



west virginia department of environmental protection

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

October 21, 2013

WELL WORK PERMIT

Re-Work

This permit, API Well Number: 47-5100523, 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: 11 INJECTION WELL
Farm Name: EAGLE NATRIUM LLC/AXIALL C
API Well Number: 47-5100523
Permit Type: Re-Work
Date Issued: 10/21/2013

Promoting a healthy environment.

10/25/2013

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

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. 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.
3. Well work activities shall not constitute a hazard to the safety of persons.

WW - 2B
(Rev. 8/10)

51-00523 W

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

3 509

1) Well Operator: Eagle Natrium LLC.

39600	Marshall	Franklin	New Martinsville
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Operator ID County District Quadrangle

2) Operator's Well Number: # 11 Injection Well 3) Elevation: 641.35'

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: 6832'

6) Proposed Total Depth: 8454' 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'

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

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

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"		52.36#	62'	62'	
Fresh Water	10 3/4"	H-40	32.8#	1609'	1609'	To Surface
Coal						
Intermediate						
Production	7"	N-80	26#	8455'	8455'	600 sacks
Tubing						
Liners	5"	N-80	18#	365'	0'	

Packers: Kind: N/A
Sizes: _____
Depths Set _____

Procedure to Remediate #11 Injection Well

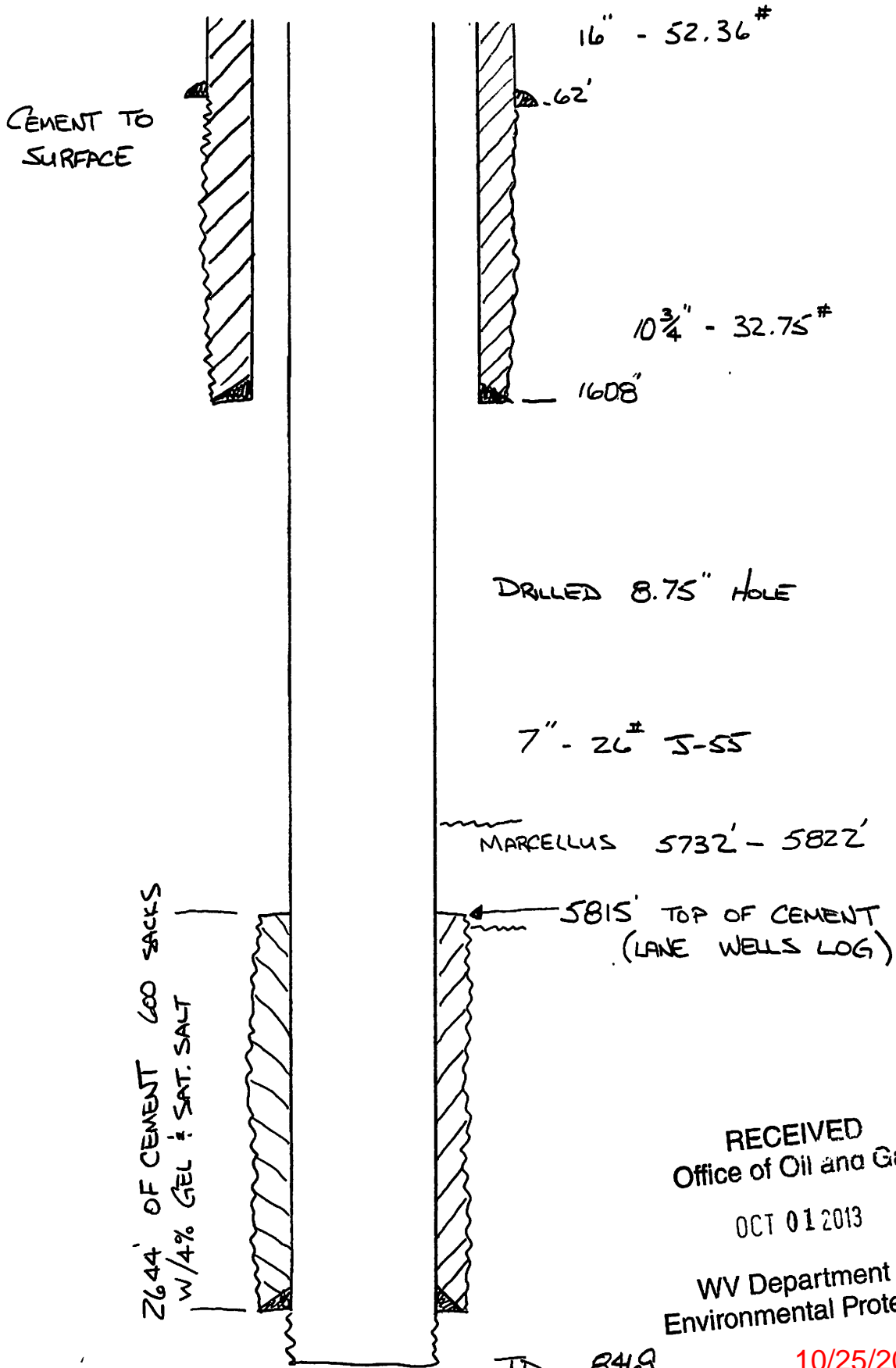
1. Pick up 7" casing scraper w/ bit and clean ID of casing to 5900'
2. Set drillable bridge plug at 5850' and load hole.
3. Allow casing to set for 6 hours to determine if any fluid loss.
4. Run cement bond log to verify cement quality, detect annular flow and any annular restrictions
5. Shoot 4 squeeze holes at point determined from log. (est. 5800')
6. Attempt injection test down 7.00" csg. Pressure not to exceed 800 psi
7. TIH with 2.875" work string and 7.00" cement retainer
8. Set retainer at approx. 5750' (or 50' above squeeze holes)
9. Establish circulation and control well with weighted fluid (10 ppg) - 290 bbls annular vol.
10. Pump cement to fill annulus from 5800' to 1600' est. 1000 sks @ 10% excess - 215 bbls
11. Displace cement to 5700' - 33 bbls
12. Sting out of retainer and wash up - 225 bbls
13. TOOH with work string
14. Run bond log to verify cement placement
15. Perform MIT test on casing
16. Drill out retainer and bridge plug
17. Verify total depth
18. TOOH and secure well head

