Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30 015 48530

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 11/18/2020

Confidential

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30 015 48530	97869	SWD; Devonian

Property Code	Property Name	Well Number
330847	JOHN WAYNE 26 SWD	1

OGRID No.	Operator Name	Elevation
	SOLARIS WATER MIDSTREAM	2947

Surface Location

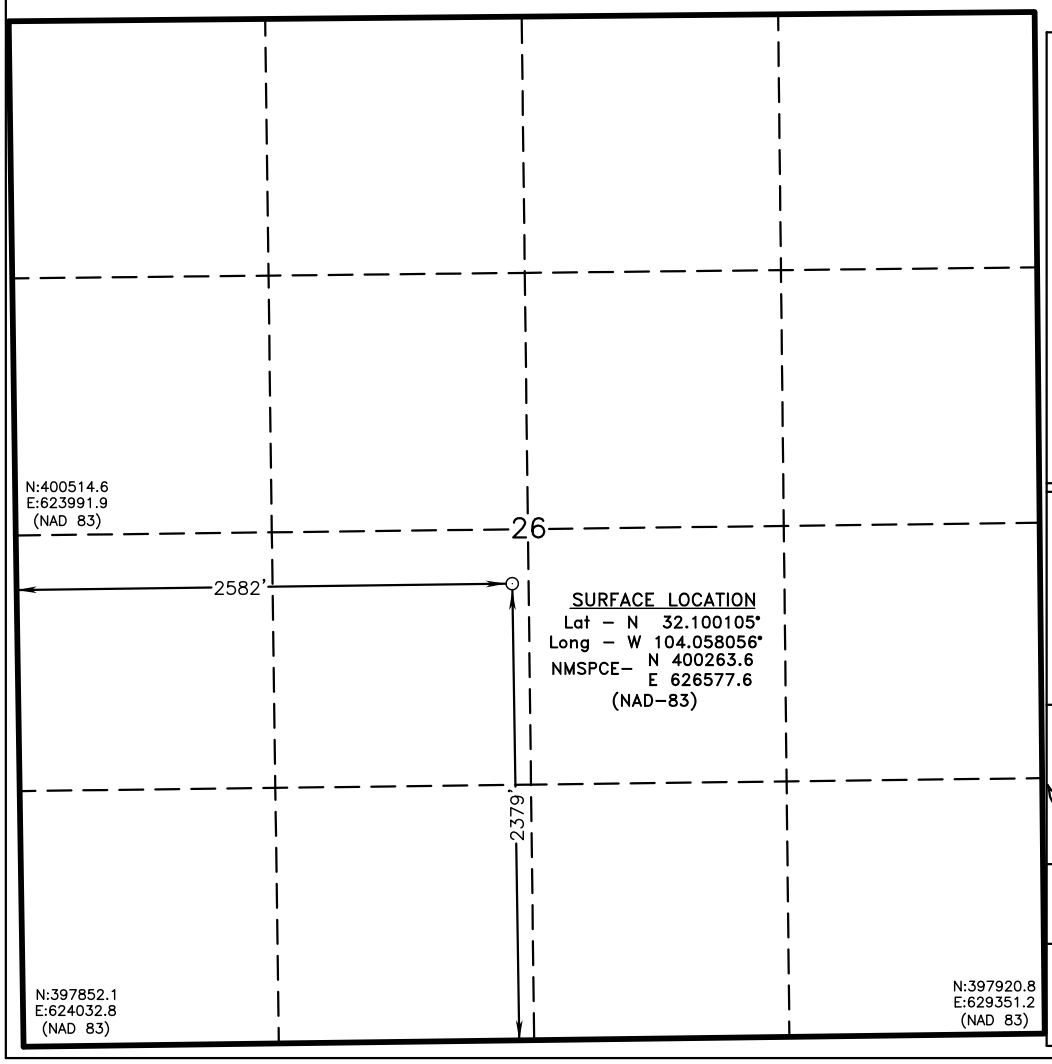
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	26	25 S	28 E		2379	SOUTH	2582	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unLEAsed mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

2/11/19

Signature Date

Whitney McKee

Printed Name

whitney.mckee@solarismidstream.com

Email Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

OCTOBER 20, 2018

Date Surveyed

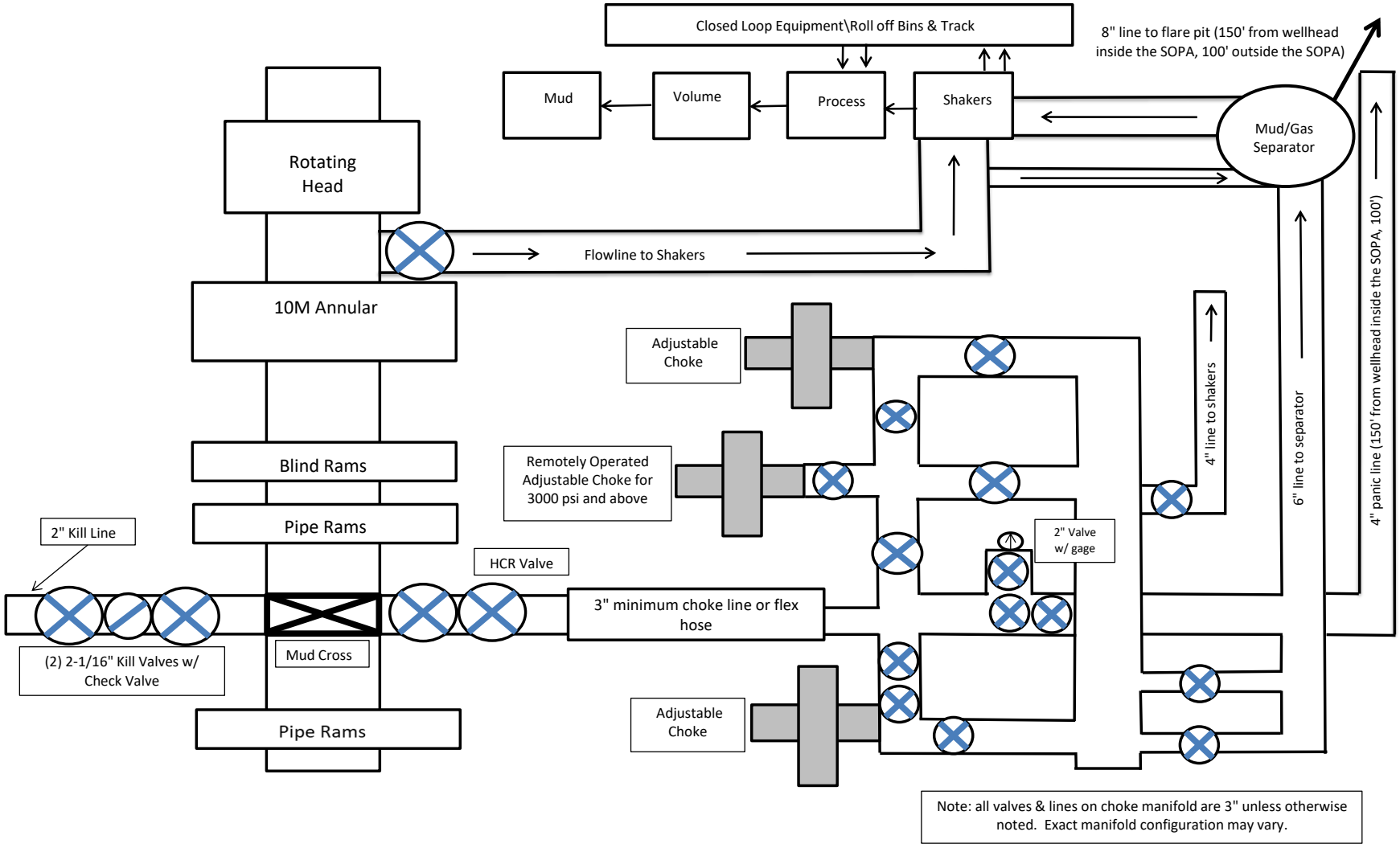
Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977
BASIN SURVEYS

