04/05/2019

Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

April 4, 2019

West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, WV 25304

To Whom It May Concern:

Please find enclosed the Well Operator's Report of Well Work, Form WR-35 (including As-Drilled Survey Plat, Directional Survey and FracFocus report), Discharge Monitoring Report Form WR-34 and corresponding logs for the following wells:

- Parachute Unit 1H (API # 47-095-02429)—Stonefly Pad
- Parachute Unit 2H (API # 47-095-02429)—Stonefly Pad
- Parachute Unit 3H (API # 47-095-02433)—Stonefly Pad
- Copper John Unit 1H (API # 47-095-02404)—Stonefly Pad
- Copper John Unit 2H (API # 47-095-02405)—Stonefly Pad
- Copper John Unit 3H (API # 47-095-02406)—Stonefly Pad
- Pheasant Unit 1H (API # 47-095-02434)—Stonefly Pad
- Pheasant Unit 2H (API # 47-095-02435)—Stonefly Pad
- Pheasant Unit 3H (API # 47-095-02437)—Stonefly Pad
- Tauscher Unit 1H (API # 47-095-02357)—Stonefly Pad
- Tauscher Unit 2H (API # 47-095-02407)—Stonefly Pad
- Tauscher Unit 3H (API # 47-095-02456)—Stonefly Pad

If you have any questions please feel free to contact me at (303) 357-7223.

Sincerely,

Megan Griffith
Permitting Agent
Antero Resources Corporation

Enclosures

04/05/2019

WR-35
Rev. 8/23/13

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 095 - 02404 County Tyler District Centerville
Quad Middlebourne 7.5' Pad Name Stonefly Pad Field/Pool Name -----
Farm name Steven McPeek et al Well Number Copper John Unit 1H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4363158m Easting 506667m
Landing Point of Curve Northing 4362823.89m Easting 506114.93m
Bottom Hole Northing 4360545m Easting 506948m

Elevation (ft) 982' GL Type of Well ■New □ Existing Type of Report □Interim ■Final

Permit Type □ Deviated □ Horizontal ■ Horizontal 6A □ Vertical Depth Type □ Deep ■ Shallow

Type of Operation □ Convert □ Deepen ■ Drill □ Plug Back □ Redrilling □ Rework ■ Stimulate

Well Type □ Brine Disposal □ CBM ■ Gas ■ Oil □ Secondary Recovery □ Solution Mining □ Storage □ Other _____

Type of Completion ■ Single □ Multiple Fluids Produced □ Brine ■Gas □ NGL ■ Oil □ Other _____
Drilled with □ Cable ■ Rotary

Drilling Media Surface hole ■ Air □ Mud □Fresh Water Intermediate hole ■ Air □ Mud □ Fresh Water □ Brine
Production hole □ Air ■ Mud □ Fresh Water □ Brine

Mud Type(s) and Additive(s)
Air - Foam & 4% KCL
Mud - Polymer

Date permit issued 3/15/2017 Date drilling commenced 8/29/2017 Date drilling ceased 1/26/2018
Date completion activities began 6/13/2018 Date completion activities ceased 12/7/2018
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 52', 400', 457' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1425', 1431' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 52', 457' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

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Rev. 8/23/13

API 47- 095 - 02404 Farm name Steven McPeek et al Well number Copper John Unit 1H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	95'	New	94#, H-40	N/A	Y
Surface	17-1/2"	13-3/8"	572'	New	54#, J-55	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2645'	New	36#, H-40	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	15165'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6815'		4.7#, N-80		
Packer type and depth set		N/A					

Comment Details

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ^{3}/sks)	Volume (ft^3)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	204 sx	15.6	1.18	244	0'	8 Hrs.
Surface	Class A	477 sx	15.6	1.19	402	0'	8 Hrs.
Coal							
Intermediate 1	Class A	909 sx	15.6	1.18	1047	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	796sx (Lead) 1116 sx (Tail)	13.5 (Lead), 15.2 (Tail)	1.53 (Lead), 1.83 (Tail)	2819	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 15165' MD, 6365' TVD (BHL), 6378' (Deepest Point Drilled) Loggers TD (ft) 15165' MD

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 6030'