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Office of Oil and Gas

OCT 01 2013

10/25/2013
WV Department of
Environmental Protection

BRINE WELL # 11



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 OCT 01 2013
 WV Department of
 Environmental Protection

TD 8469

10/25/2013

WW-2A
(Rev. 6-07)

1.) Date: 9/27/13
2.) Operator's Well Number #11 Injection Well
State 47- County 051 Permit 0523
3.) API Well No.:

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served: W
(a) Name Eagle Natrium LLC/Axiall Corporation
Address P.O. Box 191
New Martinsville, WV 26155
(b) Name _____
Address _____
(c) Name _____
Address _____
5) (a) Coal Operator
Name _____
Address _____
(b) Coal Owner(s) with Declaration
Name _____
Address _____
(c) Coal Lessee with Declaration
Name _____
Address _____

6) Inspector
Address _____
Telephone _____

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

OR Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

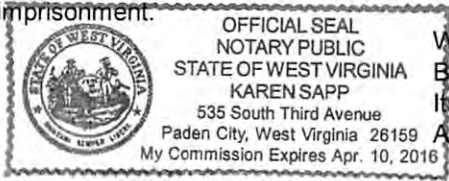
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

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, 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.



Well Operator Eagle Natrium LLC/Axiall Corporation
By: [Signature]
Its: Manager Environmental
Address P.O. Box 191
New Martinsville, WV 26155
Telephone 304-455-2200

Subscribed and sworn before me this 27th day of September 2013

Karen Sapp
My Commission Expires April 10, 2016

Notary Public **RECEIVED**
Office of Oil and Gas

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

WV Department of Environmental Protection
10/25/2013

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Marshall

Operator
Operator well number

Eagle Natrium LLC.
#11 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 57th 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 adequate 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 Eagle Natrium LLC/Axiall Corporation
By Ed McLaughlin
Its _____

Brine Field Engineer

Ed McLaughlin

Signature

RECEIVED Date

Office of Oil and Gas 9/27/13

OCT 01 2013 Date

Print Name

WV Department of
Environmental 10/25/2013

WW-2A1
(Rev. 1/11)

Operator's Well Number #11 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

SALT WELL

**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
Manager, Environmental Control

J. T. Horan

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Office of Oil and Gas

OCT 01 2013

WV Department of
Environmental Protection
10/25/2013

WW-9
(5/13)

Page _____ of _____
API Number 47 -051 -0523
Operator's Well No. #11 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 OP Code 39600

Watershed (HUC 10) Ohio River Quadrangle New Martinsville

Elevation 641.35' 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. Thomas Horan

Company Official (Typed Name) J. Thomas Horan

Company Official Title Manager, Environmental Control

Subscribed and sworn before me this 27th day of September, 2013

Karen App Notary Public

My commission expires April 10, 2016

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Form WW-9

Operator's Well No. #11 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: _____