0' 500' 1000' 1500' 2000'

SCALE: 1" = 1000'
WO Num.: 34141



13-5/8" X 10-M BOPE (3 Rams and Rotating Head) & Closed Loop System Equipment Schematic

Solaris Water Midstream, LLC

John Wayne 26 SWD #1
Gas Capture Plan

N/A – This is a SWD well.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**SOLARIS WATER MIDSTREAM LLC**
LEASE NO.:	**NMNM013413A**
WELL NAME & NO.:	**JOHN WAYNE 26 SWD 1**
SURFACE HOLE FOOTAGE:	**2379'/S & 2582'/W**
LOCATION:	**Section 26, T.25 S., R.28 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	◉ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	◉ None	○ Flex Hose	○ Other
Wellhead	◉ Conventional	○ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☑ Water Disposal	☐ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **20** inch surface casing shall be set at approximately **400** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to

 Approval Date: 11/18/2020

include the lead cement)

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing, which shall be set at **2600** ft, is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **9-5/8** inch production casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Production Liner must be kept fluid filled to meet BLM minimum collapse requirement.

4. The minimum required fill of cement behind the **7-5/8** inch production liner is:

- Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.

C. PRESSURE CONTROL

Standard pipe choke line must be used. No flex hose specs submitted.

1. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M)** psi.

D. SPECIAL REQUIREMENT (S)

WELL COMPLETION

The operator shall supply the BLM with a copy of a mudlog over the permitted disposal interval and estimated insitu water salinity based on open-hole logs. If hydrocarbon shows occur while drilling, the operator shall notify the BLM.

The operator shall provide to the BLM a summary of formation depth picks based on mudlog and geophysical logs along with a copy of the mudlog and open hole logs from TD to top of Devonian

A NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:

1. **Properly evaluate the injection zone utilizing open hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.**
2. **Restrict the injection fluid to the approved formation.**
3. **If a step rate test will be run an NOI sundry shall be submitted to the BLM for approval**

If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

JJP11062020

 Approval Date: 11/18/2020

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
03/01/2021

APD ID: 10400039011
Submission Date: 09/10/2019
Operator Name: SOLARIS WATER MIDSTREAM LLC
Well Name: JOHN WAYNE 26 SWD
Well Number: 1
Well Type: INJECTION - DISPOSAL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
395414	DEWEY LAKE	2947	120	120	ANHYDRITE	NONE	N
395415	RUSTLER	1867	1080	1080	ANHYDRITE	NONE	N
395416	BOTTOM SALT	482	2465	2465	ANHYDRITE	NONE	N
395417	DELAWARE LIME	277	2670	2670	ANHYDRITE, DOLOMITE	NONE	N
395418	DELAWARE SAND	227	2720	2720	ANHYDRITE, DOLOMITE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
395419	CHERRY CANYON	-543	3490	3490	ANHYDRITE, DOLOMITE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
395420	BRUSHY CANYON	-1763	4710	4710	ANHYDRITE, DOLOMITE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
395421	BONE SPRINGS	-3408	6355	6355	ANHYDRITE, DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
395422	WOLFCAMP	-6683	9630	9630	DOLOMITE, LIMESTONE	NATURAL GAS, OIL	N
395423	STRAWN	-8623	11570	11570	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
395424	ATOKA	-9033	11980	11980	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
395444	MORROW LIME	-9748	12695	12695	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
395445	MIDDLE MORROW	-10193	13140	13140	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
395457	MISSISSIPPIAN	-11263	14210	14210	LIMESTONE, SHALE	NATURAL GAS, OIL	N
395458	WOODFORD	-11518	14465	14465	CHERT, DOLOMITE, LIMESTONE, SHALE	NATURAL GAS, OIL	N
395459	DEVONIAN	-11653	14600	14600	CHERT, DOLOMITE	OIL	Y
395460	FUSSELMAN	-12883	15830	15830	CHERT, DOLOMITE	OIL	Y

Operator Name: SOLARIS WATER MIDSTREAM LLC

Well Name: JOHN WAYNE 26 SWD **Well Number:** 1

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 10000

Equipment: All required equipment per Federal Regulations to be in place prior to drilling out the surface casing.

Requesting Variance? NO

Variance request:

Testing Procedure: The BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure as per Onshore Order 2 requirements. Pipe Rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include an upper and lower Kelly cock, floor safety valve (inside BOP), wellhead wear bushing, press gauges, remote choke, choke lines, choke manifold, and all items as per Onshore Order #2. Mud logging unit (2 Man) below 16" casing. Open hole and cased hole logging may be conducted in intermediate and production hole sections. Logs tht may be run include triple combo, sonic, and cement bond log.

Choke Diagram Attachment:

10M_BOP_Set_Diagram_20200917130408.pdf

BOP Diagram Attachment:

10M_BOP_Diagram_and_closed_loop_schematic_20200520093540.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	24	20.0	NEW	API	N	0	575	0	575			575	J-55	94	BUTT	1.81	1.37	BUOY	16.94	BUOY	32.03
2	INTERMEDIATE	17.5	13.375	NEW	API	N	0	2690	0	2690			2690	L-80	68	BUTT	1.56	3.34	BUOY	6.14	BUOY	10.4
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	10650	0	10650			10650	P-110	53.5	BUTT	1.23	1.91	BUOY	3.56	BUOY	3.54
4	LINER	8.5	7.625	NEW	API	N	10350	14610	10350	14610			4260	P-110	39	FJ	1.14	1.5	BUOY	5.95	BUOY	9.33

Casing Attachments

Operator Name: SOLARIS WATER MIDSTREAM LLC

Well Name: JOHN WAYNE 26 SWD **Well Number:** 1

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

SWM_Casing_SF_Calcs_John_Wayne_26_SWD__1_20190213134245.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

SWM_Casing_SF_Calcs_John_Wayne_26_SWD__1_20190213134329.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

SWM_Casing_SF_Calcs_John_Wayne_26_SWD__1_20190213134338.pdf

CONFIDENTIAL

Operator Name: SOLARIS WATER MIDSTREAM LLC

Well Name: JOHN WAYNE 26 SWD **Well Number:** 1

Casing Attachments

Casing ID: 4 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

SWM_Casing_SF_Calcs_John_Wayne_26_SWD__1_20190213134348.pdf

CDS_7.625_39lbs_P110_EZGO_FJ3_20200520093734.pdf

John_Wayne_26_SWD__1___Production_Liner_20200902131651.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	575	880	1.35	14.8	6.36	100	Class C Premium	C-45 Econolite, Calcium Chloride
INTERMEDIATE	Lead		0	2190	1055	2.15	12.7	11.76	50	65.35 Class C Premium	8% Premium Gel, salt, CSA-1000, C-503P
INTERMEDIATE	Tail		2190	2690	420	1.33	14.8	6.33	50	100 Class C Premuim	C-51 Suspension Agent
INTERMEDIATE	Lead		0	2800	405	2.71	11.8	16.11	100	85.15 Class C Premium-Compass Poz-Mix	Premium gel, salt
INTERMEDIATE	Tail		2800	3300	235	1.34	14.8	6.35	100	100 Class C Premium	C-45, Calcium Chloride
INTERMEDIATE	Lead	3300	3300	6475	600	2.51	11.2	14.81	50	100 TXI Lightweight	Salt, Cirtic Acid, Defoamer, STE
INTERMEDIATE	Lead		6475	9650	610	2.45	11.2	14.67	50	100 TXI Lightweight	C-45 econolite, salt, citric acid

Operator Name: SOLARIS WATER MIDSTREAM LLC

Well Name: JOHN WAYNE 26 SWD **Well Number:** 1

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail		9650	10650	395	1.23	14.6	5.73	50	65.35 Class H Premium-Compass Poz-Mix	C-45, Calcium Chloride
LINER	Lead		10350	14610	360	1.35	15.6	5.4	50	HSLD 87	C-47B, C-14B, C-24, C-23, 100 Mesh Sand, C-49

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: BOP and Choke Manifold will be used to control the well.

Describe the mud monitoring system utilized: A PVT system will be utilized to actively monitor the pit system, along wtih daily mud checks by a Mud Engineer.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
10650	10650	OTHER : Freshwater Gel	8.7	9.5							
575	575	SPUD MUD	8.5	9.2							
2690	2690	OTHER : Brine Water	9.8	10.2							
14610	14610	OTHER : Cut Brine	9	14.6							

Operator Name: SOLARIS WATER MIDSTREAM LLC

Well Name: JOHN WAYNE 26 SWD **Well Number:** 1

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

The BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure as per Onshore Order 2 requirements.

Pipe Rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include an upper and lower Kelly cock, floor safety valve (inside BOP), wellhead wear bushing, press gauges, remote choke, choke lines, choke manifold, and all items as per Onshore Order #2.

Mud logging unit (2 Man) below 16" casing. Open hole and cased hole logging may be conducted in intermediate and production hole sections. Logs tht may be run include triple combo, sonic, and cement bond log.

List of open and cased hole logs run in the well:

CBL,GR,SONIC

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 12019 **Anticipated Surface Pressure:** 8514.4

Anticipated Bottom Hole Temperature(F): 155

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

SOLARIS_H2S_CONTINGENCY_7_30_2018_20190211133011.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Proposed_Horizontal_Plan_20190211133330.docx

Other proposed operations facets description:

Other proposed operations facets attachment:

John_Wayne_26_SWD__1___Surface_20200817093140.docx
John_Wayne_26_SWD__1___1st_Intermediate_20200817093157.docx
John_Wayne_26_SWD__1___2_Stage_2nd_Intermediate_20200817093205.docx
John_Wayne_26_SWD__1___Production_Liner_20200817093215.docx

