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**west virginia** department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.dep.wv.gov

December 16, 2013

**WELL WORK PERMIT**  
**Rework/Solution Mining**

This permit, API Well Number: 47-5100313, issued to EAGLE NATRIUM LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin  
Chief

Operator's Well No: 9 BRINE WELL (PPG IND. INC.)  
Farm Name: AXIALL CORPORATION  
**API Well Number: 47-5100313**  
**Permit Type: Rework/Solution Mining**  
Date Issued: 12/12/2013

**Promoting a healthy environment.**

## PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

### CONDITIONS

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1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR § 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR § 4-19.1.c, if the operator is unable to sample and analyze any water well or spring within one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. This permit is being conditioned to address the possibility of flooding in the area of this well. Any tanks stored on this location must be securely anchored in cement to prevent the loss of tanks should a flood occur. In addition, cages must be placed around the well head to prevent debris from damaging the well head.

OK  
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\$400.00  
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**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**WELL WORK PERMIT APPLICATION**

1) Well Operator: Eagle Natrium LLC 51 03 509  

39600	Marshall	Franklin	New Martinsville
Operator ID                      County                      District                      Quadrangle			

2) Operator's Well Number: #9 Injection Well (FRESH WATER ONLY) 3) Elevation: 624.5

4) Well Type: (a) Oil \_\_\_\_\_ or Gas Brine  
 (b) If Gas: Production \_\_\_\_\_ / Underground Storage \_\_\_\_\_  
 Deep \_\_\_\_\_ / Shallow \_\_\_\_\_

5) Proposed Target Formation(s): Salina Proposed Target Depth: 6714'

6) Proposed Total Depth: 6835.5 Feet Formation at Proposed Total Depth: Salina

7) Approximate fresh water strata depths: 50'

8) Approximate salt water depths: 1050' to 1750'

9) Approximate coal seam depths: 256' to 261'

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10) Approximate void depths, (coal, Karst, other): N/A

DEC 11 2013

11) Does land contain coal seams tributary to active mine? No

WV Department of  
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12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)  
 See attached documents

