.F., all solution-mining wells are to be completed with at least two hanging strings. The proposed rules lack requirements to shut down a solution-mining well that does not have two hanging strings.

### **3321.F. Safety, Alarm Systems**

Manually activated alarm systems are required to be installed at all cavern facilities. The alarms are required to be audible and visible from work locations within the facility. The proposed rules should also require, where communities are located within a 3 mile radius of the cavern facility, the alarm system to be audible to all living and working within a 3 mile radius of the cavern facility.

### **3327.E.1 and 2. Mechanical Integrity Test Failure and Rehabilitation**

When a solution-mining well or cavern fails a mechanical integrity test, the well or cavern operator is required to notify the Office of Conservation and take the well or cavern out of service immediately. The rules must be modified to require the public within a three mile radius to be immediately notified of the failed mechanical integrity test. Procedures for rehabilitation are required to be submitted to the Office of Conservation within 30 days of the failure (3327.E.2.). The proposed rule fails to establish a requirement for the Office of Conservation to review and approve the rehabilitation procedures prior to implementation by the operator.

LEAN appreciates the opportunity to comment on the propose rules for Class III Solution Mining Injection Wells .

# Louisiana Environmental Action Network

Helping to make Louisiana safe for future generations



November 26, 2013

To: Mr. Tyler Gray  
Office of Conservation  
P. O. Box 94275  
Baton Rouge, LA 70804-9725

From: Wilma Subra *(WS)*  
Technical Advisor  
LEAN  
subracom@aol.com

Re: Docket No. IMD-2013-08  
LAC 43:XVII.Chapter 3  
Statewide Order No. 29-M (Revision 3)  
Hydrocarbon Storage Wells in Salt Dome Cavities

EXHIBIT

*6-G*

On behalf of Louisiana Environmental Action Network, the following comments are submitted in response to the proposed rules for Hydrocarbon Storage Wells in Salt Dome Cavities.

## 301. Definitions

The definition of Catastrophic Collapse is “the sudden or utter failure of the overlying strata caused by the removal or otherwise weakening of underlying sediments.” The definition should be expanded to include the collapse of the side strata.

## 303.A.2.e. General Provisions, Applicability

In the General Provisions there is a requirement (303.A.2.e.) for a finding of fact that requires the documentation that due consideration has been given to alternative sources of water for leaching of cavities. The specific information required to be provided by the applicant needs to be more detailed to protect water resources.

### **303.A.2.c.i. General Provisions, Applicability, Property of Injector**

According to section 303.A.2.c.i., hydrocarbons injected or stored in the salt dome cavern, should at all times be deemed the property of the injector, his successors or assigned. Companies frequently insist they are storing liquids and gaseous materials for other entities and they are not the owners of the material stored in the salt dome caverns. This issue will become critical when the stored product is released into the environment. It is critical to include requirements and stipulations governing the liability of stored materials prior to their being released into the environment.

### **303.B.2. General Provisions, Prohibition of Unauthorized Injection**

Under section 303.B.2. the proposed rule states “For existing solution-mining wells that are in compliance with Statewide Order No. 29-M, but not in compliance with Statewide Order No. 29-M (Revision 3) as of the effective date of these rules, they may continue to operate for one year under Statewide Order No. 29-M.” Within that year, the owner or operator must submit required information to meet the requirements of Statewide Order No. 29-M (Revision 3). During the review period until a final determination is made, the affected solution-mining well may continue to operate in compliance.

The lack of an appropriate time period for the owner or operator to submit the required information for their solution mining wells to be in compliance with Statewide Order No. 29-M (Revision 3) within one year and the lack of a specific time for the Office of Conservation to render decisions on the required information, is not acceptable. The review period could stretch on for a number of years and the requirements of the rules set forth in Statewide Order No. 29-M (Revision 3) would not be implemented. It is critical to have a set time period for the submittal of the required information by the owner or operator and a set time period for total compliance with the proposed rules. The Office of Conservation

should have sufficient staff available to perform the appropriate reviews and render decisions within the one year time period. If not, the longest compliance period should be within 18 months of the authorization date., no longer.

### **303.B.3. General Provisions, Prohibition of Unauthorized Injection**

Under Section 303.B.3. the proposed rule states: By no later than one year after authorization of these rules the owner or operator shall provide for review documentation of any variances previously authorized by the Office of Conservation. Once again the affected solution-mining well can continue to operate in compliance with the variances. The lack of an appropriate time period for the owner or operator to submit the required information on variances for their solution mining wells to be in compliance with Statewide Order No. 29-M (Revision 3) within one year and the lack of a specific time for the Office of Conservation to render decisions on the required information, is not acceptable. It is critical to have a set time period for the submittal of the required information by the owner or operator and a set time period for total compliance with the proposed rule.

### **303. General Provisions, Prohibition of Storage of Materials**

The proposed rule should stipulate that the storage and or disposal of radioactive materials and hazardous waste should be prohibited in storage caverns in salt domes.

### **309.F.3. a. and b. Legal Permit Conditions, Proper Operation and Maintenance**

Sections 3309.F.3.a. and b. of the Solution Mining Injection Well proposed rule (Docket No. IMD-2013-07) require that the operator provide assistance to residents of areas deemed to be at immediate potential risk in the event of sinkhole developing or other incidents that require an

evacuation in association with the operation of the solution-mining well or cavern and reimbursement to the state or any political subdivision of the state for reasonable and extraordinary costs incurred in response to or mitigating a disaster or emergency due to a violation of this subsection.

These assistance and reimbursement requirements have not been included in the proposed revisions to Statewide Order No. 29-M (Revision 3) (Docket No. IMD-2013-08), Hydrocarbon Storage Wells in Salt Dome Cavities, Legal Permit Conditions, Proper Operation and Maintenance Conditions, Section 309.F. These requirements must be added to section 309.F. of the Hydrocarbon Storage Well modified proposed rules as well as the addition of the requirements that the assistance to residents is effective from the date the proposed rule goes into effect.

In addition, the requirement for reimbursement to the state or any political subdivision must include the establishment of a time period following the approval by the director of the Governor's Office of Homeland Security for the permit holder to reimburse the state or any political subdivision of the state.

Timely assistance to residents and timely reimbursement to the state or any political subdivision of the state is critical to maintaining response activities, supplying needed resources and somewhat lessening the stress levels associated with an incident.

### **309.I.8. Legal Permit Conditions, Notification Requirements, Twenty-Four Hour Reporting**

This section of the proposed rule requires the operator to report to the Office of Conservation within 24 hours, any noncompliance that may endanger the environment, or the health, safety and welfare of the public. Within five days of the operator becoming aware of the situation or circumstances, the operator must provide a written reply to the Office of Conservation.

The section requires the submittal of specific information to the Office of Conservation. This noncompliance event or situation may endanger the environment or the health, safety and welfare of the public. However, there is no mechanism to notify the potentially impacted public.

The proposed rule should be modified to require the operator to notify the public within three miles of the solution-mining well as well as the parish local emergency response agency, and the local elected officials at the same time the within 24 hours and five day notifications occur. The Office of Conservation should be required to notify other state agencies such as the La Department of Environmental Quality, Department of Health and Hospitals, and the Department of Wildlife and Fisheries of the situation immediately after receiving the notification from the operator.

#### **311.H.4. and I.2. Permitting Process, Public Comments**

Under the Public Comment section of the Permitting Process, the proposed rule states “A final permit decisions shall be effective on the date of issuance.” (311.H.4.) Under Permit Application Denial (311.I.2.) the proposed rules provide information to the applicant on requesting a review of the Office of Conservation’s decision to deny the permit application. The proposed rules should also contain information on how the public can appeal the granting of the permit and how the appeal of the granted permit impacts the effective date of the permit.

#### **313.B.1.c. Site Assessment, Geologic Studies and Evaluation**

Under Geologic Studies and Evaluations, the proposed rules require an assessment of the impact of possible anomalous zones (salt spines, shear planes) on the solution mining well or cavern. The evaluation of shear planes or shear zones between salt spines is extremely important in evaluating the locations and impacts on solution-mining wells and caverns.

### **313.E.2.e. Site Assessment, Area of Review**

Section 3313.E.2.e. of 29-M-3 proposed rules for Solution Mining Injection Wells, requires the identification of all producing formations either active or depleted occurring anywhere within the vicinity of the salt dome as part of the Area of Review. This requirement must be included in the requirements for Area of Review for hydrocarbon storage wells. There is a possibility that the status of producing formations could change between the time of the application for the solution mining well and the application for the storage well. Thus the status of the producing formations must be required at the time of application for the hydrocarbon storage well.

### **315.B.2. and 3. Cavern and Surface Facility Design, Cavern Spacing Requirements**

The cavern spacing requirements 315.B.2. and 3. establishes a 200 foot minimum separation between walls of adjacent caverns or man made structures and minimum separation of 300 feet between caverns walls and the periphery of the salt stock. These separation distances are too small and not adequate to protect the integrity of the caverns. In addition, 315.B.2. provides for the continued operation of existing caverns within 200 feet of other man made structures. One again, such continued operations of the caverns within 200 feet of other man made structures is not acceptable. Section 315.B.3. allows for the continued operation of solution-mining caverns with less than 300 feet of salt separation. The continued operation of such solution-mining caverns is unacceptable, even with enhanced monitoring requirements.

The proposed rules lack requirements and spacing restrictions for vertical separation of solution mining of caverns. Such requirements and spacing should be required.

### **315.B.3.c. Caverns and Surface Facility Design**

Hydrocarbon Storage Cavern walls within 100 feet or less from the periphery of the salt stock shall be removed from service (315.B.3.c.). It is appropriate that these caverns be removed from service. In addition, all Hydrocarbon Storage Caverns within at least 300 feet of the periphery of the salt or man made structures should also be removed from service.

### **315.C. Cavern Design, Cavern Coalescence**

Section 315.C. allows for the continued operation of coalesced caverns and the permitting of new coalesced caverns with appropriate information. The continued use of coalesced caverns and the permitting of new solution-mining caverns that will coalesce are totally unacceptable.

### **317.F. Well Construction, Hanging Strings**

According to section 317.F., all solution-mining wells are to be completed with at least two hanging strings. The proposed rules lack requirements to shut down a solution-mining well that does not have two hanging strings.

### **321.F. Safety, Alarm Systems**

Manually activated alarm systems are required to be installed at all cavern facilities. The alarms are required to be audible and visible from work locations within the facility. The proposed rules should also require, where communities are located within a 3 mile radius of the cavern facility, the alarm system to be audible to all living and working within a 3 mile radius of the cavern facility.

### **327.E.1 and 2. Mechanical Integrity Test Failure and Rehabilitation**

When a solution-mining well or cavern fails a mechanical integrity test, the well or cavern operator is required to notify the Office of Conservation and take the well or cavern out of service immediately. The rules must be modified to require the public within a three mile radius to be immediately notified of the failed mechanical integrity test. Procedures for rehabilitation are required to be submitted to the Office of Conservation within 30 days of the failure (327.E.2.). The proposed rule fails to establish a requirement for the Office of Conservation to review and approve the rehabilitation procedures prior to implementation by the operator.

LEAN appreciates the opportunity to comment on the propose rules for hydrocarbon storage wells in salt dome cavities..

07/08

**Green Army Objectives:**

- 1) Salt Dome Security
- 2) Safe Buffer Zone Around Salt Domes
- 3) Adequate Insurance Held by Companies
- 4) Public disclosure of what is being stored in Salt Domes
- 5) Repeal/Reduce Fracking State Exemption from 5 years  
to 2 years--2/3rds vote of Legislature

presented by:

Lt. General Russell L. Honore', U.S. Army, Retired

EXHIBIT

6-H

**Cherie LeCompte**  
5619 Debuse Rd.  
Erath, La 70533  
cherielecompte@gmail.com

November 26, 2013

*Hydrocarbon Storage Wells in Salt Dome Cavities  
Amendments to rules 29-M  
Docket No. IMD-2013-8  
309M. Reference: 311D. b.*

309.M

**Area or Project Permit Authorization**

The commissioner may issue a hydrocarbon storage well or cavern permit on an area basis, rather than for each well or cavern individually, provided that the permit is for well or caverns.

Reference: 311D

b. No public notice or public hearing is required for additional wells drilled or for conversion under an approved area permit or when request for conversion under an approved area permit or when a request for permit modification, revocation and reissuance, or termination denied under 311 K.

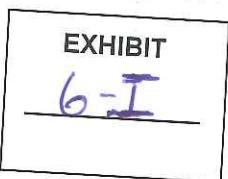
**My personal comments:**

This regulation needs to be REMOVED !!! NO AREA PERMIT!!!

Allowing an area permit is not right and irresponsible. This regulation would allow the freedom of a company to create a limitless number of hydrocarbon storages through the use of one single permit. There are different regulations to consider per each storage and the location where it's being permitted.

This is an unregulated process giving sole permission to the company or operating company to convert storage product to ANY product of choice. All hydrocarbon and chemical storage has a risk of contamination and danger. Yet, some products carry more fatal effects more quickly without oversight and protection to the public. How is the natural resource, such as water and the public being protected with this regulation?

PLEASE REMOVE THIS REGULATION!!!



**Cherie LeCompte**  
5619 Debuse Rd.  
Erath, La 70533  
cherielecompte@gmail.com

November 26, 2013

*Hydrocarbon Storage Wells in Salt Dome Cavities*

*Amendments to rules 29-M*

*Docket No. IMD-2013-8*

*309M. Reference: 311D. b.*

309.M

**Area or Project Permit Authorization**

The commissioner may issue a hydrocarbon storage well or cavern permit on an area basis, rather than for each well or cavern individually, provided that the permit is for well or caverns.

Reference: 311D

b. No public notice or public hearing is required for additional wells drilled or for conversion under an approved area permit or when request for conversion under an approved area permit or when a request for permit modification, revocation and reissuance, or termination denied under 311 K.

**My personal comments:**

This regulation needs to be REMOVED !!! NO AREA PERMIT!!!

Allowing an area permit is not right and irresponsible. This regulation would allow the freedom of a company to create a limitless number of hydrocarbon storages through the use of one single permit. There are different regulations to consider per each storage and the location where it's being permitted.

This is an unregulated process giving sole permission to the company or operating company to convert storage product to ANY product of choice. All hydrocarbon and chemical storage has a risk of contamination and danger. Yet, some products carry more fatal effects more quickly without oversight and protection to the public. How is the natural resource, such as water and the public being protected with this regulation?

PLEASE REMOVE THIS REGULATION!!!

EXHIBIT

6-J

November 26, 2013

**VIA FEDERAL EXPRESS**

Mr. Tyler Gray  
Attorney  
Office of Conservation  
Louisiana Department of Natural Resources  
617 North Third Street  
Baton Rouge, Louisiana 70802

DATE RECEIVED	
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OFFICE OF CONSERVATION	
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<i>T. Gray</i>	
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Re: Docket No. IMD-2013-08 - Comments by Targa Downstream LLC to Louisiana Department of Natural Resources' Proposed Amendment of La. Admin. Code 43:XVII.Chapter 3 to Adopt Statewide Order 29-M (Revision 3) - Regulations for Hydrocarbon Storage Wells in Salt Dome Cavities

Dear Mr. Gray:

Targa Downstream LLC ("Targa"), pursuant to the Louisiana Administrative Procedure Act, is pleased to submit the following formal comments to the Louisiana Department of Natural Resources' ("Department") proposed amendments to Statewide Order No. 29-M, identified as Statewide Order No. 29-M (Revision 3) in the October 20, 2013 edition of the Louisiana Register. Targa is an independent midstream energy company that operates a number of storage caverns in salt domes in Louisiana, Texas, and Mississippi. Targa's storage well assets in Louisiana are located in West Hackberry (Cameron Parish), Venice (Plaquemines Parish and Pine Prairie (Evangeline Parish).

Because Targa operates a number of facilities in Louisiana and employs its citizens, Targa has a vested interest in ensuring that the proposed amendments are protective of the health, environment and safety of Louisiana and its residents, but it also wants to ensure that compliance with the new rules is reasonably achievable and cost effective for companies (like Targa) that are safely and responsibly operating existing salt dome caverns without incident. Thus, Targa respectfully presents the following comments for the Department's consideration.

<b><u>Section of Proposed Rules</u></b>	<b><u>Comments by Targa</u></b>
Existing Caverns/New Caverns (General Comment)	The new rules do not provide enough clarity or differentiation between new caverns and existing caverns. The Department should provide greater specificity as to which provisions of the rules apply to existing caverns and which apply to new caverns.
§303	It is unclear where the jurisdiction of the rules begins and ends on site. This should be clarified.

<u>Section of Proposed Rules</u>	<u>Comments by Targa</u>
§303(A)(4)	This provision refers the reader back to §303.2, but no such section exists, as currently drafted. Perhaps, the Department meant §303.A.2? Additionally, why would the Department conduct a permit review pursuant to §309.K within the first year of the new rules being in place when operators (of existing caverns) are supposed to use the first year to come into compliance with new rules or seek a variance? Targa suggests that the Department conduct the permit review no sooner than one year after the new rules come into effect, giving operators at least one year to reconcile the new rules with their operations.
§303(B)(3)	Replace “one year after authorization of these rules” with “one year after <i>the effective date</i> of these rules” to maintain consistency with other provisions of the proposed rules.
§303(F)(1)(a)	Add “design and spacing” as additional requirements for which operators may seek a variance from the Department for wells that penetrate underground sources of drinking water (USDW).
§305(D)(2)	The Department should allow officers of LLCs to sign permit applications. This provision should mirror the rules for corporations.
§309(I)(8)(b)(i)	If an operator’s cavern fails a mechanical integrity test (MIT), it should not follow that an operator has caused any endangerment to the USDW, oil, gas, etc. “Failure” should not equal “endangerment.” Additionally, it takes time to ascertain the reason for a “failure.” Twenty-four (24) hours is not enough time to ascertain any endangerment. Targa recommends that the 24-hour reporting period be changed to permit operators forty-eight (48) to seventy-two (72) hours to report a failed MIT in order to allow sufficient time to analyze and determine the cause and/or implications of the test results.
§309(N)	Targa requests that the Department change this provision to allow twelve (12) months, not six (6) months, to complete recordation for existing wells.
§311(C)(2)	Notice of a site visit should be provided to the operator a reasonable amount of time in advance of the site visit (by phone or by e-mail).
§313(F)(1)	Targa cannot be required to properly plug and abandon wells or man-made structures that it does not control or own. Thus, the first sentence in this section should read “For manmade structures <b>owned or controlled by the operator</b> in the area-of-review . . .”
§315(B)(3)(b)	The Department’s proposed distance threshold of 300 feet from the cavern wall to the periphery of the salt stock seems

<u>Section of Proposed Rules</u>	<u>Comments by Targa</u>
	arbitrary. Targa requests that the Department clearly and transparently provide the information upon which the Department bases this distance threshold. Additionally, what is the Department's basis for requiring more frequent monitoring for all existing wells within 300 feet of the periphery of the salt stock? There are numerous existing wells within the 300-foot threshold that already demonstrate structural integrity and have operated safely for years. Heightened monitoring requirements are not necessarily justified just because a cavern is less than 300 feet from the periphery of the salt stock. Targa suggests that the Department allow for a case-by-case determination as to whether enhanced monitoring should be required.
§315(B)(3)(c)	The Department's proposed distance limitation of 100 feet from the cavern wall to the periphery of the salt stock seems arbitrary. Targa requests that the Department clearly and transparently provide the information upon which the Department bases this distance limitation. Each well and salt formation is unique. Accordingly, operators should be able to show on a case-by-case basis that wells that currently operate at less than 100 feet are safe, structurally sound and do not pose any threat to the health, welfare and safety of Louisiana's citizens or its environment. Alternatively, Targa requests that the Department change this provision to allow operators at least one year (or more, on a case-by-case basis, upon request) from the effective date of these rules to remove wells subject to this provision from hydrocarbon service. Many existing wells operate pursuant to long-term commercial agreements, with which this regulation would unreasonably interfere. Moreover, in many cases, it will be logically difficult for operators and/or product owners to move product to alternate storage locations. Therefore, at least one year should be allowed to remove affected wells from hydrocarbon service.
§317(C)(6)	Targa seeks clarification of this provision. Many existing wells cased to less than 300 feet have operated for years without incident or failure of structural integrity. Additionally, how does the Department intend for operators to correct existing wells constructed prior to October 1, 1976, that are not cased to 300 feet into the salt?
§317(G)	Requiring that all wellhead and related components, including flowlines, be manufactured of steel unnecessarily precludes other materials that may be as structurally sound. While Targa concurs that the wellhead and components in hydrocarbon service should be of steel construction, it should be noted that

<u>Section of Proposed Rules</u>	<u>Comments by Targa</u>
	certain plastics have been used reliably and effectively for brine service at numerous locations. In fact, plastics or other materials are less prone to corrosion than steel in brine service.
§321(F)	As a practical matter, not all alarms need to be audible and visible throughout the facility. Only certain safety alarms need to be audible and visible, like hydrocarbon release alarms, emergency shutdown alarms, or fire alarms. Process alarms, for instance, do not need to be audible and visible at cavern facilities. Targa suggests that this provision clearly specify that only safety related alarms, such as hydrocarbon release alarms, emergency shutdown alarms, or fire alarms, be audible and visible within the facility.
§323(G)	Monitoring wells need not necessarily be monitored quarterly. The Department should allow for monitoring frequency to be determined on a case-by-case basis, consistent with §317(A)(2)(b).
§327(A)	The language of this provision should be changed from “witnessed by a qualified third party” to <b><i>“testing shall be conducted by, or witnessed by, or results reviewed by a qualified third-party reasonably acceptable to the Department.”</i></b> Additionally, the qualified third-party should be identified on the work permit.
§327(B)(3)(d)	For wells that are in simultaneous storage mode <u>and</u> salt solution-mining (or washing) mode, it is unduly burdensome and unnecessary to require a mechanical integrity test (MIT) after each washing. These types of wells are washed for short periods of time but on a frequent basis to generate brine for use in other wells. Instead, Targa recommends that wells that are in dual service should operate according to a well development plan, and that an MIT be required every 5 years or after a set quantity of fresh water is injected, or on a more frequent basis after a sonar survey indicates that the well is growing at a rate greater than specified in the development plan.
§333	For inactive wells, Targa recommends that reporting be required annually. As currently drafted, this provision would require reporting on a quarterly basis for all wells, including inactive wells. For inactive wells, Targa believes that quarterly reporting is unduly burdensome and unnecessary; annual reporting is sufficient.

Targa appreciates the opportunity to provide these comments to the Department. If you or any of your colleagues have questions or concerns about the comments above, please contact me at (713) 584-1138. We look forward to discussing these comments with you at your

convenience. Or if you think an in-person meeting would be more beneficial that can be arranged as well.

Very truly yours,



Francis Foret  
Vice President – Operations  
Targa Downstream LLC

cc (via e-mail):      Ms. Colleen C. Jarrott  
                          Ms. Elizabeth Hawkins  
                          Mr. Tom Meriwether



December 5, 2013

Louisiana Department of Natural Resources  
Office of Conservation  
Attn: Tyler Gray  
617 N. 3<sup>rd</sup> Street  
Baton Rouge, Louisiana 70802

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Re: Comments on Notice of Intent, Louisiana Register Vol. 39, No. 10, October 20, 2013,  
Statewide Orders No. 29-M-3 and No. 29-M

Dear Mr. Gray:

Liberty Gas Storage, LLC (“Liberty”) hereby submits comments in response to the Notice of Intent from the Department of Natural Resources, Office of Conservation, published in the Louisiana Register (Vol. 39, No. 10) on October 20, 2013, regarding the proposed adoption of Statewide Order No. 29-M-3 and proposed revisions to Statewide Order No. 29-M (together the “Proposed Orders”). Liberty is the registered operator of wells located in the Sulphur Mines Field in Calcasieu Parish and, via its wholly-owned subsidiary LA Storage, LLC, in the West Hackberry Field in Cameron Parish.

Liberty commented on an earlier version of the Proposed Orders in an August 19, 2013 letter addressed to the Office of Conservation. The Proposed Orders incorporate changes to address two of the concerns that Liberty raised in its August letter. Liberty, however, continues to have concerns about the specific sections of the Proposed Orders referenced below. In addition, as detailed below, the Fiscal and Economic Impact Statements for the Proposed Orders materially underestimate the costs of complying with the Proposed Orders and the adverse economic impact on Louisiana operators and the Louisiana economy.

## Proposed Statewide Order 29-M-3

*§3327 (Well and Cavern Mechanical Integrity Pressure and Leak Tests) and §3337 (Closure and Post-Closure) – Apparent conflict regarding wells/caverns that fail MIT*

- Subsection E.1 of §3327 states that a well or cavern that fails a test for mechanical integrity must be immediately taken out of service. Subsection E.4 of §3327 states that if mechanical integrity cannot be reestablished, the owner may be required to begin closure of the well or cavern within six months. However, subsection A.5.b of §3337 requires that before closure the owner must perform an MIT to “ensure the integrity of both the solution-mining well and cavern.” If a cavern is being closed because mechanical integrity cannot be reestablished, there must be a path for an owner to comply with the

closure requirement without a successful MIT. Liberty suggests that subsection E.4 of §3327 be modified to add the following sentence to the end of that section: “The closure and post-closure plan shall allow for modifications from the Standards for Closure in §3337 A.5 as determined by the Office of Conservation to take into account the failure of the well or cavern to demonstrate mechanical integrity.”

*§3337 (Closure and Post-Closure) – Different Requirements for “Qualified Professionals”*

- Subsection A.3.a.i. requires that a Closure Plan include a detailed cost estimate for adequate closure of the facility that was prepared by a “qualified professional”. As Liberty suggested in its August letter, the requirement that was included in earlier versions of the regulation that such a professional be a “third party” was deleted. Subsection B.1.a.i., however, retains the unnecessary requirement that such an estimate be prepared by a “qualified, independent third party” for post-closure plans. As Liberty noted in its August letter, the requirement that owners must hire third parties to prepare cost estimates for post-closure plans is an undeserved bonus for third party “experts” at the expense of owners who have qualified in-house experts (frequently more qualified) who can do the required work with the same or better quality. The accuracy and validity of the post-closure plans must be evaluated by the Office of Conservation regardless of whether the person preparing the plan is employed by the owner or a third-party hired by the owner. Liberty suggests that subsection B.1.a.i. be modified so that post-closure plan cost estimates must be prepared by a “qualified professional,” the same requirement that applies to closure plans.

*§3337 (Closure and Post-Closure) – Measurement of shut-in pressures*

- Subsection A.5.a.i. should be modified to remove the words “no less than” before “five years.” The purpose of the monitoring is to provide information about the natural closure characteristics of the cavern or well and any resulting pressure buildup. Although five years may be required in some cases, more or less time may be needed on an individual well or cavern. The Office of Conservation should be able to specify a time greater or lesser than five years based on the characteristics of the specific well or cavern.

*§3337 (Closure and Post-Closure) – Measurement of cavern pressure*

- Subsection B.2.c., which addresses monitoring requirements after a cavern has been closed, requires an owner to monitor any groundwater required by the permit “until pressure in the cavern displays a trend of behavior that can be shown to pose no threat to cavern integrity...” If the cavern is closed as prescribed in §3337 A.2., an owner can no longer measure the pressure in the cavern. The conflict between the closure requirements and post-closure monitoring must be reconciled. Subsection B.2 qualifies all of the post-closure monitoring with the phrase “where necessary.” Liberty suggests that with this phrase at the beginning of B.2., the Office of Conservation should rewrite (c) to read:

“c. conduct any groundwater monitoring if required by the permit.”

*Fiscal and Economic Statement of Impact (Estimated Costs and/or Economic Benefits to Directly Affected Persons or Nongovernmental Groups)*

- The estimates of the costs of the required sonar surveys are incorrect. A more accurate cost of the sonar survey, which includes all of the equipment required to perform a safe and accurate sonar survey, is approximately \$15,000-\$20,000 per well.
- Although the direct costs of the logging are approximately correct, the statement fails to acknowledge the real and substantial economic cost (frequently in the form of lost revenue) of taking a well or cavern out of service in order to prepare for and complete the logging. Although the loss will vary depending on the well or cavern, the revenue loss will mean that a Louisiana well or cavern is less valuable than similar wells or caverns in other states.
- The estimate of the cost of the seismic data assumes that the seismic data already exists. If it does not, the raw seismic data may cost many millions of dollars to collect.
- The Proposed Order claims an economic benefit to “numerous consultants, contractors and professionals, who will benefit economically from being hired by the regulated community.” This “benefit” is an illusion. It is completely eliminated by the cost to the regulated community of such hiring.

**Proposed Statewide Order 29-M (Rev. 3)**

*§327 (Well and Cavern Mechanical Integrity Pressure and Leak Tests) and §337 (Closure and Post-Closure) – Apparent conflict regarding wells/caverns that fail MIT*

- Subsection E.1 of §327 states that a well or cavern that fails a test for mechanical integrity must be immediately taken out of service. Subsection E.3 of §327 states that if mechanical integrity cannot be reestablished, the owner may be required to begin closure of the well or cavern. However, subsection A.4.b of §337 requires that before closure the owner must confirm the mechanical integrity of both the well and cavern. If a cavern is being closed because mechanical integrity cannot be reestablished, there must be a path for an owner to comply with the closure requirement without confirming the mechanical integrity of the well and cavern. Liberty suggests that subsection E.3 of §327 be modified to add the following sentence to the end of that section: “The closure and post-closure plan shall allow for modifications from the Standards for Closure in §337 A.4 as determined by the Office of Conservation to take into account the failure of the well or cavern to demonstrate mechanical integrity.”

*§337 (Closure and Post-Closure) – Different Requirements for “Qualified Professionals”*

- Subsection A.3.a.i. requires that a Closure Plan include a detailed cost estimate for adequate closure of the facility that was prepared by a “qualified professional”. As Liberty suggested in its August letter, the requirement that was included in earlier versions of the regulation that such a professional be a “third party” was deleted. Subsection B.1.a.i., however, retains the unnecessary requirement that such an estimate be prepared by a “qualified, independent third party” for post-closure plans. As Liberty noted in its August letter, the requirement that owners must hire third parties to prepare cost estimates for post-closure plans is an undeserved bonus for third party “experts” at the expense of owners who have qualified in-house experts (frequently more qualified) who can do the required work with the same or better quality. The accuracy and validity of the post-closure plans must be evaluated by the Office of Conservation regardless of whether the person preparing the plan is employed by the owner or a third-party hired by the owner. Liberty suggests that subsection B.1.a.i. be modified so that post-closure plan cost estimates must be prepared by a “qualified professional,” the same requirement that applies to closure plans.

*§337 (Closure and Post-Closure) – Measurement of shut-in pressures*

- Subsection A.4.a.i. should be modified to remove the words “no less than” before “five years.” The purpose of the monitoring is to provide information about the natural closure characteristics of the cavern or well and any resulting pressure buildup. Although five years may be required in some cases, more or less time may be needed on an individual well or cavern. The Office of Conservation should be able to specify a time greater or lesser than five years based on the characteristics of the specific well or cavern.

*§337 (Closure and Post-Closure) – Measurement of cavern pressure*

- Subsection B.2.c., which addresses monitoring requirements after a cavern has been closed, requires an owner to monitor any groundwater required by the permit “until pressure in the cavern displays a trend of behavior that can be shown to pose no threat to cavern integrity...” If the cavern is closed as prescribed in §337 A.5., an owner can no longer measure the pressure in the cavern. The conflict between the closure requirements and post-closure monitoring must be reconciled. Subsection B.2 qualifies all of the post-closure monitoring with the phrase “where necessary.” Liberty suggests that with this phrase at the beginning of B.2., the Office of Conservation should rewrite (c) to read:

“c. conduct any groundwater monitoring if required by the permit.”

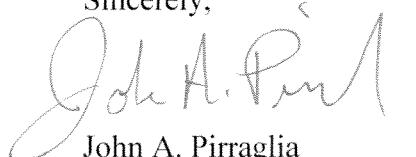
*Fiscal and Economic Statement of Impact (Estimated Costs and/or Economic Benefits to Directly Affected Persons or Nongovernmental Groups)*

- The estimates of the costs of the required sonar surveys are incorrect. A more accurate cost of the sonar survey, which includes all of the equipment required to perform a safe and accurate sonar survey, is approximately \$15,000-\$20,000 per well.
- Although the direct costs of the logging are approximately correct, the statement fails to acknowledge the real and substantial economic cost (frequently in the form of lost revenue) of taking a well or cavern out of service in order to prepare for and complete the logging. Although the loss will vary depending on the well or cavern, the revenue loss will mean that a Louisiana well or cavern is less valuable than similar wells or caverns in other states.
- The estimate of the cost of the seismic data assumes that the seismic data already exists. If it does not, the raw seismic data may cost many millions of dollars to collect.
- The Proposed Order claims an economic benefit to “numerous consultants, contractors and professionals, who will benefit economically from being hired by the regulated community.” This “benefit” is an illusion. It is completely eliminated by the cost to the regulated community of such hiring.

### **Conclusion**

Liberty appreciates the Office of Conservation’s careful consideration of these comments on the Proposed Orders.

Sincerely,



John A. Pirraglia  
Vice President  
Liberty Gas Storage, LLC

cc: Steve Lee



DOW

The Dow Chemical Company

P.O. Box 150

Plaquemine, Louisiana 70765-0150

December 3, 2013

**Hand Delivered**

Mr. James "Jim" Welsh  
Commissioner of Conservation, Office of Conservation  
Louisiana Department of Natural Resources  
617 North Third Street, Ninth Floor  
Baton Rouge, LA 70802

ATTN: Mr. Tyler Gray

**RE: Comments from The Dow Chemical Company  
Proposed LAC 43:XVII.Chapter 3 – Hydrocarbon Storage Wells in Salt Dome  
Cavities  
Docket No. IMD-2013-08**

Dear Commissioner Welsh:

The Dow Chemical Company (Dow) owns and operates solution-mined storage caverns in the Napoleonville Salt Dome near Paincourtville in Assumption Parish, Louisiana. Dow is one of the largest storage cavern operators in the State of Louisiana.

Dow supports the efforts undertaken by the Louisiana Department of Natural Resources (DNR), Office of Conservation, to develop the proposed rules for Hydrocarbon Storage Wells in Salt Dome Cavities. Dow appreciates the opportunity for public participation (including participation by the regulated community) in the development of these rules. As such, Dow submits the attached comments to the proposed rules, referenced above.

Dow further assures DNR that it is willing to actively participate in discussions regarding the development of the Hydrocarbon Storage Wells in Salt Dome Cavities rules. Should you have any questions regarding Dow's written comments, please do not hesitate to contact me at (225) 353-8116 or wanipper@dow.com.

Sincerely,



William Nipper  
Regulatory Affairs Leader  
The Dow Chemical Company

Attachment

OFFICE OF CONSERVATION

DEC 03 2013

INJECTION & MINING DIVISION

DATE RECEIVED	
12-3-13	
OFFICE OF CONSERVATION	
RTE	INIT
COMM	INIT DATE
(ASSIST COMM)	
ENGR	
G/M	
GEO	
I&M	
LGL	
P/L	
FILE	
DESTROY	

**The Dow Chemical Company's Comments on Proposed LAC 43:XVII.Chapter 3 – Hydrocarbon Storage Wells in Salt Dome Cavities (Docket No. IMD-2013-08)**

§317 Well Construction and Completion

*C. Casing and Cementing ...*

*6. The following applies to wells existing in caverns before the effective date of these rules and regulations. If the design of the well or cavern precludes having distinct intermediate and final casing seats cemented into the salt, the wellbore shall be cased with two concentric casings run from the surface of the well to a minimum distance of 300 feet into the salt. The inner casing shall be cemented from its base to surface.*

**Dow Comments:**

Existing caverns that have two casing seats cemented in the salt are sufficient, regardless of the depth into the salt. Dow recommends the Department clarify this section to reflect this, as follows:

6. The following applies to wells existing in caverns before the effective date of these rules and regulations. If the design of the well or cavern precludes having distinct intermediate and final casing seats cemented into the salt, the wellbore shall be cased with two concentric casings run from the surface of the well to a minimum distance of 300 feet into the salt. The inner casing shall be cemented from its base to surface. Existing caverns that have two casing seats cemented in the salt meet the intent of this requirement.

Retrofitting caverns that currently have two casing seats cemented into the salt to a depth of 300 feet, will require operators to spend over \$1,000,000 per cavern. Dow believes that cementing two casing seats into the salt adequately protect the well regardless of depth. Dow believes that a minimum depth of 100 feet is sufficient.

§321 Safety

*F. Alarm Systems. Manual and automatically activated alarms shall be installed at all cavern facilities. All alarms shall be audible and visible from any normal work location within the facility. The alarms shall be maintained in proper working order. Automatic alarms designed to activate an audible and a visible signal shall be integrated with all pressure, flow, heat, fire, cavern overfill, leak sensors and detectors, emergency shutdown systems, or any other safety system. The circuitry shall be designed such that failure of a detector or sensor shall activate a warning.*

**Dow Comments:**

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Alarm systems often contain redundant detectors. As such, a failure of an individual detector should not necessarily trigger a warning or automatic

shutdown. Dow proposes that the Department amend this requirement to read, as follows:

F. Alarm Systems. Manual and automatically activated alarms shall be installed at all cavern facilities. All alarms shall be audible and visible from any normal work location within the facility. The alarms shall be maintained in proper working order. Where appropriate, automatic alarms designed to activate an audible and a visible signal shall be integrated with all pressure, flow, heat, fire, cavern overfill, leak sensors and detectors, emergency shutdown systems, or any other safety system. The circuitry shall be designed such that failure of a detector or sensor shall activate a warning.

*G. Emergency Shutdown Valves...*

*2. Automatic emergency shutdown valves shall be designed to actuate on detection of abnormal pressures of the injection system, abnormal increases in flow rates, responses to any heat, fire, cavern overfill, leak sensors and detectors, loss of pressure or power to the well, cavern, or valves, or any abnormal operating condition.*

**Dow Comments:**

The safe design and operation of each cavern will be dependent on the systems that the operator has designed. As such, each system may not specifically contain "trips" for each item that appears to be required in the citation, above. For example, a facility may utilize fusible links in separate systems to achieve protection from heat and fire. These facilities should not be required to install heat and fire detection when there are sufficient systems in place. Dow proposes that the Department amend this requirement to read, as follows:

2. Automatic emergency shutdown valves shall be designed to actuate on detection of abnormal pressures of the injection system, abnormal increases in flow rates, responses to any heat, fire, cavern overfill, leak sensors and detectors, loss of pressure or power to the well, cavern, or valves, or any abnormal operating condition, or by other means as approved by the Department.

§323.Monitoring Requirements

*A. Pressure Gauges, Pressure Sensors, Flow Sensors*

*1. Pressure gauges that show pressure on the fluid injection string, fluid withdrawal string, and any other string in the well shall be installed at each wellhead. Gauges shall be designed to read gauge pressure in 10 PSIG increments. All gauges shall be properly calibrated and shall always be maintained in good working order. The pressure valves onto which the pressure gauges are affixed shall have 1/2 inch female fittings.*

**Dow Comments:**

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Dow recommends that the Department allow pressure transmitters be used in lieu of pressure gauges. It should be noted that the installation of pressure gauges or other visual site gauges adds another location for a leak to originate from. Historically, these types of gauges have also proven to not be reliable. As such, Dow proposes that the Department amend this requirement to read, as follows:

1. Pressure gauges or pressure sensors/transmitters that show pressure on the fluid injection string, fluid withdrawal string, and any other string in the well shall be installed at each wellhead. Gauges shall be designed to read gauge pressure in 10 PSIG increments. All gauges shall be properly calibrated and shall always be maintained in good working order. The pressure valves onto which the pressure gauges are affixed shall have 1/2 inch female fittings.

*A. Pressure Gauges, Pressure Sensors, Flow Sensors*

2. *Pressure sensors designed to actuate the automatic closure of all emergency shutdown valves in response to a preset pressure (high/low) shall be installed and properly maintained for all fluid injection, withdrawal, and any other string in the well.*

**Dow Comments:**

Dow notes that not all strings in a well with high or low alarms warrant an automatic shut down of a cavern. For example, protection packer strings in a cavern wellbore operate with a high pressure nitrogen safety pad. A surface nitrogen leak from the packer string does not warrant a shutdown of storage well. As such, Dow proposes that the Department amend this requirement to read, as follows:

2. Pressure sensors designed to actuate the automatic closure of all emergency shutdown valves in response to a preset pressure (high/low) shall be installed and properly maintained for all fluid injection, withdrawal, and any other appropriate string in the well.

*C. Casing Inspection*

1. *For existing permitted liquid hydrocarbon storage caverns without a casing inspection or similar log run on the entire length of the innermost cemented casing within 5 years prior to the effective date of these rules, one shall be run within 5 years of the effective date.*

2. *For existing permitted natural gas storage caverns without a casing inspection or similar log run on the entire length of the innermost cemented casing within 10 years prior to the effective date of these rules, one shall be run within 5 years of the effective date.*

3. *A casing inspection or similar log shall be run on the entire length of the cemented casing in each well at least once every 10 years for hydrocarbon storage caverns and 15 years for natural gas storage caverns.*

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**Dow Comments:**

Dow heavily relies on protection packer strings in its storage caverns. As such, removal of a packer string can cause damage to the packer system and potentially to the cemented casing. As such, Dow proposes that the Department amend this requirement to read, as follows:

C. Casing Inspection

1. For existing permitted liquid hydrocarbon storage caverns without a casing inspection or similar log run on the entire length of the innermost cemented casing or packer string within 5 years prior to the effective date of these rules, one shall be run within 5 years of the effective date.
2. For existing permitted natural gas storage caverns without a casing inspection or similar log run on the entire length of the innermost cemented casing or packer string within 10 years prior to the effective date of these rules, one shall be run within 5 years of the effective date.
3. A casing inspection or similar log shall be run on the entire length of the cemented casing or packer string in each well at least once every 10 years for hydrocarbon storage caverns and 15 years for natural gas storage caverns.

§337. Closure and Post-Closure

A. Closure

4. Standards for Closure.

- b. *Before closure, the owner or operator shall confirm the mechanical integrity of both the well and cavern by well/cavern test methods or analysis of the data collected during the period between the end of storage operations and well/cavern closure.*

**Dow Comments:**

Dow notes that caverns being plugged and abandoned due to a failed mechanical integrity test do not need to have additional mechanical integrity tests run. As such, Dow proposes that the Department amend this requirement to read, as follows:

- b. Unless the well is being plug and abandoned due to a failed mechanical integrity test, Before closure, the owner or operator shall confirm the mechanical integrity of both the well and cavern by well/cavern test methods or analysis of the data collected during the period between the end of storage operations and well/cavern closure.

A. Closure

4. Standards for Closure.

c. Before closure, the owner or operator shall remove and properly manage any hydrocarbons remaining in the well or cavern.

**Dow Comments:**

Dow notes that there may be caverns where the roof may develop a “pocket” that prevents product from fully being removed. As such, Dow proposes that the Department amend this requirement to read, as follows:

c. Before closure, the owner or operator shall remove, where feasible, and properly manage any hydrocarbons remaining in the well or cavern.

A. Closure

5. Plugging and Abandonment

a. The well and cavern shall be in a state of static equilibrium before plugging and abandoning.

**Dow Comments:**

Dow notes that a “state of static equilibrium” is unclear. Dow believes this to mean that the well and cavern pressure are equal to zero prior to plugging and abandoning. Furthermore, Dow notes there may be cases in which the well and cavern should be plugged and abandoned under pressure. As such, Dow proposes that the Department amend this requirement to read, as follows:

a. The well and cavern shall be in a state of static equilibrium before plugging and abandoning unless otherwise authorized by the Department.

A. Closure

6. Closure Report. The owner or operator shall submit a closure report to the Office of Conservation within 30 days after closing the storage well, cavern, facility, or part thereof. The report shall be certified as accurate by the owner or operator and by the person charged with overseeing the closure operation (if other than the owner or operator). The report shall contain the following information:

**Dow Comments:**

Dow recommends that the amount of time be 60 days to submit a closure report as it is often a challenge to complete the work in this time period. As such, Dow proposes that the Department amend this requirement to read, as follows:

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6. Closure Report. The owner or operator shall submit a closure report to the Office of Conservation within 60 ~~30~~ days after closing the storage well, cavern, facility, or part thereof. The report shall be certified as accurate by the owner or operator and by the person charged with overseeing the closure operation (if other than the owner or operator). The report shall contain the following information:

*B. Post-Closure.*

*1. The owner or operator shall review the post-closure plan at least every five years to determine if the conditions for post-closure are still applicable to actual conditions. Any revision to the plan shall be submitted to the Office of Conservation for approval. At a minimum, a post-closure plan shall address the following:*

**Dow Comments:**

Dow believes that there can be certain conditions that should end post-closure requirements. As such, Dow proposes that the Department amend this requirement to read, as follows:

1. The owner or operator shall review the post-closure plan at least every five years to determine if the conditions for post-closure are still applicable to actual conditions. If conditions warrant, the review of post-closure plans may be waived or amended after approval by the Department. Any revision to the plan shall be submitted to the Office of Conservation for approval. At a minimum, a post-closure plan shall address the following:

2...

*c. conduct any groundwater monitoring if required by the permit until pressure in the cavern displays a trend of behavior that can be shown to pose no threat to cavern integrity, underground sources of drinking water, or other natural resources of the state;*

**Dow Comments:**

Dow contends that a plug and abandoned cavern does not have pressure monitored. Therefore, Dow recommends that the Department provide additional clarification or remove this requirement.

OFFICE OF CONSERVATION

DEC 03 2013

INJECTION & MINING DIVISION

## Tyler Gray

---

**From:** Stephen Lee  
**Sent:** Tuesday, December 10, 2013 8:35 AM  
**To:** Tyler Gray  
**Subject:** FW: Revised Rules 29-M and 29-M-3

**From:** Pugh, Dennis R [mailto:[dennis.r.pugh@exxonmobil.com](mailto:dennis.r.pugh@exxonmobil.com)]  
**Sent:** Tuesday, December 03, 2013 2:01 PM  
**To:** Stephen Lee  
**Cc:** Smith, Marshall H  
**Subject:** Revised Rules 29-M and 29-M-3

In a teleconference between industry and the LDNR on 9/13/13, I asked if the requirements of paragraphs 317.C.6 and 3317.C.6 would be waived on existing wells (requirement is for dual strings cemented into the salt). The ExxonMobil wells at Sorrento were completed with single strings into the salt. My interpretation of the discussion was that wells drilled before the enactment of the dual string requirement would be "grandfathered" and allowed to continue operating with additional monitoring requirements.

Rev. 3 of the proposed 29-M and 29-M-3 still contain language requiring all wells have dual casings into the salt. Will the paragraphs be revised to reflect waiver of the dual casings on older wells? If not, will there be a procedure where waiver of the dual casing requirement can be requested for specific wells or facilities?

Respectfully

Dennis Pugh  
ExxonMobil Pipeline Co.  
Field Engineering West  
Design Engineer  
800 Bell St.  
PL-EMB-503C  
Houston, TX 77002

(ofc) 713-656-2316

## **Tyler Gray**

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**From:** Tyler Gray  
**Sent:** Tuesday, December 10, 2013 8:57 AM  
**To:** Tyler Gray  
**Subject:** RE: Proposed Cavern Regulations

**From:** Joe Ball  
**Sent:** Wednesday, November 20, 2013 2:00 PM  
**To:** Stephen Lee  
**Subject:** Proposed Cavern Regulations

The proposed solution mining regulation at §3313.E.2.e regarding area-of-review reads,

"e. all producing formations either active or depleted occurring anywhere within the vicinity of the salt dome." Have you given any consideration as to how the term "vicinity of the salt dome" will be defined? The term is ambiguous leaving it open to all sorts of interpretation.

The proposed storage regulation at §303.A.4 reads,

"4. That these regulations shall apply to all liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976, as specified in §303.2 . . .".

Section §303.2 does not exist.

## **Tyler Gray**

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**From:** William Fontenot <wafontenot@gmail.com>  
**Sent:** Friday, December 06, 2013 7:54 AM  
**To:** Tyler Gray  
**Subject:** Docket No. IMD-2013-08 Proposed regulations on Salt Dome Caverns

**By e-mail to:**

Mr. Tyler Gray  
Office of Conservation  
P.O. Box 94275  
Baton Rouge, LA 70804-9725  
(225) 342-5540  
tyler.gray@la.gov

December 5, 2013

Docket No. IMD-2013-08

**Re: Comments on behalf of the Delta Chapter of the Sierra Club, Louisiana.**

Dear Mr. Gray,

The Delta Chapter of the Sierra Club represents thousands of members from across Louisiana. We believe that all public officials in the state must be working to protect human health and the environment as described in Article 9, Section 1 of the State Constitution and numerous laws which have been adopted by the State Legislature and decisions by judges in hundreds of legal cases like Save Ourselves versus the Louisiana Environmental Control Commission, 452 So.2d 1152. This court decision was the first judicial interpretation of Article 9, Section 1 of the Louisiana Constitution of 1974 and it was a unanimous 9-0 decision by the state's top judges.

The Louisiana State Constitution of 1974; Article 9, Section 1, provides that ...

*"The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people. The legislature shall enact laws to implement this policy."*

In the recent official notice which was sent out by the Office of Conservation the public has learned that...

*"The Department of Natural Resources, Office of Conservation proposes to adopt LAC 43:XVII.Chap 33 in accordance with the provisions of the Administrative Procedure Act, R.S. 49:950 et seq., and pursuant to the power delegated under the laws of the state of Louisiana. The proposed action will adopt Statewide Order No. 29-M-3, which provides comprehensive regulations for Class III (Solution-Mining) Injection Wells, as enacted by Act 368 and Act 369 of the 2013 Legislative Session."*

Below are the Delta Chapter of the Sierra Club Comments:

"What the public may not understand is that these proposed regulations, we believe, include a serious weakening of the laws of Louisiana which require state officials to protect human health and the natural resources of the state and to involve the public in the permitting of facilities and operations which may alter, extract or modify these important natural resources."

There are apparently more than 200 massive caverns which have been carved out of more than 30 salt domes across Louisiana. The officials of the Office of Conservation and other state and local government agencies have failed to notify the public about these facilities before they were put into service.

Before these facilities were constructed put into operation, modified, and some closed and taken out of service there were no public notices or opportunities for public comment. There have apparently been a number of failures and closures at some of these salt dome caverns, also without any public notices and opportunities for public comment.

The history of human and natural activities in and around salt domes shows that billions of dollars of damages have occurred around the state. The total disruption of surface and subsurface activities and natural and human resources can cause problems which must be considered by the Commissioner of Conservation and all public officials in Louisiana before any future activities are permitted in or near salt domes.

**1. In order for people to be able to adequately participate in the Office of Conservation permitting and administrative process the Commissioner of Conservation must insure that his, or her, agency develops regulations which**

- a. Comply with the intent and purpose of Louisiana laws, insure that actions being considered are protective of human health and the environment, and
- b. Provide adequate opportunity for the public to find out about proposed agency actions, like the issuance of permits, and actions which may impact or involve the public, their community or the environment, and
- c. In order for the public to learn about and participate in proposed actions the Commissioner of the Office of Conservation must insure that the public has access to adequate information and an appropriate amount of time to learn about and participate in the permitting process.

According to the draft regulations presently being considered by the Office of Conservation we believe that the officials in that agency are not providing adequate lead time for the public to learn about and participate in the decision making process. According to the draft regulations only ten days lead time are being proposed for public notice before public hearings.

*"Public notice shall be published by the Office of Conservation in the legal advertisement section of the official state journal and the official journal of the parish of the proposed project location not less than 10 days before the scheduled hearing." 29M Rev§311(D)(2)(a).*

Given the devastating potential impact the storage of hydrocarbon and other materials and waste in salt domes can have on workers, the nearby public, the environment and the economy, ample time for public comment and participation in a hearing is critical. Ten days notice is, in our opinion, inconsistent with the mandates laid down in state law and not a sufficient amount of time to prepare for a hearing. We respectfully request that notice must be posted not less than ninety, 90, days prior to the public hearing.

In fact, we believe that to insure adequate public notification and participation in the permitting process that a series of public notices must be sent out at least 90, 60 and 30 days before public hearings for new proposed caverns in salt domes, for major alterations or expansions of caverns in existing dome facilities or facilities and operations connected with salt dome storage or disposal facilities.

## **2. Area Wide Permitting Issues**

There should be no Area Wide Permits. We believe that this type of permit exemption is an attempt by the officials in the Office of Conservation to get around the legally established requirements for public notice and participation in the protection of human health and the environment.

*"No public notice or public hearing is required for additional wells drilled or for conversion under an approved area permit or when a request for permit modification, revocation and reissuance, or termination is denied under §311.K."*

**29M-Rev§311(D)(1)(b).**

Area permits should not be allowed. Any modifications of existing permits and facilities must be open to full public disclosure and require notices and hearings before these changes can be authorized by the officials in the Office of Conservation.

Article 9, Section 1 of the Louisiana Constitution which we have provided above states that the natural resources of the state "shall" be protected, replenished and restored as much as possible. While the Constitutional language is a mandatory "shall" the proposed regulations developed by the officials at the Office of Conservation uses words like "may" which would in our opinion be a serious attempt at weakening of the laws of Louisiana. We believe that regulations cannot be weaker than the requirements found in the Constitution as has been proposed by the officials in the Office of Conservation.

## **3. Exceptions and Variances**

The original 29M regulations do not mention variances. In the proposed regulations, the lengthy section on variances and exceptions provide new options for permit applicants. We believe that if the officials in the Office of Conservation allow exceptions and variances in the proposed regulations there will be a serious weakening of the laws of Louisiana which are designed to protect the health and welfare of the people.

*"Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case- by- case basis, exceptions or variances to these rules and regulations. It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures shall not result in an unacceptable increase of endangerment to the environment, or the health, safety and welfare of the public. The applicant, owner, or operator shall submit a written request to the Office of Conservation detailing the reason for the requested exception or variance. No deviation from the requirements of these rules or regulations shall be undertaken by the applicant, owner, or operator without prior written authorization from the Office of Conservation."*

**29M Rev §303(F)(1)**

Clearly the officials in the Office of Conservation must delete this section which would allow the Commissioner of Conservation, or officials in the agency, to exempt applicants and operators of wells, facilities and caverns in salt domes from laws and regulations which are designed to protect the health and welfare of the people.

*"The area permit may authorize the operator to construct and operate, convert, or plug and abandon wells within the permit area provided:*

- a. the operator notifies the commissioner at such time as the permit requires;*
- b. the additional well satisfies the criteria in §3309.M.1 and meets the requirements specified in the permit under §3309.M.2; and*
- c. the cumulative effects of drilling and operation of additional injection wells are considered by the commissioner during evaluation of the area permit application and are acceptable to the commissioner.*

*4. If the commissioner determines that any well constructed pursuant to §3309.M.3 does not satisfy any of the requirements of §3309.M.3.a and b, the commissioner may modify the permit under §3311.K.3, terminate under §3311.K.6, or take enforcement action. If the commissioner determines that cumulative effects are unacceptable, the permit may be modified under §3311.K.3.”*

We believe that the use of Area Permits is an attempt by the officials in the Office of Conservation to create a secret permitting process which would deny the public an open permitting process. These Area Permits would also deny the public access to information about what the officials in the Office of Conservation are doing and what the owners and operators of these salt dome caverns, injection and mining wells and related facilities would be doing in the salt domes of Louisiana.

#### **4. The proposed language in 29M-3 does not make it sufficiently clear that a hearing is required.**

The regulations developed by the officials in the Office of Conservation dealing with public notice and hearings must be changed to ensure that these valuable public rights are protected and enforced. The only way to ensure that the public's health and safety is being sufficiently protected is with transparency in the permitting process through the mandatory and consistent requirement for public notice, comment and hearing, and for sufficient time for these important processes for public participation.

*“The commissioner shall hold a public hearing whenever he finds, on the basis of requests, a significant degree of public interest in (a) draft permit(s). The commissioner also may hold a public hearing at his discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision.” 29N-1 §111(G).*

The new 29M-3 obscures the hearing requirement that states,

*“If a public hearing has been requested, the Office of Conservation shall fix a time, date, and location for a public hearing...”*  
**29M-3 § 3311(G)**

The regulation mentions a hearing but fails to make it clear that the Office of Conservation requires a hearing during the permitting process. In order to adequately protect the public, the Office of Conservation must make its permitting process public and it must make clear to permit applicants that hearings are a non-negotiable part of this process.

#### **5. The regulations describing the process for allowing variances are ambiguous and not sufficiently stringent**

The proposed sections of the regulations which would allow for variances and exceptions from requirements of the regulations are totally unacceptable to the Delta Chapter of the Sierra Club.

*“Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case- by- case basis, exceptions or variances to these rules and regulations. It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures shall not result in an unacceptable increase of endangerment to the environment, or the health, safety and welfare of the public. The applicant, owner, or operator shall submit a written request to the Office of Conservation detailing the reason for the requested exception or variance. No deviation from the requirements of these rules or regulations shall be undertaken by the applicant, owner, or operator without prior written authorization from the Office of Conservation...”*

*Granting of exceptions or variances to these rules and regulations shall only be considered upon proper showing by the applicant, owner, or operator at a public hearing that such exception or variance is reasonable,*

*justified by the particular circumstances, and consistent with the intent of these rules and regulations regarding physical and environmental safety and the prevention of waste. The requester of the exception or variance shall be responsible for all costs associated with a public hearing.*

**29M-3§3303(F)(1-2)**

**6. The proposed regulations are expanding the types of public documents which can be classified as confidential. This proposed regulation appears to be nothing more than an attempt to expand the denial of information to the public. Adequate information and public participation in the review and evaluation of documents are critical to the understanding of what is being proposed and an essential part of the process.**

*"In accordance with R.S. 44.1, et seq., any information submitted to the Office of Conservation pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application for, or instructions, or in the case of other submissions, by stamping the words "Confidential Business Information" on each page containing such information. If no claim is made at the time of submission, the Office of Conservation may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in R.S. 44.1, et seq. (Public Information)."*

**29M-3§3307(G)**

Clearly the public has a legal right to know what is being proposed and how these proposals may affect human health and the environment. For the officials in the Office of Conservation to propose that it is legal for applicants of hazardous operations to hide critical information from the public appears to be a direct effort to help applicants to avoid complying with the requirements of the Louisiana Constitution and other relevant laws and judicial decisions.