Operator Name: SOLARIS WATER MIDSTREAM LLC

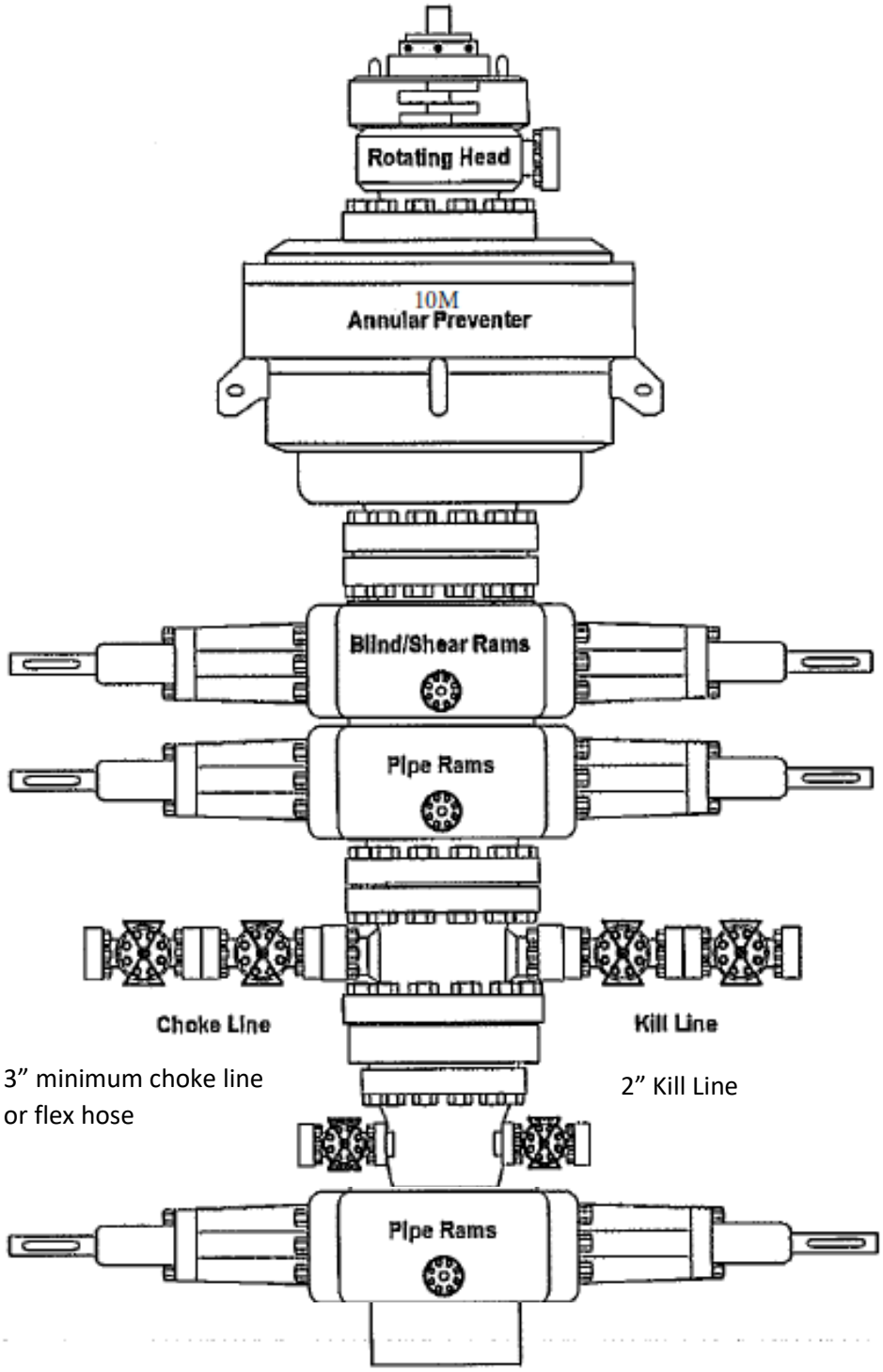
Well Name: JOHN WAYNE 26 SWD **Well Number:** 1

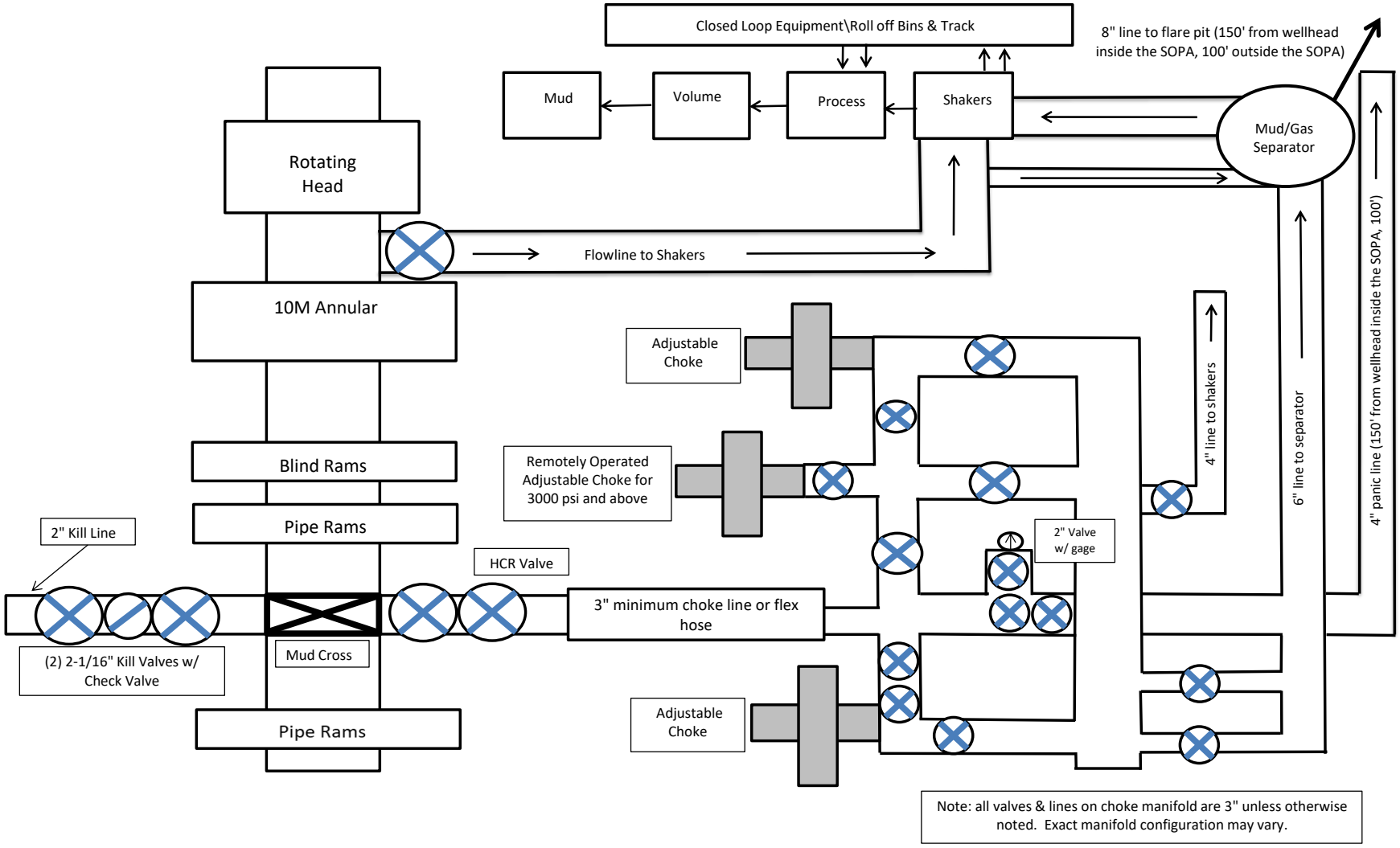
Deficiencies_Bradenhead_Testing_Pressures_20200817093505.pdf

Other Variance attachment:

CONFIDENTIAL

Representative BOP Set up





13-5/8" X 10-M BOPE (3 Rams and Rotating Head) & Closed Loop System Equipment Schematic

SOLARIS®
WATER MIDSTREAM, LLC

H_2S Contingency Plan

Developed by
SOS Consulting, LLC
September 21, 2017

This plan was developed exclusively for Solaris Water Midstream, LLC
Use of this document by its employees including
contractors, is at the discretion of Solaris management.