**13) CASING AND TUBING PROGRAM**

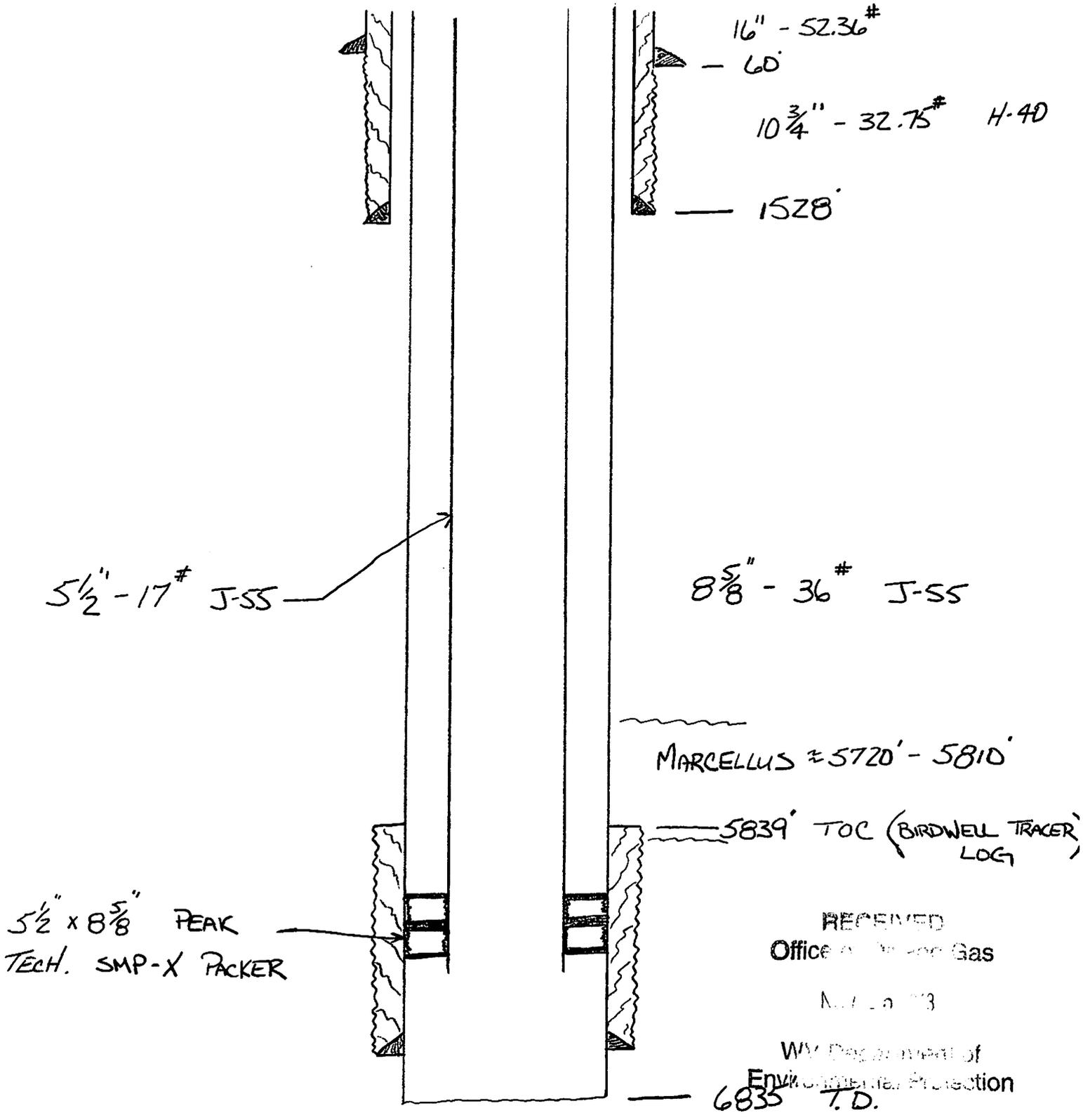
TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	16"				60'	
Fresh Water						
Coal	13 3/8"	H-40	48lb.		441'	
Intermediate	10 3/4"	H-40	32.75lb.		1528'	530 sacks
Production	8 5/8"	J-55	36lb.		6804'	400 sacks
Tubing						
Liners	5 1/2"	J-55	17lb.		6264'	

Packers: Kind: Peak Technology SMP-X  
 Sizes: 5 1/2" in 8 5/8"  
 Depths Set 6350'

BRINE WELL #9

5100313R

AXIALL CORP.



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Nov 14 1983

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6835 T.D.

**Procedure to Remediate #9 Injection Well** OF FRESHWATER ONLY

1. Set plug in 5 ½" liner at 6270'.
2. Chemical cut the 5 ½" liner at 6260'.
3. Remove 5 ½" liner.
4. Pick up 8 5/8" casing scraper w/ bit and clean ID of casing to 6260'.
5. Perform bond log to verify top of cement location.
6. Run spinner log to locate existing hole in 8 5/8" casing.
7. Attempt injection test down 8.625" csg. Pressure not to exceed 800 psi.
8. Perform High resolution Vertilog test to determine casing integrity.
9. If necessary shoot an additional 4 squeeze holes at point determined from log. (est. 5790')
10. TIH with 2.875" work string and 8.625" cement retainer.
11. Set retainer at approx. 5720'.
12. Circulate Fluorescent dye to calculate annular volume.
13. Pump cement to fill annulus from 5790' to approximately 1528'.
14. Displace cement.
15. Sting out of retainer and wash up.
16. TOOH with work string.
17. Run bond log to verify cement placement.
18. Drill out retainer.
19. Perform MIT test on casing.
20. Drill out bridge plug.
21. TOOH and secure well head.

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STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION 7

*Grad - New Martinsville*  
Permit No. MARS-313

WELL RECORD

Oil or Gas Well Brine  
(RMD)

Company Columbia-Southern Chemical Corp.  
Address New Martinsville, W. Va.  
Farm J. N. Wells Acres 86.86  
Location (waters) East Bank Ohio River, Natrium  
Well No. 9 Elev. 632.8  
District Franklin County Marshall  
The surface of tract is owned in fee by Columbia-Southern Chemical Corp. Address New Martinsville  
Mineral rights are owned by Columbia-Southern Chemical Corp. Address New Martinsville  
Drilling commenced August 1, 1957  
Drilling completed May 7, 1959  
Date Shot From To  
With  
Open Flow /10ths Water in Inch  
/10ths Merc. in Inch  
Volume Cu. Ft.  
Rock Pressure lbs. hrs.  
Oil bbls., 1st 24 hrs.  
Fresh water feet feet  
Salt water feet feet

Casing and Tubing	Used in Drilling	Left in Well	Factors
Size			
18	62'	62'	Kind of Packer
18	4 1/3"	4 1/3"	
10	1530'	1530'	Size of
8x 8-5/8	680 1/4"	680 1/4"	
6 1/2"			Depth set
5 3/16"			
3"			Perf. top
2"			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED SIZE No. Ft. Date

COAL WAS ENCOUNTERED AT FEET INCHES

FEET INCHES FEET INCHES

FEET INCHES FEET INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
---	"	"	0	4.1			
Clay	"	Soft	4.1	37			
Gravel	"	Soft	37	65			
Sand	"	Hard	65	72			
Shale	"	Hard	72	114			
Lime	"	Hard	114	162			
Coal	"	Hard	162	167			
Lime	"	Hard	167	182			
Slate	"	Hard	182	186			
Lime	"	Hard	186	198			
Shale	"	Hard	198	221			
Lime	"	Hard	221	228			
Slate	"	Hard	228	232			
Lime	"	Hard	232	246			
Slate	"	Hard	246	252			
Coal	"	Hard	252	258			Pittsburgh Coal
Shale	"	Hard	258	291			
Sand	"	Hard	291	312			
Slate	"	Hard	312	317			
Red Rock	"	Hard	317	322			
Shale	"	Hard	322	346			
Red Rock	"	Hard	346	348			
Slate	"	Hard	348	387			
Sand	"	Hard	387	396			
Red Rock	"	Hard	396	402			
Shale	"	Hard	402	432			
Red Rock	"	Hard	432	452			
Shale	"	Hard	452	497			
Sand	"	Hard	497	528			Cow Run
Shale	"	Hard	528	550			
Red Rock	"	Hard	550	555			
Shale	"	Hard	555	561			
Sand	"	Hard	561	572			
Lime	"	Hard	572	578			
Sand	"	Hard	578	602			
Slate	"	Hard	602	646			
Red Rock	"	Hard	646	651			
Shale	"	Hard	651	669			
Red Rock	"	Hard	669	682			



(Over)

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Formation	Color	Hard or Soft	Top <sup>7</sup>	Bottom	Oil, Gas or Water	Depth Found	Remarks
Shale	"	Hard	682	707			
Lime	"	Hard	707	712			
Shale	"	Hard	712	752			
Lime	"	Hard	752	765			
Shale	"	Hard	765	782			
Lime	"	Hard	782	792			
Slate	"	Hard	792	799			
Lime	"	Hard	799	809			
Shale	"	Hard	809	840			
Lime	"	Hard	840	881			
Slate	"	Hard	881	948			
Sand	"	Hard	948	982			
Slate	"	Hard	982	1029			
Sand	"	Hard	1029	1046			
Slate	"	Hard	1046	1111			
Sand	"	Hard	1111	1122			
Shale	"	Hard	1122	1172			
Sand	"	Hard	1172	1211			
Shale	"	Hard	1211	1221			
Sand	"	Hard	1221	1250			
Shale	"	Hard	1250	1277			
Lime	"	Hard	1277	1286			
Slate	"	Hard	1286	1289			
Lime	"	Hard	1289	1327			
Sand	"	Hard	1327	1597	Water 1418-1446		Big Lime Injun Sand
Shale	"	Hard	1597	1685			
Lime	"	Hard	1685	1697			
Slate & Shells	"	Hard	1697	1752			
Sand	"	Hard	1752	1802			
Lime	"	Hard	1802	1851			
Slate & Shells	"	Hard	1851	2286			
Sand	"	Hard	2286	2328			
Slate & Shells	"	Hard	2328	2376			
Sand	"	Hard	2376	2383			
Slate & Shells	"	Hard	2383	2461			
Lime	"	Hard	2461	2546			
Slate & Shells	"	Hard	2546	2898			
Lime	"	Hard	2898	2996			
Slate & Shells	"	Hard	2996	5805			
Lime	"	Hard	5805	6030			Onondaga
Sand	"	Hard	6030	6083			Oriskany
Lime	"	Hard	6083	6705			Helderberg
Salt & Lime	"	Hard	6705	6815			
Lime	"	Hard	6815	6820.5			TD 6820.5