If any documents are allowed to be withheld from the public in the permitting process then the officials with the Office of Conservation must include in the publicly available documents and files a list of documents which have been classified as confidential. This list must include a description of all documents and pages, or parts of pages which have been classified as confidential. There must also be a description of why each document has been classified as confidential.

The list of documents which have been classified as confidential must be adequate to assure that the public will be able to understand which documents are being withheld from the public, why these documents are being withheld, and what process is available to challenge these classifications

The public must be able to determine what documents have been classified as confidential and able to challenge the denial of access to these documents or to individual pages or parts of pages which are being withheld as confidential.

We hope these comments will provide the Commissioner of Conservation and other officials in the Office of Conservation and all other state agencies with adequate information so that the draft proposed regulations can be modified to insure compliance with applicable state laws and court decisions so that the officials will be better able to protect human health and the environment.

We are especially thankful for the exceptional work of Aminta Conant, Tulane University law student and Lisa Jordan, supervising attorney at the Tulane Environmental Law Clinic. Their exceptional work and dedication has made a tremendous positive difference to the people and natural resources of Louisiana.

Sincerely yours,

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## Tyler Gray

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**From:** Mike Schaff <mschaff@dbdoran.com>  
**Sent:** Friday, December 06, 2013 11:53 AM  
**To:** Tyler Gray  
**Cc:** Stephen Chustz; Jim Welsh; kensimoneaux@aol.com; Gary Metrejean; 'Brenda Romero'; blanchardcandy@yahoo.com; callemaa1@yahoo.com; russel.honore@gmail.com; Wilma Subra; Glo; Jacques Morial; Anne Rolfs; sandy@levees.org; marylee@leanweb.org; Elizabeth\_Schaff@lawd.uscourts.gov  
**Subject:** proposed rules for salt caverns

To: Mr. Tyler Gray  
Office of Conservation  
P. O. Box 94275  
Baton Rouge, LA 70804-9725

From: Mike Schaff  
Bayou Corne / Grand Bayou Support Group  
[mschaff@dbdoran.com](mailto:mschaff@dbdoran.com)

Re: Docket No. IMD-2013-08  
LAC 43:XVII.Chapter 3  
Statewide Order No. 29-M (Revision 3)  
Hydrocarbon Storage Wells in Salt Dome Cavities

and

Docket No. IMD-2013-07  
LAC 43:XVII.Chapter 33  
Statewide Order No. 29-M-3  
Class III, Solution Mining Injection Well

Good morning, Mr. Gray

Although I was unable to attend the hearing last Tuesday on the proposed new rules and regulations for mining of and hydrocarbon storage in the state's salt domes due to a family matter, you can be assured that I wholeheartedly support all of the changes submitted by our group as presented by Mr. Nick Romero and the other participants. This letter is to add reasons to some of our changes and I wish them to be made part of the permanent record.

As the proposed changes current read in para. 3315 of 29-M-3, with regards to cavern separation of 200', it would be completely legal to mine a total of 377 caverns at EACH elevation in our Napoleonville salt dome which is roughly 3 miles long and 1 mile wide. Laying out a tri-pitch grid of 500' center to center (300' cavern diameter plus 200' separation, excluding the 300' salt edge area) the operators could turn our dome into a veritable honeycomb that would never be able to sustain itself. And that is only at ONE elevation... there could be another 377 directly below those, and so forth.

That is why we propose changing the spacing requirements from 200' to 400'... there would still be plenty area to mine over 100 new caverns at the current elevation and as technology improves, another 180 below those.

In addition, the salt periphery spacing needs to be lengthened due to the inaccuracies of our present technologies. As you should be aware, the Napoleonville Salt Dome was submitted to extensive 3D seismic arrays at the cost of many millions of dollars, yet the best resolution that was available, even with such an extensive study, was + or - 75'. Based on

that alone, the periphery limits need to be extended to 400' and all those that fall within that range need to cease operations.

Also, with regard to hydrocarbon storage spacing (reference para. 315 of 29-M (Revision 3), the office of conservation has been greatly concerned about the CrossTex caverns located over 1000' away from the failed oxy 3... can you imagine the terror if this storage cavern was only 200' away as stated in these proposals? That is why we recommend that storage caverns be spaced at 800' intervals. There can be a brining cavern, either operating or dormant, within the 400' distance, but if the brine cavern ever fails an MIT or is P&A'd for any reason, then all contents of the storage cavern MUST be transferred to another cavern using these same distance guidelines as soon as safely practical, not to exceed 90 days. All residents within the blast / asphyxiation area of this dome will be notified immediately of the incident and the corrective action being taken.

These changes will still ensure continued mining and storage with no disruption. They will also help bring some peace of mind to those who live near these facilities.

Thank you for taking the time to read this and we look forward to seeing the revised regulations soon and attending that hearing as well.

Respectfully,

Michael Schaff  
108 Crawfish Stew St.  
Bayou Corne, LA



Tulane Environmental Law Clinic

December 6, 2013

**By e-mail to: Tyler.Gray@la.gov**

Mr. Tyler Gray  
Office of Conservation  
P.O. Box 94275  
Baton Rouge, LA 70804-9725

**Re:   Comments on Docket No. IMD-2013-07  
by Roger Stelly, Save Lake Peigneur, Inc. and  
the Louisiana Environmental Action Network**

Dear Mr. Gray,

On behalf of Save Lake Peigneur, Inc., the Louisiana Environmental Action Network, and Mr. Roger Stelly (“Citizens”), we submit the following comments on the Department of Natural Resources, Office of Conservation’s proposed changes to Statewide Order 29-N-1, LAC 43:XVII.Chapter 33, to be enacted as Statewide Order 29-M-3. Citizens appreciate the efforts of the Office of Conservation to improve and strengthen the regulations governing solution mining and injection wells. However, some sections of the proposed regulations do not adequately protect against the severity of the possible outcomes if the Commissioner does not strictly and consistently regulate salt dome mining and storage.

Injection mining and hydrocarbon storage in salt domes pose very serious risks and, therefore, the regulations governing these activities must require the precautions necessary for protecting both the environment and the people of Louisiana. Solution mining and the subsequent storing of hydrocarbons like natural gas in salt dome caverns open the door for a number of dangerous consequences if the process is not carefully and constantly regulated. Potential loopholes in the regulations, even those that appear small, can lead to disastrous consequences. Citizens have seen, at Bayou Corne, the potential damage that solution mining and drilling in salt domes can trigger, and they are concerned that, without full and complete analysis of all aspects of the construction and operation of project in salt domes, existing and future projects could repeat these disastrous consequences or even exceed them.

For that reason, the primary change Citizens recommend in the regulations is that they be amended to explicitly incorporate the Environmental Impact Analysis that DNR’s constitutional

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duty as public trustee over the environment mandates for any proposed action affecting the environment.

Citizens reserve the right to rely on all oral and written comments submitted during the comment period, particularly those of Wilma Subra. Citizens also incorporate their comments with changes recommended to the 29-M revisions where the language tracks language in the proposed revisions to 29-N-1.

## **INTRODUCTION**

Some language in the proposed regulations is overly permissive and fails to ensure the oversight and transparency necessary to protect the public and the environment. Therefore, Citizens urge DNR to revise these sections in the interest of the public health and safety. The sections addressed in these comments must not be enacted as proposed because:

- A. Certain changes to the original language of 29-N-1 are overly permissive given the grave possible outcomes if proper care is not taken with permit review.
- B. Area permitting, and its associated exclusions, do not sufficiently protect against dangers associated with future drilling and, therefore, should be prohibited.
- C. The requirements for public notice and hearings are not sufficient and may violate citizens' Due Process rights.
- D. The regulations describing the process for allowing variances are ambiguous and not sufficiently stringent.
- E. Disclosure of information on permit applications is not sufficiently transparent.

Further, the regulations should explicitly incorporate the environmental impact analysis required by DNR pursuant to its constitutional duties.

### **A. The Regulations Should Explicitly Incorporate the Requirement for an Environmental Impact Analysis.**

As primary public trustee over the environment with respect to the construction and operation of solution mined hydrocarbon storage caverns, DNR has a Constitutional duty under Article IX, section 1 of the Louisiana Constitution to protect the environment “insofar as possible and consistent with the health, safety, and welfare of the people.” La. Const. Art. 9, § 1. To meet this duty, the Louisiana Constitution requires DNR “before granting approval of [a] proposed action affecting the environment, to determine that adverse environmental impacts have been minimized or avoided as much as possible consistently with the public welfare.” *Save Ourselves v. La. Envtl. Control Comm'n*, 452 So. 2d 1152, 1157 (La. 1984).

The Supreme Court has delineated what DNR’s constitutionally-required Environmental Impact Analysis, often referred to as the “IT Analysis,” **must** include. Before granting any proposed action affecting the environment, like the construction and operation of hydrocarbon storage caverns, DNR must address and analyze at least three core issues:

- (1) whether the potential and real adverse environmental effects of the proposed project have been avoided to the maximum extent possible;
- (2) whether a cost-benefit analysis of the environmental impact costs balanced against the social and economic benefits of the project demonstrate that the latter outweighs the former; and
- (3) whether there are alternative projects or alternative sites or mitigating measures which would offer more protection to the environment than the proposed project without unduly curtailing non-environmental benefits to the extent applicable.”

*Id; see also In re Rubicon, Inc., 95-0108 (La. App. 1 Cir. 2/14/96); 670 So. 2d 475, 483.*

Further, DNR’s “role as the representative of the public interest does not permit it to act as an umpire passively calling balls and strikes for adversaries appearing before it; the rights of the public must receive ***active and affirmative protection.***” *Save Ourselves*, 452 So. 2d at 1157 (interpreting La. Const. Article 9, § 1) (emphasis added).

As it derives from the Constitution, this duty exists regardless of whether DNR includes or references it in its regulations. Adherence “only to [the agency’s] own regulations rather than to the constitutional and statutory mandates” is not adequate. *Save Ourselves*, 452 So. 2d at 1160. That is particularly true here, where the regulations do not appear to cover critical aspects of an Environmental Impacts Analysis. For example, the regulations do not appear to include any requirement that the DNR analyze whether there are alternative sites that would offer more protection than the proposed site.

However, though the DNR retains this duty regardless of whether the regulations require it, placing the requirement for an Environmental Impact Analysis into the regulations provides both citizens and the applicant with a clear indication of what is required before proposed action affecting the environment can be permitted. Further, placing the requirements into the regulations allows DNR to mandate that the applicant perform the initial Environmental Impact Analysis as part of its application. Though the DNR will need to independently analyze the issues and independently assess the risks, requiring the applicant to do the initial analysis will allow the costs involved in an adequate analysis to be borne by the applicant rather than the DNR.

In sum, DNR should add a provision in the regulations requiring an Environmental Impact Analysis consistent with the requirements of the Louisiana Constitution as articulated by the *Save Ourselves* court. Further, as the *Save Ourselves* court referenced the analysis required under the National Environmental Policy Act (NEPA) when mandating this analysis under Louisiana law, its requirement for an Environmental Impact Analysis essentially requires an environmental impact statement (EIS) consistent with one required by NEPA. Further, when these projects are permitted by the Federal Energy Regulatory Commission (FERC), FERC performs Environmental Impact Statements. Louisiana citizens affected by similar projects permitted instead by the DNR are entitled to the same stringent analysis.

## **B. Proposed Language Changes Dilute Previous Protections.**

The changes between the existing 29-N-1 and the new 29-M-3 include several shifts in the requirements of the Commissioner and the Office of Conservation. In some instances, the duties prescribed by the new regulations to protect underground sources of drinking water from the potential hazards associated with injection mining relax requirements that citizens should be able to rely on.

1. *Changes in language from “will” to “may” in the proposed 29-M-3 diminish the duty of the DNR as a protector of the public and the environment.*

First, in **29-N-1, §107**, the original regulation states that,

*[t]he commissioner shall impose on a case-by-case basis such additional conditions as are necessary to protect underground sources of drinking water.*

### **29-N-1, §107(O) (emphasis added).**

However, in the revised regulations under 29-M-3, the mandate to protect drinking water is less clear, stating that,

*The Office of Conservation may, on a case-by-case basis, impose any additional conditions or requirements as are necessary to protect ... underground sources of drinking waters...*

### **29-M-3, §3309(O) (emphasis added).**

As these and other changes relate to the protection of sources of drinking water, the DNR must hold permit applicants to the highest standards and, accordingly, the language requiring agency action in the event of a threat to drinking water should be mandatory.

Second, in **29-N-1, § 111(D)(2)**, the regulations currently mandate what the Commissioner must include in a fact sheet with a draft permit. This fact sheet is a significant source of information to the public on what the project will involve. It provides:

*The fact sheet shall include, when applicable . . .*

### **29-N-1, § 111(D)(2) (emphasis added).**

The proposed regulations, however, now provide:

*The fact sheet may include . . .*

### **29- M-3, § 3311(F)(1) (emphasis added).**

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Both of these provisions should retain the mandatory “shall” language rather than the permissive “may” language.

2. *DNR Should Not Delete Language Imposing a Duty to Reapply.*

The existing regulations, at § 107(E), entitled “Duty to Reapply,” mandated that

*If the permittee wishes to continue an activity required by a permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.*

This language has been removed from the current draft. It should be retained, as it closes a potential loophole concerning what happens when a permit expires before the activity is completed.

**C. Area Permits Do Not Offer the Same Scrutiny for New Wells As Do Individual Permits.**

The DNR must stop allowing area permits. 29-M-3 maintains the provisions allowing for area permits that were also in place under 29-N-1. 29-N-1§109(B)(11), 29-M-3§3309(M). These permits put the public and the environment at risk. In light of the likely impetus for these rule changes – the ongoing disaster at Bayou Corne – allowing such a large loophole for new projects that will impact a new area of a salt dome flies in the face of the prevention goal.

When DNR gives a permittee an area permit, it allows the permittee to construct and operate not only the caverns it has currently applied for permission on, but it is also granting permission for an unlimited additional number of caverns. The proposed regulations state that,

*[t]he area permit may authorize the operator to construct and operate, convert, or plug and abandon wells within the permit area provided...*

**29-M-3§3309(M)(3).**

Citizens understand the existing and proposed regulations to exempt these additional caverns from undergoing the same review process as the first one. In fact, it is unclear what, if any, substantive requirements apply to all but the first well under an area permit. Worse, it is unclear if any public notice requirements attach to the construction and/or use of future wells authorized by an area permit. At a minimum, Citizens request that the DNR inform them whether notice and comment is required whenever additional caverns under an area permit are developed and used. If it is not required, this must change.

The exact structure, composition, and stability of salt domes is unknown without extensive seismic scanning, and the structural integrity of an entire salt dome area is unreliable at best. If the DNR maintains the provisions allowing area permits, it should include language to ensure that they are only allowed sparingly and not without a higher level of scrutiny on the area

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in question. Without extensive testing of a mining site and all connected or possibly related sites, an area permit could usher in a project that starts off safe but gradually loses structural integrity as it expands to new wells.

The DNR must require the applicant to provide higher quality studies, like 3-D seismic, of existing caverns and wells and more interaction and transparency with the surrounding communities if it maintains this ill-advised provision on area permits.

#### **D. The DNR Must End the Apparent Exemption for Expansions.**

The regulations, current and proposed, can be read to exempt expansions of existing wells/caverns from all of the regulatory requirements, including the requirement that it apply for a permit. Language must be included to clarify that expansions of existing caverns must be permitted, and must go through the same rigor as new caverns.

#### **E. The Proposed Language in 29-M-3 Does Not Make It Sufficiently Clear That a Public Hearing Is Required.**

The DNR must change the regulatory language with regard to public notice and hearings to ensure that these valuable rights are protected and enforced. Regardless of how effective the substantive changes in the proposed regulations are, the only way to ensure that the public's health and safety is being sufficiently protected and that their Due Process rights are maintained is with transparency in the permitting process through the mandatory and consistent requirement for public notice, comment and hearing, and for sufficient time for these important contributions.

While the proposed regulations may have attempted to improve the public hearing requirements for permit applications, it still remains unclear that one is required when the public requests one. This, however, should be the standard. Currently, the regulations state:

*The commissioner shall hold a public hearing whenever he finds, on the basis of requests, a significant degree of public interest in (a) draft permit(s). The commissioner also may hold a public hearing at his discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision.*

#### **29-N-1 §111(G) (emphasis added).**

The new 29-M-3, though it contains better language on public hearings, is still unclear in this regard. The proposed regulations state that,

*If a public hearing has been requested, the Office of Conservation shall fix a time, date, and location for a public hearing... ‘*

#### **29-M-3 § 3311(G).**

Thus, the regulation mentions a hearing but fails to clearly state that the DNR requires a hearing during the permitting process. In order to adequately protect the public, the DNR must make its permitting process public and it must make clear to permit applicants that hearings are a non-negotiable part of this process.

**F. The Regulations Describing the Process for Allowing Variances Are Ambiguous and Not Sufficiently Stringent.**

The proposed regulations include a “case- by- case basis” allowance for variances, subject to the discretion of the Office of Conservation. This language provides for an avenue around the regulations at the discretion of the Office of Conservation and at the expense of the public, and must be limited. The new regulations state,

*Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case- by- case basis, exceptions or variances to these rules and regulations. It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures shall not result in an unacceptable increase of endangerment to the environment, or the health, safety and welfare of the public. The applicant, owner, or operator shall submit a written request to the Office of Conservation detailing the reason for the requested exception or variance. No deviation from the requirements of these rules or regulations shall be undertaken by the applicant, owner, or operator without prior written authorization from the Office of Conservation...*

*Granting of exceptions or variances to these rules and regulations shall only be considered upon proper showing by the applicant, owner, or operator at a public hearing that such exception or variance is reasonable, justified by the particular circumstances, and consistent with the intent of these rules and regulations regarding physical and environmental safety and the prevention of waste. The requester of the exception or variance shall be responsible for all costs associated with a public hearing.*

**29-M-3§3303(F)(1-2) (emphasis added).**

The proposed regulations do not offer any further criteria for what constitutes a reasonable and justified variance, nor what it means to be consistent with the “intent” of the regulations. While there is more description here than in the original regulations, the DNR needs to make its variance allowance criteria more detailed and available to the public for comment and hearing prior to the final adoption of this regulation.

**G. Disclosure of Information with regard to Permit Applications Is Not Sufficiently Transparent.**

The availability of documents and information relating to the permit application is a critical element of the transparency requisite to protect the public. Without open access to the details of what a possible injection mining and storage will mean for a community, the public is left vulnerable. In the original 29-N-1, the DNR first emphasizes that information shall be available to the public, and that only by request and approval by the commissioner can it be withheld from the public, if the request meets certain criteria.

*Information obtained by any rule, regulations, order, or permit term or condition adopted or issued here-under, or by any investigation authorized thereby, shall be available to the public, unless nondisclosure is requested in writing and such information is determined by the commissioner to require confidentiality to protect trade secrets, processes, operations, style of work, apparatus, statistical data, income, profits, losses, or in order to protect any plan, process, tool, mechanism, or compound; provided that such nondisclosure shall not apply to information that is necessary for use by duly authorized officers or employees of state or federal government in carrying out their responsibilities under these regulations or applicable federal or state law. If no claim is made at the time of submission, the commissioner may make the information available to the public without further notice.*

**29-N-1§105(H) (emphasis added).**

Contrarily, the proposed regulation changes imply that the default is for the DNR to automatically withhold information submitted and stamped as confidential without a determination that such protection is merited.

*In accordance with R.S. 44.1, et seq., any information submitted to the Office of Conservation pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application for, or instructions, or in the case of other submissions, by stamping the words "Confidential Business Information" on each page containing such information. If no claim is made at the time of submission, the Office of Conservation may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in R.S. 44.1, et seq. (Public Information).*

**29-M-3, §3307(G) (emphasis added).**

The DNR must prioritize making information submitted with applications available to the public. It is the public's right to know what a company plans to put in a community, especially the details of the project's proposed contents of the well and the structural information about the area and the project. Without public access to this information, the permit applicant may place a potentially hazardous project in the midst of an unknowing community that stands to lose the most if there is a disaster.

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**H. The Regulations Should Require Applicants to Obtain All Information Regarding Wells and Other Structures Penetrating the Salt Stock.**

Both the current and proposed regulations impose only a limited duty of permit applicants to determine what wells and other structures exist in the area of review surrounding its project. The proposed regulations, at § 3307(D), provide:

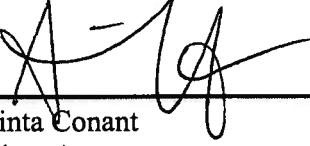
*Only information of public record or otherwise known to the applicant need be researched or submitted with the application, however, a diligent effort must be made to identify all wells and other manmade structures that penetrate the salt stock in response to the area of review requirements.*

**29-M-3, §3307(D).** The added “diligent effort” language is an improvement over the current language, but does not suffice. Permit applicants, who seek to profit from mining salt domes, must be responsible for discovering all wells in its area of review, even if they are not of public record or “otherwise known.” The term “diligent effort” is too vague, and is likely not enforceable. No other entity will undertake a study of what wells are in the area of review, yet this information is essential to ensuring that the drilling and caverns in a salt dome will not be impacted by existing, and particularly abandoned, wells. The language should plainly require the applicant to “identify all wells and other manmade structures that penetrate the salt stock in response to the area of review requirements.”

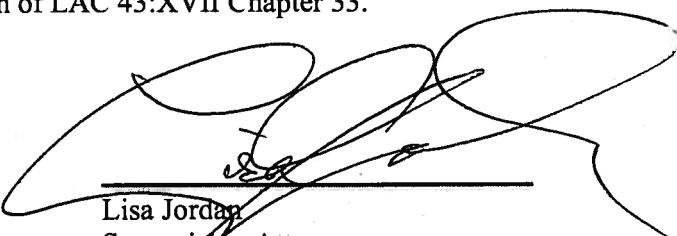
**CONCLUSION**

For the reasons above, Citizens request that DNR adopt the changes recommended in these comments into the final version of LAC 43:XVII Chapter 33.

Respectfully submitted by:



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*On behalf of Roger Stelly*



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*On behalf of Roger Stelly, Save Lake Peigneur, Inc., and LEAN and as supervisor over Ms. Conant's representation of Roger Stelly<sup>1</sup>*

<sup>1</sup> Mr. Stelly's consent to representation by a student attorney and the Introduction of Student Attorney was filed into the record at the November 26, 2013, public hearing.



Tulane Environmental Law Clinic

December 6, 2013

**By e-mail to: Tyler.Gray@la.gov**

Mr. Tyler Gray  
Office of Conservation  
P.O. Box 94275  
Baton Rouge, LA 70804-9725

**Re:   Comments on Docket No. IMD-2013-08  
by Roger Stelly, Save Lake Peigneur, Inc. and  
the Louisiana Environmental Action Network**

Dear Mr. Gray,

On behalf of Save Lake Peigneur, Inc., the Louisiana Environmental Action Network, and Mr. Roger Stelly (“Citizens”), we submit the following comments on the Department of Natural Resources, Office of Conservation’s proposed changes to Statewide Order 29-M, LAC 43:XVII Chapter 3 (“29-M”). Citizens appreciate the efforts of the Office of Conservation to improve and strengthen the regulations governing Hydrocarbon Storage Wells in Salt Dome Cavities. However, some sections of the proposed regulations do not adequately guard against the severity of the possible outcomes if the Commissioner does not strictly and consistently regulate salt dome mining and storage. Further, in several areas, the proposed regulations curtail or eliminate critical public participation via notice, comment, and public hearings, in violation of citizens’ Due Process rights.

Injection mining and hydrocarbon storage in salt domes pose very serious risks and, therefore, the regulations governing these activities must require the precautions necessary for protecting both the environment and the people of Louisiana. Solution mining and the subsequent storing of hydrocarbons like natural gas in salt dome caverns open the door for a number of dangerous consequences if the process is not carefully and constantly regulated. Potential loopholes in the regulations, even those that appear small, can lead to disastrous consequences. Citizens have seen, at Bayou Corne, the potential damage that solution mining and drilling in salt domes can trigger, and they are concerned that some of the changes in these governing regulation could inadvertently make such disastrous history repeat itself. Citizens reserve the right to rely on all oral and written comments submitted during the comment period regarding changes to both 29-M and 29-N-1, particularly, those of Wilma Subra. Additionally, for any language in proposed 29-M that tracks language in proposed 29-M-3, Citizens adopt herein their recommendations presented in their comments on proposed 29-M-3.

Tulane Environmental Law Clinic

6329 Freret St., Ste. 130, New Orleans, LA 70118-6231 tel 504.865.5789 fax 504.862.8721 www.tulane.edu/~telc

## **INTRODUCTION**

Some language in the proposed regulations is overly permissive and fails to ensure the oversight and transparency necessary to protect the public and the environment. Therefore, Citizens urge DNR to revise these sections in the interest of the public health and safety. The sections addressed in these comments must not be enacted as proposed because:

- A. The new proposed public notice and hearing requirements are inadequate.
- B. Area permitting, and its associated exclusions, does not sufficiently protect against dangers associated with future drilling and, therefore, should be prohibited.
- C. The regulations describing the process for allowing variances are ambiguous and not sufficiently stringent.

### **A. Public Notice Provisions in the Proposed Language Are Inadequate.**

Public notice and comment is essential to ensure adequate protection for storage projects, and to protect the Due Process rights of citizens whose constitutional health, welfare, safety, and property interests are affected by proposed hydrocarbon storage wells. However, while DNR's changes to 29-M add much detail in the way of technical requirements on well owners and operators, they fail to provide for public notice and comment in a number of critical areas. The regulations must be changed to ensure that the affected public has the right to know about, and comment on, matters relating to hydrocarbon storage wells.

#### *1. DNR Must Not Allow Variances Without Public Notice and Comment.*

While DNR has added many new requirements for applicants for hydrocarbon storage permits, it has also provided for variances or exceptions from all or most of the new requirements. However, while the existing variance language, by providing for a mandatory public hearing, ensures that the public will hear of the proposed exception and will be allowed to comment, the proposed new variance language does not. The proposed variance language not only fails to provide for a mandatory public hearing, but it even fails to provide for public notice.

Thus, in the existing language, at § 301(G), variances are allowed "only upon proper showing by the applicant ***at a public hearing*** that such exception is reasonable, justified by the particular circumstances, and consistent with the intent of this order regarding physical and environmental safety and the prevention of waste." **29-M Rev, §301(G)** (emphasis added). However, the new variance language provides for neither public notice nor a public hearing when the Commissioner is considering a variance request. Section 303(F) of the proposed regulations is the variance section. ***Nowhere in this section does it mention public notice, much less require it.*** The only place where the new language references public participation at all is a vague reference to a public hearing that the regulations never actually require. Thus, at § 303(F)(2), which provision appears to be the counterpart to the variance language in the existing regulations at § 301(G), the language discusses the standard an applicant for a variance must meet and then provides: "The requester of the exception or variance shall be responsible for all costs associated with a public hearing." **29-M Rev, §303(F)(2).** But the regulations do not

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provide for a public hearing. This vague reference to who pays the cost for a public hearing that the regulations do not otherwise reference surely does not suffice to require a public hearing or even allow for one.

DNR should add language to the variance provision mandating public notice of all variance requests and mandating a public hearing before it issues any decision granting a variance.

*2. DNR Must Provide for a Public Hearing Before It Exempts an Aquifer from the Regulatory Requirements.*

The proposed changes to 29-M also allow exemptions to the requirements for protecting aquifers. At section 303(E)(2), the proposed regulations state that “the Office of Conservation may identify . . . all aquifers or parts thereof that the Office of Conservation proposes to denote as exempted aquifers . . .” **29-M Rev, §303(E)(2)**. However, though the regulations require “notice” of a proposed aquifer exemption, it does not mandate a public hearing. Instead, it provides for “opportunity for public hearing.” *Id.* This language does not suffice to mandate a public hearing, even upon request by a large portion of the public. The U.S. Army Corps of Engineers uses similar “opportunity for a public hearing” language in its regulations, and has interpreted that language such that it rarely grants public hearings, even upon request. Courts have also interpreted that language as not requiring a public hearing, and making such a hearing entirely discretionary with the agency.

The Commissioner should not be allowed to exempt aquifers from the protections of the regulations without the public being allowed to comment on it at a public hearing. The public has a strong interest in maintaining the integrity and purity of aquifers regardless of whether the aquifer currently serves as a source of drinking water. The aquifers we have now are the only aquifers the public will ever have, and the future could hold for serious compromises on the availability of potable water. Further, future advances in technology could more cheaply and practically allow for use of aquifers not currently being used for potable water. The public has a right to comment at a public hearing on this basic amenity if the Commissioner is considering allowing the aquifer to be compromised.

Therefore, DNR must change this language as follows: “After public notice and ~~opportunity for~~ a public hearing, the Office of Conservation may . . .” This will ensure the necessary public participation in such an important, and potentially irreversible, decision.

*3. The Proposed Regulations Must Allow for More Prior Notice of a Public Hearing.*

The proposed regulations improve the requirements for public notice of permit applications and permit issuances for hydrocarbon storage. The original regulations under 29-M do not provide for public notice on permit applications. Under the existing language, the first time the public is required to be notified that a company seeks to store hydrocarbons in a salt dome cavity is ten days before the public hearing, and the permit may be issued shortly thereafter. *See 29-M, §301(B)*. The proposed regulations, on the other hand, clearly require

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public notice that a proposed permittee has applied for a storage permit. *See 29-M Rev, §311(B)(1)* (“The applicant shall make public notice that a permit application is proposed for filing with the Office of Conservation. A notice of intent shall be published at least 30 days but not more than 180 days before filing the permit application with the Office of Conservation.”). This is a significant improvement.

However, in redrafting and expanding these regulations, the Department of Natural Resources missed a significant opportunity to establish concrete standards for public hearings that accompany the storage applications. The revised regulations do not afford sufficient advance notice to the public of a public hearing. The proposed language provides:

*Public notice shall be published by the Office of Conservation in the legal advertisement section of the official state journal and the official journal of the parish of the proposed project location not less than 10 days before the scheduled hearing.*

**29-M Rev, §311(D)(2)(a).**

Given the devastating potential impact the storage of hydrocarbon in salt domes can have on the nearby public, ample time for public comment and participation in a hearing is critical. Ten days notice is not a sufficient amount of time to prepare for a hearing. Notice of a public hearing must be posted at least thirty days prior to the public hearing. The language must be changed to reflect this.

**B. DNR Must Prohibit Area Permitting or, at a Minimum, Require Notification to the Public When New Wells Are Drilled or Converted.**

The DNR must stop allowing area permits and, if area permitting remains, must mandate that the public be notified and be allowed to comment when additional wells are drilled or converted under an area permit. While many of the updates to 29-M mirror much of the language in 29-N (now 29-M-3), the 29-M updates lack a significant discussion of area wide permits other than to eliminate the need for public notice or hearings when additional wells are drilled or converted within the permit area. These permits put the public and the environment at risk, and no valid reason exists for failing to at least notify the public of additional wells. The proposed regulations state,

*No public notice or public hearing is required for additional wells drilled or for conversion under an approved area permit or when a request for permit modification, revocation and reissuance, or termination is denied under §311.K.*

**29-M-Rev§311(D)(1)(b).**

This rejection of public involvement is as troubling as area wide permits in general. In light of the likely impetus for these rule changes – the ongoing disaster at Bayou Corne – allowing such a large loophole for new projects that will impact a new area of a salt dome flies in

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the face of the prevention goal. Without mandatory public notice and a public hearing, the possibly hazardous activities of the salt dome operators can go unchecked until the worst happens.

**C. The Proposed Regulations Describing the Process for  
Allowing Variances Are Ambiguous and Not Sufficiently Stringent.**

The proposed regulations include a “case- by- case basis” allowance for variances, subject to the discretion of the Office of Conservation. This language provides more detail on variances than the exception provision in the original 29-M regulations (at § 301(G)), but it still provides for an avenue around the regulations at the discretion of the Office of Conservation and at the expense of the public. The proposed regulations state,

*“Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case- by- case basis, exceptions or variances to these rules and regulations. It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures shall not result in an unacceptable increase of endangerment to the environment, or the health, safety and welfare of the public. The applicant, owner, or operator shall submit a written request to the Office of Conservation detailing the reason for the requested exception or variance. No deviation from the requirements of these rules or regulations shall be undertaken by the applicant, owner, or operator without prior written authorization from the Office of Conservation.”*

**29-M Rev §303(F)(1) (emphasis added).**

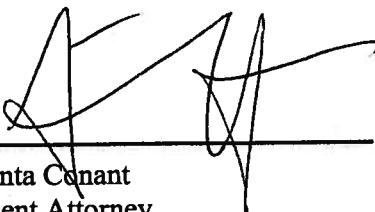
The proposed regulations do not offer any further criteria for what constitutes a reasonable and justified variance, nor what it means to be consistent with the “intent” of the regulations. While there is more description here than in the original regulations, the DNR needs to make its variance allowance criteria more detailed and available to the public for comment and hearing.

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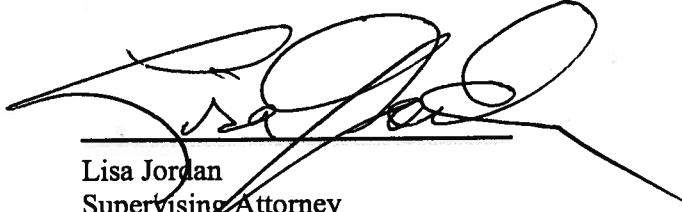
### CONCLUSION

For the reasons above, Citizens request that DNR adopt the changes recommended in these comments into the final version of LAC 43:XVII Chapter 3.

Respectfully submitted by:



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*On behalf of Roger Stelly*



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*On behalf of Roger Stelly, Save Lake Peigneur, Inc.,  
and the Louisiana Environmental Action Network  
and as supervisor over Ms. Conant's representation  
of Roger Stelly<sup>1</sup>*

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<sup>1</sup> Mr. Stelly's consent to representation by a student attorney and the Introduction of Student Attorney was filed into the record at the November 26, 2013, public hearing.



730 NORTH BOULEVARD, BATON ROUGE, LOUISIANA 70802 • TELEPHONE (225) 387-3205 FAX (225) 344-6136

December 6, 2013

Mr. Tyler Gray  
Attorney  
Office of Conservation  
Louisiana Department of Natural Resources  
617 N. 3<sup>rd</sup> St  
Baton Rouge, LA 70802

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RE: Comments of the Louisiana Mid-Continent Oil and Gas Association on the Proposed for Class III (solution-mining) injection wells and hydrocarbon storage wells in salt dome cavities

Dear Mr. Gray:

The Louisiana Mid-Continent Oil and Gas Association (LMOGA) appreciate the opportunity to comment on the Notice of Intent that appeared in the October 2013 Louisiana Register. LMOGA is an industry trade association which represents individuals and companies who together produce, transport, refine and market crude oil, natural gas and petroleum products in Louisiana and the Gulf of Mexico. The companies that have storage facilities represented by LMOGA are affected by the proposed changes.

LMOGA has reviewed and supports the comments of the Louisiana Chemical Association and LMOGA endorses their comments to the extent they do not conflict with the following comments.

LMOGA appreciates the efforts the Office of Conservation in crafting these proposed rules. Upon review, a few questions of clarity and intent remain:

**29-M 317.C.6 and 29-M 317.C.6** – calls for the requirement of dual casings cemented into the salt of existing wells. Mid-Continent members estimate that it will cost \$1M per well to install the additional casing. For that reason, LMOGA believes there should be a “grandfather clause” of some type for wells existing in caverns before the effective date of these rules and regulations. The exception process outlined in the rules is onerous and needs additional discussion. LMOGA

believes there is a need to incorporate “alternate” compliance scenarios (with justification) for existing facilities. A “one-size fits all” rule is problematic. Additionally, LMOGA urges DNR to recognize the differences between heavy liquid storage and gas storage and those alternatives should be allowed under the rule.

Once again, LMOGA appreciates the opportunity to submit these comments and looks forward to continue working with you on these matters.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris John".

Chris John  
President, Louisiana Mid-Continent Oil and Gas Association



DAN S. BORNÉ  
PRESIDENT

**LOUISIANA CHEMICAL ASSOCIATION**

2:38 pm

December 6, 2013

**VIA HAND DELIVERY**

Office of Conservation  
Louisiana Department of Natural Resources  
617 North 3<sup>rd</sup> Street, 9<sup>th</sup> Floor  
Baton Rouge, Louisiana 70802

Attention: Tyler Gray

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RE: Comments of the Louisiana Chemical Association Concerning  
Proposed Class III (Solution-Mining) Injection Wells Rules  
(LAC 43:XVII.Chapter 33)  
Statewide Order No. 29-M-3  
Docket No. IMD-2013-07

Dear Sir:

As you know, the written comment period in connection with the proposed Class III (Solution Mining) Injection Wells Rules (LAC 43:XVII.Chapter 33), Statewide Order No. 29-M-3, Docket No. IMD-2013-07 (the “Solution Mining Rules”) ends on Friday, December 6, 2013 at 4:30 pm.

Set forth below are the written comments of the Louisiana Chemical Association (“LCA”) to the Louisiana Department of Natural Resources, Office of Conservation (“LDNR”) for inclusion in the administrative record of proceedings in connection with the above-referenced proposed Solution Mining Rules.

LCA requests that all written comments provided in connection with the Solution Mining Rules (including LCA's comments herein) be incorporated in the administrative record for the Solution Mining Rules. Pursuant to La. R.S. 49:953(A)(2)(b), LCA requests that LDNR issue a concise statement of the principal reasons for and against the adoption of any modifications or changes suggested in written or oral comments made to LDNR in connection with the Solution Mining Rules.

LCA also requests that, prior to any legislative oversight hearings, LDNR provide to LCA a complete draft of proposed technical changes to the Solution Mining Rules.

LCA's comments on the Solution Mining Rules follow.

## **LCA COMMENTS ON THE SOLUTION MINING RULES<sup>1</sup>**

### **Introduction.**

LCA is a nonprofit Louisiana corporation, composed of 63 members with over 100 chemical manufacturing plant sites in Louisiana. A number of LCA member companies own and/or operate solution-mining wells and will be directly affected by the proposed Solution Mining Rules.

### **1. General -- Incorporation of Other Comments.**

LCA hereby adopts and incorporates by reference those comments on the proposed Solution Mining Rules made by the Louisiana Mid-Continent Oil & Gas Association (“LMOGA”), members of LCA, and members of LMOGA, to the extent that such comments are not inconsistent with the comments made herein by LCA.

### **2. General -- LDNR Efforts.**

LCA acknowledges the significant efforts undertaken by LDNR to develop the proposed Solution Mining Rules. LCA very much appreciates LDNR’s efforts.

### **3. General -- Support for Solution Mining Rules.**

LCA understands the need for appropriate regulation of solution mining in Louisiana. As such, LCA generally supports the proposed Solution Mining Rules, which LCA believes are some of the most stringent solution mining rules in the United States.

### **4. General -- Significant Changes.**

LCA submits that LDNR should finally promulgate the Solution Mining Rules as expeditiously as possible. To the extent that LDNR determines that significant changes to the Solution Mining Rules may be required, LCA submits that LDNR should propose and promulgate those significant changes in a subsequent, separate rulemaking. To include such changes in the current rulemaking would only delay final promulgation of these needed regulations and, assuming that LDNR goes forward with the separate rulemaking, is neither necessary nor justifiable.

### **5. General -- LDNR Flexibility.**

One size does not fit all. LCA thus supports LDNR’s retention of the necessary flexibility to address those situations where an owner, operator, cavern, or well cannot meet an otherwise

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<sup>1</sup> In these comments, LCA has attempted to blackline all of its proposed changes to the proposed rules (double underline reflects additions, and ~~strikeout~~ reflects deletions).

applicable provision of the Solution Mining Rules *but public health and the environment nonetheless can be fully protected.*

**6. General -- Spacing Requirements.**

LCA supports spacing requirements based on sound science and good management practices. While LCA generally supports the spacing requirements set forth in §§3315 and 3317, LCA notes that in particular situations, solution-mining caverns may be operated and maintained with spacing less than that set forth in such regulations. LDNR should maintain the flexibility to allow this, as appropriate.

**7. §3301. Definitions -- Definitions of “Emergency Shutdown Valve” and “Previously Closed Cavern Well”.<sup>2</sup>**

LCA submits that given §3321.G’s requirement for manual (not automatic) emergency shutdown valves, the definition of “Emergency Shutdown Valve” should be revised to read as follows:

“*Emergency Shutdown Valve* -- a valve that automatically closes to isolate a solution-mining well from surface piping in the event of a specified condition that, if uncontrolled, may cause an emergency.”

LCA submits that the definition of “Previously Closed Cavern Well” should be revised to clearly indicate that no closure or post-closure is required for a previously closed cavern well. Thus, the definition of “Previously Closed Cavern Well” should be revised to read as follows:

“*Previously Closed Cavern Well* -- a solution-mining well that is no longer used, or capable of being used, to solution mine minerals and was closed prior to the effective date of these regulations. Previously closed cavern wells are not subject to the closure and post-closure requirements of §3337.”

**8. §3303. General Provisions -- §§B and F.**

**a. B -- Prohibition of Unauthorized Injection.**

LCA submits that the “compliance” referenced in the last sentence of §3303.B.2 should be compliance with Statewide Order No. 29-N-1. LCA further submits that if, after review by the Office of Conservation, the commissioner does not decide to terminate, modify, or revoke and reissue an existing permit with a variance, the solution-mining well should be able to continue to

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<sup>2</sup> In these comments, LCA refers to the individual sections of the proposed Solution Mining Rules by section number (not full citation). Thus, for example, proposed LAC 43:XVII.3301 is referred to as §3301.

operate in compliance with such variance. LCA thus submits that §§3303.B.2 and 3 should be revised to read as follows:

“B. Prohibition of Unauthorized Injection

\* \* \*

2. For existing solution-mining wells that are in compliance with Statewide Order No. 29-N-1, but not in compliance with Statewide Order No. 29-M-3 as of the effective date of these rules, they may continue to operate for one year under Statewide Order No. 29-N-1. Within that year, the owner or operator must submit an alternate means of compliance or a request for a variance pursuant to §3303.F and/or present a corrective action plan to meet the requirements of Statewide Order No. 29-M-3. During the review period of the request until a final determination is made regarding the alternate means of compliance or variance and/or corrective action plan, the affected solution mining well may continue to operate in compliance with Statewide Order No. 29-N-1.
3. By no later than one year after authorization of these rules, the owner or operator shall provide for review documentation of any variance previously authorized by the Office of Conservation. Based on that review, the commissioner may terminate, modify, or revoke and reissue the existing permit with the variance if it is determined that continued operations cannot be conducted in a way that is protective of the environment, or the health, safety, and welfare of the public. The process for terminating, modifying, or revoking and reissuing the permit with the variance is set forth in 3311.K. During the review period the affected solution-mining well may continue to operate in compliance with such variance. If the commissioner does not terminate, modify, or revoke and reissue the existing permit with the variance, the affected solution-mining well may continue to operate in compliance with such variance.”

b. **F -- Exceptions/Variances/Alternative Means of Compliance.**

LCA submits that public hearings should not be required for minor exceptions or variances that do not pose a substantial endangerment to the environment or the health, safety, and welfare of the public. Public hearings add significant amounts of time to the process of procuring a variance and greatly contribute to the workload of LDNR. Moreover, other state agencies, such as the Louisiana Department of Environmental Quality, do not require public hearing for variances. §3303.F should be revised accordingly. LCA thus submits that §3303.F.2 should be revised to read as follows:

- “2. Granting of exceptions or variances to these rules and regulations shall only be considered upon proper showing by the applicant, owner, or operator at a public hearing to the Office of Conservation that such exception or variance is reasonable, justified by the particular circumstances, and consistent with the intent

of these rules and regulations regarding physical and environmental safety and the prevention of waste. A public hearing shall be held on the requested exception or variance only if (a) requested by the applicant, owner, or operator, or (b) the Office of Conservation determines that given the nature of the requested exception or variance, a public hearing is warranted. A public hearing shall not be held on a minor exception or variance (an exception or variance that could not pose a substantial endangerment to the environment or the health, safety, and welfare of the public). The requester of the exception or variance shall be responsible for all costs associated with a public hearing.”

LCA also asks LDNR to confirm LCA’s understanding that §3303.B.3 -- not §3303.F -- applies to existing solution-mining wells operating pursuant to any variance previously authorized by the Office of Conservation.

**9. §3307. Application Content -- §C.7 -- Maps and Related Information.**

LCA submits that structure contour mapping of the entire salt stock is not necessary to safely permit a Class III solution-mining well. Only the portion of the salt stock that is within the area of review should require mapping for permitting and operational purposes. A particular salt dome may have many operators, each with a number of Class II or Class III wells. The surface area over the dome upon which operators have facilities can cover several square miles. There is no benefit in requiring each owner/operator to submit information on facilities and caverns with wells that are separately permitted by LDNR. The mechanical properties of salt are such that facilities located outside the proposed area of review are not relevant with respect to analysis of mechanical integrity or facility safety. LCA thus submits that §3307.C.7 should be reworded as follows: “7. structure contour mapping of the salt stock within the area of review on a scale no smaller than 1 inch to 500 feet;”.

**10. §3309. Legal Permit Conditions -- §§B, F, and I.**

**a. §B -- Financial Responsibility.**

LCA submits that owners and operators should have multiple options to satisfy financial responsibility requirements, including (in addition to those already included in §3309.B) insurance, a financial test, corporate guarantee, etc. (See, e.g., LAC 33:VII.Chapter 13 for financial assurance provided for closure/post-closure of solid waste facilities permitted by the Louisiana Department of Environmental Quality.) These need to be specifically identified in §3309.B and not depend upon future approval by LDNR. That said, LCA recognizes that inclusion of multiple options to satisfy financial responsibility requirements may be a significant revision to the proposed Solution Mining Rules. Because LCA does not wish to delay final promulgation of the Solution Mining Rules, LCA submits that LDNR should provide for inclusion of multiple options to satisfy financial responsibility requirements in a subsequent, separate rulemaking.

Moreover, LCA submits that the provision of increased financial security, if required, will take more than 30 days. LCA thus submits that the last sentence of §3309.B.2 should be reworded as follows: “In the event that an operator has previously provided financial security pursuant to LAC 43: XVII.3309, such operator shall provide increased financial security if required to remain in compliance with this Section, within 3060 days after notice from the commissioner.”

**b. §F -- Proper Operation and Maintenance.**

LCA submits that operators should not have to address escapes, discharges, or releases from “related facilities,” as required under §3309.F.2. Such escapes, discharges, or releases are already addressed under other state authority. *See, e.g.*, LAC 33:V.10111 and LAC 33:I.Chapter 39. LCA further submits that there are incorrect references in §3309.F.3.b. LCA thus submits that §3309.F.2 and 3 should be revised to read as follows:

“F. Proper Operation and Maintenance

\* \* \*

2. The operator shall address any unauthorized escape, discharge, or release of any material from the solution mining well, cavern, ~~and related facility~~, or parts thereof that is in violation of any state or federal permit or which is not incidental to normal operations, with a corrective action plan. The plan shall address the cause, delineate the extent, and determine the overall effects on the environment resulting from the escape, discharge, or release. The Office of Conservation shall require the operator to formulate a plan to remediate the escaped, discharged, or released material if the material is thought to have entered or has the possibility of entering an underground source of drinking water.

3. The operator shall agree to provide the following:

a. Assistance to residents of areas deemed to be at immediate potential risk in the event of a sinkhole developing or other incident that requires an evacuation if the potential risk or evacuation is associated with the operation of the solution-mining well or cavern.

b. Reimbursement to the state or any political subdivision of the state for reasonable and extraordinary costs incurred in responding to or mitigating a disaster or emergency due to a violation of R.S. 30:4(M)~~this Subseetion~~ or any rule, regulation or order promulgated or issued pursuant to R.S. 30:4(M)~~this Subseetion~~. Such costs shall be subject to approval by the director of the Governor's Office of Homeland Security and Emergency Preparedness prior to being submitted to the permittee for reimbursement. Such payments shall not be construed as an admission of responsibility or liability for the emergency or disaster.”

c. **§I -- Notification Requirements.**

LCA submits that §3309.I.1's requirement to notify LDNR of any change in the principal officers, management, owner, or operator of the solution-mining well in writing within 10 days of the change is unreasonable. LCA submits that the operator should have at least 30 days to provide this information and this information should be limited to a change in the owner or operator (not principal officers or management).

Moreover, while LCA agrees that any activity that is invasive in nature should require approval from LDNR, LCA submits that non-invasive activity (including activity that does not remove a string) should not require notification and LDNR approval in advance of the work. When an operator has to wait for approval from LDNR to begin work, this will, in most cases, greatly impact the ability to complete the task in a timely fashion. Often, downstream customers experiencing unplanned shutdowns are the only windows of opportunities to complete certain non-invasive tasks. Operators also often will do more non-invasive work than is required. Forcing operators to request and receive pre-approval for this type of activity is burdensome and discourages pro-active testing. That said, operators should submit relevant information regarding non-invasive activities after the work has been completed. LCA thus submits that §3309.I.2 should be revised to read as follows:

"I. Notification Requirements. The operator shall give written, and where required, verbal notice to the Office of Conservation concerning activities indicated in this Subsection.

\* \* \*

2. Planned physical alterations or additions to the solution-mining well, cavern, surface facility or parts thereof that may constitute a modification or amendment of the permit. No mechanical integrity tests, sonar caliper surveys, remedial work, well or cavern abandonment, or any test or work on a well or cavern (excluding an interface survey not associated with a mechanical integrity test) that requires invasive work (e.g., removing strings, etc.) shall be performed without prior authorization from the Office of Conservation. The operator must submit the appropriate work permit request form (Form UIC-17 or subsequent document) for approval. Non-invasive activity does not need to be approved in advance by the Office of Conservation, but a follow-up report detailing the non-invasive activity and any related findings shall be submitted to the Office of Conservation within 60 days after the work is completed."

11. **§3311. Permitting Process -- General and §§D and H.**

a. **General.**

LCA understands that the application process is: (1) submission of the permit application to

LDNR, (2) administrative and technical review by LDNR, (3) LDNR approval of the permit application, (4) LDNR preparation of a draft permit (§3311.E) and Fact Sheet (§3311.F), followed by (5) public notice and a 30-day public comment period. A public hearing, if necessary, can be held during the public comment period. Please confirm or correct LCA's understanding.

**b. §D -- Public Hearing Requirements.**

LCA submits that no public hearing should be required for minor permit changes, modifications, amendments, variances, or exceptions and that §3311.D should be revised to specifically provide this.

**c. §H -- Public Comments, Response to Comments, and Permit Issuance.**

LCA §3311.H.5 should more closely resemble R.S. 30:23.1, upon which it is based, and thus there should be no requirement for the filing of the final permit in the parish mortgage and conveyance records. LCA thus submits that §3311.H.5 should be revised to read as follows:

"H. Public Comments, Response to Comments, and Permit Issuance

\* \* \*

5. The owner or operator of a solution-mined cavern shall record a certified survey plat ~~and final permit~~ in the mortgage and conveyance records of the parish in which the property is located. A date/file stamped copy of the plat ~~and final permit~~ is to be furnished to the Office of Conservation within 15 days of its recording. If an owner or operator fails or refuses to record such notice, the commissioner may, if he determines that the public interest requires, and after due notice and an opportunity for a hearing has been given to the owner and operator, cause such notice to be recorded."

LCA also notes that while §3309.J.3 provides for extensions of a permit to drill, construct or convert a new solution-mining well based on "just cause," §3311.H.6 provides for extensions of a permit to construct or a convert a solution-mining well based on "extenuating circumstances." LCA submits that the basis for any such extension should be the same -- either just cause or extenuating circumstances -- and that §3309.J.3 or §3311.H.6 should be revised accordingly. (LCA further submits that "just cause" is more appropriate than "extenuating circumstances.")

**12. §3315 Cavern and Surface Facility Design Requirements -- §§ B and C.**

**a. §B -- Cavern Spacing Requirements.**

LCA submits that there are typographical errors in §3315.B.1 and 2.

As noted above, LCA further submits that solution-mining caverns may be operated and maintained with spacing less than that set forth in §3315. LDNR should maintain the flexibility to allow this, as appropriate. LDNR should likewise allow the intentional connection of two caverns for U-Tube production as currently authorized.

LCA thus submits that §3315.B should be revised to read as follows:

“B. Cavern Spacing Requirements

1. Property Boundary

- a. Existing Solution-Mining Caverns. No part of a solution-mining cavern permitted as of the date these regulations are promulgated shall extend closer than 100 feet to the property of others without consent of the owner(s). Continued operation without this consent of an existing solution mining cavern within 100 feet ~~to~~of the property of others may be allowed as follows.

\* \* \*

2. Adjacent Structures within the Salt. As measured in any direction, the minimum separation between walls of adjacent caverns or between the walls of the cavern and any manmade structure within the salt stock shall not be less than 200 feet. Caverns must be operated in a manner that ensures the walls between any cavern and any adjacent cavern or any other manmade structure maintain the minimum separation of 200 feet. For solution mining caverns permitted prior to the effective date of these regulations and which areis already within 200 feet of any other cavern or manmade structure within the salt stock, the Commissioner of Conservation may approve continued operation upon a proper showing by the owner or operator that the cavern is capable of continued safe operations. For newly permitted solution mining caverns that are proposed to be within 200 feet of any other cavern or manmade structure within the salt stock, the Commissioner of Conservation may approve operation upon a proper showing by the owner or operator that the cavern is capable of safe operations.

3. Salt Periphery

- a. ~~Without exception or variance to these rules and regulations, at~~ At no time shall the minimum separation between the cavern walls at any point and the periphery of the salt stock for a newly permitted solution-mining cavern be less than 300 feet.

- b. An existing solution-mining cavern with less than 300 feet of salt separation at any point between the cavern walls and the periphery of the salt stock shall provide the Office of Conservation with an enhanced monitoring plan that has provisions for ongoing monitoring of the structural stability of the cavern and salt through methods that may include, but are not limited to, increased frequency of sonar caliper surveys, vertical seismic profiles, micro-seismic monitoring,

increased frequency of subsidence monitoring, mechanical integrity testing, continuous cavern pressure data monitoring, etc. A combination of enhanced monitoring methods may be proposed where appropriate. Once approved, the owner or operator shall implement the enhanced monitoring plan.

c. ~~Without exception or variance to these rules and regulations, an~~ An existing solution-mining cavern with cavern walls 100 feet or less from the periphery of the salt stock shall be removed from service immediately and permanently. An enhanced monitoring plan of Subparagraph b above shall be prepared and submitted to the Office of Conservation. Once approved, the owner or operator shall implement the enhanced monitoring plan.”

LCA also asks that LDNR confirm LCA’s understanding that (1) the term “manmade structure,” as used in §3315.B includes a conventionally mined space, and (2) any “new” intentional connection of two caverns for U-Tube production, as currently authorized, would be considered a “newly permitted solution mining cavern” for purposes of §3315.B.2.

**b.      §C -- Cavern Coalescence.**

How does LDNR intend to apply §3315.C requirements on cavern coalescence to existing caverns that have already coalesced? LCA submits that existing coalesced caverns should be grandfathered and not be subject to §3315.C. At a minimum, LDNR should specifically identify any requirements for existing coalesced caverns.

**13.     §3317 Well Construction and Completion -- §C -- Casing and Cementing.**

LCA submits that no additional casing and cementing should be required for wells existing in caverns before the effective date of these rules and regulations and that are being used for solution-mining. (Retrofitting such existing wells, as envisioned by proposed §3317.C.6 will require operators to spend over \$1,000,000 per well.) §3317.C.6 should be revised to provide this. That said, LCA recognizes that such “grandfathering” of wells existing in caverns before the effective date of these rules and regulations and that are being used for solution-mining may be a significant revision to the proposed Solution Mining Rules. Because LCA does not wish to delay final promulgation of the Solution Mining Rules, LCA submits that LDNR may wish to provide for such grandfathering in a subsequent, separate rulemaking.<sup>3</sup>

LCA further notes that wells existing in caverns before the effective date of these rules and

---

<sup>3</sup> Although LCA is not submitting formal comments on the proposed salt dome rules for “storage,” LCA notes that this same issue applies in proposed LAC 43:XVII.317.C.6 and that LDNR should revise such proposed regulation so that no additional casing and cementing shall be required for wells existing in caverns before the effective date of these rules and regulations and that are being used for storage.

regulations and that are being used for solution-mining existing caverns and that have two casing seats cemented in the salt adequately protect the well, regardless of the depth into the salt. (Retrofitting wells that currently have two casing seats cemented into the salt to a depth of 300 feet will require operators to spend over \$1,000,000 per well.) LCA further submits that casing inspection logs can be used to demonstrate adequate protection for wells existing in caverns before the effective date of these rules and regulations and that are being used for solution-mining and that have a single casing cemented in the salt. (This is allowed by the State of Texas.) Thus, at a minimum, LCA submits that §3317.C.6 should be revised in the current rulemaking to read as follows:

“C. Casing and Cementing. Except as specified below, the wellbore of the solution-mining well shall be cased, completed, and cemented according to rules and regulations of the Office of Conservation and good petroleum industry engineering practices for wells of comparable depth that are applicable to the same locality of the cavern. Design considerations for casings and cementing materials and methods shall address the nature and characteristics of the subsurface environment, the nature of injected materials, the range of conditions under which the well, cavern, and facility shall be operated, and the expected life of the well including closure and post-closure.

\* \* \*

6. The following applies to wells existing in caverns before the effective date of these rules and regulations and that are being used for solution-mining. If the design of the well or cavern precludes having distinct intermediate and final casing seats cemented into the salt, the wellbore shall be cased with two concentric casings run from the surface of the well to a minimum distance of 300 feet into the salt. The inner casing shall be cemented from its base to surface. Provided, however, that unless otherwise directed by the commissioner, no additional action is required under this Subsection for wells existing in caverns before the effective date of these rules and regulations that are being used for solution-mining and that (a) have two casing seats cemented in the salt, or (b) have five-year casing inspection logs that demonstrate to the satisfaction of the Office of Conservation that the existing single cemented casing is adequate to withstand the maximum operating pressure of the well.”

#### **14. §3319 Operating Requirements -- §C -- Remedial Work.**

Again, while LCA agrees that any activity that is invasive in nature should require approval from LDNR, LCA submits that non-invasive activity (including activity that does not remove a string) should not require notification and LDNR approval in advance of the work. When an operator has to wait for approval from LDNR to begin work, this will, in most cases, greatly impact the ability to complete the task in a timely fashion. Often, downstream customers experiencing unplanned shutdowns are the only windows of opportunities to complete certain non-invasive

tasks. Operators also often will do more non-invasive work than is required. Forcing operators to request and receive pre-approval for this type of activity is burdensome and discourages proactive testing. That said, operators should submit relevant information regarding non-invasive activities after the work has been completed. LCA thus submits that §3319.C should be revised to read as follows:

"C. Remedial Work. No remedial work or repair work of any kind that requires invasive work (e.g., removing strings, etc.) shall be done on the solution-mining well or cavern without prior authorization from the Office of Conservation. The provision for prior authorization shall also extend to doing mechanical integrity pressure and leak tests and sonar caliper surveys; however, a work permit is not required in order to conduct interface surveys. The owner or operator or its agent shall submit a valid work permit request form (Form UIC-17 or successor). Before beginning well or cavern remedial work, the pressure in the cavern shall be relieved, as practicable. Non-invasive activity does not need to be approved in advance by the Office of Conservation, but a follow-up report detailing the non-invasive activity and any related findings shall be submitted to the Office of Conservation within 60 days after the work is completed."

**15. §3321 Safety -- §§G and H.**

**a. §G -- Emergency Shutdown Valves.**

LCA submits that §3321.G.1 is inapplicable because emergency shutdown valves will be actuated manually, not automatically. LCA thus submits that §3321.G.1 should be deleted.

**b. §H -- Systems Test and Inspection**

§3321.G only requires the use of manually actuated shutdown valves, which is appropriate. §3321.H.1 needs to be updated to reflect the change. That is, since the only requirement is for these to be manual valves (not automatic), test tripping and closure times are not relevant.

LCA further submits that daily inspections of the entire solution mining site (which can be very large, remote, and in swamp/marsh areas) should not be required in all cases. Thus, the Office of Conservation should have the flexibility to modify the daily inspection requirements of §3321.H.2, if appropriate. LCA thus submits that §3321.H should be revised to read as follows:

**"H. Systems Test and Inspection**

1. Safety Systems Test. The operator shall annually function-test all critical systems of control and safety. This includes testing of alarms, test tripping manual actuations of emergency shutdown valves ensuring ability to close their closure times are within design specifications, and ensuring the integrity of all electrical,

pneumatic, and/or hydraulic circuits. Tests results shall be documented and kept onsite for inspection by an agent of the Office of Conservation.

2. Visual Facility Inspections. Visual inspections of the entire cavern facility shall be conducted each day the facility is operating. At a minimum, this shall include inspections of the wellhead, flowlines, valves, signs, perimeter fencing, and all other areas of the facility, unless otherwise approved by the Office of Conservation. Problems discovered during the inspections shall be corrected timely.”

**16. §3323 Monitoring Requirements -- §A -- Pressure Gauges, Pressure Sensors, Flow Sensors.**

LCA notes that there are other mechanisms to monitor pressure besides gauges. Operators should have the option of using better technology, such as electronic pressure transmitters, rather than archaic pressure gauges. LDNR should allow this as option in §3323.A.

LCA further submits that pressure sensors and flow sensors designed to automatically close all emergency shutdown valves, as required in §3323.A.2 and 3, respectively, are not applicable to Class III wells in brine production service. These sections should be deleted. Indeed, LDNR only requires *manual* emergency shutdown valves in §3321.G. LCA thus submits that §3323.A should be revised to read as follows:

“A. Pressure Gauges, Pressure Sensors, Flow Sensors

1. Pressure gauges or transmitters that show pressure on the fluid injection string, fluid withdrawal string, and any annulus of the well, including the blanket material annulus, shall be used installed at each wellhead. Gauges or transmitters shall be designed to read gauge pressure in 10 PSIG increments. All gauges or transmitters shall be properly calibrated and shall always be maintained in good working order. The pressure valves onto which the pressure gauges are affixed shall have 1/2 inch female fittings.

2. Pressure sensors designed to automatically close all emergency shutdown valves in response to a preset pressure (high) shall be installed and properly maintained for all fluid injection and fluid withdrawal strings, and blanket material annulus.

3. Flow sensors designed to automatically close all emergency shutdown valves in response to abnormal increases in cavern injection and withdrawal flow rates shall be installed and properly maintained on each solution mining well.”

17. **§3327 Well and Cavern Mechanical Integrity Pressure and Leak Tests -- §§ B and E.**

a. **§B -- Frequency of Tests.**

LCA submits that there are typographical errors in §3327.B.1 and 2. LCA thus submits that §§3327.B.1 and 2 should be revised to read as follows:

- “1. Without exception or variance to these rules and regulations, all solution mining wells and caverns shall be tested for and satisfactorily demonstrate mechanical integrity before beginning injection storage activities.
- 2. For solution mining wells and caverns permitted on the effective date of these regulations, ~~if~~ if a mechanical integrity test (MIT) has not been run on the well or cavern within three years prior to the effective date of these regulations, the operator must run an MIT within two years in order to remain in compliance.”

b. **§E -- Mechanical Integrity Test Failure.**

Based on historical response times from vendors, LCA submits that it will take more than thirty days to obtain, compile, and submit mechanical integrity pressure and leak test results to LDNR. Thus, LCA submits that §3327.E.2 should be revised to read as follows:

- “2. Written procedures for rehabilitation of the solution-mining well or cavern, extended cavern monitoring, or abandonment (closure and post-closure) of the solution-mining well or cavern shall be submitted to the Office of Conservation within 30~~60~~ days of mechanical integrity test failure.”

LCA also understands that when §3329.E.4 requires the owner or operator “to begin closure of the well or cavern within six months according to an approved closure and post-closure plan”, such closure is to address the items described in the approved closure plan, *pursuant to the schedule specified in such plan*. Please confirm or correct LCA’s understanding.

18. **§3329 Cavern Configuration and Capacity Measurements -- § B -- Frequency of Surveys.**

LCA submits that there is a typographical error in §3329.B.3. LCA thus submits that §3329.B.3 should be revised to read as follows:

- “B. Frequency of Surveys. A sonar caliper survey shall be performed at least once every five years. At least once every 10 years a sonar caliper survey, or other approved survey, shall be performed that logs the roof of the cavern. Additional surveys as specified by the Office of Conservation shall be performed for any of the following reasons regardless of frequency:

\* \* \*

3. after performing any remedial work to reestablish solution-mining well or cavern integrity; or".

**19. §3331 Inactive Caverns -- General.**

LCA asks that LDNR confirm that the mechanical integrity requirements of §3331.A.4 apply to inactive wells in lieu of the mechanical integrity requirements of §3327. (LCA submits that the mechanical integrity requirements of §3327 should not apply to inactive wells.)

LCA further asks that LDNR confirm that §3309.I.3 and §3331 contain the only requirements in the Solution Mining Rules for inactive wells and caverns (unless, of course, the Office of Conservation adds additional requirements under §3331.A.6).

Finally, because mechanical integrity for inactive caverns can be effectively demonstrated with monitoring and integrity reports, LCA submits that the following provision in §3331.A.4 should be deleted: "See §3327.B for the frequency of mechanical integrity tests".

**20. §3337 Closure and Post-Closure -- A -- Closure**

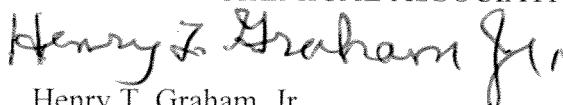
LCA submits that additional mechanical integrity pressure and leak tests should not be required before closure. The solution mining well and cavern will have been monitored and will have demonstrated mechanical integrity during the stabilization period. LCA thus submits that §3337.A.5.b should be deleted.

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LCA welcomes further review and dialogue with LDNR personnel in light of the significant impact the proposed regulations may have on industry. Should you have any questions regarding the written comments of LCA or desire to meet with LCA representatives regarding the effect of the proposed regulations, please do not hesitate to contact me at (225) 376-7642. Thank you for all of your assistance and cooperation.

Very truly yours,

LOUISIANA CHEMICAL ASSOCIATION



Henry T. Graham, Jr.

Vice President of Environmental Affairs and  
General Counsel

Office of Conservation  
Louisiana Department of Natural Resources  
LCA Comments  
December 6, 2013  
Page 16

cc: Mr. Stephen Chustz, Secretary (w/encl. via email)  
Mr. James H. "Jim" Welsh, Commissioner (w/encl. via email)  
Mr. Stephen Lee, Director - Injection and Mining Division (w/enc. via email)



# Jefferson Island Storage & Hub™

An AGL Resources Company

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## VIA EMAIL

December 4, 2013

Mr. Tyler Gray, Attorney  
Office of Conservation  
Louisiana Department of Natural Resources  
617 North Third Street  
Baton Rouge, LA 70802

Re: Comments in Response to the Notice of Intent to Amend LAC 43:XVII, Chapter 3 –  
Hydrocarbon Storage Wells in Salt Dome Cavities dated October 20, 2013, Statewide  
Order No. 29-M (Rev. 3)

Dear Mr. Gray:

Jefferson Island Storage & Hub, L.L.C. ("Jefferson Island") respectfully submits the attached comments in response to the Notice of Intent to Amend LAC 43:XVII, Chapter 3 – Hydrocarbon Storage Wells in Salt Dome Cavities dated October 20, 2013, Statewide Order No. 29-M (Rev. 3). For the sake of clarity, Jefferson Island has arranged its comments in spreadsheet format, with each comment correlated with the number and text of the proposed regulation to which it applies.

Thank you for your attention to this matter. We appreciate the opportunity to provide input with respect to those matters addressed in the proposed regulations.

Should the Office of Conservation have any questions regarding this filing, please contact me by phone at 832.397.8523 or by email to [kwatson@aglresources.com](mailto:kwatson@aglresources.com) or contact Kathryn L. McCoy, Associate General Counsel, by phone at 832.397.8642 or by email at [kmccoy@aglresources.com](mailto:kmccoy@aglresources.com).

Respectfully submitted,

Kimberly Watson  
Director, Regulatory Affairs  
AGL Resources Inc.

Attachment

cc: Kathryn L. McCoy, AGL Resources Inc.

**Jefferson Island Storage & Hub, L.L.C.'s  
Comments in Response to the Notice of Intent to Amend IAC 43:XVII,  
Chapter 3 – Hydrocarbon Storage Wells in Salt Dome Cavities dated October 20, 2013,  
Statewide Order No. 29-M (Rev. 3)**

**Submitted December 4, 2013**

Section Number	Notice of Intent to Amend LAC 43:XVII, Chapter 3 – Hydrocarbon Storage Wells in Salt Dome Cavities dated October 20, 2013, Statewide Order No. 29-M (Rev. 3)	Jefferson Island Storage & Hub, L.L.C.'s Comments to the Notice of Intent to Amend LAC 43:XVII, Chapter 3 - Hydrocarbon Storage Wells in Salt Dome Cavities dated October 20, 2013, Statewide Order No. 29-M (Rev. 3)
§301.	<i>Improved Sinkhole</i> —a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface.	Jefferson Island is confused by this definition because “karst depression” is a term that is not usually associated with volcanic terrain. The terms may not be associated with one another, but appear to be associated because of the wording of the definition.
§309.J.2	2. Authorization to Drill, Construct, or Convert. Authorization by permit to drill, construct, or convert a hydrocarbon storage well shall be valid for one year from the effective date of the permit. If drilling or conversion is not completed in that time, the permit shall be null and void and the operator must obtain a new permit.	A construction period of one year is not adequate for operators or owners who are solution-mining wells for conversion to a hydrocarbon storage cavern. It requires 18 months or longer depending upon the size of the cavern to drill, solution mine, test and remove brine for conversion to natural gas service. Jefferson Island suggests that the Office of Conservation set the time period for permit authorization on a case-by-case basis depending upon the size of the hydrocarbon storage well being created. In the alternative, Jefferson Island suggests that the Office of Conservation increase the permit authorization from one year to two years for hydrocarbon storage caverns.
§311.H.6	6. Approval or the granting of a permit to construct or convert a hydrocarbon storage well shall be valid for one year from its effective date and if not completed in that time, the permit shall be null and void. The permittee may request an extension of this one year requirement; however, the commissioner shall approve the request only for extenuating circumstances and only if the conditions existing at the time the permit was issued have not changed. The permittee shall have the burden of proving claims of extenuating circumstances.	For operators or owners who are solution-mining wells for conversion to natural gas storage cavern, a construction period of one year is not adequate. It requires 18 months or longer depending upon the size of the cavern to drill, solution mine, test and remove brine for conversion to natural gas service. Jefferson Island suggests that the Office of Conservation set the time period for permit authorization on a case-by-case basis depending upon the size of the hydrocarbon storage well being created. In the alternative, Jefferson Island suggests that the Office of Conservation increase the permit authorization from one year to two years for hydrocarbon storage caverns.
		Jefferson Island suggests that the term “extenuating circumstances” be revised to read “just cause” similar to the language proposed by the Office of Conservation in §309.J.3.



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December 6, 2013

**BY HAND**

Louisiana Department of Natural Resources  
Office of Conservation  
617 N. 3rd Street  
Baton Rouge, LA 70802

Attn: Mr. Tyler Gray

Re: Comments to Advance Notice of Rulemaking  
Proposed Statewide Order No. 29-M (Rev. 3) and  
Statewide Order No. 29-M-3  
Louisiana Department of Natural Resources  
Office of Conservation  
Docket No. IMD-2013-07

Dear Mr. Gray:

Thank you very much for the opportunity to provide comments on the proposed regulations regarding salt dome solution mining injection and storage wells. We offer the attached two sets of comments on behalf of two separate clients.

Again, thank you for the opportunity to provide these comments. Please let us know if you need anything further from us.

Sincerely,

A handwritten signature in black ink that reads "MAM/jm".

Marjorie A. McKeithen

MAM/jm  
Enclosure

{N2737483.1}

**Comments to the Louisiana Department of Natural Resources (DNR)**

**Proposed Rules:**

**October 20, 2013 version**

**Title 43**

**Natural Resources**

**Part XVII. Office of Conservation — Injection and Mining**

**Subpart 3. Statewide Order No. 29-M (Revision 3)**

**and**

**Subpart 5. Statewide Order No. 29-M-3**

**Comments provided in red.**

(Although comments may be provided only as to Subpart 3. (29-M) or only as to Subpart 5. (29-M-3), the same comments apply to the other Subpart where the respective counterparts are comparable.)

**§3309. Legal Permit Conditions**

**F. Proper Operation and Maintenance**

1. The operator shall always properly operate and maintain all facilities and systems of injection, withdrawal, and control (and related appurtenances) installed or used to achieve compliance with the permit or these rules and regulations. Proper operation and maintenance include effective performance (including well/cavern mechanical integrity), adequate funding, adequate operation, staffing and training, and adequate laboratory process controls including appropriate quality assurance procedures. This provision requires the operation of back-up, auxiliary facilities, or similar systems when necessary to achieve compliance with the conditions of the permit or these rules and regulations.

**Comment:** We respectfully submit that “always properly operate...” is vague and overly broad. Because it does not provide a definitive standard for compliance and is open to any interpretation, it could easily lead to unintended arbitrary enforcement and penalties where no standard or specific provision of any rule or regulation has been violated. We respectfully submit that the terms “effective performance,” “adequate operation,” and “adequate laboratory process controls” are similarly vague and problematic.

**§3313. Site Assessment**

E. Area of Review. A thorough evaluation shall be undertaken of both surface and subsurface activities in the defined area of review of the individual solution-mining well or project area that may influence the integrity of the salt stock, solution-mining well, and cavern, or contribute to the movement of injected fluids outside the cavern, wellbore, or salt stock.

2. Subsurface Delineation. At a minimum, the following shall be identified within the area of review:

- e. all producing formations either active or depleted occurring anywhere within the vicinity of the salt dome.

**Comment:** Please consider defining "vicinity of the salt dome," since the term is ambiguous and open to interpretation. See also §§3307.C.9, 3313.A.6, 3313.B.2 (vicinity of the salt stock), 3323.D (vicinity of the solution mining cavern), 307.C.9, and 313.A.6.

### **§3317. Well Construction and Completion**

#### **A. General Requirements**

2.a. Where injection is into a formation which contains water with less than 10,000 mg/l TDS, monitoring wells shall be completed into the injection zone and into any underground sources of drinking water above the injection zone which could be affected by the mining operation. These wells shall be located in such a fashion as to detect any excursion of injected fluids, process by-products, or formation fluids outside the mining area or zone. If the operation may be affected by subsidence or catastrophic collapse the monitoring wells shall be located so that they will not be physically affected.

2.b. Where injection is into a formation which does not contain water with less than 10,000 mg/l TDS, no monitoring wells are necessary in the injection stratum.

**Comment:** The references to injection into water bearing zones appear to be misplaced in a salt dome context. These types of references appear in other portions of 29-M-3 as well and appear to apply to salt water disposal wells.

### **§301. Definitions**

**Contamination** – the introduction of substances or contaminants into a groundwater aquifer, a USDW or soil in such quantities as to render them unusable of their intended purposes.

**Comment:** Consider substituting the word "for" in place of the word "of"?

**Permit** - an authorization, license, or equivalent control document issued by the commissioner to implement the requirements of these regulations. Permit includes, but is not limited to, area permits and emergency permits. Permit does not include UIC authorization by rule or any permit which has not yet been the subject of final agency action, such as a draft permit.

**Comment:** As defined and tied to the language "to implement the requirements of these regulations," the definition could be interpreted as excluding existing permits or authorizations. We suggest changing "to

implement the requirements of these regulations" to "pursuant to Office of Conservation regulations." Otherwise, an operator with an existing valid permit would be in violation of §303.B.1 simply by continuing to operate. (§303.B.1 states that it is a violation of these rules and the laws the state of Louisiana to operate a salt cavern without obtaining a permit.)

### **§303. General Provisions**

#### **A. Applicability**

1. These rules and regulations shall apply to applicants, owners, or operators of a solution-mined salt cavern to store liquid, liquefied, or gaseous hydrocarbons.
2. That except as to liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976, no such project to develop or use a salt dome in the state of Louisiana for the injection, storage and withdrawal of liquid, liquefied, or gaseous hydrocarbons shall be allowed until the commissioner has issued an order following a public hearing after 10-day notice, under the rules covering such matters, which order shall include the following findings of fact:
  - a. that the area of the salt dome sought to be used for the injection, storage, and withdrawal of liquid, liquefied, or gaseous hydrocarbons is suitable and feasible for such use as to area, salt volume, depth and other physical characteristics;
  - b. that the use of the salt dome cavern for the storage of liquid, liquefied, or gaseous hydrocarbons will not contaminate other formations containing fresh water, oil, gas, or other commercial mineral deposits, except salt;
  - c. that the proposed storage, including all surface pits and surface storage facilities incidental thereto which are used in connection with the salt dome cavern storage operation, will not endanger lives or property and is environmentally compatible with existing uses of the salt dome area, and which order shall provide that:
    - i. liquid, liquefied, or gaseous hydrocarbons, which are injected and stored in a salt dome cavern, shall at all times be deemed the property of the injector, his successors or assigns, subject to the provisions of any contract with the affected land or mineral owners; and
    - ii. in no event shall the owner of the surface of the lands or water bottoms or of any mineral interest under or adjacent to which the salt dome cavern may lie, or any other person, be entitled to any right of claim in or to such liquid, liquefied, or gaseous hydrocarbons stored unless permitted by the injector;

d. that temporary loss of jobs caused by the storage of liquid, liquefied, or gaseous hydrocarbons will be corrected by compensation, finding of new employment, or other provisions made for displaced labor;

e. that due consideration has been given to alternative sources of water for the leaching of cavities.

**Comment:**

This sub-section could be interpreted to require new public hearings for post-1976 existing storage projects or caverns with orders which do not contain all of the specifically worded findings listed above, as well as discontinued use of such caverns until a new public hearings could be held. This would lead to unreasonable and far-reaching unintended consequences since certain of the findings were not required by R.S. §30:23, the enabling statute, until 2008. The "alternative sources of water" language, for example, was added in 2008. As written, if the applicable order does not contain the precise language listed above, some of which is entirely new, this rule could be interpreted to require shutting down a storage facility until new hearings and new findings could be issued.

All existing orders issued by the DNR contain conditions, terms and phrases approved by the Commissioner of Conservation at the time the orders were entered, which conditions, terms and language, may not be identical to the language proposed above.

There is no need to reissue existing permits immediately. Under proposed §303.B, very specific review criteria are established to begin reviewing existing caverns within a year. Further, proposed §309.K provides that the commissioner shall review each hydrocarbon storage well permit or area permit once every five years to determine whether it should be modified, revoked and reissued, terminated or if minor modifications are needed. During this review process, staff will be in a position to determine if existing permits need to be amended.

For these reasons, we respectfully suggest that the above section should apply prospectively only to new permits.

**§303. General Provisions**

4. That these regulations shall apply to all liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976, as specified in §303.2, except for the requirements under §307 and §311.A-H. Any liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976 shall fulfill the requirements of §309.K within one year of the effective date of these regulations.

**Comment:** §303.2 is referenced but does not exist in the regulations.

## B. Prohibition of Unauthorized Injection

2. For existing hydrocarbon storage caverns that are in compliance with Statewide Order No. 29-M, but not in compliance with Statewide Order No. 29-M (revision 3) as of the effective date of these rules, they may continue to operate for one year under Statewide Order, No, 29-M. Within that year, the owner or operator must submit an alternate means of compliance or a request for a variance pursuant to §303F. and/or present a corrective action plan to meet the requirements of Statewide Order No. 29-M (Revision3). During the review period of the request until a final determination is made regarding the alternate means of compliance or variance and/or corrective action plan, the affected solution-mining well may continue to operate in compliance.

**Comment:** In the October version of Rule 29-M (Rev. 3) the words “solution-mining” were changed to “hydrocarbon storage” in §303.B.3, §305.D.1.b and §309.C; however, a corresponding change was not made in §303.B.2.

§303.B.2 relates to hydrocarbon storage caverns; therefore we respectfully request that words “solution-mining” be deleted and replaced with the words “hydrocarbon storage.”

3. By no later than one year after authorization of these rules the owner or operator shall provide for review documentation of any variance previously authorized by the Office of Conservation. Based on that review, the commissioner may terminate, modify or revoke and reissue the existing permit with the variance if it is determined that continued operations cannot be conducted in a way that is protective of the environment, or the health, safety, and welfare of the public. The process for terminating, modifying, or revoking and reissuing the permit with the variance is set forth in 311.K. During the review period the affected hydrocarbon storage well may continue to operate in compliance with such variance.

**Comment:** Please consider substituting “the effective date” for “authorization.”

Also, we are not sure what “provide for review documentation” means and respectfully request clarification. Does it mean that an operator must provide documentation related to the variance for review?

## F. Exceptions/Variances/Alternative Means of Compliance

1. Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case-by-case basis, exceptions or variances to these rules and regulations. It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures shall not result in an unacceptable increase of endangerment to the environment, or the

health, safety and welfare of the public. The applicant, owner, or operator shall submit a written request to the Office of Conservation detailing the reason for the requested exception or variance. No deviation from the requirements of these rules or regulations shall be undertaken by the applicant, owner, or operator without prior written authorization from the office of Conservation.

a. When injection does not occur into, through, or above an underground source of drinking water, the commissioner may authorize a hydrocarbon storage well or project with less stringent requirements for area-of review, construction, mechanical integrity, operation, monitoring, and reporting than required herein to the extent that the reduction in requirements will not result in an increased risk of movements of fluids into an underground source of drinking water or endanger the public.

\* \* \*

2. Granting of exceptions or variances to these rules and regulations shall only be considered upon proper showing by the applicant, owner, or operator at a public hearing that such exception or variance is reasonable, justified by the particular circumstances, and consistent with the intent of these rules and regulations regarding physical and environmental safety and the prevention of waste. The requester of the exception or variance shall be responsible for all costs associated with a public hearing.

Comment: The two highlighted sentences in 1 and 2 above appear to be redundant and are confusing in that they both address the burden of proof for a variance or exception but provide differing burdens of proof. Because they are inconsistent in that they provide two different burdens of proof, we respectfully suggest that the first highlighted sentence either be deleted in its entirety or be changed to read as follows:

“It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures meet the requirements set forth in subsection 2 below.”

Additionally, as currently worded, all exception and variance requests (even non-substantive or immaterial requests) require public hearings. Scheduling public hearings for all matters will unnecessarily further burden time and resources expended by the DNR and will further delay the permitting and compliance review process. We respectfully request that this rule be modified to allow DNR staff to waive the requirement for a public hearing, based on relevant information available to them, when the granting of the proposed exception or variance does not involve substantive or material concerns regarding physical or environmental safety or the prevention of waste and is justified by the particular circumstances.

Lastly, in 1.a above, consider substituting “unacceptable increase in risk” for “increased risk” and changing “movements” to “movement.”

### **S307.E. Technical Information**

The applicant shall submit, as an attachment to the application form, the following information:

9. Plans and procedures for operating the hydrocarbon storage well, cavern, and related surface facility to include at a minimum:

g. the safety requirements of §321, including, but not limited to an emergency action plan, controlled site access, facility identification, personnel, wellhead protection and identification, valves and flowlines, alarm systems, emergency shutdown valves, systems test and inspections, and surface facility retaining walls and spill containment, contingency plans to cope with all shut-ins as a result of noncompliance with these regulations or well failures to prevent the migration of contaminating fluids into underground sources of drinking water.

**Comment:** Having to develop a contingency plan for all shut-ins for noncompliance would be burdensome to create and would likely not be useful. A contingency plan for losses of well integrity or well failures may be more beneficial and will limit nonproductive paperwork. We respectfully suggest that the term “shut-ins” be changed to “losses of well integrity.”

### **309. Legal Permit Conditions**

#### **F. Proper Operation and Maintenance**

2. The operator shall address any unauthorized escape, discharge, or release of any material from the hydrocarbon well, or part thereof that is in violation of any state or federal permit or which is not incidental to normal operations, with a corrective action plan. The plan shall address the cause, delineate the extent, and determine the overall effects on the environment resulting from the escape, discharge, or release. The Office of Conservation shall require the operator to formulate a plan to remediate the escaped, discharged, or released material if the material is believed to have entered or has the possibility of entering an underground source of drinking water.

**Comment: Is the corrective action plan something we submit or gain approval for?**

I. Notification Requirements. The operator shall give written, and where required, verbal notice to the Office of Conservation concerning activities indicated herein.

#### **8. Twenty-Four Hour Reporting**

a. The operator shall report any noncompliance that may endanger the environment, or the health, safety and welfare of the public. Any information pertinent to the noncompliance shall be reported to the Office of Conservation by telephone at 225-342-5515 within 24 hours from when the operator became aware of the circumstances. In addition, a written submission shall be provided within five days from when the operator became aware of the circumstances. The written notification shall contain a description of the noncompliance and its cause, the periods of noncompliance including exact times and dates, and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.

**Comment:** Different operators will likely have their own definition of what constitutes an issue that may cause endangerment. We request that DNR consider adding language to define reportable limits – possibly using discharge or air permit or DOT reportable volumes as a trigger.

#### J. Duration of Permits

2. Authorization to Drill, Construct, or Convert. Authorization by permit to drill, construct, or convert a hydrocarbon storage well shall be valid for one year from the effective date of the permit. If drilling or conversion is not completed in that time, the permit shall be null and void and the operator must obtain a new permit.
3. Extensions. The operator shall submit to the Office of Conservation a written request for an extension of the time of Paragraph 2 above; however, the Office of Conservation shall approve the request only for just cause and only if the permitting conditions have not changed. The operator shall have the burden of proving claims of just cause.

#### H. Public Comments, Response to Comments, and Permit Issuance

6. Approval or the granting of a permit to construct or convert a hydrocarbon storage well shall be valid for one year from its effective date and if not completed in that time, the permit shall be null and void. The permittee may request an extension of this one year requirement; however, the commissioner shall approve the request only for extenuating circumstances and only if the conditions existing at the time the permit was issued have not changed. The permittee shall have the burden of proving claims of extenuating circumstances.

#### Comment:

The standard for granting extensions in §309.J in the August version of the draft rules was “extenuating circumstances.” The standard was changed in the October version to “just cause”; however, a corresponding change was not made in §311.H. We respectfully request that §311.H be deleted in its entirety as it is

duplicative of §309.J or that the words “extenuating circumstances” be deleted and replaced with the words “just cause.”

Additionally, we request that the word “materially” be inserted before the word “changed” such that §309.J, for example, would read: “and only if the permitting conditions have not materially changed.” Over the course of years that it could take to obtain approval of a permit and then request an extension, many conditions will change, but only those that have a bearing on the permit, or are “material,” should effect whether an extension is granted.

### **§311.K. Permit Suspension, Modification, Revocation and Reissuance, Termination**

1.c. The Office of Conservation may, upon its own initiative or at the request of any interested person, review any permit to determine if cause exists to suspend, modify, revoke and reissue, or terminate the permit for the reasons specified in §§311 K2, 3, 4, 5 and 6. All requests by interested persons shall be in writing and shall contain only factual information supporting the request.

**Comment:** The term “interested person” is not defined although it is used seven times in proposed Rule 29-M. We respectfully request that the term “interested person” be defined for purposes of §311.K.1.c only, as follows: “1) all owners and operators in the salt dome at issue; and 2) other persons or entities which own a surface or subsurface property or mineral interest or right in the salt dome at issue or in the surface or subsurface immediately adjacent to the project boundary.” Only someone with a material interest should be allowed to initiate review of a permit.

### **§315. Cavern Design and Spacing Requirements**

#### **B. Cavern Spacing Requirements**

##### **1. Property Boundary**

a. Existing Hydrocarbon Storage Caverns. No part of a hydrocarbon storage cavern permitted as of the date these regulations are promulgated shall extend closer than 100 feet to the property of others without consent of the owner(s). Continued operation without this consent of an existing hydrocarbon storage cavern within 100 feet to the property of others may be allowed as follows.

**Comment:** Consider inserting the following sentence after the second sentence of §315.B.1.a:

“As used in this section, consent by the adjacent property owner may consist of written consent to store beneath the adjacent

property, written consent to leach beneath the adjacent property, written consent to a cavern proximity of 100 feet or less, or other form of written consent.”

- i. The operator of the cavern shall make a good faith effort to provide notice in a form and manner approved by the commissioner to the adjacent property owner(s) of the location of its cavern.
- ii. The commissioner shall hold a public hearing at Baton Rouge if an adjacent owner whose property line is within 100 feet objects to the cavern's continued operation. Following the public hearing the commissioner may approve the cavern's continued operation upon a determination that the continued operation of the cavern has no adverse effects to the rights of the adjacent property owner(s).

Comment: Please consider substituting “a non-consenting adjacent owner” for “an adjacent owner.” Someone who consented should not be able to force a hearing.

Please consider deleting the last sentence of §315.B.1.ii. in its entirety and replacing it with the following sentence:

“Following the public hearing, the commissioner may order discontinuance of the operation of the cavern upon a determination that the continued operation of the cavern will cause adverse physical or environmental effects on the property of the adjacent non-consenting owner(s).”

We make this suggestion because requiring an operator to prove a negative in order to continue operating (i.e. no adverse effects on the rights of the adjacent property owner) is troublesome. Proving a negative in almost any instance is close to impossible. Moreover, “no adverse effects to the rights of the adjacent property owner(s)” is extremely broad and could open the door to almost any argument, including arguments regarding diminution of property value where no trespass or infringement on property of any sort has occurred. Although it was likely not the intent when drafting this section, the wording of this section could have the unintended consequence of adjacent landowners asking the Office of Conservation to become a forum for determination of real estate values. We believe the suggested language above more closely captures what we assume is the intent of this section, and respectfully ask that the change be considered.

- iii. If no objection from an adjacent property owner is received within 30 days of the notice provided in accordance with Subparagraph 1.a.i above, then the commissioner may approve the continued operation of the cavern administratively.

**Comment:** Consider substituting “a non-consenting adjacent property owner” for the highlighted language.

b. New Hydrocarbon Storage Caverns. No part of a newly permitted hydrocarbon storage cavern shall extend closer than 100 feet to the property of others without the consent of the owner(s).

2. Adjacent Structures within the Salt. As measured in any direction, the minimum separation between walls of adjacent caverns or between the walls of the cavern and any manmade structure within the salt stock shall not be less than 200 feet. Caverns must be operated in a manner that ensures the walls between any cavern and any other manmade structure maintain the minimum separation of 200 feet. For hydrocarbon storage caverns permitted prior to the effective date of these regulations and which are already within 200 feet of any other manmade structure within the salt stock, the commissioner of conservation may approve continued operation upon a proper showing by the owner or operator that the cavern is capable of continued safe operations.

**Comment:** Consider inserting “an adjacent cavern or” prior to “any other manmade structure” in the last sentence.

C. Cavern Coalescence. The Office of Conservation may permit the use of coalesced caverns for hydrocarbon storage, but only for hydrocarbons that are liquid at standard temperature and pressure. It shall be the duty of the applicant, owner, or operator to demonstrate that operation of coalesced caverns under the proposed cavern operating conditions can be accomplished in a physical and environmentally safe manner and that the stability and integrity of the cavern and salt stock shall not be compromised. The intentional subsurface coalescing of adjacent caverns must be requested by the applicant, owner, or operator in writing and be approved by the Office of Conservation before beginning or resumption of hydrocarbon storage operations. If the design of adjacent caverns should include approval for the subsurface coalescing of adjacent caverns, the minimum spacing requirement of §315.B.2 shall not apply to the coalesced caverns.

**Comment:** The highlighted language seems to rule out the possibility of using coalesced caverns for most hydrocarbon storage. We request that DNR consider rewording this to allow for a waiver for coalesced caverns in LPG service.

## **§317. Well Construction and Completion**

### **C. Casing and Cementing**

Casing and cementing. Except as specified below, the wellbore of the hydrocarbon storage well shall be cased, completed, and cemented according to rules and regulations of the Office of Conservation and good industry engineering practices for wells of comparable depth that are applicable to the same locality of the cavern. Design

considerations for casings and cementing materials and methods shall address the nature and characteristics of the subsurface environment, the nature of injected materials, the range of conditions under which the well, cavern, and facility shall be operated, and the expected life of the well including closure and post-closure.

6. The following applies to wells existing in caverns before the effective date of these rules and regulations. If the design of the well or cavern precludes having distinct intermediate and final casing seats cemented into the salt, the wellbore shall be cased with two concentric casings run from the surface of the well to a minimum distance of 300 feet into the salt. The inner casing shall be cemented from its base to surface.

**Comment:** This requirement can severely limit the functionality of the cavern and may cause it to be taken out of service. We request the addition of a waiver or alternative means of compliance option with supporting documentation.

#### E. Cased Borehole Surveys

A cement bond with variable density log (or similar cement evaluation tool) and a temperature log shall be run on all casings. The Office of Conservation may consider requests for allowances for wireline logging in large diameter casings or justifiable special conditions. A descriptive report interpreting the results of such logs shall be prepared and submitted to the commissioner.

**Comment:** "Allowances" is not a defined term in the proposed rules. We respectfully request the word "allowances" be deleted and replaced with the term "alternative means of compliance" as defined in §303.F.3.

#### F. Hanging Strings

Hanging Strings. Hanging strings shall be designed with a collapse, burst and tensile strength rating conforming to all expected operating conditions, including [excluding] flow induced vibrations. The design shall also consider the physical and chemical characteristics of fluids placed into and withdrawn from the cavern.

**Comment:** Industry along with the Solution Mining Research Institute are in the process of developing standards by which to design hanging strings to take into consideration flow induced vibrations. Until such time as guidance, with respect to flow induced vibrations, is developed compliance with this requirement is not theoretically possible; therefore we request that the word "including" be replaced with the word "excluding".

### **§321. Safety**

#### E. Valves and Flowlines...

**Comment:** We request clarification as to whether only product lines are considered flowlines, or whether brine and fresh water piping would be included as well. This can have a significant impact if brine and fresh water piping are included as it is not typical for all brine piping to be rated for product pressure. We request the addition of a definition for flowlines in §301.

Additionally, it may be necessary to identify requirements for product and brine piping separately. The excerpt below is from the Texas Railroad Commission (TRRC) Rule 95 for liquid storage caverns and may provide a useful reference.

**TRRC Rule 95 Excerpt:**

- (3) *Product, brine, and fresh water surface piping.*
  - (A) Product surface piping shall be designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well. For facilities with hazardous materials surface piping under the administrative authority of the Safety Division of the Railroad Commission of Texas, for the purposes of this section, product surface piping extends from the wellhead emergency shutdown valve to the first pressure regulation device, including a manual, motor-operated, or emergency shutdown valve.
  - (B) Brine surface piping shall be designed for the maximum brine wellhead pressure and to transport, under emergency conditions, product to the brine system gas vapor control system described in paragraph (6) of this subsection unless:
    - (i) a secondary emergency shutdown valve is in operation on the brine surface piping; and
    - (ii) the brine surface piping between the wellhead emergency shutdown valve and the secondary emergency shutdown valve is designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well.
  - (C) Fresh water surface piping, if any, must be equipped with a wellhead emergency shutdown valve unless it is:
    - (i) disconnected from the wellhead; or
    - (ii) connected to brine surface piping outboard of the wellhead emergency shutdown valve; or
    - (iii) designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well; and has an internal diameter of less than or equal to two inches; and an attendant is posted at the well site to provide immediate manual shut-in when in use.
  - (D) Fresh water piping designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well and with an internal diameter of less than or equal to two inches is exempt from the requirement that an emergency shutdown valve be located on the

wellhead or separated from the wellhead by a spool no longer than six feet.

### **§323. Monitoring Requirements**

- A. Pressure Gauges, Pressure Sensors, Flow Sensor
- 3. Flow sensors designed to actuate the automatic closure of all emergency shutdown valves in response to abnormal changes in cavern injection and withdrawal flow rates shall be installed and properly maintained on each storage well.

**Comment:** We request clarification as to whether this applies to brine measurement as well as product. This could have a significant impact as many caverns do not have brine measurement.

### **§333. Monthly Operating Reports**

- A. Operation reports shall be submitted quarterly to the Office of Conservation. Reports are due no later than 15 days following the end of the reporting period.

**Comment:** We request that data be gathered monthly and submitted annually.

- B. Reports shall be submitted electronically on the appropriate Form and reference the operator name, well name, well number, well state serial number, salt dome name, and contain the following minimum information acquired daily during the reporting month:

**Comment:** When will these forms be available?

**Comments to the Louisiana Department of Natural Resources (DNR)**

**Proposed Rules:**

**October 20, 2013 version**

**Title 43**

**Natural Resources**

**Part XVII. Office of Conservation — Injection and Mining**

**Subpart 3. Statewide Order No. 29-M (Revision 3)**

**and**

**Subpart 5. Statewide Order No. 29-M-3**

**Comments provided in red.**

(Although comments may be provided only as to Subpart 3. (29-M) or only as to Subpart 5. (29-M-3), the same comments apply to the other Subpart where the respective counterparts are comparable.)

**§3309. Legal Permit Conditions**

**F. Proper Operation and Maintenance**

1. The operator shall always properly operate and maintain all facilities and systems of injection, withdrawal, and control (and related appurtenances) installed or used to achieve compliance with the permit or these rules and regulations. Proper operation and maintenance include effective performance (including well/cavern mechanical integrity), adequate funding, adequate operation, staffing and training, and adequate laboratory process controls including appropriate quality assurance procedures. This provision requires the operation of back-up, auxiliary facilities, or similar systems when necessary to achieve compliance with the conditions of the permit or these rules and regulations.

**Comment:** We respectfully submit that “always properly operate...” is vague and overly broad. Because it does not provide a definitive standard for compliance and is open to any interpretation, it could easily lead to unintended arbitrary enforcement and penalties where no standard or specific provision of any rule or regulation has been violated. We respectfully submit that the terms “effective performance,” “adequate operation,” and “adequate laboratory process controls” are similarly vague and problematic.

**§3313. Site Assessment**

E. Area of Review. A thorough evaluation shall be undertaken of both surface and subsurface activities in the defined area of review of the individual solution-mining well or project area that may influence the integrity of the salt stock, solution-mining well, and cavern, or contribute to the movement of injected fluids outside the cavern, wellbore, or salt stock.

2. Subsurface Delineation. At a minimum, the following shall be identified within the area of review:

e. all producing formations either active or depleted occurring anywhere within the vicinity of the salt dome.

**Comment:** Please consider defining "vicinity of the salt dome," since the term is ambiguous and open to interpretation. See also §§3307.C.9, 3313.A.6, 3313.B.2 (vicinity of the salt stock), 3323.D (vicinity of the solution mining cavern), 307.C.9, and 313.A.6.

### **§3317. Well Construction and Completion**

#### **A. General Requirements**

2.a. Where injection is into a formation which contains water with less than 10,000 mg/l TDS, monitoring wells shall be completed into the injection zone and into any underground sources of drinking water above the injection zone which could be affected by the mining operation. These wells shall be located in such a fashion as to detect any excursion of injected fluids, process by-products, or formation fluids outside the mining area or zone. If the operation may be affected by subsidence or catastrophic collapse the monitoring wells shall be located so that they will not be physically affected.

2.b. Where injection is into a formation which does not contain water with less than 10,000 mg/l TDS, no monitoring wells are necessary in the injection stratum.

**Comment:** The references to injection into water bearing zones appear to be misplaced in a salt dome context. These types of references appear in other portions of 29-M-3 as well and appear to apply to salt water disposal wells.

### **§301. Definitions**

**Contamination** – the introduction of substances or contaminants into a groundwater aquifer, a USDW or soil in such quantities as to render them unusable of their intended purposes.

**Comment:** Consider substituting the word "for" in place of the word "of"?

**Permit** - an authorization, license, or equivalent control document issued by the commissioner to implement the requirements of these regulations. Permit includes, but is not limited to, area permits and emergency permits. Permit does not include UIC authorization by rule or any permit which has not yet been the subject of final agency action, such as a draft permit.

**Comment:** As defined and tied to the language "to implement the requirements of these regulations," the definition could be interpreted as excluding existing permits or authorizations. We suggest changing "to

implement the requirements of these regulations" to "pursuant to Office of Conservation regulations." Otherwise, an operator with an existing valid permit would be in violation of §303.B.1 simply by continuing to operate. (§303.B.1 states that it is a violation of these rules and the laws the state of Louisiana to operate a salt cavern without obtaining a permit.)

### **§303. General Provisions**

#### **A. Applicability**

1. These rules and regulations shall apply to applicants, owners, or operators of a solution-mined salt cavern to store liquid, liquefied, or gaseous hydrocarbons.
2. That except as to liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976, no such project to develop or use a salt dome in the state of Louisiana for the injection, storage and withdrawal of liquid, liquefied, or gaseous hydrocarbons shall be allowed until the commissioner has issued an order following a public hearing after 10-day notice, under the rules covering such matters, which order shall include the following findings of fact:
  - a. that the area of the salt dome sought to be used for the injection, storage, and withdrawal of liquid, liquefied, or gaseous hydrocarbons is suitable and feasible for such use as to area, salt volume, depth and other physical characteristics;
  - b. that the use of the salt dome cavern for the storage of liquid, liquefied, or gaseous hydrocarbons will not contaminate other formations containing fresh water, oil, gas, or other commercial mineral deposits, except salt;
  - c. that the proposed storage, including all surface pits and surface storage facilities incidental thereto which are used in connection with the salt dome cavern storage operation, will not endanger lives or property and is environmentally compatible with existing uses of the salt dome area, and which order shall provide that:
    - i. liquid, liquefied, or gaseous hydrocarbons, which are injected and stored in a salt dome cavern, shall at all times be deemed the property of the injector, his successors or assigns, subject to the provisions of any contract with the affected land or mineral owners; and
    - ii. in no event shall the owner of the surface of the lands or water bottoms or of any mineral interest under or adjacent to which the salt dome cavern may lie, or any other person, be entitled to any right of claim in or to such liquid, liquefied, or gaseous hydrocarbons stored unless permitted by the injector;

- d. that temporary loss of jobs caused by the storage of liquid, liquefied, or gaseous hydrocarbons will be corrected by compensation, finding of new employment, or other provisions made for displaced labor;
- e. that due consideration has been given to alternative sources of water for the leaching of cavities.

**Comment:**

This sub-section could be interpreted to require new public hearings for post-1976 existing storage projects or caverns with orders which do not contain all of the specifically worded findings listed above, as well as discontinued use of such caverns until a new public hearings could be held. This would lead to unreasonable and far-reaching unintended consequences since certain of the findings were not required by R.S. §30:23, the enabling statute, until 2008. The "alternative sources of water" language, for example, was added in 2008. As written, if the applicable order does not contain the precise language listed above, some of which is entirely new, this rule could be interpreted to require shutting down a storage facility until new hearings and new findings could be issued.

All existing orders issued by the DNR contain conditions, terms and phrases approved by the Commissioner of Conservation at the time the orders were entered, which conditions, terms and language, may not be identical to the language proposed above.

There is no need to reissue existing permits immediately. Under proposed §303.B, very specific review criteria are established to begin reviewing existing caverns within a year. Further, proposed §309.K provides that the commissioner shall review each hydrocarbon storage well permit or area permit once every five years to determine whether it should be modified, revoked and reissued, terminated or if minor modifications are needed. During this review process, staff will be in a position to determine if existing permits need to be amended.

For these reasons, we respectfully suggest that the above section should apply prospectively only to new permits.

### **§303. General Provisions**

- 4. That these regulations shall apply to all liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976, as specified in §303.2, except for the requirements under §307 and §311.A-H. Any liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976 shall fulfill the requirements of §309.K within one year of the effective date of these regulations.

**Comment:** §303.2 is referenced but does not exist in the regulations.

## B. Prohibition of Unauthorized Injection

2. For existing hydrocarbon storage caverns that are in compliance with Statewide Order No. 29-M, but not in compliance with Statewide Order No. 29-M (revision 3) as of the effective date of these rules, they may continue to operate for one year under Statewide Order, No, 29-M. Within that year, the owner or operator must submit an alternate means of compliance or a request for a variance pursuant to §303F, and/or present a corrective action plan to meet the requirements of Statewide Order No. 29-M (Revision3). During the review period of the request until a final determination is made regarding the alternate means of compliance or variance and/or corrective action plan, the affected solution-mining well may continue to operate in compliance.

**Comment:** In the October version of Rule 29-M (Rev. 3) the words "solution-mining" were changed to "hydrocarbon storage" in §303.B.3, §305.D.1.b and §309.C; however, a corresponding change was not made in §303.B.2.

§303.B.2 relates to hydrocarbon storage caverns; therefore we respectfully request that words "solution-mining" be deleted and replaced with the words "hydrocarbon storage."

3. By no later than one year after authorization of these rules the owner or operator shall provide for review documentation of any variance previously authorized by the Office of Conservation. Based on that review, the commissioner may terminate, modify or revoke and reissue the existing permit with the variance if it is determined that continued operations cannot be conducted in a way that is protective of the environment, or the health, safety, and welfare of the public. The process for terminating, modifying, or revoking and reissuing the permit with the variance is set forth in 311.K. During the review period the affected hydrocarbon storage well may continue to operate in compliance with such variance.

**Comment:** Please consider substituting "the effective date" for "authorization."

Also, we are not sure what "provide for review documentation" means and respectfully request clarification. Does it mean that an operator must provide documentation related to the variance for review?

## F. Exceptions/Variances/Alternative Means of Compliance

1. Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case-by-case basis, exceptions or variances to these rules and regulations. It shall be the obligation of the applicant, owner, or operator to show

that the requested exception or variance and any associated mitigating measures shall not result in an unacceptable increase of endangerment to the environment, or the health, safety and welfare of the public. The applicant, owner, or operator shall submit a written request to the Office of Conservation detailing the reason for the requested exception or variance. No deviation from the requirements of these rules or regulations shall be undertaken by the applicant, owner, or operator without prior written authorization from the office of Conservation.

a. When injection does not occur into, through, or above an underground source of drinking water, the commissioner may authorize a hydrocarbon storage well or project with less stringent requirements for area-of review, construction, mechanical integrity, operation, monitoring, and reporting than required herein to the extent that the reduction in requirements will not result in an increased risk of movements of fluids into an underground source of drinking water or endanger the public.

\* \* \*

2. Granting of exceptions or variances to these rules and regulations shall only be considered upon proper showing by the applicant, owner, or operator at a public hearing that such exception or variance is reasonable, justified by the particular circumstances, and consistent with the intent of these rules and regulations regarding physical and environmental safety and the prevention of waste. The requester of the exception or variance shall be responsible for all costs associated with a public hearing.

**Comment:** The two highlighted sentences in 1 and 2 above appear to be redundant and are confusing in that they both address the burden of proof for a variance or exception but provide differing burdens of proof. Because they are inconsistent in that they provide two different burdens of proof, we respectfully suggest that the first highlighted sentence either be deleted in its entirety or be changed to read as follows:

**"It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures meet the requirements set forth in subsection 2 below."**

Additionally, as currently worded, all exception and variance requests (even non-substantive or immaterial requests) require public hearings. Scheduling public hearings for all matters will unnecessarily further burden time and resources expended by the DNR and will further delay the permitting and compliance review process. We respectfully request that this rule be modified to allow DNR staff to waive the requirement for a public hearing, based on relevant information available to them, when the granting of the proposed exception or variance does not involve substantive or material concerns regarding physical or environmental safety or the prevention of waste and is justified by the particular circumstances.

Lastly, in 1.a above, consider substituting “unacceptable increase in risk” for “increased risk” and changing “movements” to “movement.”

### **§307.E. Technical Information**

The applicant shall submit, as an attachment to the application form, the following information:

9. Plans and procedures for operating the hydrocarbon storage well, cavern, and related surface facility to include at a minimum:

g. the safety requirements of §321, including, but not limited to an emergency action plan, controlled site access, facility identification, personnel, wellhead protection and identification, valves and flowlines, alarm systems, emergency shutdown valves, systems test and inspections, and surface facility retaining walls and spill containment, contingency plans to cope with all shut-ins as a result of noncompliance with these regulations or well failures to prevent the migration of contaminating fluids into underground sources of drinking water.

Comment: Having to develop a contingency plan for all shut-ins for noncompliance would be burdensome to create and would likely not be useful. A contingency plan for losses of well integrity or well failures may be more beneficial and will limit nonproductive paperwork. We respectfully suggest that the term “shut-ins” be changed to “losses of well integrity.”

### **309. Legal Permit Conditions**

I. Notification Requirements. The operator shall give written, and where required, verbal notice to the Office of Conservation concerning activities indicated herein.

#### **8. Twenty-Four Hour Reporting**

a. The operator shall report any noncompliance that may endanger the environment, or the health, safety and welfare of the public. Any information pertinent to the noncompliance shall be reported to the Office of Conservation by telephone at 225-342-5515 within 24 hours from when the operator became aware of the circumstances. In addition, a written submission shall be provided within five days from when the operator became aware of the circumstances. The written notification shall contain a description of the noncompliance and its cause, the periods of noncompliance including exact times and dates, and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.

**Comment:** Different operators will likely have their own definition of what constitutes an issue that may cause endangerment. We request that DNR consider adding language to define reportable limits -- possibly using discharge or air permit or DEQ reportable quantities as a trigger (LAC 33:I, Chapter 39). Pursuant to DEQ rules, such follow up written report is due within seven days after the initial notice is required. (LAC 33:I.3925) The DNR rules should be consistent to avoid confusing reporting deadlines for reporting of the same events. The rules should also include provisions similar to DEQ reporting regulations concerning status reports where investigation is ongoing and required reporting information was not available at the time of the initial written report. Under those circumstances status reports should be filed every 60 days until the investigation has been completed and the results of the investigation submitted. (LAC 33:I.3925.B)

**J. Duration of Permits**

2. Authorization to Drill, Construct, or Convert. Authorization by permit to drill, construct, or convert a hydrocarbon storage well shall be valid for one year from the effective date of the permit. If drilling or conversion is not completed in that time, the permit shall be null and void and the operator must obtain a new permit.
3. Extensions. The operator shall submit to the Office of Conservation a written request for an extension of the time of Paragraph 2 above; however, the Office of Conservation shall approve the request only for just cause and only if the permitting conditions have not changed. The operator shall have the burden of proving claims of just cause.

**H. Public Comments, Response to Comments, and Permit Issuance**

6. Approval or the granting of a permit to construct or convert a hydrocarbon storage well shall be valid for one year from its effective date and if not completed in that time, the permit shall be null and void. The permittee may request an extension of this one year requirement; however, the commissioner shall approve the request only for extenuating circumstances and only if the conditions existing at the time the permit was issued have not changed. The permittee shall have the burden of proving claims of extenuating circumstances.

**Comment:**

The standard for granting extensions in §309.J in the August version of the draft rules was "extenuating circumstances." The standard was changed in the October version to "just cause"; however, a corresponding change was not made in §311.H. We respectfully request that §311.H be deleted in its entirety as it is duplicative of §309.J or that the words "extenuating circumstances" be deleted and replaced with the words "just cause."

Additionally, we request that the word "materially" be inserted before the word "changed" such that §309.J, for example, would read: "and only if the permitting conditions have not materially changed." Over the course of years that it could take to obtain approval of a permit and then request an extension, many conditions will change, but only those that have a bearing on the permit, or are "material," should effect whether an extension is granted.

### **§311.K. Permit Suspension, Modification, Revocation and Reissuance, Termination**

1.c. The Office of Conservation may, upon its own initiative or at the request of any interested person, review any permit to determine if cause exists to suspend, modify, revoke and reissue, or terminate the permit for the reasons specified in §§311 K2, 3, 4, 5 and 6. All requests by interested persons shall be in writing and shall contain only factual information supporting the request.

**Comment:** The term "interested person" is not defined although it is used seven times in proposed Rule 29-M. We respectfully request that the term "interested person" be defined for purposes of §311.K.1.c only, as follows: "1) all owners and operators in the salt dome at issue; and 2) other persons or entities which own a surface or subsurface property or mineral interest or right in the salt dome at issue or in the surface or subsurface immediately adjacent to the project boundary." Only someone with a material interest should be allowed to initiate review of a permit.

### **§315. Cavern Design and Spacing Requirements**

#### **B. Cavern Spacing Requirements**

##### **1. Property Boundary**

a. Existing Hydrocarbon Storage Caverns. No part of a hydrocarbon storage cavern permitted as of the date these regulations are promulgated shall extend closer than 100 feet to the property of others without consent of the owner(s). Continued operation without this consent of an existing hydrocarbon storage cavern within 100 feet to the property of others may be allowed as follows.

**Comment:** Consider inserting the following sentence after the second sentence of §315.B.1.a:

"As used in this section, consent by the adjacent property owner may consist of written consent to store beneath the adjacent property, written consent to leach beneath the adjacent property, written consent to a cavern proximity of 100 feet or less, or other form of written consent."

i. The operator of the cavern shall make a good faith effort to provide notice in a form and manner approved by the commissioner to the adjacent property owner(s) of the location of its cavern.

ii. The commissioner shall hold a public hearing at Baton Rouge if an adjacent owner whose property line is within 100 feet objects to the cavern's continued operation. Following the public hearing the commissioner may approve the cavern's continued operation upon a determination that the continued operation of the cavern has no adverse effects to the rights of the adjacent property owner(s).

**Comment:** Please consider substituting "a non-consenting adjacent owner" for "an adjacent owner." Someone who consented should not be able to force a hearing.

Please consider deleting the last sentence of §315.B.1.ii. in its entirety and replacing it with the following sentence:

"Following the public hearing, the commissioner may order discontinuance of the operation of the cavern upon a determination that the continued operation of the cavern will cause adverse physical or environmental effects on the property of the adjacent non-consenting owner(s)."

We make this suggestion because requiring an operator to prove a negative in order to continue operating (i.e. no adverse effects on the rights of the adjacent property owner) is troublesome. Proving a negative in almost any instance is close to impossible. Moreover, "no adverse effects to the rights of the adjacent property owner(s)" is extremely broad and could open the door to almost any argument, including arguments regarding diminution of property value where no trespass or infringement on property of any sort has occurred. Although it was likely not the intent when drafting this section, the wording of this section could have the unintended consequence of adjacent landowners asking the Office of Conservation to become a forum for determination of real estate values. We believe the suggested language above more closely captures what we assume is the intent of this section, and respectfully ask that the change be considered.

iii. If no objection from an adjacent property owner is received within 30 days of the notice provided in accordance with Subparagraph 1.a.i above, then the commissioner may approve the continued operation of the cavern administratively.