No part of the content may be copied or used for
other purposes by any other entity without the consent of
SOS Consulting, LLC I 903-488-9850 I info@sosconsulting.us

HYDROGEN SULFIDE CONTINGENCY PLAN

POLICY OF

SOLARIS WATER MIDSTREAM, LLC

MUST BE REVIEWED BY ALL PERSONNEL
PRIOR TO COMMENCEMENT OF OPERATIONS

PREFACE / OVERVIEW

PLAN ACTIVATION

AT A MINIMUM, THE PLAN MUST BE ACTIVATED WHENEVER A RELEASE MAY CREATE A CONCENTRATION OF H2S OF MORE THAN 100 PPM IN ANY PUBLIC AREA, 500 PPM AT ANY PUBLIC ROAD OR 100 PPM 3,000 FEET FROM THE SITE OF RELEASE.

OPERATIONAL DISTINCTION OF CONDITION

FOR ALL OPERATIONS, SOLARIS WATER MIDSTREAM, LLC WILL APPLY THESE CRITERIA TO DETERMINE THE OPERATIONAL CONDITION:

A.* NORMAL / LOW CONDITIONS:** KNOWN H2S ***IS AT OR LESS THAN 10 PPM.

PURSUANT TO NMOCD RULES AND REGULATIONS, SOLARIS WATER MIDSTREAM, LLC MAY PETITION THE NEW MEXICO OIL CONSERVATION DIVISION DIRECTOR FOR AN ***EXEMPTION*** TO ANY REQUIREMENT OF THIS SECTION.

FOR NORMAL I LOW CONDITION OPERATIONS, OTHER THAN AN AWARNESS OF THIS PLAN AND BASIC MONITORING AND WIND DIRECTION INDICATORS, AN EXEMPTION WILL BE REQUESTED AND DETAILED INFORMATION NOT OTHERWISE PROVIDED FOR IN THE NORMAL REGULATORY PERMITTING PROCESS MAY BE OMITTED.

B.* HIGH RISK CONDITIONS:** KNOWN H2S ***MAY APPROACH OR BE MORE THAN 100 PPM.

IMPLEMENTATION

THIS PLAN DETAILS PROCEDURES AND ACTIVITIES PARTICULARY GEARED TOWARDS HIGH RISK OPERATIONAL CONDITIONS .

ADDITIONAL INFORMATION SHALL BE FURHISHED IN THE FORM OF SITE SPECIFICS AND MAPS WHEN THE OPERATIONAL CONDITION IS DERTIMINED TO BE HIGH RISK.

PREFACE / OVERVIEW (continued)

A. NOTIFICATION / COORDIATION OF EMERGENCY SERVICES

PRIOR TO COMMENCING ACTIVITIES AT A HIGH-RISK SITE, THE APPROPIRATE EMERGENCY PERSONNEL FOR THE AREA WILL BE ALERTED TO THE ACTIVITY INCLUDING DATES, ANTICIPATED WORK TIMES, A COPY OF THIS PLAN AND THE FOLLOWING ITEMS SUCH THAT EMERGENCY PERSONNEL IS FULLY APPRISED OF THE OPERATION AND POTENTIAL OCURRANCES NO MATTER HOW UNLIKELY. *(REFER TO EMERGENCY TELEPHONE LIST IN SECTION 5 OF THE PLAN, PAGES 8-9.)*

B. SITE SPECIFIC PLANS SHALL INCLUDE*:

WELL OR FACILTIY NAME, LOCATION (INCLUDING GIS COORDINATES) TYPE, DEPTH, ANTICIPATED OR MEASURED H2S CONCENTRATION, WELL OR LINE PRESSURES, PRESSURE AND FLOW CONTROL EQUIPMENT AND A SCHEMATIC DIAGRAM.

C. MAPS SHALL INDICATE:

1. LOCATION OF WELL OF FACILITY WITH LOCATION IN RELATION TO ROADS, PUBLIC AREAS AND TOWNS AS APPLICABLE.

2. DIRECTION AND SPEED OF PREVAILING WINDS AT THE SITE, AS CURRENT AS POSSIBLE.

3. INGRESS / EGRESS TO THE SITE AS WELL AS TYPICAL ACCESS ROUTES FROM THE NEAREST TOWN WITH EMERGENCY SERVICES.

4. POTENTIAL ROAD CLOSURE AREAS SHALL BE COORDINATED WITH EMERGENCY PERSONNEL AND MAPPED BASED ON CRITERIA ABOVE.

*** NOTE: THIS PLAN SATISIFIES NORMAL OPERATING EVIRONMENTS. WHEN SOLARIS WATER MISTREAM, LLC PLANS DRILLING OR OTHER ACTIVITIES IN A KNOWN H2S AREA (REASONABLY EXPECTED TO APPROACH 100 PPM AND HIGHER VOLUMES), THE PLAN SHOULD BE AUGMENTED FOR THAT SPECIFIC SITE - SEE SITE SPECIFIC CHECK LIST IN APPENDIX 'B' OF THE MAIN PLAN.**

PLAN DEVELOPMENT

THIS PLAN HAS BEEN DEVELOPED IN ACCORDANCE WITH TITLE 19 NATURAL RESOURCES AND WILDLIFE CHAPTER 15, OIL AND GAS PART 11, HYDROGEN SULFIDE GAS AND ALL PARTS CONTAINED THEREIN.

IT FURTHER MEETS AS APPLICABLE, OSHA REQUIREMENTS AND API H2S PUBLICATIONS:

- 'RECOMMENDED PRACTICE FOR OIL AND GAS WELL SERVICING AND WORKOVER OPERATIONS INVOLVING HYDROGEN SULFIDE', RP-68 (API);
- 'RECOMMENDED PRACTICES FOR DRILLING AND WELL SERVICING OPERATIONS INVOLVING WELLS CONTAINING HYDROGEN SULFIDE', RP-49 (API);
- 'H2S AT CRUDE OIL PUMP STATIONS, PRODUCING WELLS, TANK BATTERIES AND ASSOCIATED PRODUCTION FACILITIES, PIPELINES, REFINERIES, GAS PLANTS AND COMPRESSOR STATIONS', RP-55 (API)

HYDROGEN SULFIDE CONTINGENCY PLAN

POLICY OF

SOLARIS WATER MIDSTREAM, LLC

PLEASE NOTICE

APPLICABILITY OF PLAN

NORMAL OPERATIONS

THIS PLAN IS GENERALLY APPLICABLE TO ALL OPERATIONS IN NORMAL CONDITIONS IN SOUTHEAST NEW MEXICO WHERE KNOWN ***H2S IS AT OR LESS THAN I0 PPM.***

HIGH RISK / KNOWN H2S AREAS

SITE SPECIFIC PLANS WILL BE DEVELOPED FOR WORK PLANNED IN HIGH RISK AREA. THESE ARE AREAS WHERE KNOWN H2S CONCENTRATION MAY REASONABLY BE EXPECTED TO ***APPROACH OR EXCEED I00 PPM*** AND AT SIGNIFICANT VOLUMES.

TO MEET THE REQUIREMENTS FOR SITE SPECIFIC PLANS, THIS PLAN WILL BE AMENDED OR AUGMENTED TO INCLUDE MAPS, DIAGRAMS AND DRAWINGS AND DETAIL THE COORDINATION BETWEEN COMPANY PERSONNEL AND COUNTY EMERGENCY AGENCIES INCLUDING LAW ENFORCEMENT.

THE CHECKLIST ON THE FOLLOWING PAGE SHOWS THE ADDITIONAL ITEMS REQUIRED TO MEET NEW MEXICO OIL CONSERVATION DIVISION RULES AND REGULATIONS.

OIL CONSERVATION DIVISION

H2S CONTINGENCY PLAN REQUIRED BY OCD RULE 19.15.11 NMAC

Operator Name: SOLARIS WATER MIDSTREAM, LLC

Date: Implemented/ Adopted September 2017

Contingency Plan Requirements Checklist				
19.15.11.9.B NMAC Requirement	**Included?**	**Page in Document?**		**Notes**
Emergency Procedures				
Responsibilities & duties of personnel during emergency	YES	2, 3		
Immediate action plan	YES	4, 5		
Evacuation and shelter in place plans	YES	9, 10		Applicable to site specific - Shelter in Place.
Telephone numbers of emergency responders	YES	8, 9		
Telephone numbers of public agencies	YES	8, 9		
Telephone numbers of local government	YES	8, 9		
Telephone numbers of appropriate public authorities	YES	8, 9		
Location of potentially affected public areas Also see 19.15.11.12.B & D	n/a			Applicable to site specific.
Location of potentially affected public roads	n/a			Applicable to site specific.
Proposed evacuation routes, with locations of road blocks	n/a			Applicable to site specific.
Procedures for notifying the public	YES	10		
Availability and location of safety equipment and supplies Also see 19.15.11.12.C	n/a	7, 13		Applicable to site specific. H2S Safety Trailer on location. Equipment list pg.13
Characteristics of hydrogen sulfide and sulfur dioxide	YES	16, 17		
Discussion of characteristics	YES	16, 17, 18		
Maps and Drawings				
Area of exposure	n/a			Applicable to site specific.
Public areas within area of exposure	n/a			Applicable to site specific.
Public roads within area of exposure	n/a			Applicable to site specific.
Training and Drills				
Training of personnel to include responsibilities, duties, hazards, detection, personal protection and contingency procedure	YES	11		Solaris Water Midsteam, LLC personnel and all contractors will be certified in H2S Safety. Training requirements are listed in plan.
Periodic drills or exercises that simuilate a release	n/a			Applicable to site specific.
Documentation of training, drills, & attendance	n/a			Applicable to site specific.
Training of residents on protective measures	n/a			Applicable to site specific.
Briefing of public officials on evacuation or shelter-in-place plans	n/a			Applicable to site specific.
Coordination with state emergency plans				
How emergency response actions will coordinate with OCD and the state police response plans	Perhaps	10, 20		[Mostly] Applicable to site specific.
Activation Levels				
Activation Levels and description of events which may lead to a release in excess of activation level	YES	4, 5		
Plan Activation				
Commitment to activate contingency plan whenever H2S concentration of more that 100 ppm in a public area or 500 ppm at a public road	YES	15		
Commitment to activate contingency plAn whenever H2S concentration of more that 100 ppm 3000 feet from the site of release	YES	15		

HYDROGEN SULFIDE CONTINGENCY PLAN

POLICY OF

SOLARIS WATER MIDSTREAM, LLC

MUST BE REVIEWED BY ALL PERSONNEL PRIOR TO COMMENCEMENT OF OPERATIONS

SCOPE

THIS CONTINGENCY PLAN ESTABLISHES GUIDELINES FOR ALL COMPANY AND CONTRACTOR PERSONNEL WHO'S WORK ACTIVITIES MAY INVOLVE EXPOSURE TO HYDROGEN SULFIDE (H2S) GAS. GUIDELINES ADDRESSING PUBLIC SAFETY ARE INCLUDED.

OBJECTIVE

1. PREVENT ANY AND ALL ACCIDENTS, AND PREVENT THE UNCONTROLLED RELEASE OF HYDROGEN SULFIDE INTO THE ATMOSPHERE.

2. PROVIDE PROPER PROCEDURES TO HANDLE EMERGENCIES AND POSSIBLE EVACUATION.

3. PROVIDE IMMEDIATE AND ADEQUATE MEDICAL ATTENTION SHOULD AN INJURY OCCUR.

IMPLEMENTATION

THIS PLAN WITH ALL DETAILS IS TO BE FULLY IMPLEMENTED BEFORE OPERATIONS COMMENCE PURSUANT TO THE CONDITION BEING:

NORMAL / LOW CONDITIONS: KNOWN H2S ***IS AT OR LESS THAN 10 PPM.***

HIGH RISK CONDITIONS: KNOWN H2S ***MAY APPROACH OR BE MORE THAN 100 PPM.***

OVERVIEW OF PLAN

1.	PERSONNEL RESPONSIBILITY **(PAGES 2-3)**	THIS SECTION SHOWS SPECIFIC RESPONSIBILITIES FOR ALL PERSONNEL PRESENT - BY TITLE OR JOB DUTIES.
2.	NORMAL / LOW H2S CONDITIONS **(PAGES 3-4)**	THIS SECTION OUTLINES PROCEDURES DURING NORMAL OPERATIONS WHEN EXPECTATIONS OF AN H2S ENVIRONMENT ARE REASONABLY LOW.

