



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Richard J. Simmers, Chief

Division of Oil and Gas Resources Management

2045 Morse Rd, Building F-2

Columbus, Ohio 43229

Phone: (614) 265-6922; Fax: (614) 265-6910

ORDER BY THE CHIEF

February 27, 2020

ORDER NO. 2020-64

**TO: Pillar Energy, LLC
P. O. Box 2682
Charleston, WV 25330**

**RE: API#s 34-087-2-0400-0000, 34-087-2-0410-00-00, and 34-087-2-0461-00-00
George T. Herrell No. 1; D. Miller No. 2; Mayer J #1 Wells
Lawrence County, Mason Township**

SUBJECT: Cease Unauthorized Brine Disposal Operations

Pursuant to Ohio Revised Code Sections 1509.03(D) and 1509.22 and Ohio Administrative Code Section 1501:9-5-06, the Chief of the Division of Oil and Gas Resources Management ("Chief" or "Division") makes the following Findings and issues the following Order:

BACKGROUND:

- (1) Pillar Energy, LLC ("Pillar Energy") is the "project owner," as that term is defined in Ohio Adm. Code 1501:9-5-01(E), of the George T. Herrell No. 1 Well, API# 34-087-2-0400-00-00 ("Herrell No. 1 Well"), the D. Miller No. 2, API# 34-087-2-0410-00-00 ("Miller No. 2 Well"), and the Mayer J #1 Well, API# 34-087-2-0461-00-00 ("Mayer No. 1 Well"), all located in Mason Township, Lawrence County, Ohio. Pillar Energy is registered with the Division as owner number 9619.
- (2) Division (A) of R.C. 1509.22 states, in pertinent part, that "no person shall place or cause to be placed in ground water or in or on the land * * * brine, crude oil, natural gas, or other fluids associated with the exploration, development, well stimulation, production operations, or plugging of oil and gas resources that causes or could reasonably be anticipated to cause damage or injury to public health or safety or the environment."
- (3) Division (B) of R.C. 1509.22 states, in pertinent part, that "[n]o person shall * * * dispose of * * * brine * * * without an order or permit issued under this section or section 1509.06 or 1509.21 of the Revised Code or rules adopted under any of those sections."

- (4) Ohio Administrative Code 1501:9-5-06 states that “[a]ll persons engaged in any phase of enhanced recovery operations shall conduct such operations in a manner which will not contaminate the surface of the land, or water on the surface or subsurface.”
- (5) On October 22, 2018, the Division inspected the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well. Outside the injection facility, the Division observed a leak in the injection line that was causing brine to contaminate the land surface and had left a scald area approximately 12 feet by 22 feet. A photo of the brine scald area is attached as Exhibit 1. Using a high-range Chloride QuanTab test strip, the Division’s test of pooled fluid within the scald area showed a concentration of 4621 ppm.
- (6) On October 22, 2018, the Division issued a Compliance Notice to Pillar Energy requiring Pillar Energy to repair and replace the injection line, to test the injection line with Division personnel present prior to resuming operations, and to submit a plan to the Division regarding remediation of the brine contaminated soil.
- (7) On November 9, 2018, the Division conducted a Compliance Notice follow-up inspection at the line leak outside the injection facility near the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well. The Division observed excavation work had been performed; however, the contaminated soil had not been removed from the Site. All three wells were in operation and a trench had been dug that was channeling water from the contaminated soil towards Buckeye Creek. A photo of the trench is attached as Exhibit 2.
- (8) On November 19, 2018, a Geologist for the Division took soil samples in two locations in the within the scald are at the line leak outside of the injection facility near the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well. The chloride results from the two scald areas were 735 ppm and 554 ppm. The lab results from the soil samples taken on November 19, 2018 are attached as Exhibit 3. A photo from the inspection on November 19, 2018 is attached as Exhibit 4.
- (9) On November 19, 2018, December 10, 2018, January 4, 2019, February 15, 2019, March 15, 2019, April 11, 2019, and April 23, 2019, the Division conducted Compliance Notice follow-up inspections at the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well. During the April 23, 2019 Division inspection, a high-range Chloride QuanTab test strip showed a concentration of 2374 ppm at the location where the injection line leak was observed.
- (10) On May 28, 2019, June 12, 2019, July 9, 2019, and September 17, 2019, the Division conducted Compliance Notice follow-up inspections at the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well. During the July 9, 2019 Division inspection, high-range Chloride QuanTab test strips showed concentrations of 1043 ppm, 885 ppm, and 753 ppm at the location where the injection line leak was observed.
- (11) The Division visited the Site of the line leak on October 15, 2019. A high-range Chloride QuanTab test strip used at the location of the line leak showed a concentration of 961 ppm. A photo of the line leak on October 15, 2019 is attached as Exhibit 5.