Check all wireline logs run □ caliper □ density □ deviated/directional □ induction
□ neutron □ resistivity □ gamma ray □ temperature □sonic

Well cored □ Yes ■ No Conventional Sidewall Were cuttings collected □ Yes ■ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

Conductor - 0

Surface - 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface

Intermediate - 1 above float joint, 1 above float collar, 1 every 4th joint to surface

Production - 1 above float joint, 1 below float collar, 1 every 3rd joint to top of cement

WAS WELL COMPLETED AS SHOT HOLE □ Yes ■ No DETAILS

WAS WELL COMPLETED OPEN HOLE? □ Yes ■ No DETAILS

WERE TRACERS USED □ Yes ■ No TYPE OF TRACER(S) USED N/A

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API 47- 095 - 02404 Farm name Steven McPeek et al Well number Copper John Unit 1H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)

***PLEASE SEE ATTACHED EXHIBIT 1**

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)

***PLEASE SEE ATTACHED EXHIBIT 2**

Please insert additional pages as applicable.

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API 47- 095 - 02404 Farm name Steven McPeek et al Well number Copper John Unit 1H

PRODUCING FORMATION(S)	DEPTHS			
Marcellus	6319' (TOP)	TVD	6877' (TOP)	MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ■ Open Flow OIL TEST ■ Flow ☐ Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW	Gas	Oil	NGL	Water	GAS MEASURED BY
	7253 mcfpd	149 bpd	--- bpd	7 bpd	☐ Estimated ■ Orifice ☐ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H_2S, ETC)
***PLEASE SEE ATTACHED EXHIBIT 3**					

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company Nine Energy Services
Address 125 Museum Road City Washington State PA Zip 15301

Cementing Company C&J Energy Services
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Baker Hughes
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223
Signature [signature] Title Permitting Agent Date 4/4/2019

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

API 47-095-02404 **Farm Name** Steven McPeek et al **Well Number** Copper John Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	10/31/2018	14889.3	15060.5	60	Marcellus
2	11/1/2018	14690.1	14858.1	60	Marcellus
3	11/2/2018	14490.9	14658.9	60	Marcellus
4	11/2/2018	14291.7	14459.7	60	Marcellus
5	11/3/2018	14092.5	14260.5	60	Marcellus
6	11/3/2018	13893.3	14061.3	60	Marcellus
7	11/4/2018	13694.1	13862.1	60	Marcellus
8	11/5/2018	13494.9	13662.9	60	Marcellus
9	11/5/2018	13295.7	13463.7	60	Marcellus
10	11/5/2018	13096.5	13264.5	60	Marcellus
11	11/6/2018	12897.3	13065.3	60	Marcellus
12	11/6/2018	12698.1	12866.1	60	Marcellus
13	11/6/2018	12498.9	12666.9	60	Marcellus
14	11/6/2018	12299.7	12467.7	60	Marcellus
15	11/7/2018	12100.5	12268.5	60	Marcellus
16	11/8/2018	11901.3	12069.3	60	Marcellus
17	11/8/2018	11702.1	11870.1	60	Marcellus
18	11/9/2018	11502.9	11670.9	60	Marcellus
19	11/9/2018	11303.7	11471.7	60	Marcellus
20	11/9/2018	11104.5	11272.5	60	Marcellus
21	11/10/2018	10905.3	11073.3	60	Marcellus
22	11/10/2018	10706.1	10874.1	60	Marcellus
23	11/11/2018	10506.9	10674.9	60	Marcellus
24	11/11/2018	10307.7	10475.7	60	Marcellus
25	11/12/2018	10108.5	10276.5	60	Marcellus
26	11/12/2018	9909.3	10077.3	60	Marcellus
27	11/13/2018	9710.1	9878.1	60	Marcellus
28	11/13/2018	9510.9	9678.9	60	Marcellus
29	11/14/2018	9311.7	9479.7	60	Marcellus
30	11/14/2018	9112.5	9280.5	60	Marcellus
31	11/15/2018	8913.3	9081.3	60	Marcellus
32	11/15/2018	8714.1	8882.1	60	Marcellus
33	11/16/2018	8514.9	8682.9	60	Marcellus
34	11/16/2018	8315.7	8483.7	60	Marcellus
35	11/17/2018	8116.5	8284.5	60	Marcellus
36	11/17/2018	7917.3	8085.3	60	Marcellus
37	11/18/2018	7718.1	7886.1	60	Marcellus
38	11/18/2018	7518.9	7686.9	60	Marcellus
39	11/18/2018	7319.7	7487.7	60	Marcellus
40	11/18/2018	7120.5	7288.5	60	Marcellus
41	11/19/2018	6921.3	7089.3	60	Marcellus

API 47-095-02404 **Farm Name** Steven McPeek et al **Well Number** Copper John Unit 1H

EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	10/31/2018	64.70518	7152.34	6061	4121	348650	9041.22	N/A
2	11/1/2018	69.62335	7138.065	6000	4061	375100	7638.91	N/A
3	11/2/2018	71.36538	7554.246	7826	3987	398450	9683.75	N/A
4	11/2/2018	70.22782	7079.233	5646	4005	404050	8005	N/A
5	11/3/2018	71.3508	7155.156	5910	4020	403350	8036.85	N/A
6	11/3/2018	68.73856	6875.365	5722	3524	403450	8047	N/A
7	11/4/2018	70.76975	6832.149	5690	3745	404150	7911	N/A
8	11/5/2018	75.83253	7108.331	5653	4333	402350	8036.57	N/A
9	11/5/2018	74.77734	7326.734	6044	4340	403650	7855.2	N/A
10	11/5/2018	73.65924	7342.555	6202	4899	388000	7875	N/A
11	11/6/2018	72.49092	7162.362	6185	4177	404650	7865	N/A
12	11/6/2018	72.89168	7219.645	5858	4900	404500	7851.36	N/A
13	11/6/2018	73.16055	7147.665	5658	3968	403400	7890	N/A
14	11/6/2018	73.16678	6984.537	5325	4466	404500	7890	N/A
15	11/7/2018	77.38324	7381.493	6053	4040	404550	7847.55	N/A
16	11/8/2018	76.21512	7237.184	6307	3666	405300	7992.7	N/A
17	11/8/2018	77.35655	7172.083	6093	3720	404450	8021.73	N/A
18	11/9/2018	76.32077	7085.608	5995	4539	404200	8015.09	N/A
19	11/9/2018	76.95866	6975.404	5893	3900	404000	7854.83	N/A
20	11/9/2018	75.32552	6754.252	6393	3993	403250	7988.99	N/A
21	11/10/2018	80.10974	7330.074	6670	3911	403100	7801.78	N/A
22	11/10/2018	79.12098	7398.041	6508	3634	403600	7859.92	N/A
23	11/11/2018	79.35799	7359.335	6174	3900	405150	8215.98	N/A
24	11/11/2018	76.31557	7053.142	6294	3907	404050	7839.455	N/A
25	11/12/2018	77.40716	7268.543	6377	4124	403250	7771.27	N/A
26	11/12/2018	76.27576	7059.617	6710	4303	404500	7762.24	N/A
27	11/13/2018	79.70114	7326.157	6446	3900	404250	7811.47	N/A
28	11/13/2018	77.54477	6677.403	6532	4762	403800	7904.13	N/A
29	11/14/2018	78.70011	7040.836	6120	3895	404500	7914.37	N/A
30	11/14/2018	75.37008	6751.445	6768	3961	405800	7695.95	N/A
31	11/15/2018	76.18511	6786.7	6719	4189	405100	7856.39	N/A
32	11/15/2018	76.17138	6743.741	7016	3993	402650	7717.04	N/A
33	11/16/2018	80.82224	6553.456	5307	3834	405300	7639.83	N/A
34	11/16/2018	78.38088	6620.303	7239	3896	402400	7658.39	N/A
35	11/17/2018	77.45538	6646.011	7134	3668	404000	7703.9	N/A
36	11/17/2018	76.3125	6447.787	7601	3885	402550	7654.615	N/A
37	11/18/2018	75.89977	6361.079	6629	3867	403150	7717.51	N/A
38	11/18/2018	78.50575	6350.694	7233	3756	404300	7827.58	
39	11/18/2018	76.24156	7012.105	7214	3981	405000	10022.43	
40	11/18/2018	76.66795	6247.059	6314	4308	403850	7818.14	
41	11/19/2018	77.22504	6002.671	6624	4032	403700	7669.57	N/A
	AVG=	**75.4**	**6,969**	**6,345**	**4,051**	**16,458,000**	**327,210**	TOTAL

API 47-095-02404 Farm Name Steven McPeek et al Well Number Copper John Unit 1

EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD) From Surface	BOTTOM DEPTH (TVD) From Surface	TOP DEPTH (MD) From Surface
Silty Sandstone	0	205	0
Sandy siltstone	205	310	205
Sandstone	310	605	310
Silty Sandstone	605	785	605
limey siltstone	785	960	785
silty sandstone, tr. coal	960	1,110	960
silty sandstone	1,110	1,505	1,110
silty shale	1,505	1,635	1,505
sandstone, tr coal	1,635	1,645	1,635
silty sandstone	1,645	1,685	1,645
sandstone	1,685	1,760	1,685
sandy shale	1,760	1,785	1,760
shaly sand	1,785	1,847	1,785
Big Lime	1,862	2,008	1,903
Big Injun	2,008	2,481	2,054
Gantz Sand	2,481	2,613	2,553
Fifty Foot Sandstone	2,613	2,719	2,692
Gordon	2,719	3,054	2,803
Fifth Sandstone	3,054	3,108	3,165
Bayard	3,108	3,486	3,223
Warren	3,486	3,879	3,632
Speechley	3,879	4,569	4,052
Balltown	4,179	4,970	4,371
Bradford	4,569	4,970	4,791
Benson	4,970	5,227	5,225
Alexander	5,227	5,734	5,500
Rhinestreet	5,710	6,010	6,019
Sycamore	6,010	6,185	6,363
Middlesex	6,185	6,272	6,608
Burkett	6,272	6,298	6,763
Tully	6,298	6,319	6,819
Marcellus	6,319	NA	6,877

*Please note Antero determines formation tops based on mud logs that are only run on one well o
measured depth (MD) data on subsequent wells may be slightly different due to the well's u

H

BOTTOM DEPTH (MD) From Surface
205
310
605
785
960
1,110
1,505
1,635
1,645
1,685
1,760
1,785
1,888
2,054
2,553
2,692
2,803
3,165
3,223
3,632
4,052
4,791
5,225
5,225
5,500
6,043
6,363
6,608
6,763
6,819
6,877
NA

n a multi-well pad. The
nique departure.

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/31/2018
Job End Date:	11/19/2018
State:	West Virginia
County:	Tyler
API Number:	47-095-02404-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Copper John Unit 1H
Latitude:	39.41365200
Longitude:	-80.92260600
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,364
Total Base Water Volume (gal):	14,084,730
Total Base Non Water Volume:	0

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Supplied by Operator	Base Fluid					
			Water	7732-18-5	70.00000	87.52516	
Sand (Proppant)	CWS	Propping Agent					
				Listed Below			

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DWP-111	CWS	Gel Slurry					
				Listed Below			
DAP-902	CWS	Scale Inhibitor					
				Listed Below			
Hydrochloric Acid	CWS	Clean Perforations					
				Listed Below			
DAP-103	CWS	Iron Control					
				Listed Below			
Calbreak 5501	CWS	Breaker					
				Listed Below			
SaniFrac 8844	CWS	Biocide					
				Listed Below			
DWP-641	CWS	Friction Reducer					
				Listed Below			
CI-9100G	CWS	Corrosion Inhibitor					
				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					