3. EMERGENCY RESPONSE PROCEDURES **(PAGES 4-6)**	THIS SECTION OUTLINES THE CONDITIONS PROCEDURE AND DENOTES STEPS TO BE TAKEN IN THE EVENT OF AN EMERGENCY OR HIGH RISK LEVELS OF H2S ARE IMMINENT.
4. HIGH RISK / EMERGENCY EQUIPMENT **(PAGES 6-7)**	THIS SECTION OUTLINES THE USE OF EMERGENCY EQUIPMENT THAT WILL BE REQUIRED FOR THE DRILLING OR WORKOVER OF THIS WELL.
S. EMERGENCY TELEPHONE NUMBERS **(PAGES 8-9)**	ALL PARTIES TO BE CONTACTED SHOULD AN EMERGENCY EXIST.
6. SAFETY BRIEFING **(PAGE 9)**	THIS SECTION DEALS WITH THE BRIEFING OF ALL PEOPLE INVOLVED IN THE DRILLING OPERATION.
7. EVACUATION / PUBLIC SAFETY **(PAGES 9-10)**	THIS SECTION DEALS WITH THE EVACUATION OF PERSONNEL AND PUBLIC SAFETY IN THE EVENT OF AN EMERGENCY.

APPENDICES

A. TRAINING REQUIREMENTS AND FIRST AIDE **(PAGE 11-12)**	ALL COMPANIES WILL INSURE THAT ALL PERSONNEL AT THE WELL SITE WILL HAVE HAD ADEQUATE TRAINING IN H2S SAFETY PROCEDURES. FIRST AIDE FOR H2S.
B. CHECK LISTS **(PAGES 13-15)**	A STATUS CHECK LIST, PROCEDURAL CHECK LIST AND SITE SPECIFIC PLAN CHECK LIST HAVE BEEN INCLUDED TO INSURE ADHERENCE TO THE PLAN.
C. EFFECTS, LEVELS, RADIUS OF EXPOSURE, THRESHOLDS **(PAGES 16-19)**	A GENERAL INFORMATION SECTION HAS BEEN INCLUDED TO SUPPLY SUPPORT INFORMATION INCLUDING EFFECTS OF H2S, LEVELS AND RADIUS OF EXPOSURE & REGULATORY THRESHOLDS.
D. INCIDENT RESPONSE PROTOCOL **(PAGE 20)**	**IN THE EVENT OF AN ACTUAL EMERGENCY INCIDENT, THIS STEP-BY-STEP PROCEDURE CAN BE TURNED TO QUICKLY AT THE BACK OF THE DOCUMENT.**

1. PERSONNEL RESPONSIBILITY

COMPANY FOREMAN /	SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THIS PLAN.

DESIGNATED PERSONNEL	SHALL BE IN COMPLETE COMMAND DURING ANY EMERGENCY. **(INCIDENT COMMANDER)** SHALL DESIGNATE A BACK-UP.
ALL PERSONNEL	**1.** ON ALARM, DON ESCAPE UNIT AND REPORT IN UP WIND BRIEFING AREA. **2.** CHECK STATUS OF PERSONNEL (BUDDY SYSTEM). **3.** SECURE BREATHING EQUIPMENT. **4.** AWAIT ORDERS FROM SUPERVISOR.
DRILLING FOREMAN / RIG OPERATOR	**1.** REPORT TO UP WIND BRIEFING AREA. **2.** DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH TOOL PUSHER OR DRILLER (BUDDY SYSTEM). **3.** DETERMINE H2S CONCENTRATIONS. **4.** ASSESS SITUATION AND TAKE CONTROL MEASURES.
TOOL PUSHER	**1.** REPORT TO UP WIND SAFETY BRIEFING AREA. **2.** DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH DRILLING FOREMAN OR DRILLER (BUDDY SYSTEM). **3.** DETERMINE H2S CONCENTRATION. **4.** ASSESS SITUATION AND TAKE CONTROL MEASURES.
DRILLER	**1.** DON ESCAPE UNIT. **2.** CHECK MONITOR FOR POINT OF RELEASE. **3.** REPORT TO BRIEFING AREA. **4.** CHECK STATUS OF PERSONNEL (IN AN ATTEMPT TO RESCUE, USE THE BUDDY SYSTEM). **5.** ASSIGNS LEAST ESSENTIAL PERSON TO NOTIFY DRILLING FOREMAN AND TOOL PUSHER BY QUICKEST MEANS IN CASE OF THEIR ABSENCE. **6.** ASSUMES THE RESPONSIBILITIES OF THE DRILLING FORMAN AND TOOL PUSHER UNTIL THEY ARRIVE SHOULD THEY BE ABSENT.
DERRICK MAN FLOOR MAN #I FLOOR MAN #2 VISITORS	REPORT TO AND REMAIN IN SAFETY BRIEFING AREA UNTIL INSTRUCTED BY SUPERVISOR.
MUD ENGINEER	**1.** REPORT TO BRIEFING AREA. **2.** WHEN INSTRUCTED, BEGIN CHECK OF MUD FOR PH AND H2S LEVEL.
SAFETY PERSONNEL	MASK UP AND CHECK STATUS OF ALL PERSONNEL AND SECURE OPERATIONS AS INSTRUCTED BY DRILLING FOREMAN AND REPORT TO BRIEFING AREA.

2. NORMAL / LOW H2S CONDITION

CONDITIONS ARE CONSIDERED NORMAL WHEN THERE ARE REASONABLE EXPECTATIONS THAT NONE OR LOW CONCENTRATIONS OF H2S WILL BE ENCOUNTERED DURING ALL PHASES OF THE CURRENT OPERATIONS. (SEE APPENDIX 'C', THRESHOLDS, PRGPH.3)

I. LOW H2S - LEVELS ARE KNOWN TO CONSISTENTLY BE AT OR **BELOW 10 PPM**.

2. NORMAL CONDIDTION EXPECTATIONS ARE BASED ON HISTORICAL EVIDENCE OF THE AREA, GEOLOGIC FORMATIONS AND TYPE OF OPERATIONS WITH REGARD TO FLUIDS BEING UTILIZED FOR DRILLIING AND/OR WORKOVER TASKS.