- (12) Over the course of two days, October 16, 2019 and October 21, 2019, the Division conducted Compliance Notice follow-up inspections at the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well. During the October 21, 2019 inspection, the inspection used high-range Chloride QuanTab test strips in two locations within the scald area near the line leak. The Chloride QuanTab concentrations were 1440 ppm and 2177 ppm.
- (13) On November 29, 2019, December 20, 2019, January 22, 2020, the Division conducted Compliance Notice follow-up inspections at the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well.
- (14) As of the date of this Order, the excavated contaminated soil has not been removed from the Site.
- (15) The Site of the injection line leak is a location that floods frequently. The Site of the injection line leak is approximately 274 feet from Buckeye Creek.

FINDINGS:

- (1) The Chief finds that at the Well Site of the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well Pillar Energy has caused to be placed on the land brine or other fluids associated with the exploration, development, well stimulation, production operations, or plugging of oil and gas resources that causes or could reasonably be anticipated to cause damage or injury to public health or safety or the environment in violation of R.C. 1509.22(A).
- (2) The Chief finds that at the location of the line leak at the Well Site of the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well Pillar Energy has disposed of brine associated with the exploration, development, well stimulation, production operations, or plugging of oil and gas resources without an order or permit in violation of R.C. 1509.22(B).
- (3) The Chief finds that at the Well Site of the Herrell No. 1 Well, the Miller No. 2 Well, and the Mayer No. 1 Well Pillar Energy has conducted its enhanced recovery operations in a manner that has contaminated the surface of the land or subsurface in violation of Ohio Adm. Code 1501:9-5-06.

ORDERS:

IT IS HEREBY ORDERED:

- (1) Pillar Energy must immediately cease all unauthorized brine disposal operations at the Herrell No. 1 Well, Miller No. 2 Well, and Mayer No. 1 Well.
- (2) Pillar Energy must develop a site assessment plan, including a schedule for implementation, for the Division's review and approval, to determine the horizontal and vertical extents of the contamination surrounding the injection line leak at the Herrell No.

1 Well, Miller No. 2 Well, and Mayer No. 1 Well within 30 days of receipt of this Chief's Order.

- (3) Within 45 days of the Division's approval of Pillar Energy's plan submitted pursuant to Order (2) above, Pillar Energy shall remediate the contaminated soil in accordance with the approved plan.

2-27-2020
Date


Richard J. Simmers, Chief
Division of Oil and Gas Resources Management

Pursuant to R.C. 1509.224(B), addressee is hereby notified that this action is a preliminary order of the Chief and becomes a final order thirty (30) days after its issuance unless the person to whom the preliminary order is directed submits to the Chief a written request for an informal hearing before the Chief within that thirty (30) day period.

If no informal review is requested within thirty (30) days after the issuance of this order, this order is deemed final and effective and may be appealed pursuant to Sections 1509.36 and 1509.37 of the Ohio Revised Code. If the Order is appealed to the Ohio Oil and Gas Commission, the appeal must be in writing and must set forth the orders complained of and the grounds upon which the appeal is based. Such appeal must be filed with the Oil and Gas Commission within thirty (30) days after the date upon which the order becomes final and sent to the following address: Oil and Gas Commission, 2045 Morse Road, A-2, Columbus, Ohio 43229.

In addition, within three (3) days after the appeal is filed with the Oil and Gas Commission, notice of the filing of the appeal must be filed with Richard J. Simmers, Chief of the Division of Oil and Gas Resources Management, Building F, 2045 Morse Road, Columbus, Ohio 43229-6633.

Enclosures:

- Exhibit 1
- Exhibit 2
- Exhibit 3
- Exhibit 4
- Exhibit 5

CERTIFIED MAIL No: 9489009000276122331981

9489 0090 0027 6122 3319 81

EXHIBIT 1





EXHIBIT 2

Nov 9, 2018 at 2:20:54 PM

OHIO DEPARTMENT OF NATURAL RESOURCES – CAMBRIDGE ENVIRONMENTAL LABORATORY

CHAIN OF CUSTODY RECORD
DNR-734-3002A Revised 12/14

325 North 7th Street
Cambridge, Ohio 43725 #VIC

Telephone: (740) 439-5591
Fax No.: (740) 439-3075

SAMPLE RECEIVING:
(For Lab Use Only)

Division: DOCRM
District Office: ZANESVILLE
Sample Numbers: JS-164 To JS-166
County/Township: LAWRENCE
Site:
Project Name (#)/Permit (#): #0410 PILLAR ERP

Sample Information							Analysis Requested		
Number of Containers	Bottle Type: Glass (G) or Plastic (P)	Filtered (F) or Non-Filtered (NF)	Matrix: Air (A) Soil (S) Water (W)	Water Code: SW, GW, WW, DW	Preservative: HNO ₃ , HCl, Other	Group I	Group II	Group Oil & Gas	

FUNDING SOURCE:

- AML
- AML Set-Aside
- Coal Regulatory
- Industrial Minerals
- Oil & Gas

Ice Present Y N

Sample Temperature @ Lab:

JS-165-4.20°C

Sampled By: [Signature]

Witnessed By:
(Optional)

SAMPLE NUMBERS	DATE	TIME (Military)	Number of Containers	Bottle Type: Glass (G) or Plastic (P)	Filtered (F) or Non-Filtered (NF)	Matrix: Air (A) Soil (S) Water (W)	Water Code: SW, GW, WW, DW	Preservative: HNO ₃ , HCl, Other	Group I	Group II	Group Oil & Gas	SAMPLE LOCATION	LATITUDE/LONGITUDE COORDINATES/COMMENTS
JS-164	11/19/18	12:34	1	P	NF	S	-	-			X	SCALD AREA #2	38.63394 / -82.452264-9
JS-165	11/19/18	12:24	1	P	NF	S	-	-			X	SCALD AREA #1	38.63402 / -82.452254-9
JS-166	11/19/18	12:15	1	P	NF	S	-	-			X	BASELINE	38.63341 / -82.450744-9

Water Codes: Surface Water (SW), Ground Water (GW), Waste Water (WW), Drinking Water (DW)

Turned In By: <u>[Signature]</u>	Date: <u>11/20/18</u>	Time: (Military) <u>13:30</u>	Received By:	Date:	Time: (Military)
Transferred By:	Date:	Time: (Military)	Received By:	Date:	Time: (Military)
Transferred By:	Date:	Time: (Military)	Received By:	Date:	Time: (Military)
Transferred By:	Date:	Time: (Military)	Received By: <u>[Signature]</u>	Date: <u>11/20/18</u>	Time: (Military) <u>1330</u>



Chain of Custody Record

1101 North Cole Street Lima OH 45045

Project: L18-21039

3302

This is a legal document that authorizes Alloway to perform testing on samples submitted under this agreement



13

Report To: Jason M. McClarren Name: ODNR/DOGRM Company: 325 North 7th Street Address: Cambridge, Ohio 43725				Invoice To (if Different): Name: SAME Company: Address: PO#: JASON 11/20/18				<i>*Ice in cooler!*</i>					
Phone #: 740-439-5591		Fax #: 740-439-3075		E-mail: jason.mcclarren@dnr.state.oh.us									
Project Name #0410 PILLAR ERP				Matrix Codes: ww - wastewater s - solid sg - sludge gw - groundwater w - water o - other dw - drinking water oil - oil									
Sampler (Print) JAKE GLASCOCK				(Signature)				Analysis Required		Alloway Lims # <small>(For Lab Use Only)</small>			
	Customer Sample ID / Sample Location	Sample Date	Sample Time	Comp.	Grab	Matrix	Number of Containers						
1	JG-164/SCALD AREA #2	11/19/18	12:34		✓	S	1	Ba, Chloride, Conductivity, K, Na, Sr, SO4, Ca, Mg, Br, Alkalinity		01			
2	JG-165/SCALD AREA #1	11/19/18	12:24		✓	S	1	Ba, Chloride, Conductivity, K, Na, Sr, SO4, Ca, Mg, Br, Alkalinity		02			
3	JG-166/BASELINE	11/19/18	12:15		✓	S	1	Ba, Chloride, Conductivity, K, Na, Sr, SO4, Ca, Mg, Br, Alkalinity		03			
4													
5													
6													
7													
8													
Relinquished by:				Received by:				Date	Time	Sample Receiving <small>(For Lab Use Only)</small>		Priority (for Client use) <small>Note: Rush Charges May Apply</small>	
1	<i>Jason M. McClarren 11/20/18-1400</i>									Ice Present? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		24 Hrs <input type="checkbox"/>	
2										Proper Preservation? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		48 Hrs <input type="checkbox"/>	
3										Container Temperature: 54°C		3 Working Days <input type="checkbox"/>	
Method of Sample Delivery: UPS/FedEx <input type="checkbox"/> Client Delivery <input type="checkbox"/> Other _____ Alloway Pick-up <input type="checkbox"/>				Received for Laboratory By: (Signature) <i>[Signature]</i>				Date: 11/21/18	Time: 1040			Routine (5-10 Working days) <input type="checkbox"/>	

White - Lab Copy

Yellow - Client Copy

7171



ANALYTICAL REPORT

 Ohio DNR
 Attn: Jason McClarren
 325 North 7th Street
 Cambridge, OH 43725

Lab Project # L18-21039
Received: 11/21/2018
Reported: 12/04/2018
Date/Time Sampled: 11/19/2018 12:34
Sampled By: JG
Sampled Matrix: Solid
Containers: 1

Project Name: #0410 Pillar ERP

Sample ID: JG-164/Scald Area #2

Lab Sample # L18-21039-01

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Alkalinity, Total (as CaCO ₃)	1600	mg/L	5.0	SM-2320 B	ANS		11/26/2018
Conductivity	5650	umhos/cm	5	EPA 120.1	AS		11/29/2018
Bromide	<30.0	mg/Kg	30.0	SW-9056	JMT		12/03/2018
Chloride	554	mg/Kg	12.0	SW-9056	JMT		11/21/2018
Sulfate	<30.0	mg/Kg	30.0	SW-9056	JMT		11/21/2018
Barium, Total	111	mg/Kg	0.476	SW-6010B	AOP		11/28/2018
Calcium, Total	4940	mg/Kg	9.52	SW-6010B	AOP		11/28/2018
Magnesium, Total	1850	mg/Kg	4.76	SW-6010B	AOP		11/28/2018
Potassium, Total	1220	mg/Kg	4.76	SW-6010B	AOP		11/28/2018
Sodium, Total	1210	mg/Kg	23.8	SW-6010B	AOP		11/28/2018
Strontium, Total	33.9	mg/Kg	0.476	SW-6010B	AOP		11/28/2018

 Analysis Certified By: Lane L Jackson

 1101 N. Cole Street - Lima, Ohio 45805
 419.223.1362 - Fax 419.227.3792
 800.436.1243

 1502 W. Fourth St. - Mansfield, Ohio 44906
 419.525.1644 - Fax 419.524.5575
 800.635.3222

 1776 Marion-Waldo Rd. - Marion, Ohio 43302
 740.389.5991 - Fax 740.389.1481
 800.873.2835



ANALYTICAL REPORT

Lab Project # L18-21039
Received: 11/21/2018
Reported: 12/04/2018
Date/Time Sampled: 11/19/2018 12:24
Sampled By: JG
Sampled Matrix: Solid
Containers: 1

Ohio DNR
 Attn: Jason McClarren
 325 North 7th Street
 Cambridge, OH 43725

Project Name: #0410 Pillar ERP

Sample ID: JG-165/Scald Area #1

Lab Sample # L18-21039-02

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Alkalinity, Total (as CaCO ₃)	1200	mg/L	5.0	SM-2320 B	ANS		11/26/2018
Conductivity	7500	umhos/cm	5	EPA 120.1	AS		11/29/2018
Bromide	<30.0	mg/Kg	30.0	SW-9056	JMT		12/03/2018
Chloride	735	mg/Kg	12.0	SW-9056	JMT		11/21/2018
Sulfate	<30.0	mg/Kg	30.0	SW-9056	JMT		11/21/2018
Barium, Total	140	mg/Kg	0.483	SW-6010B	AOP		11/28/2018
Calcium, Total	1900	mg/Kg	9.66	SW-6010B	AOP		11/28/2018
Magnesium, Total	1750	mg/Kg	4.83	SW-6010B	AOP		11/28/2018
Potassium, Total	1370	mg/Kg	4.83	SW-6010B	AOP		11/28/2018
Sodium, Total	1430	mg/Kg	24.1	SW-6010B	AOP		11/28/2018
Strontium, Total	23.8	mg/Kg	0.483	SW-6010B	AOP		11/28/2018

Analysis Certified By: _____



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 800.873.2835



ANALYTICAL REPORT

Lab Project # L18-21039

 Ohio DNR
 Attn: Jason McClarren
 325 North 7th Street
 Cambridge, OH 43725

Received: 11/21/2018

Reported: 12/04/2018

Date/Time Sampled: 11/19/2018 12:15

Sampled By: JG

Sampled Matrix: Solid

Containers: 1

Project Name: #0410 Pillar ERP

Sample ID: JG-166/Baseline

Lab Sample # L18-21039-03

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Alkalinity, Total (as CaCO ₃)	500	mg/L	5.0	SM-2320 B	ANS		11/26/2018
Conductivity	169	umhos/cm	5	EPA 120.1	AS		11/29/2018
Bromide	<30.0	mg/Kg	30.0	SW-9056	JMT		12/03/2018
Chloride	<12.0	mg/Kg	12.0	SW-9056	JMT		11/21/2018
Sulfate	<30.0	mg/Kg	30.0	SW-9056	JMT		11/21/2018
Barium, Total	88.5	mg/Kg	0.496	SW-6010B	AOP		11/28/2018
Calcium, Total	1300	mg/Kg	9.92	SW-6010B	AOP		11/28/2018
Magnesium, Total	1380	mg/Kg	4.96	SW-6010B	AOP		11/28/2018
Potassium, Total	1160	mg/Kg	4.96	SW-6010B	AOP		11/28/2018
Sodium, Total	117	mg/Kg	24.8	SW-6010B	AOP		11/28/2018
Strontium, Total	11.5	mg/Kg	0.496	SW-6010B	AOP		11/28/2018

Analysis Certified By:



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EXHIBIT 4



Nov 19, 2018 at 11:01:46 AM

EXHIBIT 5

10/15/2019 at 10:52:11 AM