**Comment:** Consider substituting "a non-consenting adjacent property owner" for the highlighted language.

b. New Hydrocarbon Storage Caverns. No part of a newly permitted hydrocarbon storage cavern shall extend closer than 100 feet to the property of others without the consent of the owner(s).

2. Adjacent Structures within the Salt. As measured in any direction, the minimum separation between walls of adjacent caverns or between the walls of the cavern and any manmade structure within the salt stock shall not be less than 200 feet. Caverns must be operated in a manner that ensures the walls between any cavern and any other manmade structure maintain the minimum separation of 200 feet. For hydrocarbon storage caverns permitted prior to the effective date of these regulations and which are already within 200 feet of any other manmade structure within the salt stock, the commissioner of conservation may approve continued operation upon a proper showing by the owner or operator that the cavern is capable of continued safe operations.

**Comment:** Consider inserting "an adjacent cavern or" prior to "any other manmade structure" in the last sentence.

C. Cavern Coalescence. The Office of Conservation may permit the use of coalesced caverns for hydrocarbon storage, but only for hydrocarbons that are liquid at standard temperature and pressure. It shall be the duty of the applicant, owner, or operator to demonstrate that operation of coalesced caverns under the proposed cavern operating conditions can be accomplished in a physical and environmentally safe manner and that the stability and integrity of the cavern and salt stock shall not be compromised. The intentional subsurface coalescing of adjacent caverns must be requested by the applicant, owner, or operator in writing and be approved by the Office of Conservation before beginning or resumption of hydrocarbon storage operations. If the design of adjacent caverns should include approval for the subsurface coalescing of adjacent caverns, the minimum spacing requirement of §315.B.2 shall not apply to the coalesced caverns.

**Comment:** The highlighted language seems to rule out the possibility of using coalesced caverns for most hydrocarbon storage. We request that DNR consider rewording this to allow for a waiver for coalesced caverns in LPG service.

## **§317. Well Construction and Completion**

### **C. Casing and Cementing**

Casing and cementing. Except as specified below, the wellbore of the hydrocarbon storage well shall be cased, completed, and cemented according to rules and regulations of the Office of Conservation and good industry engineering practices for wells of comparable depth that are applicable to the same locality of the cavern. Design considerations for casings and cementing materials and methods shall address the nature and characteristics of the subsurface environment, the nature of injected

materials, the range of conditions under which the well, cavern, and facility shall be operated, and the expected life of the well including closure and post-closure.

6. The following applies to wells existing in caverns before the effective date of these rules and regulations. If the design of the well or cavern precludes having distinct intermediate and final casing seats cemented into the salt, the wellbore shall be cased with two concentric casings run from the surface of the well to a minimum distance of 300 feet into the salt. The inner casing shall be cemented from its base to surface.

**Comment:** This requirement can severely limit the functionality of the cavern and may cause it to be taken out of service. We request the addition of a waiver or alternative means of compliance option with supporting documentation.

#### E. Cased Borehole Surveys

A cement bond with variable density log (or similar cement evaluation tool) and a temperature log shall be run on all casings. The Office of Conservation may consider requests for allowances for wireline logging in large diameter casings or justifiable special conditions. A descriptive report interpreting the results of such logs shall be prepared and submitted to the commissioner.

**Comment:** "Allowances" is not a defined term in the proposed rules. We respectfully request the word "allowances" be deleted and replaced with the term "alternative means of compliance" as defined in §303.F.3.

#### F. Hanging Strings

Hanging Strings. Hanging strings shall be designed with a collapse, burst and tensile strength rating conforming to all expected operating conditions, including [excluding] flow induced vibrations. The design shall also consider the physical and chemical characteristics of fluids placed into and withdrawn from the cavern.

**Comment:** Industry along with the Solution Mining Research Institute are in the process of developing standards by which to design hanging strings to take into consideration flow induced vibrations. Until such time as guidance, with respect to flow induced vibrations, is developed compliance with this requirement is not theoretically possible; therefore we request that the word "including" be replaced with the word "excluding".

### **§321. Safety**

#### E. Valves and Flowlines...

**Comment:** We request clarification as to whether only product lines are considered flowlines, or whether brine and fresh water piping would be included as

well. This can have a significant impact if brine and fresh water piping are included as it is not typical for all brine piping to be rated for product pressure. We request the addition of a definition for flowlines in §301.

Additionally, it may be necessary to identify requirements for product and brine piping separately. The excerpt below is from the Texas Railroad Commission (TRRC) Rule 95 for liquid storage caverns and may provide a useful reference.

**TRRC Rule 95 Excerpt:**

(3) *Product, brine, and fresh water surface piping.*

(A) Product surface piping shall be designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well. For facilities with hazardous materials surface piping under the administrative authority of the Safety Division of the Railroad Commission of Texas, for the purposes of this section, product surface piping extends from the wellhead emergency shutdown valve to the first pressure regulation device, including a manual, motor-operated, or emergency shutdown valve.

(B) Brine surface piping shall be designed for the maximum brine wellhead pressure and to transport, under emergency conditions, product to the brine system gas vapor control system described in paragraph (6) of this subsection unless:

(i) a secondary emergency shutdown valve is in operation on the brine surface piping; and

(ii) the brine surface piping between the wellhead emergency shutdown valve and the secondary emergency shutdown valve is designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well.

(C) Fresh water surface piping, if any, must be equipped with a wellhead emergency shutdown valve unless it is:

(i) disconnected from the wellhead; or

(ii) connected to brine surface piping outboard of the wellhead emergency shutdown valve; or

(iii) designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well; and has an internal diameter of less than or equal to two inches; and an attendant is posted at the well site to provide immediate manual shut-in when in use.

(D) Fresh water piping designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well and with an internal diameter of less than or equal to two inches is exempt from the requirement that an emergency shutdown valve be located on the wellhead or separated from the wellhead by a spool no longer than six feet.

### **§323. Monitoring Requirements**

- A. Pressure Gauges, Pressure Sensors, Flow Sensor
- 3. Flow sensors designed to actuate the automatic closure of all emergency shutdown valves in response to abnormal changes in cavern injection and withdrawal flow rates shall be installed and properly maintained on each storage well.

**Comment:** We request clarification as to whether this applies to brine measurement as well as product. This could have a significant impact as many caverns do not have brine measurement.

- E. Subsidence Monitoring and Frequency. The owner or operator shall prepare and carry out a plan to monitor ground subsidence at and in the area of the storage cavern(s). A monitoring report shall be prepared and submitted to the Office of Conservation after completion of each monitoring event.

- 1. The frequency of conducting subsidence-monitoring surveys for caverns in gas storage shall be every 6 months.

**Comment:** The monitoring frequency should not be required more frequently than annually for both liquids and gas.

### **§333. Monthly Operating Reports**

- A. Operation reports shall be submitted quarterly to the Office of Conservation. Reports are due no later than 15 days following the end of the reporting period.

**Comment:** We request that data be gathered monthly and submitted annually.

- B. Reports shall be submitted electronically on the appropriate Form and reference the operator name, well name, well number, well state serial number, salt dome name, and contain the following minimum information acquired daily during the reporting month:

**Comment:** When will these forms be available?



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December 6, 2013

**BY HAND**

Louisiana Department of Natural Resources  
Office of Conservation  
617 N. 3rd Street  
Baton Rouge, LA 70802

Attn: Mr. Tyler Gray

Re: Comments to Advance Notice of Rulemaking  
Proposed Statewide Order No. 29-M (Rev. 3) and  
Statewide Order No. 29-M-3  
Louisiana Department of Natural Resources  
Office of Conservation  
Docket No. IMD-2013-07

Dear Mr. Gray:

Thank you very much for the opportunity to provide comments on the proposed regulations regarding salt dome solution mining injection and storage wells. We offer the attached comments on behalf of Pine Prairie Energy Center, LLC.

Again, thank you for the opportunity to provide these comments. Please let us know if you need anything further from us.

Sincerely,

A handwritten signature in black ink that reads "Marjorie A. McKeithen".

Marjorie A. McKeithen

MAM/jm  
Enclosure

{N2737092.1}

Comments to the Louisiana Department of Natural Resources (DNR)

Proposed Rules:  
October 20, 2013 version

Title 43

Natural Resources

Part XVII. Office of Conservation — Injection and Mining

Subpart 3. Statewide Order No. 29-M (Revision 3)

and

Subpart 5. Statewide Order No. 29-M-3

Comments provided in red.

(Although comments are provided as to Subpart 3 only, the same comments apply to Subpart 5 where the respective counterparts are comparable.)

**§301. Definitions**

Permit - an authorization, license, or equivalent control document issued by the commissioner ~~to implement the requirements of these [pursuant to Office of Conservation] regulations.~~ Permit includes, but is not limited to, area permits and emergency permits. Permit does not include UIC authorization by rule or any permit which has not yet been the subject of final agency action, such as a draft permit.

**Comment:** As currently worded, the definition could be interpreted as excluding existing permits or authorizations. We suggest changing "to implement the requirements of these regulations" to "pursuant to Office of Conservation regulations."

**§303. General Provisions**

**A. Applicability**

1. These rules and regulations shall apply to applicants, owners, or operators of a solution-mined salt cavern to store liquid, liquefied, or gaseous hydrocarbons.
2. That except as to liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976, no such project to develop or use a salt dome in the state of Louisiana for the injection, storage and withdrawal of liquid, liquefied, or gaseous hydrocarbons shall be allowed until the commissioner has issued an order following a public hearing after 10-day notice, under the rules covering such matters, which order shall include the following findings of fact:
  - a. that the area of the salt dome sought to be used for the injection, storage, and withdrawal of liquid, liquefied, or gaseous hydrocarbons is suitable and feasible for such use as to area, salt volume, depth and other physical characteristics;

- b. that the use of the salt dome cavern for the storage of liquid, liquefied, or gaseous hydrocarbons will not contaminate other formations containing fresh water, oil, gas, or other commercial mineral deposits, except salt;
- c. that the proposed storage, including all surface pits and surface storage facilities incidental thereto which are used in connection with the salt dome cavern storage operation, will not endanger lives or property and is environmentally compatible with existing uses of the salt dome area, and which order shall provide that:
  - i. liquid, liquefied, or gaseous hydrocarbons, which are injected and stored in a salt dome cavern, shall at all times be deemed the property of the injector, his successors or assigns, subject to the provisions of any contract with the affected land or mineral owners; and
  - ii. in no event shall the owner of the surface of the lands or water bottoms or of any mineral interest under or adjacent to which the salt dome cavern may lie, or any other person, be entitled to any right of claim in or to such liquid, liquefied, or gaseous hydrocarbons stored unless permitted by the injector;
- d. that temporary loss of jobs caused by the storage of liquid, liquefied, or gaseous hydrocarbons will be corrected by compensation, finding of new employment, or other provisions made for displaced labor;
- e. that due consideration has been given to alternative sources of water for the leaching of cavities.

**Comment:** All existing orders issued by the DNR contain conditions, terms and phrases approved by the Commissioner of Conservation at the time the orders were entered, which conditions, terms and language, may not be identical to the language proposed above. We respectfully suggest that Rule 303.A.2. be applied prospectively only.

There is no need to reissue existing permits immediately. Proposed §309.K provides that the commissioner shall review each hydrocarbon storage well permit or area permit once every five years to determine whether it should be modified, revoked and reissued, terminated or if minor modifications are needed. During this review process, staff will be in a position to determine if existing permits need to be amended.

#### **B. Prohibition of Unauthorized Injection**

- 2. For existing hydrocarbon storage caverns that are in compliance with Statewide Order No. 29-M, but not in compliance with Statewide Order No. 29-M (revision 3) as of the effective date of these rules, they may continue to operate for one year under Statewide Order, No. 29M. Within that year, the owner or operator must

submit an alternate means of compliance or a request for a variance pursuant to §303F, and/or present a corrective action plan to meet the requirements of Statewide Order No. 29-M (Revision3). During the review period of the request until a final determination is made regarding the alternate means of compliance or variance and/or corrective action plan, the affected [hydrocarbon storage] solution-mining well may continue to operate in compliance.

**Comment:** In the October version of Rule 29-M (Rev. 3) the words “solution-mining” were changed to “hydrocarbon storage” in §303.B.3, §305.D.1.b and §309.C; however, a corresponding change was not made in §303.B.2.

**§303.B.2 relates to hydrocarbon storage caverns; therefore we respectfully request that words “solution-mining” be deleted and replaced with the words “hydrocarbon storage”.**

3. By no later than one year after authorization [the effective date] of these rules the owner or operator shall provide for review documentation of any variance previously authorized by the Office of Conservation. Based on that review, the commissioner may terminate, modify or revoke and reissue the existing permit with the variance if it is determined that continued operations cannot be conducted in a way that is protective of the environment, or the health, safety, and welfare of the public. The process for terminating, modifying, or revoking and reissuing the permit with the variance is set forth in 311.K. During the review period the affected hydrocarbon storage well may continue to operate in compliance with such variance.

**Comment:** Consider replacing the word “authorization” with “the effective date”.

#### **E. Exceptions/Variances/Alternative Means of Compliance**

1. Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case-by-case basis, exceptions or variances to these rules and regulations. It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures shall not result in an unacceptable increase of endangerment to the environment, or the health, safety and welfare of the public. The applicant, owner, or operator shall submit a written request to the Office of Conservation detailing the reason for the requested exception or variance. No deviation from the requirements of these rules or regulations shall be undertaken by the applicant, owner, or operator without prior written authorization from the office of Conservation. (See comment 2 below)

\* \* \*

2. Granting of exceptions or variances to these rules and regulations shall only be considered upon proper showing by the applicant, owner, or operator at a public hearing

that such exception or variance is reasonable, justified by the particular circumstances, and consistent with the intent of these rules and regulations regarding physical and environmental safety and the prevention of waste. The requester of the exception or variance shall be responsible for all costs associated with a public hearing.

**Comment:** The underlined passages are inconsistent as they provide different burdens of proof for exceptions and variances. We respectfully suggest that the first underlined sentence either be deleted in its entirety or be revised as follows:

“It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures meet the requirements set forth in subsection 2 below.”

Additionally, as currently worded, all exception and variance requests (even non-substantive or immaterial requests) require public hearings. Scheduling public hearings for all matters will unnecessarily further burden time and resources expended by the DNR and will further delay the permitting and compliance review process. We respectfully request that this rule be modified to allow DNR staff to waive the requirement for a public hearing, based on relevant information available to them, when the granting of the proposed exception or variance does not involve substantive or material concerns regarding physical and environmental safety or the prevention of waste and is justified by the particular circumstances.

#### **309.J. Duration of Permits**

2. Authorization to Drill, Construct, or Convert. Authorization by permit to drill, construct, or convert a hydrocarbon storage well shall be valid for one year from the effective date of the permit. If drilling or conversion is not completed in that time, the permit shall be null and void and the operator must obtain a new permit.
3. Extensions. The operator shall submit to the Office of Conservation a written request for an extension of the time of Paragraph 2 above; however, the Office of Conservation shall approve the request only for just cause and only if the permitting conditions have not [materially] changed. The operator shall have the burden of proving claims of just cause.

#### **311.H. Public Comments, Response to Comments, and Permit Issuance**

6. Approval or the granting of a permit to construct or convert a hydrocarbon storage well shall be valid for one year from its effective date and if not completed in that time, the permit shall be null and void. The permittee may request an extension of this one year requirement; however, the commissioner shall approve the request only for [just cause]extenuating circumstances and only if the conditions existing at the time the permit

was issued have not [materially] changed. The permittee shall have the burden of proving claims of [just cause]. extenuating circumstances.

**Comment:** The standard for granting extensions in §309.J.3. in the August version of the draft rules was “extenuating circumstances.” The standard was changed in the October version to “just cause”; however, a corresponding change was not made in §311.H.6. We respectfully request that §311.H.6. be deleted in its entirety as it is duplicative of §309.J or that the words “extenuating circumstances” be deleted and replaced with the words “just cause.”

We further request that the word “materially” be inserted before the word “changed” as set forth above. Extensions should not be denied merely because an insignificant condition has changed.

#### **§311.K. Permit Suspension, Modification, Revocation and Reissuance, Termination**

- 1.c. The Office of Conservation may, upon its own initiative or at the request of any interested person, review any permit to determine if cause exists to suspend, modify, revoke and reissue, or terminate the permit for the reasons specified in §§311 K.2, 3, 4, 5 and 6. All requests by interested persons shall be in writing and shall contain only factual information supporting the request.

**Comment:** Although the term interested person is not defined in proposed rule 29-M, it used seven (7) times.

We respectfully request that for §311.K.1.c. only interested persons who (1) are owners or operators in the salt dome at issue, or (2) own a surface, subsurface or mineral interest or right in the salt dome at issue, or (3) own an interest in the surface, subsurface or mineral interest or right in property immediately adjacent to the property boundary, be allowed to request a permit review.

#### **§315.B Cavern Spacing Requirements**

##### **3.c. Salt Periphery**

Without exception or variance to these rules and regulations, [if any part of] an existing hydrocarbon storage cavern ~~with cavern walls~~ [is located within] 100 feet or less from the periphery of the salt stock [the hydrocarbon storage cavern] shall be removed from hydrocarbon storage service immediately and permanently.

**Comment:** As currently worded, 3.c is subject to more than one interpretation. We respectfully request that rule §315.B.3.c be revised as follows:

“Without exception or variance to these rules and regulations, if any part of an existing hydrocarbon storage cavern is located

**within 100 feet or less from the periphery of the salt stock, the hydrocarbon storage cavern shall be removed from hydrocarbon storage service immediately and permanently.”**

### **§317.E Cased Borehole Surveys**

A cement bond with variable density log (or similar cement evaluation tool) and a temperature log shall be run on all casings. The Office of Conservation may consider requests for allowances [alternative means of compliance] for wireline logging in large diameter casings or justifiable special conditions. A descriptive report interpreting the results of such logs shall be prepared and submitted to the commissioner.

**Comment:** “Allowances” is not a defined term in the proposed rules. We respectfully request the word “allowances” be deleted and replaced with the term “alternative means of compliance” as defined in §303.F.3.

### **§317.F Hanging Strings**

Hanging Strings. Hanging strings shall be designed with a collapse, burst and tensile strength rating conforming to all expected operating conditions, including [excluding] flow induced vibrations. The design shall also consider the physical and chemical characteristics of fluids placed into and withdrawn from the cavern.

**Comment:** Industry along with the Solution Mining Research Institute are in the process of developing standards by which to design hanging strings to take into consideration flow induced vibrations. Until such time as guidance, with respect to flow induced vibrations, is developed compliance with this requirement is not theoretically possible; therefore we request that the word “including” be replaced with the word “excluding”.

## **§321. Safety**

- H. Vapor Detection. The operator shall develop and implement a plan as required in §323.D to detect the presence of [a buildup of liquefied] combustible-gases or any potentially ignitable substances in the atmosphere resulting from the storage operation. (See comment under §323.D below)

## **§323. Monitoring Requirements**

- D. Vapor Detection. The operator shall develop a monitoring plan designed to detect the presence of a buildup of combustible [liquefied] gases or any potentially ignitable substances in the atmosphere resulting from the hydrocarbon storage operation.

**Comment:** The intent of these rules is to address concerns regarding low lying hydrocarbons that are heavier than air that do not immediately vent into the

atmosphere. We respectfully request that the word "combustible" in §§321.H and 323.D be replaced with the word "liquefied" and that the words "a buildup of" be inserted in §321.H.

**General Comment:**

Under the current rules and agency staff levels, the processing time of permit applications can be in excess of two years and a considerable backlog exists. Despite the fact that the DNR is proposing to add two full time employees, the obligations imposed by the new rules and regulations will create a further delay in the DNR's permit and compliance review process. We respectfully suggest that the DNR consider increasing its technical staff by adopting an expedited processing program, similar to the procedure currently in effect at the DEQ. Industry would be willing to help shoulder the financial burden on the agency by providing funding through the payment of fees for the necessary resources, overtime, new employees and contractors.



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December 6, 2013

**BY HAND**

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Attn: Mr. Tyler Gray

Re: Comments to Advance Notice of Rulemaking  
Proposed Statewide Order No. 29-M (Rev. 3) and  
Statewide Order No. 29-M-3  
Louisiana Department of Natural Resources  
Office of Conservation  
Docket No. IMD-2013-07

Dear Mr. Gray:

Thank you very much for the opportunity to provide comments on the proposed regulations regarding salt dome solution mining injection and storage wells. We offer the attached comments on behalf of Pine Prairie Energy Center, LLC.

Again, thank you for the opportunity to provide these comments. Please let us know if you need anything further from us.

Sincerely,

A handwritten signature in black ink, appearing to read "McKeithen".

Marjorie A. McKeithen

MAM/jm  
Enclosure

(N2737092.1)

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JONES WALKER LLP

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Comments to the Louisiana Department of Natural Resources (DNR)

Proposed Rules:

October 20, 2013 version

Title 43

Natural Resources

Part XVII. Office of Conservation — Injection and Mining

Subpart 3. Statewide Order No. 29-M (Revision 3)

and

Subpart 5. Statewide Order No. 29-M-3

Comments provided in red.

(Although comments are provided as to Subpart 3 only, the same comments apply to Subpart 5 where the respective counterparts are comparable.)

**§301. Definitions**

Permit - an authorization, license, or equivalent control document issued by the commissioner ~~to implement the requirements of these [pursuant to Office of Conservation] regulations.~~ Permit includes, but is not limited to, area permits and emergency permits. Permit does not include UIC authorization by rule or any permit which has not yet been the subject of final agency action, such as a draft permit.

**Comment:** As currently worded, the definition could be interpreted as excluding existing permits or authorizations. We suggest changing "to implement the requirements of these regulations" to "pursuant to Office of Conservation regulations."

**§303. General Provisions**

**A. Applicability**

1. These rules and regulations shall apply to applicants, owners, or operators of a solution-mined salt cavern to store liquid, liquefied, or gaseous hydrocarbons.
2. That except as to liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976, no such project to develop or use a salt dome in the state of Louisiana for the injection, storage and withdrawal of liquid, liquefied, or gaseous hydrocarbons shall be allowed until the commissioner has issued an order following a public hearing after 10-day notice, under the rules covering such matters, which order shall include the following findings of fact:
  - a. that the area of the salt dome sought to be used for the injection, storage, and withdrawal of liquid, liquefied, or gaseous hydrocarbons is suitable and feasible for such use as to area, salt volume, depth and other physical characteristics;

- b. that the use of the salt dome cavern for the storage of liquid, liquefied, or gaseous hydrocarbons will not contaminate other formations containing fresh water, oil, gas, or other commercial mineral deposits, except salt;
- c. that the proposed storage, including all surface pits and surface storage facilities incidental thereto which are used in connection with the salt dome cavern storage operation, will not endanger lives or property and is environmentally compatible with existing uses of the salt dome area, and which order shall provide that:
  - i. liquid, liquefied, or gaseous hydrocarbons, which are injected and stored in a salt dome cavern, shall at all times be deemed the property of the injector, his successors or assigns, subject to the provisions of any contract with the affected land or mineral owners; and
  - ii. in no event shall the owner of the surface of the lands or water bottoms or of any mineral interest under or adjacent to which the salt dome cavern may lie, or any other person, be entitled to any right of claim in or to such liquid, liquefied, or gaseous hydrocarbons stored unless permitted by the injector;
- d. that temporary loss of jobs caused by the storage of liquid, liquefied, or gaseous hydrocarbons will be corrected by compensation, finding of new employment, or other provisions made for displaced labor;
- e. that due consideration has been given to alternative sources of water for the leaching of cavities.

**Comment:** All existing orders issued by the DNR contain conditions, terms and phrases approved by the Commissioner of Conservation at the time the orders were entered, which conditions, terms and language, may not be identical to the language proposed above. We respectfully suggest that Rule 303.A.2. be applied prospectively only.

There is no need to reissue existing permits immediately. Proposed §309.K provides that the commissioner shall review each hydrocarbon storage well permit or area permit once every five years to determine whether it should be modified, revoked and reissued, terminated or if minor modifications are needed. During this review process, staff will be in a position to determine if existing permits need to be amended.

#### **B. Prohibition of Unauthorized Injection**

- 2. For existing hydrocarbon storage caverns that are in compliance with Statewide Order No. 29-M, but not in compliance with Statewide Order No. 29-M (revision 3) as of the effective date of these rules, they may continue to operate for one year under Statewide Order, No. 29M. Within that year, the owner or operator must

submit an alternate means of compliance or a request for a variance pursuant to §303F, and/or present a corrective action plan to meet the requirements of Statewide Order No. 29-M (Revision3). During the review period of the request until a final determination is made regarding the alternate means of compliance or variance and/or corrective action plan, the affected [hydrocarbon storage] solution-mining well may continue to operate in compliance.

**Comment:** In the October version of Rule 29-M (Rev. 3) the words “solution-mining” were changed to “hydrocarbon storage” in §303.B.3, §305.D.1.b and §309.C; however, a corresponding change was not made in §303.B.2.

**§303.B.2 relates to hydrocarbon storage caverns; therefore we respectfully request that words “solution-mining” be deleted and replaced with the words “hydrocarbon storage”.**

3. By no later than one year after authorization [the effective date] of these rules the owner or operator shall provide for review documentation of any variance previously authorized by the Office of Conservation. Based on that review, the commissioner may terminate, modify or revoke and reissue the existing permit with the variance if it is determined that continued operations cannot be conducted in a way that is protective of the environment, or the health, safety, and welfare of the public. The process for terminating, modifying, or revoking and reissuing the permit with the variance is set forth in 311.K. During the review period the affected hydrocarbon storage well may continue to operate in compliance with such variance.

**Comment:** Consider replacing the word “authorization” with “the effective date”.

#### **E. Exceptions/Variances/Alternative Means of Compliance**

1. Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case-by-case basis, exceptions or variances to these rules and regulations. It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures shall not result in an unacceptable increase of endangerment to the environment, or the health, safety and welfare of the public. The applicant, owner, or operator shall submit a written request to the Office of Conservation detailing the reason for the requested exception or variance. No deviation from the requirements of these rules or regulations shall be undertaken by the applicant, owner, or operator without prior written authorization from the office of Conservation. (See comment 2 below)

\* \* \*

2. Granting of exceptions or variances to these rules and regulations shall only be considered upon proper showing by the applicant, owner, or operator at a public hearing

that such exception or variance is reasonable, justified by the particular circumstances, and consistent with the intent of these rules and regulations regarding physical and environmental safety and the prevention of waste. The requester of the exception or variance shall be responsible for all costs associated with a public hearing.

**Comment:** The underlined passages are inconsistent as they provide different burdens of proof for exceptions and variances. We respectfully suggest that the first underlined sentence either be deleted in its entirety or be revised as follows:

**"It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures meet the requirements set forth in subsection 2 below."**

Additionally, as currently worded, all exception and variance requests (even non-substantive or immaterial requests) require public hearings. Scheduling public hearings for all matters will unnecessarily further burden time and resources expended by the DNR and will further delay the permitting and compliance review process. We respectfully request that this rule be modified to allow DNR staff to waive the requirement for a public hearing, based on relevant information available to them, when the granting of the proposed exception or variance does not involve substantive or material concerns regarding physical and environmental safety or the prevention of waste and is justified by the particular circumstances.

#### **309.J. Duration of Permits**

2. Authorization to Drill, Construct, or Convert. Authorization by permit to drill, construct, or convert a hydrocarbon storage well shall be valid for one year from the effective date of the permit. If drilling or conversion is not completed in that time, the permit shall be null and void and the operator must obtain a new permit.
3. Extensions. The operator shall submit to the Office of Conservation a written request for an extension of the time of Paragraph 2 above; however, the Office of Conservation shall approve the request only for just cause and only if the permitting conditions have not [materially] changed. The operator shall have the burden of proving claims of just cause.

#### **311.H. Public Comments, Response to Comments, and Permit Issuance**

6. Approval or the granting of a permit to construct or convert a hydrocarbon storage well shall be valid for one year from its effective date and if not completed in that time, the permit shall be null and void. The permittee may request an extension of this one year requirement; however, the commissioner shall approve the request only for [just cause]extenuating circumstances and only if the conditions existing at the time the permit

was issued have not [materially] changed. The permittee shall have the burden of proving claims of [just cause], extenuating circumstances.

**Comment:** The standard for granting extensions in §309.J.3. in the August version of the draft rules was “extenuating circumstances.” The standard was changed in the October version to “just cause”; however, a corresponding change was not made in §311.H.6. We respectfully request that §311.H.6. be deleted in its entirety as it is duplicative of §309.J or that the words “extenuating circumstances” be deleted and replaced with the words “just cause.”

We further request that the word “materially” be inserted before the word “changed” as set forth above. Extensions should not be denied merely because an insignificant condition has changed.

### **§311.K. Permit Suspension, Modification, Revocation and Reissuance, Termination**

- 1.c. The Office of Conservation may, upon its own initiative or at the request of any interested person, review any permit to determine if cause exists to suspend, modify, revoke and reissue, or terminate the permit for the reasons specified in §§311 K.2, 3, 4, 5 and 6. All requests by interested persons shall be in writing and shall contain only factual information supporting the request.

**Comment:** Although the term interested person is not defined in proposed rule 29-M, it used seven (7) times.

We respectfully request that for §311.K.1.c. only interested persons who (1) are owners or operators in the salt dome at issue, or (2) own a surface, subsurface or mineral interest or right in the salt dome at issue, or (3) own an interest in the surface, subsurface or mineral interest or right in property immediately adjacent to the property boundary, be allowed to request a permit review.

### **§315.B Cavern Spacing Requirements**

#### **3.c. Salt Periphery**

Without exception or variance to these rules and regulations, [if any part of] an existing hydrocarbon storage cavern ~~with cavern walls~~ [is located within] 100 feet or less from the periphery of the salt stock [~~the hydrocarbon storage cavern~~] shall be removed from hydrocarbon storage service immediately and permanently.

**Comment:** As currently worded, 3.c is subject to more than one interpretation. We respectfully request that rule §315.B.3.c be revised as follows:

“Without exception or variance to these rules and regulations, if any part of an existing hydrocarbon storage cavern is located

**within 100 feet or less from the periphery of the salt stock, the hydrocarbon storage cavern shall be removed from hydrocarbon storage service immediately and permanently.”**

### **§317.E Cased Borehole Surveys**

A cement bond with variable density log (or similar cement evaluation tool) and a temperature log shall be run on all casings. The Office of Conservation may consider requests for allowances [alternative means of compliance] for wireline logging in large diameter casings or justifiable special conditions. A descriptive report interpreting the results of such logs shall be prepared and submitted to the commissioner.

**Comment:** “Allowances” is not a defined term in the proposed rules. We respectfully request the word “allowances” be deleted and replaced with the term “alternative means of compliance” as defined in §303.F.3.

### **§317.F Hanging Strings**

Hanging Strings. Hanging strings shall be designed with a collapse, burst and tensile strength rating conforming to all expected operating conditions, including [excluding] flow induced vibrations. The design shall also consider the physical and chemical characteristics of fluids placed into and withdrawn from the cavern.

**Comment:** Industry along with the Solution Mining Research Institute are in the process of developing standards by which to design hanging strings to take into consideration flow induced vibrations. Until such time as guidance, with respect to flow induced vibrations, is developed compliance with this requirement is not theoretically possible; therefore we request that the word “including” be replaced with the word “excluding”.

## **§321. Safety**

- H. Vapor Detection. The operator shall develop and implement a plan as required in §323.D to detect the presence of [a buildup of liquefied] combustible-gases or any potentially ignitable substances in the atmosphere resulting from the storage operation. (See comment under §323.D below)

## **§323. Monitoring Requirements**

- D. Vapor Detection. The operator shall develop a monitoring plan designed to detect the presence of a buildup of combustible [liquefied] gases or any potentially ignitable substances in the atmosphere resulting from the hydrocarbon storage operation.

**Comment:** The intent of these rules is to address concerns regarding low lying hydrocarbons that are heavier than air that do not immediately vent into the

atmosphere. We respectfully request that the word "combustible" in §§321.H and 323.D be replaced with the word "liquefied" and that the words "a buildup of" be inserted in §321.H.

**General Comment:**

Under the current rules and agency staff levels, the processing time of permit applications can be in excess of two years and a considerable backlog exists. Despite the fact that the DNR is proposing to add two full time employees, the obligations imposed by the new rules and regulations will create a further delay in the DNR's permit and compliance review process. We respectfully suggest that the DNR consider increasing its technical staff by adopting an expedited processing program, similar to the procedure currently in effect at the DEQ. Industry would be willing to help shoulder the financial burden on the agency by providing funding through the payment of fees for the necessary resources, overtime, new employees and contractors.



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December 6, 2013

**BY HAND**

Louisiana Department of Natural Resources  
Office of Conservation  
617 N. 3rd Street  
Baton Rouge, LA 70802

Attn: Mr. Tyler Gray

Re: Comments to Advance Notice of Rulemaking  
Proposed Statewide Order No. 29-M (Rev. 3) and  
Statewide Order No. 29-M-3  
Louisiana Department of Natural Resources  
Office of Conservation  
Docket No. IMD-2013-07

Dear Mr. Gray:

Thank you very much for the opportunity to provide comments on the proposed regulations regarding salt dome solution mining injection and storage wells. We offer the attached comments on behalf of Perryville Gas Storage LLC and Arcadia Gas Storage LLC.

Again, thank you for the opportunity to provide these comments. Please let us know if you need anything further from us.

Sincerely,

A handwritten signature in black ink, appearing to read "MAM/jm" followed by "McKeithen".

Marjorie A. McKeithen

MAM/jm  
Enclosure

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Comments to the Louisiana Department of Natural Resources (DNR)

Proposed Rules:

October 20, 2013 version

Title 43

Natural Resources

Part XVII. Office of Conservation — Injection and Mining

Subpart 3. Statewide Order No. 29-M (Revision 3)

and

Subpart 5. Statewide Order No. 29-M-3

Comments provided in red.

(Although comments may be provided only as to Subpart 3. (29-M) or only as to Subpart 5. (29-M-3), the same comments apply to the other Subpart where the respective counterparts are comparable.)

### **§3309. Legal Permit Conditions**

#### **F. Proper Operation and Maintenance**

1. The operator shall always properly operate and maintain all facilities and systems of injection, withdrawal, and control (and related appurtenances) installed or used to achieve compliance with the permit or these rules and regulations. Proper operation and maintenance include effective performance (including well/cavern mechanical integrity), adequate funding, adequate operation, staffing and training, and adequate laboratory process controls including appropriate quality assurance procedures. This provision requires the operation of back-up, auxiliary facilities, or similar systems when necessary to achieve compliance with the conditions of the permit or these rules and regulations.

**Comment:** We respectfully submit that “always properly operate...” is vague and overly broad. Because it does not provide a definitive standard for compliance and is open to any interpretation, it could easily lead to unintended arbitrary enforcement and penalties where no standard or specific provision of any rule or regulation has been violated. We respectfully submit that the terms “effective performance,” “adequate operation,” and “adequate laboratory process controls” are similarly vague and problematic.

### **§3313. Site Assessment**

E. Area of Review. A thorough evaluation shall be undertaken of both surface and subsurface activities in the defined area of review of the individual solution-mining well or project area that may influence the integrity of the salt stock, solution-mining well, and cavern, or contribute to the movement of injected fluids outside the cavern, wellbore, or salt stock.

2. Subsurface Delineation. At a minimum, the following shall be identified within the area of review:

e. all producing formations either active or depleted occurring anywhere within the vicinity of the salt dome.

**Comment:** Please consider defining "vicinity of the salt dome," since the term is ambiguous and open to interpretation. See also §§3307.C.9, 3313.A.6, 3313.B.2 (vicinity of the salt stock), 3323.D (vicinity of the solution mining cavern), 307.C.9, and 313.A.6.

### **§3317. Well Construction and Completion**

#### A. General Requirements

2.a. Where injection is into a formation which contains water with less than 10,000 mg/l TDS, monitoring wells shall be completed into the injection zone and into any underground sources of drinking water above the injection zone which could be affected by the mining operation. These wells shall be located in such a fashion as to detect any excursion of injected fluids, process by-products, or formation fluids outside the mining area or zone. If the operation may be affected by subsidence or catastrophic collapse the monitoring wells shall be located so that they will not be physically affected.

2.b. Where injection is into a formation which does not contain water with less than 10,000 mg/l TDS, no monitoring wells are necessary in the injection stratum.

**Comment:** The references to injection into water bearing zones appear to be misplaced in a salt dome context. These types of references appear in other portions of 29-M-3 as well and appear to apply to salt water disposal wells.

### **§301. Definitions**

Contamination – the introduction of substances or contaminants into a groundwater aquifer, a USDW or soil in such quantities as to render them unusable of their intended purposes.

**Comment:** Consider substituting the word "for" in place of the word "of"?

Permit - an authorization, license, or equivalent control document issued by the commissioner to implement the requirements of these regulations. Permit includes, but is not limited to, area permits and emergency permits. Permit does not include UIC authorization by rule or any permit which has not yet been the subject of final agency action, such as a draft permit.

**Comment:** As defined and tied to the language "to implement the requirements of these regulations," the definition could be interpreted as excluding existing permits or authorizations. We suggest changing "to

implement the requirements of these regulations" to "pursuant to Office of Conservation regulations." Otherwise, an operator with an existing valid permit would be in violation of §303.B.1 simply by continuing to operate. (§303.B.1 states that it is a violation of these rules and the laws the state of Louisiana to operate a salt cavern without obtaining a permit.)

### **§303. General Provisions**

#### **A. Applicability**

1. These rules and regulations shall apply to applicants, owners, or operators of a solution-mined salt cavern to store liquid, liquefied, or gaseous hydrocarbons.
2. That except as to liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976, no such project to develop or use a salt dome in the state of Louisiana for the injection, storage and withdrawal of liquid, liquefied, or gaseous hydrocarbons shall be allowed until the commissioner has issued an order following a public hearing after 10-day notice, under the rules covering such matters, which order shall include the following findings of fact:
  - a. that the area of the salt dome sought to be used for the injection, storage, and withdrawal of liquid, liquefied, or gaseous hydrocarbons is suitable and feasible for such use as to area, salt volume, depth and other physical characteristics;
  - b. that the use of the salt dome cavern for the storage of liquid, liquefied, or gaseous hydrocarbons will not contaminate other formations containing fresh water, oil, gas, or other commercial mineral deposits, except salt;
  - c. that the proposed storage, including all surface pits and surface storage facilities incidental thereto which are used in connection with the salt dome cavern storage operation, will not endanger lives or property and is environmentally compatible with existing uses of the salt dome area, and which order shall provide that:
    - i. liquid, liquefied, or gaseous hydrocarbons, which are injected and stored in a salt dome cavern, shall at all times be deemed the property of the injector, his successors or assigns, subject to the provisions of any contract with the affected land or mineral owners; and
    - ii. in no event shall the owner of the surface of the lands or water bottoms or of any mineral interest under or adjacent to which the salt dome cavern may lie, or any other person, be entitled to any right of claim in or to such liquid, liquefied, or gaseous hydrocarbons stored unless permitted by the injector;

- d. that temporary loss of jobs caused by the storage of liquid, liquefied, or gaseous hydrocarbons will be corrected by compensation, finding of new employment, or other provisions made for displaced labor;
- e. that due consideration has been given to alternative sources of water for the leaching of cavities.

**Comment:**

This sub-section could be interpreted to require new public hearings for post-1976 existing storage projects or caverns with orders which do not contain all of the specifically worded findings listed above, as well as discontinued use of such caverns until a new public hearings could be held. This would lead to unreasonable and far-reaching unintended consequences since certain of the findings were not required by R.S. §30:23, the enabling statute, until 2008. The "alternative sources of water" language, for example, was added in 2008. As written, if the applicable order does not contain the precise language listed above, some of which is entirely new, this rule could be interpreted to require shutting down a storage facility until new hearings and new findings could be issued.

All existing orders issued by the DNR contain conditions, terms and phrases approved by the Commissioner of Conservation at the time the orders were entered, which conditions, terms and language, may not be identical to the language proposed above.

There is no need to reissue existing permits immediately. Under proposed §303.B, very specific review criteria are established to begin reviewing existing caverns within a year. Further, proposed §309.K provides that the commissioner shall review each hydrocarbon storage well permit or area permit once every five years to determine whether it should be modified, revoked and reissued, terminated or if minor modifications are needed. During this review process, staff will be in a position to determine if existing permits need to be amended.

For these reasons, we respectfully suggest that the above section should apply prospectively only to new permits.

**§303. General Provisions**

- 4. That these regulations shall apply to all liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976, as specified in §303.2, except for the requirements under §307 and §311.A-H. Any liquid, liquefied, or gaseous hydrocarbon storage projects begun before October 1, 1976 shall fulfill the requirements of §309.K within one year of the effective date of these regulations.

**Comment:** §303.2 is referenced but does not exist in the regulations.

## B. Prohibition of Unauthorized Injection

2. For existing hydrocarbon storage caverns that are in compliance with Statewide Order No. 29-M, but not in compliance with Statewide Order No. 29-M (revision 3) as of the effective date of these rules, they may continue to operate for one year under Statewide Order, No, 29-M. Within that year, the owner or operator must submit an alternate means of compliance or a request for a variance pursuant to §303F. and/or present a corrective action plan to meet the requirements of Statewide Order No. 29-M (Revision3). During the review period of the request until a final determination is made regarding the alternate means of compliance or variance and/or corrective action plan, the affected solution-mining well may continue to operate in compliance.

**Comment:** In the October version of Rule 29-M (Rev. 3) the words “solution-mining” were changed to “hydrocarbon storage” in §303.B.3, §305.D.1.b and §309.C; however, a corresponding change was not made in §303.B.2.

**§303.B.2 relates to hydrocarbon storage caverns; therefore we respectfully request that words “solution-mining” be deleted and replaced with the words “hydrocarbon storage.”**

3. By no later than one year after authorization of these rules the owner or operator shall provide for review documentation of any variance previously authorized by the Office of Conservation. Based on that review, the commissioner may terminate, modify or revoke and reissue the existing permit with the variance if it is determined that continued operations cannot be conducted in a way that is protective of the environment, or the health, safety, and welfare of the public. The process for terminating, modifying, or revoking and reissuing the permit with the variance is set forth in 311.K. During the review period the affected hydrocarbon storage well may continue to operate in compliance with such variance.

**Comment:** Please consider substituting “the effective date” for “authorization.”

Also, we are not sure what “provide for review documentation” means and respectfully request clarification. Does it mean that an operator must provide documentation related to the variance for review?

## F. Exceptions/Variances/Alternative Means of Compliance

1. Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case-by-case basis, exceptions or variances to these rules and regulations. It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures shall not result in an unacceptable increase of endangerment to the environment, or the

health, safety and welfare of the public. The applicant, owner, or operator shall submit a written request to the Office of Conservation detailing the reason for the requested exception or variance. No deviation from the requirements of these rules or regulations shall be undertaken by the applicant, owner, or operator without prior written authorization from the office of Conservation.

a. When injection does not occur into, through, or above an underground source of drinking water, the commissioner may authorize a hydrocarbon storage well or project with less stringent requirements for area-of review, construction, mechanical integrity, operation, monitoring, and reporting than required herein to the extent that the reduction in requirements will not result in an increased risk of movements of fluids into an underground source of drinking water or endanger the public.

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2. Granting of exceptions or variances to these rules and regulations shall only be considered upon proper showing by the applicant, owner, or operator at a public hearing that such exception or variance is reasonable, justified by the particular circumstances, and consistent with the intent of these rules and regulations regarding physical and environmental safety and the prevention of waste. The requester of the exception or variance shall be responsible for all costs associated with a public hearing.

**Comment:** The two highlighted sentences in 1 and 2 above appear to be redundant and are confusing in that they both address the burden of proof for a variance or exception but provide differing burdens of proof. Because they are inconsistent in that they provide two different burdens of proof, we respectfully suggest that the first highlighted sentence either be deleted in its entirety or be changed to read as follows:

**"It shall be the obligation of the applicant, owner, or operator to show that the requested exception or variance and any associated mitigating measures meet the requirements set for the in subsection 2 below."**

Additionally, as currently worded, all exception and variance requests (even non-substantive or immaterial requests) require public hearings. Scheduling public hearings for all matters will unnecessarily further burden time and resources expended by the DNR and will further delay the permitting and compliance review process. We respectfully request that this rule be modified to allow DNR staff to waive the requirement for a public hearing, based on relevant information available to them, when the granting of the proposed exception or variance does not involve substantive or material concerns regarding physical or environmental safety or the prevention of waste and is justified by the particular circumstances.

Lastly, in 1.a above, consider substituting “unacceptable increase in risk” for “increased risk” and changing “movements” to “movement.”

### **§307.E. Technical Information**

The applicant shall submit, as an attachment to the application form, the following information:

9. Plans and procedures for operating the hydrocarbon storage well, cavern, and related surface facility to include at a minimum:

g. the safety requirements of §321, including, but not limited to an emergency action plan, controlled site access, facility identification, personnel, wellhead protection and identification, valves and flowlines, alarm systems, emergency shutdown valves, systems test and inspections, and surface facility retaining walls and spill containment, contingency plans to cope with all shut-ins as a result of noncompliance with these regulations or well failures to prevent the migration of contaminating fluids into underground sources of drinking water.

**Comment:** Having to develop a contingency plan for all shut-ins for noncompliance would be burdensome to create and would likely not be useful. A contingency plan for losses of well integrity or well failures may be more beneficial and will limit nonproductive paperwork. We respectfully suggest that the term “shut-ins” be changed to “losses of well integrity.”

### **309. Legal Permit Conditions**

#### **F. Proper Operation and Maintenance**

2. The operator shall address any unauthorized escape, discharge, or release of any material from the hydrocarbon well, or part thereof that is in violation of any state or federal permit or which is not incidental to normal operations, with a corrective action plan. The plan shall address the cause, delineate the extent, and determine the overall effects on the environment resulting from the escape, discharge, or release. The Office of Conservation shall require the operator to formulate a plan to remediate the escaped, discharged, or released material if the material is believed to have entered or has the possibility of entering an underground source of drinking water.

**Comment:** Is the corrective action plan something we submit or gain approval for?

I. Notification Requirements. The operator shall give written, and where required, verbal notice to the Office of Conservation concerning activities indicated herein.

8. Twenty-Four Hour Reporting

a. The operator shall report any noncompliance that may endanger the environment, or the health, safety and welfare of the public. Any information pertinent to the noncompliance shall be reported to the Office of Conservation by telephone at 225-342-5515 within 24 hours from when the operator became aware of the circumstances. In addition, a written submission shall be provided within five days from when the operator became aware of the circumstances. The written notification shall contain a description of the noncompliance and its cause, the periods of noncompliance including exact times and dates, and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.

**Comment:** Different operators will likely have their own definition of what constitutes an issue that may cause endangerment. We request that DNR consider adding language to define reportable limits -- possibly using discharge or air permit or DOT reportable volumes as a trigger.

#### J. Duration of Permits

2. Authorization to Drill, Construct, or Convert. Authorization by permit to drill, construct, or convert a hydrocarbon storage well shall be valid for one year from the effective date of the permit. If drilling or conversion is not completed in that time, the permit shall be null and void and the operator must obtain a new permit.
3. Extensions. The operator shall submit to the Office of Conservation a written request for an extension of the time of Paragraph 2 above; however, the Office of Conservation shall approve the request only for just cause and only if the permitting conditions have not changed. The operator shall have the burden of proving claims of just cause.

#### H. Public Comments, Response to Comments, and Permit Issuance

6. Approval or the granting of a permit to construct or convert a hydrocarbon storage well shall be valid for one year from its effective date and if not completed in that time, the permit shall be null and void. The permittee may request an extension of this one year requirement; however, the commissioner shall approve the request only for extenuating circumstances and only if the conditions existing at the time the permit was issued have not changed. The permittee shall have the burden of proving claims of extenuating circumstances.

#### Comment:

The standard for granting extensions in §309.J in the August version of the draft rules was "extenuating circumstances." The standard was changed in the October version to "just cause"; however, a corresponding change was not made in §311.H. We respectfully request that §311.H be deleted in its entirety as it is

duplicative of §309.J or that the words "extenuating circumstances" be deleted and replaced with the words "just cause."

Additionally, we request that the word "materially" be inserted before the word "changed" such that §309.J, for example, would read: "and only if the permitting conditions have not materially changed." Over the course of years that it could take to obtain approval of a permit and then request an extension, many conditions will change, but only those that have a bearing on the permit, or are "material," should effect whether an extension is granted.

### **§311.K. Permit Suspension, Modification, Revocation and Reissuance, Termination**

1.c. The Office of Conservation may, upon its own initiative or at the request of any interested person, review any permit to determine if cause exists to suspend, modify, revoke and reissue, or terminate the permit for the reasons specified in §§311 K2, 3, 4, 5 and 6. All requests by interested persons shall be in writing and shall contain only factual information supporting the request.

**Comment:** The term "interested person" is not defined although it is used seven times in proposed Rule 29-M. We respectfully request that the term "interested person" be defined for purposes of §311.K.1.c only, as follows: "1) all owners and operators in the salt dome at issue; and 2) other persons or entities which own a surface or subsurface property or mineral interest or right in the salt dome at issue or in the surface or subsurface immediately adjacent to the project boundary." Only someone with a material interest should be allowed to initiate review of a permit.

### **§315. Cavern Design and Spacing Requirements**

#### **B. Cavern Spacing Requirements**

##### **1. Property Boundary**

a. Existing Hydrocarbon Storage Caverns. No part of a hydrocarbon storage cavern permitted as of the date these regulations are promulgated shall extend closer than 100 feet to the property of others without consent of the owner(s). Continued operation without this consent of an existing hydrocarbon storage cavern within 100 feet to the property of others may be allowed as follows.

**Comment:** Consider inserting the following sentence after the second sentence of §315.B.1.a:

"As used in this section, consent by the adjacent property owner may consist of written consent to store beneath the adjacent

property, written consent to leach beneath the adjacent property, written consent to a cavern proximity of 100 feet or less, or other form of written consent."

- i. The operator of the cavern shall make a good faith effort to provide notice in a form and manner approved by the commissioner to the adjacent property owner(s) of the location of its cavern.
- ii. The commissioner shall hold a public hearing at Baton Rouge if an adjacent owner whose property line is within 100 feet objects to the cavern's continued operation. Following the public hearing the commissioner may approve the cavern's continued operation upon a determination that the continued operation of the cavern has no adverse effects to the rights of the adjacent property owner(s).

**Comment:** Please consider substituting "a non-consenting adjacent owner" for "an adjacent owner." Someone who consented should not be able to force a hearing.

Please consider deleting the last sentence of §315.B.1.ii. in its entirety and replacing it with the following sentence:

"Following the public hearing, the commissioner may order discontinuance of the operation of the cavern upon a determination that the continued operation of the cavern will cause adverse physical or environmental effects on the property of the adjacent non-consenting owner(s)."

We make this suggestion because requiring an operator to prove a negative in order to continue operating (i.e. no adverse effects on the rights of the adjacent property owner) is troublesome. Proving a negative in almost any instance is close to impossible. Moreover, "no adverse effects to the rights of the adjacent property owner(s)" is extremely broad and could open the door to almost any argument, including arguments regarding diminution of property value where no trespass or infringement on property of any sort has occurred. Although it was likely not the intent when drafting this section, the wording of this section could have the unintended consequence of adjacent landowners asking the Office of Conservation to become a forum for determination of real estate values. We believe the suggested language above more closely captures what we assume is the intent of this section, and respectfully ask that the change be considered.

- iii. If no objection from an adjacent property owner is received within 30 days of the notice provided in accordance with Subparagraph 1.a.i above, then the commissioner may approve the continued operation of the cavern administratively.

**Comment:** Consider substituting “a non-consenting adjacent property owner” for the highlighted language.

b. New Hydrocarbon Storage Caverns. No part of a newly permitted hydrocarbon storage cavern shall extend closer than 100 feet to the property of others without the consent of the owner(s).

2. Adjacent Structures within the Salt. As measured in any direction, the minimum separation between walls of adjacent caverns or between the walls of the cavern and any manmade structure within the salt stock shall not be less than 200 feet. Caverns must be operated in a manner that ensures the walls between any cavern and any other manmade structure maintain the minimum separation of 200 feet. For hydrocarbon storage caverns permitted prior to the effective date of these regulations and which are already within 200 feet of any other manmade structure within the salt stock, the commissioner of conservation may approve continued operation upon a proper showing by the owner or operator that the cavern is capable of continued safe operations.

**Comment:** Consider inserting “an adjacent cavern or” prior to “any other manmade structure” in the last sentence.

### **§317. Well Construction and Completion**

#### C. Casing and Cementing

Casing and cementing. Except as specified below, the wellbore of the hydrocarbon storage well shall be cased, completed, and cemented according to rules and regulations of the Office of Conservation and good industry engineering practices for wells of comparable depth that are applicable to the same locality of the cavern. Design considerations for casings and cementing materials and methods shall address the nature and characteristics of the subsurface environment, the nature of injected materials, the range of conditions under which the well, cavern, and facility shall be operated, and the expected life of the well including closure and post-closure.

6. The following applies to wells existing in caverns before the effective date of these rules and regulations. If the design of the well or cavern precludes having distinct intermediate and final casing seats cemented into the salt, the wellbore shall be cased with two concentric casings run from the surface of the well to a minimum distance of 300 feet into the salt. The inner casing shall be cemented from its base to surface.

**Comment:** This requirement can severely limit the functionality of the cavern and may cause it to be taken out of service. We request the addition of a waiver or alternative means of compliance option with supporting documentation.

#### E. Cased Borehole Surveys

A cement bond with variable density log (or similar cement evaluation tool) and a temperature log shall be run on all casings. The Office of Conservation may consider requests for allowances for wireline logging in large diameter casings or justifiable special conditions. A descriptive report interpreting the results of such logs shall be prepared and submitted to the commissioner.

**Comment:** "Allowances" is not a defined term in the proposed rules. We respectfully request the word "allowances" be deleted and replaced with the term "alternative means of compliance" as defined in §303.F.3.

#### F. Hanging Strings

Hanging Strings. Hanging strings shall be designed with a collapse, burst and tensile strength rating conforming to all expected operating conditions, including [excluding] flow induced vibrations. The design shall also consider the physical and chemical characteristics of fluids placed into and withdrawn from the cavern.

**Comment:** Industry along with the Solution Mining Research Institute are in the process of developing standards by which to design hanging strings to take into consideration flow induced vibrations. Until such time as guidance, with respect to flow induced vibrations, is developed compliance with this requirement is not theoretically possible; therefore we request that the word "including" be replaced with the word "excluding."

### §321. Safety

#### E. Valves and Flowlines...

**Comment:** We request clarification as to whether only product lines are considered flowlines, or whether brine and fresh water piping would be included as well. This can have a significant impact if brine and fresh water piping are included as it is not typical for all brine piping to be rated for product pressure. We request the addition of a definition for flowlines in §301.

Additionally, it may be necessary to identify requirements for product and brine piping separately. The excerpt below is from the Texas Railroad Commission (TRRC) Rule 95 for liquid storage caverns and may provide a useful reference.

#### TRRC Rule 95 Excerpt:

- (3) Product, brine, and fresh water surface piping.
  - (A) Product surface piping shall be designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well. For facilities with hazardous materials surface piping under the administrative authority of the Safety Division of the Railroad Commission of Texas, for

the purposes of this section, product surface piping extends from the wellhead emergency shutdown valve to the first pressure regulation device, including a manual, motor-operated, or emergency shutdown valve.

(B) Brine surface piping shall be designed for the maximum brine wellhead pressure and to transport, under emergency conditions, product to the brine system gas vapor control system described in paragraph (6) of this subsection unless:

(i) a secondary emergency shutdown valve is in operation on the brine surface piping; and

(ii) the brine surface piping between the wellhead emergency shutdown valve and the secondary emergency shutdown valve is designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well.

(C) Fresh water surface piping, if any, must be equipped with a wellhead emergency shutdown valve unless it is:

(i) disconnected from the wellhead; or

(ii) connected to brine surface piping outboard of the wellhead emergency shutdown valve; or

(iii) designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well; and has an internal diameter of less than or equal to two inches; and an attendant is posted at the well site to provide immediate manual shut-in when in use.

(D) Fresh water piping designed for the permitted maximum allowable operating pressure on the hydrocarbon side of the well and with an internal diameter of less than or equal to two inches is exempt from the requirement that an emergency shutdown valve be located on the wellhead or separated from the wellhead by a spool no longer than six feet.

### **§323. Monitoring Requirements**

#### **A. Pressure Gauges, Pressure Sensors, Flow Sensor**

3. Flow sensors designed to actuate the automatic closure of all emergency shutdown valves in response to abnormal changes in cavern injection and withdrawal flow rates shall be installed and properly maintained on each storage well.

**Comment:** We request clarification as to whether this applies to brine measurement as well as product. This could have a significant impact as many caverns do not have brine measurement.

### **§333. Monthly Operating Reports**

A. Operation reports shall be submitted quarterly to the Office of Conservation. Reports are due no later than 15 days following the end of the reporting period.

**Comment: We request that data be gathered monthly and submitted annually.**

B. Reports shall be submitted electronically on the appropriate Form and reference the operator name, well name, well number, well state serial number, salt dome name, and contain the following minimum information acquired daily during the reporting month:

**Comment: When will these forms be available?**