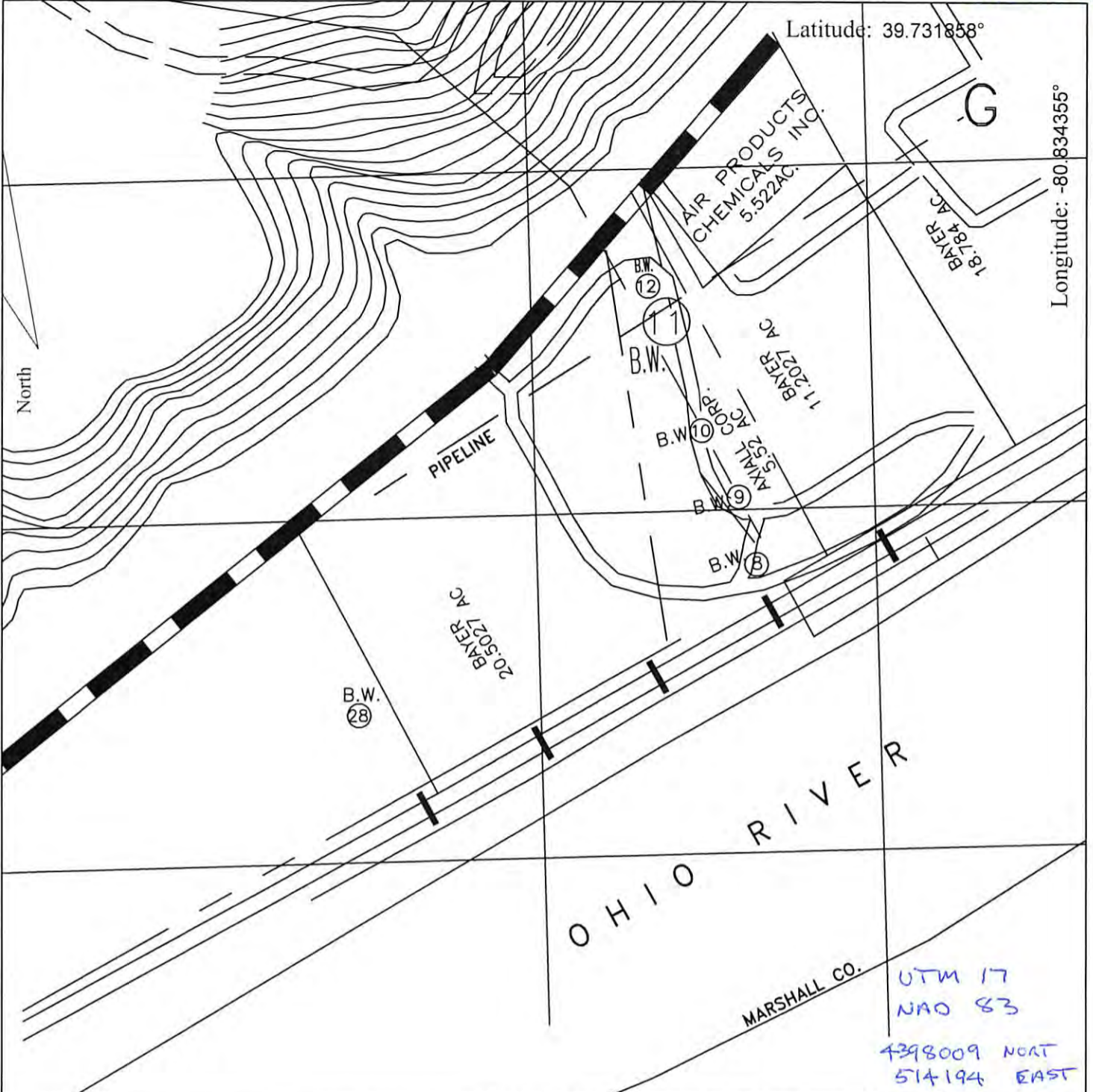
Comments: _____

Title: _____ Date: _____

Field Reviewed? () Yes () No

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OCT 01 2013
WV Department of
Environmental Protection
10/25/2013

5100523 R



UTM 17
 NAO 83
 4398009 NOAT
 514194 EAST

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: _____
 R.P.E.: _____ L.L.S.: _____

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 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 #: **11 Brine Well**
 API WELL #: **47 - 051 - 00523 R**
 STATE COUNTY PERMIT

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

WATERSHED: Ohio River ELEVATION: 633.2
 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 **10/25/2013**

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

N/A 5100523R

WW-2B1
(5-12)

Well No. #11 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
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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10/25/2013



Axiall Corporation
Eagle Natrium LLC
PO Box 191
New Martinsville, WV 26155

J. Thomas Horan
Manager Environmental
Telephone: (304) 455-2200 ext. 3310
Fax: (304) 455-2422
Tom.Horan@axiall.com

September 27, 2013

Certified Mail Return Receipt Requested

James Martin, Chief
WV Department of Environmental Protection
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

Attention: Mr. James Peterson:

**Subject: Well Work Permit Application for #11 Injection Well,
API Well Number 47-051-0523, UIC Permit No. UIC3S05101**

Please find attached, the required completed forms and associated maps for a well work permit for #11 Injection Well. The required permit fee will be submitted under a separate letter.

If you should have any questions, please call Mr. Ed McLaughlin at (304) 455-2200 extension 3476.

cc 304-266-8647

Sincerely,

J. Thomas Horan
Manager Environmental

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Office of Oil and Gas

OCT 01 2013

WV Department of
Environmental Protection

Attachments: