AP - 001

2015 GEN COR

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July 20, 2015

Mr. Glenn Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Subject: Notice for Plugging and Abandonment of Monitoring Wells
Former Brickland Refinery Site
Sunland Park, New Mexico
(Abatement Plan AP-001) – New Mexico Oil Conservation Division Approval Correspondence

Dear Mr. Von Gonten:

Huntsman is providing the New Mexico Oil Conservation Division (NMOCD) with a notice for the upcoming plugging and abandonment of monitoring wells and well points at the Former Brickland Refinery Site. Huntsman will plug and abandon wells and well points using a licensed driller in the State of New Mexico. The licensed driller, Maverick Drilling (WD-1449), has completed a Well Plugging Plan of Operations form provided by the State of New Mexico and has been approved by the Office of the State Engineer (OSE) on July 1, 2015. It is Huntsman's understanding that well plugging plan LGR-16012 includes and applies to all of the wells listed below slated for abandonment.

Huntsman expects the plugging and abandonment of the following wells and well points to be completed the week of July 20, 2015.

WELL ID	TOTAL DEPTH (FT)	Casing Size (ID) (in)
MW-1	14.25	4
MW-12	25	4
MW-14	23.3	4
MW-15	32.2	4
MW-16	29.7	4
MW-4	14	4
MW-7	13.66	4
WP-1	9.5	2
WP-14	5.6	2
WP-2	17.6	2
WP-25	Unknown	2
WP-26D	Unknown	2
WP-26S	Unknown	2
WP-27D	14.9	2
WP-27S	11.8	2
WP-3	8.8	2
WP-30	10.1	2
WP-31	13.5	2

8600 Gosling Road, The Woodlands, Texas 77381
Tel.: 1-281-719-7400 Fax.: 1-281-719-7500 www.huntsman.com

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WELL ID	TOTAL DEPTH (FT)	Casing Size (ID) (in)
WP-32	12.6	2
WP-33	12	2
WP-7	17.2	2
WP-9	6.1	2

Upon completion of the well plugging event, Maverick Drilling will submit appropriate plugging records to the OSE. A summary report for plug and abandonment of monitoring wells will be provided to the NMOCD within 45 days of receiving the plugging records from Maverick Drilling.

If you have any questions or require additional information on our addendum, please contact me at 281-719-3039 or via email at ed_l_gunderson@huntsman.com.

Sincerely,

Edward L Gunderson

Edward L. Gunderson
Senior Manager, EHS Legal and Regulatory Compliance

Huntsman/3185.1/C/5/gf

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Attachment A

Plugging Plan of Approval for LRG-16012
July 1, 2015

Tom Blaine, P.E.
State Engineer

1680 Hickory Loop, Suite J
Las Cruces, NM 88005-6598
Phone: (575) 524-6161
Fax: (575) 524-6160

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
District 4 Office

July 1, 2015

Huntsman International LLC
Edward Gunderson
8600 Gosling Road
The Woodlands, TX 77381

RE: Plugging Plan of Approval for LRG-16012

Greetings:

Enclosed is your copy of the Well Plugging Plan of Operation for LRG-16012, approved subject to the attached conditions. You are responsible for submitting a properly completed Plugging Record(s) to this office within twenty (20) days after plugging is complete. The Plugging Record is available at http://www.ose.state.nm.us/PDF/WellDrillers/WD-11.pdf

Please let us know if you have any questions.

Sincerely,

Cheryl S. Thacker
LRG Basin Supervisor
Las Cruces – Dist IV

Encl (2): Well Plugging Plan of Operations and Conditions of Approval

CC

Attachment
Conditions of Approval

Well Plugging Plan of Operations for LRG-16012

1) Well LRG-16012 shall be plugged using the methods and materials identified in the State Engineer approved Well Plugging Plan of Operations for said well.

2) A licensed well driller shall perform the plugging and keep a record of the plugging work as it progresses. A Plugging Record for well LRG-16012 must be filed with the Office of the State Engineer in Las Cruces no later than twenty (20) days after completion of the plugging.

3) NMOSE witnessing of the plugging activities will not be required, but may be provided if requested. NMOSE witnessing may be requested during normal work hours by calling the District 4 NMOSE Office at 575-524-6161, at least 48-hours in advance. NMOSE witnessing/inspection is dependent on personnel availability.

4) Should another regulatory agency sharing jurisdiction of the project authorize, or by regulation, require more stringent requirements then stated herein, the more-stringent procedure should be followed. This, in part, includes provisions regarding pre-authorization to proceed, type of methods and materials used, inspection, or prohibition of free discharge of any fluid or other material to or from the borehole that is related to the drilling and/or plugging process.

Date: July 1, 2015

Cheryl S. Thacker
LRG Basin Supervisor
Office of the State Engineer
District IV, Las Cruces

LRG 16012

WELL PLUGGING PLAN OF OPERATIONS

NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP:

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: W-1

Name of well owner: Edward Gunderson, Huntsman International, LLC.

Mailing address: 8600 Gosling Road

City: TheWoodlands State: Texas Zip code: 77381

Phone number: _____ E-mail: _____

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: Marvin Magee, Maverick Drilling, Inc.

New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016

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IV. WELL INFORMATION:

Note: A copy of the existing Well Record for the well to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: 31 deg, 47 min, 39 sec
Longitude: 106 deg, 32 min, 04 sec, NAD 83

2) Reason(s) for plugging well: No longer need monitoring wells.

3) Was well used for any type of monitoring program? Yes If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? No If yes, provide additional detail, including analytical results and/or laboratory report(s): _____

5) Static water level: 3-10 feet below land surface / feet above land surface (circle one)

6) Depth of the well: 14.25 feet

LRG-16012
TRN ?

7) Inside diameter of innermost casing: 4 inches.

8) Casing material: steel

9) The well was constructed with:

_____ an open-hole production interval, state the open interval: _____

X a well screen or perforated pipe, state the screened interval(s): unknown

10) What annular interval surrounding the artesian casing of this well is cement-grouted? _____

11) Was the well built with surface casing? No If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? _____ If yes, please describe: _____

12) Has all pumping equipment and associated piping been removed from the well? Yes If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal.

1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well: It will be poured from top.

2) Will well head be cut-off below land surface after plugging? Yes

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant

1) For plugging intervals that employ cement grout, complete and attach Table A.

2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.

3) Theoretical volume of grout required to plug the well to land surface: 1.2 cubic feet

4) Type of Cement proposed: Neat cement grout with 5% bentonite.

5) Proposed cement grout mix: 7 - 8.5 gallons of water per 94 pound sack of Portland cement.

6) Will the grout be: _____ batch-mixed and delivered to the site

X mixed on site

7) Grout additives requested, and percent by dry weight relative to cement: Bentonite 3-5%

8) Additional notes and calculations:

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

Unknown

VIII. SIGNATURE:

I, Marvin Magee, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Marvin Magee — Signature of Applicant

6-22-15 — Date

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

X Approved subject to the attached conditions.

_____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 1 day of July, 2015

Tom Blaine, P.E., STATE ENGINEER

BY Cheryl S. Thacker

Cheryl Thacker
Lower Rio Grande Basin Supervisor

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)	Top of casing		
Bottom of proposed interval of grout placement (ft bgl)	3-10		
Theoretical volume of grout required per interval (gallons)	9.3		
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement	7 - 8.5		
Mixed on-site or batch-mixed and delivered?	on site		
Grout additive 1 requested	Bentonite		
Additive 1 percent by dry weight relative to cement	3-5%		
Grout additive 2 requested	None		
Additive 2 percent by dry weight relative to cement	N/A		

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)			
Bottom of proposed sealant of grout placement (ft bgl)			
Theoretical volume of sealant required per interval (gallons)			
Proposed abandonment sealant (manufacturer and trade name)			

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Attachment B

Site Map – Plugging and Abandonment Plan

0 200’ 400’

W. PAISANO DR. (HWY. 85)

RIO GRANDE RIVER

ACCESS ROAD

FORMER BRICKLAND REFINERY SITE

BRICKLAND RD.

MW-9S
MW-6D
MW-6S
WP-27D
WP-27S
MW-15
WP-2
WP-1
WP-3
WP-32
WP-25
MW-3D
MW-17
MW-10
MW-16
MW-3S
WP-7
WP-31
WP-30
MW-7
MW-11
WP-33
WP-9
MW-14
MW-8
MW-4
WP-14
MW-1
MW-5
MW-12

Locations of WP-26S and WP-26D.

LEGEND

- MW-1 — MONITOR WELL LOCATION AND DESIGNATION
- FENCE
- CULVERT
- APPROXIMATE RIVER SAMPLING LOCATION
- WELL POINT
- MONITOR WELLS FOR BENZENE ANALYSIS
- MONITOR WELLS TO BE PLUGGED AND ABANDONED

PROPOSED – NO FURTHER MONITORING AT UPSTREAM/DOWNSTREAM LOCATIONS.

NOTES:

1. ONLY ACTIVELY MEASURED WELLS SHOWN, PLUGGED AND ABANDONED EXCLUDED.

3. SOURCE: GCL FIGURE 2, FPRDCT2. DWG (9/13/95).

FORMER BRICKLAND REFINERY
HUNTSMAN CORPORATION
SUNLAND PARK, NEW MEXICO

SITE LAYOUT

ARCADIS

FIGURE 2

DRAWN BY: S. MEN CHECKED BY: TDR PROJECT MANAGER: DRE
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