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				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica (Quartz)	14808-60-7	100.00000	12.10260	
			Calcite	471-34-1	1.00000	0.07871	
			Hydrochloric acid	7647-01-0	37.00000	0.05930	
			Illite	12173-60-3	1.00000	0.04229	
			Distillates (petroleum), hydrotreated middle	64742-46-7	60.00000	0.03889	
			Guar gum	9000-30-0	60.00000	0.03889	
			Polymer	26100-47-0	45.00000	0.02366	
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.01578	
			Apatite	64476-38-6	0.10000	0.01210	
			Biotite	1302-27-8	0.10000	0.01210	
			Goethite	1310-14-1	0.10000	0.01210	
			Polyethylene glycol mixture	25322-68-3	54.50000	0.00604	
			2-Propenoic acid, homopolymer, sodium salt	9003-04-7	40.00000	0.00591	
			Ammonium chloride	12125-02-9	11.00000	0.00578	
			Ilmenite	98072-94-7	0.10000	0.00423	
			Quaternary ammonium compounds, bis (hydrogenated tallow alkyl)dimethyl, salts with bentonite	68953-58-2	5.00000	0.00324	
			2,2-Dibromo-3-Nitrilopropionamide	10222-01-2	20.00000	0.00222	
			Sorbitan monooleate	1338-43-8	4.00000	0.00210	
			Polyethylene glycol monooleate	9004-96-0	3.00000	0.00158	
			1,2-Propanediol	57-55-6	10.00000	0.00148	
			Ammonium Persulfate	64742-47-8	100.00000	0.00132	
			Sorbitol tetraoleate	61723-83-9	2.00000	0.00105	

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			Oxirane, 2-methyl-, polymer with oxirane, monodecyl ether	37251-67-5	1.50000	0.00097	
			Citric acid	77-92-9	60.00000	0.00054	
			Amines, tallow alkyl, ethoxylated	61791-26-2	1.00000	0.00053	
			Sodium bromide	7647-15-6	4.00000	0.00044	
			Dibromoacetonitrile	3252-43-5	3.00000	0.00033	
			Alkyloxypolyethyleneoxy ethanol	84133-50-6	0.50000	0.00026	
			Vinylidene chloride-methyl acrylate copolymer	69418-26-4	20.00000	0.00026	
			Acrylamide	79-06-1	0.10000	0.00005	
			Ethylene glycol	107-21-1	40.00000	0.00003	
			Diethylene glycol (mono) methyl ether	34590-94-8	20.00000	0.00002	
			Isopropanol	67-63-0	5.00000	0.00001	
			Tar bases, quinolone derivs, benzyl chloride-quatenized	72480-70-7	10.00000	0.00001	
			Formic Acid	64-18-6	10.00000	0.00001	
			Tar bases, quinolone derivs	68513-87-1	1.00000	0.00001	
			Cinnamaldehyde	104-55-2	10.00000	0.00001	
			Diethylene glycol	111-46-6	1.00000	0.00001	
			Ethoxylated alcohols	Proprietary	10.00000	0.00001	Proprietary CAS

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%
*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Discharge Monitoring Report
Oil and Gas General Permit

Company Name: Antero Resources Corporation
API No: 47-095-02404 County: Tyler
District: Centerville Well No: Copper John Unit 1H
Farm Name: Steven McPeek et al
Discharge Date/s From:(MMDDYY) 01/08/19 To: (MMDDYY) 02/07/19
Discharge Times. From: 0:00 To: 24:00
Total Volume to be Disposed from this facility (gallons): 765,779
Disposal Option(s) Utilized (write volumes in gallons):

(1) Land Application: _____ (Include a topographical map of the Area.)
(2) UIC: 458,877 Permit No. 3400923821, 3410523619, 3416729731, 3416729543, 3416729464, 3416729445, 3405320968, 4708509721, 3400923761, 3416723862, 3410523268
(3) Offsite Disposal: 700 Site Location: Mud Masters
(4) Reuse: 306,202 Alternate Permit Number: _____
(5) Centralized Facility: _____ Permit No. _____
(6) Other method: _____ (Include an explanation)

Follow Instructions below to determine your treatment category:
Optional Pretreatment test: n/a Cl- mg/l n/a DO mg/l

1. Do you have permission to use expedited treatment from the Director or his representative? (Y/N) n/a If yes, who? _____ and place a four (4) on line 7. If not go to line 2
2. Was Frac Fluid or flowback put into the pit? (Y/N) n/a If yes, go to line 5. If not, go to line 3.
3. Do you have a chloride value pretreatment (see above)? (Y/N) n/a If yes, go to line 4 If not, go to line 5.
4. Is the Chloride level less than 5000 mg/l? (Y/N) n/a If yes, then enter a one (1) on line 7.
5. Do you have a pretreatment value for DO? (See above) (Y/N) n/a If yes, go to line 6 If not, enter a three (3) in line 7.
6. Is the DO level greater than 2.5 mg/l?(Y/N) n/a If yes, enter a two (2) on line 7. If not, enter a three (3) on line 7.
7. n/a is the category of your pit. Use the Appropriate section.
8. Comments on Pit condition: n/a No pit on site.

Name of Principal Exec. Officer: Gretchen Kohler
Title of Officer: Senior Environmental and Regulatory Manager
Date Completed: 3/18/19

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Gretchen Kohler
Signature of a Principal Exec. Officer or Authorized agent.

Category 1
Sampling Results
API No : _____

Parameter	Predischarge Limits	Predischarge Reported	Discharge Limits	Discharge Reported	Units
pH	6-10		6-10		S.U
Settling Time	5		N/A	N/A	Days
Fe	6		6		mg/l
D.O.	2.5		2.5		mg/l
Settleable Sol.	0.5		0.5		mg/l
Cl	5,000		5,000		mg/l
Oil	Trace		Trace		Obs.
TOC**			Monitor		mg/l
Oil and Grease			Monitor		mg/l
Total Al***			Monitor		mg/l
TSS			Monitor		mg/l
Total Mn	Monitor		Monitor		mg/l
Volume			Monitor		Gal
Flow			Monitor		Gal/min
Disposal Area			Monitor		Acres

*** Al is only reported if the pH is above 9.0

Category 2
Sampling Results
API No : _____

Parameter	Predischarge Limits	Predischarge Reported	Discharge Limits	Discharge Reported	Units
pH	6-10		6-10		S.U
Settling Time	10		N/A	N/A	Days
Fe	6		6		mg/l
D.O.	2.5		2.5		mg/l
Settleable Sol.	0.5		0.5		mg/l
Cl*	12,500		12,500		mg/l
Oil	Trace		Trace		Obs.
TOC**			Monitor		mg/l
Oil and Grease			Monitor		mg/l
Total Al***			Monitor		mg/l
TSS			Monitor		mg/l
Total Mn	Monitor		Monitor		mg/l
Volume			Monitor		Gal
Flow			Monitor		Gal/min
Disposal Area			Monitor		Acres

* Can be 25,000 with inspector's approval,

(Inspector's signature): _____ Date: _____
** Include a description of your aeration technique. Aeration Code: _____
*** Al is only reported if the pH is above 9.0

Category 3
Sampling Results
API No : _____

Parameter	Predischarge Limits	Predischarge Reported	Discharge Limits	Discharge Reported	Units
pH	6-10		6-10		S.U
Settling Time	20		N/A	N/A	Days
Fe	6		6		mg/l
D.O.	2.5		2.5		mg/l
Settleable Sol.	0.5		0.5		mg/l
Cl*	12,500		12,500		mg/l
Oil	Trace		Trace		Obs.
TOC**			Monitor		mg/l
Oil and Grease			Monitor		mg/l
Total Al***			Monitor		mg/l
TSS			Monitor		mg/l
Total Mn	Monitor		Monitor		mg/l
Volume			Monitor		Gal
Flow			Monitor		Gal/min
Disposal Area			Monitor		Acres

* Can be 25,000 with inspector's approval,

(Inspector's signature): _____ Date: _____
** Include a description of your aeration technique. Aeration Code: _____
*** Al is only reported if the pH is above 9.0.

Category 4
Sampling Results
API No: _____

Parameter	Predischarge Limits	Predischarge Reported	Discharge Limits	Discharge Reported	Units
pH	6-10		6-10		S.U
Settling Time	1		N/A	N/A	Days
Fe	Monitor		Monitor		mg/l
D.O.	Monitor		Monitor		mg/l
Settleable Sol.	Monitor		Monitor		mg/l
Cl*	12,500		12,500		mg/l
Oil	Trace		Trace		Obs.
TOC**			Monitor		mg/l
Oil and Grease			Monitor		mg/l
TSS			Monitor		mg/l
Total Mn	Monitor		Monitor		mg/l
Volume			Monitor		Gal
Flow			Monitor		Gal/min
Activated Carbon (0.175)			N/A	N/A	lb/Bl
Date Site Reclaimed	N/A	N/A			10 days from dis.
Disposal Area			Monitor		Acres

* Can be 25,000 with inspector's approval,

(Inspector's signature): _____ Date: _____