Date May 29, 1959APPROVED Columbia-Southern Chemical Corp., OwnerBy G. I. Cobb

(Title)

G. I. Cobb, Chief Engineer

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WR-35  
Rev (9-11)

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

DATE: 7/16/2012  
API #: 47-051-0313 JP

Farm name: PPG Industries, Inc. Operator Well No.: #9 Brine Well

LOCATION: Elevation: 687.6 Quadrangle: New Martinsville, WV

District: Franklin County: Marshall  
Latitude: ~~1000~~ 6700 Feet South of 39 Deg. 45 Min. 0 Sec.  
Longitude 1000 Feet West of 80 Deg. 50 Min. 0 Sec.

Company: PPG Industries, Inc.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
N. St. Rt. 2, New Martinsville, WV 26155	16"		60'	
Agent: J. Thomas Horan	13 3/8" H-40		441'	
Inspector: Dereck M. Haught	10 3/4" H-40		1528'	530 Sacks
Date Permit Issued: 6/8/2012	8 5/8" J-55		6804'	400 Sacks
Date Well Work Commenced: 6/8/2012	5 1/2" J-55		6264'	Packer
Date Well Work Completed: 6/15/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary <input type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 6824'				
Total Measured Depth (ft): 6824'				
Fresh Water Depth (ft.):				
Salt Water Depth (ft.): 6714' - 6824' (solid)				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s)				

EXISTING  
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OCT 01 2013  
WV Department of Environmental Protection

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation N/A Pay zone depth (ft) N/A  
 Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d  
 Final open flow N/A MCF/d Final open flow N/A Bbl/d  
 Time of open flow between initial and final tests N/A Hours  
 Static rock Pressure N/A psig (surface pressure) after N/A Hours

Second producing formation N/A Pay zone depth (ft) N/A  
 Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d  
 Final open flow N/A MCF/d Final open flow N/A Bbl/d  
 Time of open flow between initial and final tests N/A Hours  
 Static rock Pressure N/A psig (surface pressure) after N/A Hours

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.

J. Thomas Horan  
Signature

7/16/12  
Date





5100313R

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Marshall

Operator  
Operator well number

Eagle Natrium LLC./Axiall Corporation  
#9 Injection Well

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A**

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

**WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure a dequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

**Comments must be in writing.** Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

**List of Water Testing Laboratories.** The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through \_\_\_ including a work order on Form WW2-B, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

\_\_\_\_\_  
Signature

Date \_\_\_\_\_

Company  
Name  
By  
Its

Eagle Natrium LLC Axiall Corporation  
Ed McLaughlin

Brine Field Engineer

Ed McLaughlin 11/14/13

Signature \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_  
Print Name

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Office of Oil and Gas

NOV 15 2013 Date

Environmental Protection

N/A

WW-2A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County \_\_\_\_\_ Operator's Well Number #9 Injection Well

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 extension 1654

WAIVER

The undersigned coal operator / owner / lessee / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature Date Company Name By Its Date Signature Date

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Office of Oil and Gas
NOV 15 2013
WV Department of Environmental Protection

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WW-2A1  
(Rev. 1/11)

Operator's Well Number #9 Injection Well

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6, Section 8(d)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
351/265			

AXIAL OWNS MINERALS

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:  
By: Its:

Eagle Natrium LLC/Axiall Corporation  
Manager, Environmental Control

*J. Titman*

NOV 15 2013

Office of Oil and Gas  
WV Department of  
Environmental Protection

5100313 R  
N/A

WW-2B1  
(5-12)

Well No. #9 Injection Well

West Virginia Department of Environmental Protection  
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name \_\_\_\_\_  
Sampling Contractor \_\_\_\_\_

Well Operator Eagle Natrium LLC/Axiall Corporation  
Address P.O. Box 191  
New Martinsville, WV 26155  
Telephone (304)455-2200

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

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NOV 15 2013  
WV Department of  
Environmental Protection

WW-9  
(5/13)

Page \_\_\_\_\_ of \_\_\_\_\_  
API Number 47 - 051 -0313  
Operator's Well No. #9 Injection Well

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Eagle Natrium LLC/Axiall Corporation OP Code 39600

Watershed (HUC 10) Ohio River Quadrangle New Martinsville

Elevation 624.5 County Marshall District Franklin

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes \_\_\_\_\_ No x

Will a pit be used for drill cuttings? Yes \_\_\_\_\_ No x

If so, please describe anticipated pit waste: \_\_\_\_\_

Will a synthetic liner be used in the pit? Yes \_\_\_\_\_ No \_\_\_\_\_ If so, what ml.? \_\_\_\_\_

Proposed Disposal Method For Treated Pit Wastes:

- \_\_\_\_\_ Land Application
- \_\_\_\_\_ Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- \_\_\_\_\_ Reuse (at API Number \_\_\_\_\_ )
- \_\_\_\_\_ Off Site Disposal (Supply form WW-9 for disposal location)
- \_\_\_\_\_ Other (Explain \_\_\_\_\_)

Will closed loop system be used? No

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Brine

-If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_

Additives to be used in drilling medium? \_\_\_\_\_

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Removed Offsite

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) \_\_\_\_\_

-Landfill or offsite name/permit number? SWF-1034

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.

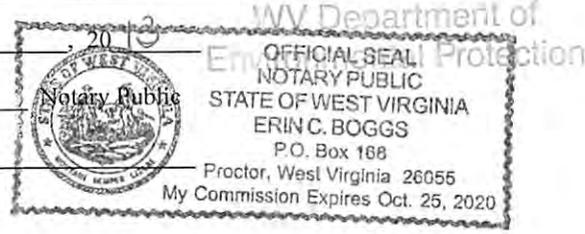
Company Official Signature J.T. Horan  
Company Official (Typed Name) J. Thomas Horan  
Company Official Title Manager, Environmental Control

RECEIVED  
Office of Oil and Gas  
NOV 15 2013

Subscribed and sworn before me this 14 day of October

Erin C. Boggs

My commission expires Oct. 25, 2020



5100313R  
N/A

Form WW-9

Operator's Well No. #9 Injection Well

Proposed Revegetation Treatment: Acres Disturbed N/A Prevegetation pH \_\_\_\_\_

Lime \_\_\_\_\_ Tons/acre or to correct to pH \_\_\_\_\_

Fertilizer (10-20-20 or equivalent) \_\_\_\_\_ lbs/acre (500 lbs minimum)

Mulch \_\_\_\_\_ Tons/acre

Seed Mixtures

Seed Type	Area I		Seed Type	Area II	
		lbs/acre			lbs/acre
_____			_____		
_____			_____		
_____			_____		

Attach:  
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: \_\_\_\_\_

Comments: \_\_\_\_\_

Title: \_\_\_\_\_

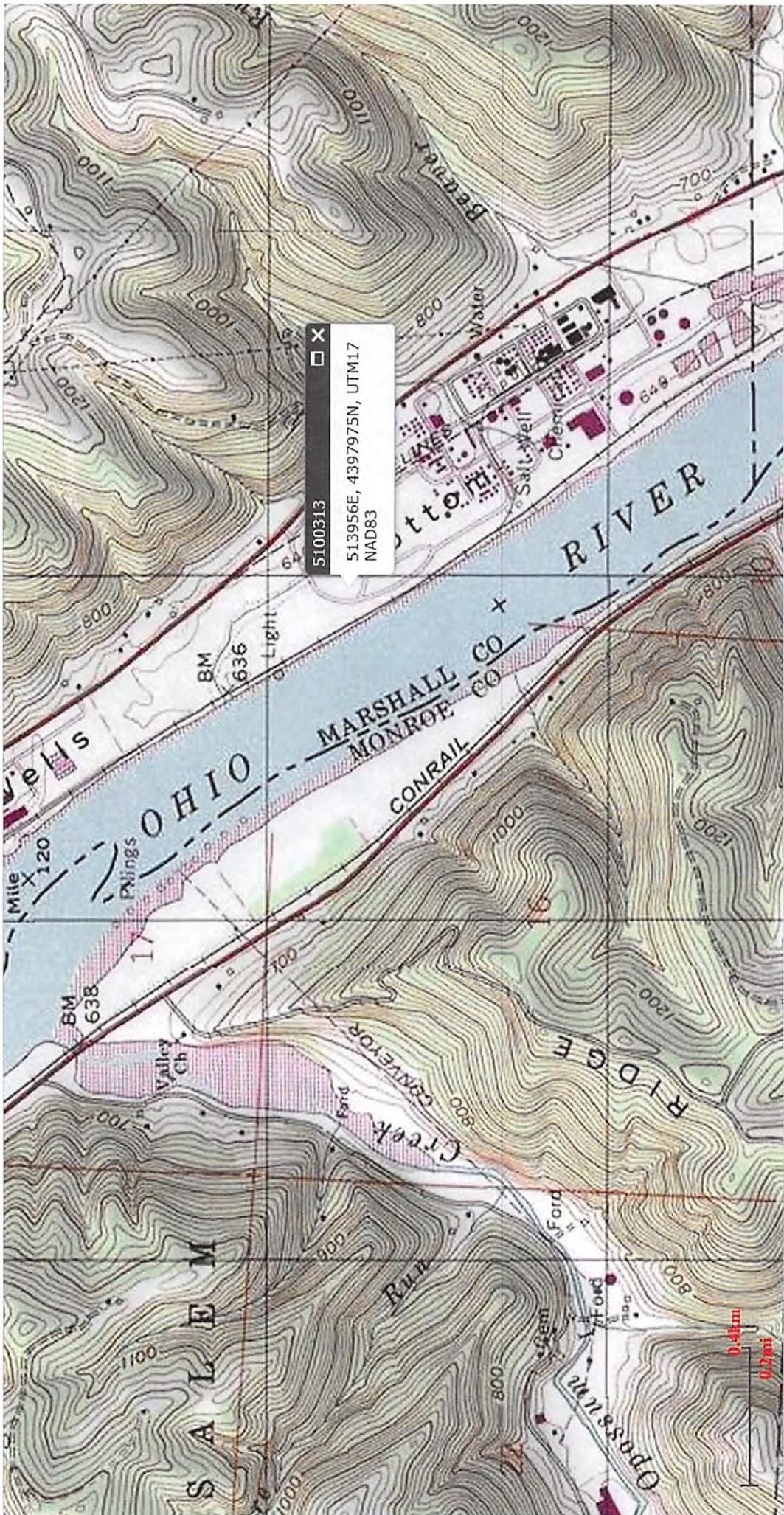
Date: \_\_\_\_\_

Field Reviewed? ( ) Yes ( ) No

RECEIVED  
Office of Oil and Gas  
NOV 15 2013  
WV Department of  
Environmental Protection

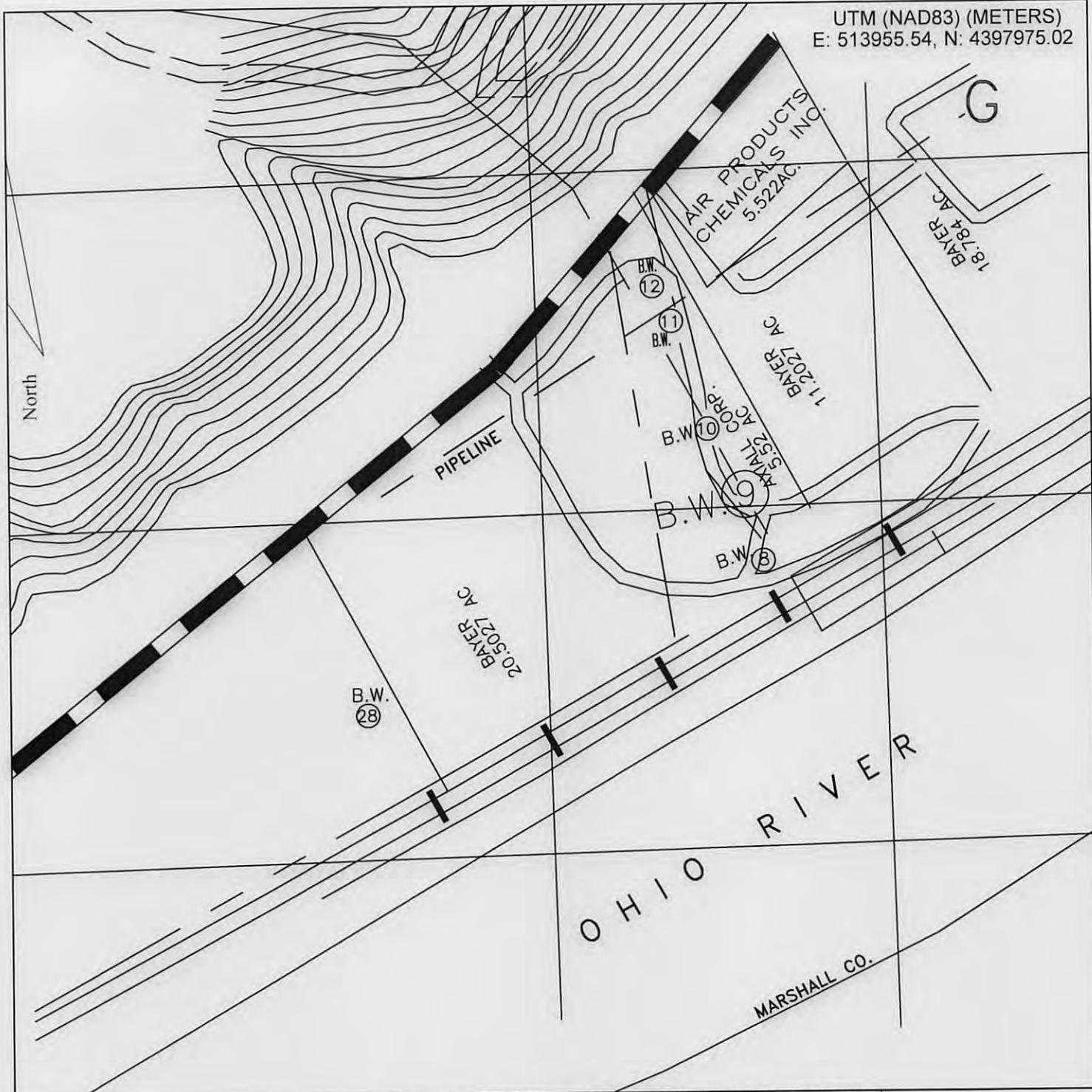


5100313R



5100313  
513956E, 4397975N, UTM17  
NAD83

UTM (NAD83) (METERS)  
E: 513955.54, N: 4397975.02



FILE #: \_\_\_\_\_  
DRAWING #: \_\_\_\_\_  
SCALE: 1" = 250'  
MINIMUM DEGREE OF ACCURACY: 1 in 10,000  
PROVEN SOURCE OF ELEVATION: GPS

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: Stephen Clark, P.E.  
L.A. \_\_\_\_\_  
R.P.E.: E-21878 L.L.S.: \_\_\_\_\_

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
WVDEP  
OFFICE OF OIL & GAS  
601 57TH STREET  
CHARLESTON, WV 25304



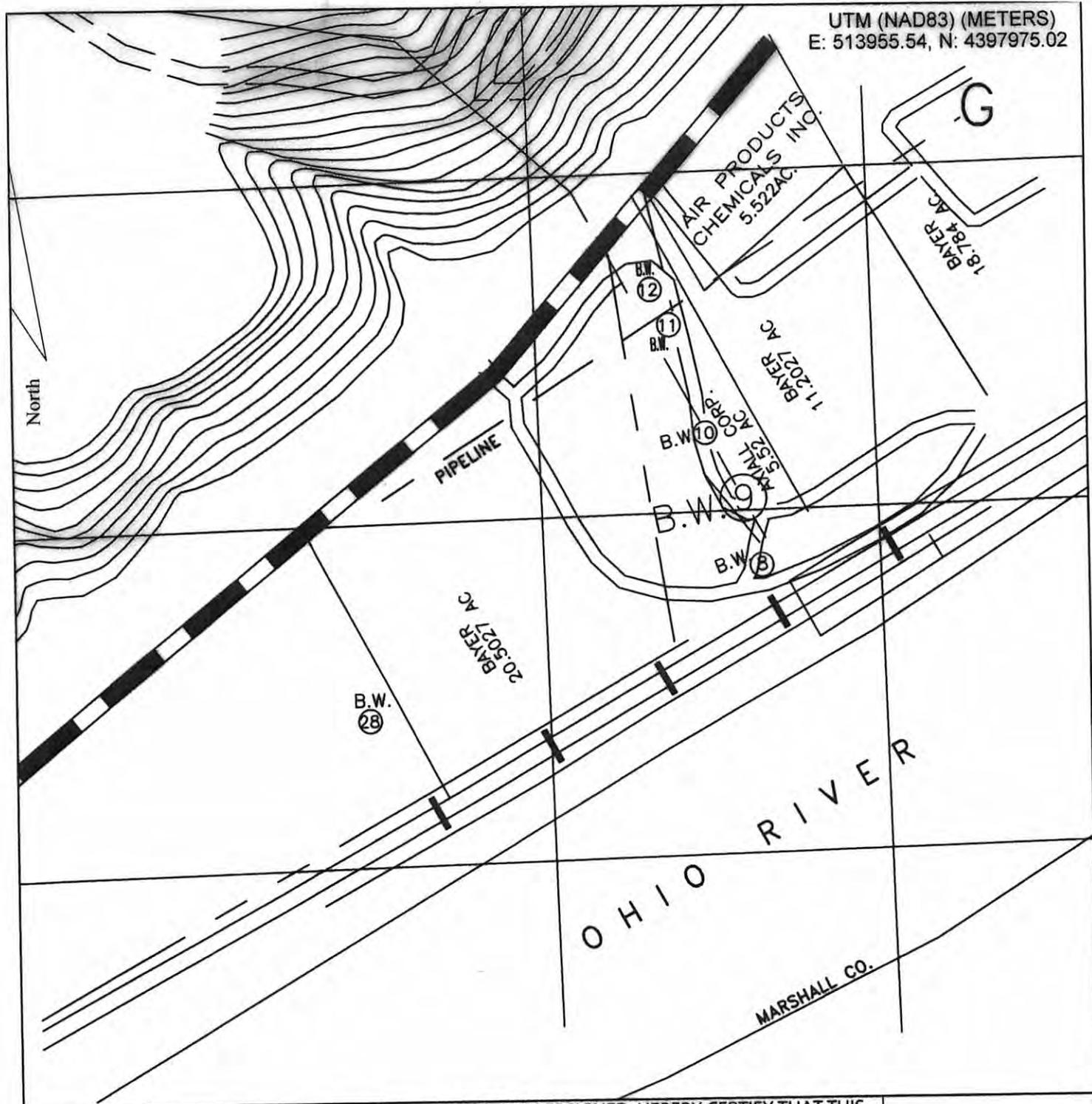
DATE: September 23, 2013  
OPERATOR'S WELL #: 9 Brine Well  
API WELL #: 47 - 051 - 00313 <sup>REMOVED</sup> W  
STATE COUNTY PERMIT

Well Type:  Oil  Waste Disposal  Production  Deep  
 Gas  Liquid Injection  Storage  Shallow

WATERSHED: Ohio River ELEVATION: 624.5  
COUNTY/DISTRICT: Marshall\Franklin QUADRANGLE: New Martinsville, WV-OHIO  
SURFACE OWNER: Axiall Corporation ACREAGE: 5.52  
OIL & GAS ROYALTY OWNER: Axiall Corporation ACREAGE: 5.52  
DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): Seal Casing

TARGET FORMATION: Salina ESTIMATED DEPTH: 6835.5 Feet  
WELL OPERATOR Eagle Natrium LLC DESIGNATED AGENT J. Thomas Horan  
Address P.O. Box 191 Address P.O. Box 191  
City New Martinsville State WV Zip Code 26155 City New Martinsville State WV Zip Code 26155

UTM (NAD83) (METERS)  
E: 513955.54, N: 4397975.02



FILE #:  
 DRAWING #:  
 SCALE: 1" = 250'  
 MINIMUM DEGREE OF ACCURACY: 1 in 10,000  
 PROVEN SOURCE OF ELEVATION: GPS

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 R.P.E.: LA. E-21878 L.L.S.:

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**CHARLESTON, WV 25304**



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