3. OPERATING IN A NORMAL CONDITION DOES NOT RELIEVE ANY PERSONNEL OF THEIR RESPONSIBILITY, NOR SHOULD IT LESSEN THEIR ATTENTION TO KNOWING THE SAFETY PROCEDURES THAT WILL IMMEDIATELY BE IMPLEMENTED UPON ANY EVIDENCE OF CHANGING H2S LEVELS.

4. ALL PERSONNEL WORKING ON SITE WILL DON PERSONAL H2S DETECTORS.

S. A WINDSOCK OR OTHER WIND DIRECTION INDICATOR WILL BE ON LOCATION AND EASILY VISIBLE FROM ALL AREAS.

6. ALL PERSONNEL WILL HAVE A CURRENT H2S TRAINING CARD.

7. ALL PERSONNEL WILL HAVE VIEWED THIS H2S CONTINGENCY PLAN.

3. EMERGENCY RESPONSE PROCEDURES (SEE ALSO APPENDIX 'D')

NOTICE: FOR ALL SITES AND OPERATIONS WHERE REASONABLE EXPECTATIONS ARE THAT H2S LEVELS MAY BE **ABOVE 100 PPM**, ALL SERVICE COMPANY PERSONNEL HAVE READ THIS H2S CONTINGENCY PLAN AND WILL VERBALLY INDICATE STRICT ADHERENCE TO WITH ALL PROCEDURES ESPECIALLY WITH REGARD TO THEIR JOB TITLE AND DUTIES ON THIS LOCATION.

IMMEDIATE PROCEDURES

A. IN THE EVENT OF ANY EVIDENCE OF H2S LEVEL **ABOVE 100 PPM**, (OR IS APPROACHING I00 PPM) TAKE THE FOLLOWING STEPS:

I. SECURE BREATHING EQUIPMENT.

2. ORDER NON-ESSENTIAL PERSONNEL OUT OF DANGER ZONE.

3. TAKE STEPS TO DETERMINE IF THE H2S LEVEL CAN BE CORRECTED OR SUPPRESSED AND, IF SO, PROCEED IN NORMAL OPERATION.

B. IF UNCONTROLLABLE CONDITIONS OCCUR: (SEE ALSO APPENDIX 'D')

I. TAKE STEPS TO PROTECT AND/OR REMOVE ANY PUBLIC IN THE DOWN-WIND AREA FROM THE RIG - PARTIAL EVACUATION AND ISOLATION. NOTIFY NECESSARY

PUBLIC SAFETY PERSONNEL EMERGENCY RESPONDERS OF THE SITUATION, E.G. STATE POLICE, COUNTY EMERGENCY MANAGEMENT, SHERRIF, MEDICAL IF REQUIRED.

2. REMOVE ALL PERSONNEL TO SAFE BREATHING AREA.

3. NOTIFY PUBLIC SAFETY PERSONNEL TO SAFE BREATHING AREA.

4. PROCEED WITH BEST PLAN (AT THE TIME) TO REGAIN CONTROL OF THE WELL. MAINTAIN TIGHT SECURITY AND SAFETY PROCEDURES.

EMERGENCY ACTIONS

WELL BLOWOUT - IF EMERGENCY

1. EVACUATE ALL PERSONNEL IF POSSIBLE.
2. IF SOUR GAS - EVACUATE RIG PERSONNEL.
3. IF SOUR GAS - EVACUATE PUBLIC WITHIN 3000 FT RADIUS OF EXPOSURE.
4. DON SCBA AND RESCUE.
5. CALL 911 FOR EMERGENCY HELP (FIRE DEPT AND AMBULANCE) AND NOTIFY COMPANY FOREMAN / DESIGNATED PERSONNEL.
6. GIVE FIRST AID.

PERSON DOWN LOCATION / FACILITY

1. IF IMMEDIATELY POSSIBLE, CONTACT 911. GIVE LOCATION AND WAIT FOR CONFIRMATION.
2. DON SCBA AND RESCUE - BUDDY SYSTEM ONLY.

AS APPLICABLE FOR TODAY'S CURRENT OPERATIONS / EVENTS

TAKING A KICK

WHEN TAKING A KICK DURING AN H2S EMERGENCY, ALL PERSONNEL WILL FOLLOW STANDARD BOP PROCEDURES AFTER REPORTING TO ·BRIEFING AREA AND MASKING UP.

OPEN-HOLE LOGGING

ALL UNNECESSARY PERSONNEL OFF FLOOR. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD MONITOR CONDITION, ADVISE STATUS AND DETERMINE NEED FOR USE OF AID EQUIPMENT.

RUNNING CASING OR PLUGGING

FOLLOWING THE SAME "TRIPPING" PROCEDURE AS ABOVE. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD DETERMINE IF ALL PERSONNEL HAVE ACCESS TO PROTECTIVE EQUIPMENT.

WELL OUT OF CONTROL

THE DECISION TO IGNITE THE WELL IS THE RESPONSIBILITY OF COMPANY FOREMAN. IN THE EVENT HE IS INCAPACITATED, IT BECOMES THE RESPONSIBILITY OF THE CONTRACT RIG TOOL PUSHER. THE DECISION SHOULD BE MADE ONLY AS A LAST RESORT AND IN A SITUATION WHERE IT IS CLEAR THAT:

I. HUMAN LIFE AND PROPERTY ARE ENDANGERED.

2. THERE IS NO HOPE OF CONTROLLING THE BLOWOUT UNDER THE PREVAILING CONDITIONS AT THE WELL.

NOTIFY EMERGENCY AUTHORITIES IF TIME PERMITS,
BUT DO NOT DELAY IF HUMAN LIFE IS IN DANGER.

INITIATE EVACUATION PLAN.

IGNITION PROCEDURES

INSTRUCTIONS FOR IGNITING THE WELL

I. TWO PEOPLE ARE REQUIRED FOR THE ACTUAL IGNITING OPERATION. THEY MUST WEAR SELF-CONTAINED BREATHING APPARATUS (SCBA) UNITS AND HAVE SAFETY ROPE ATTACHED. ONE MAN (TOOL PUSHER OR SAFETY ENGINEER) WILL CHECK THE ATMOSPHERE FOR EXPLOSIVE GASES WITH THE EXPLOSIMETER. THE OTHER MAN (DRILLING FOREMAN) IS RESPONSIBLE FOR IGNITING THE WELL.

2. PRIMARY METHOD TO IGNITE: 2S MM FLARE GUN WITH RANGE OF APPROXIMATELY S00 FEET.

3. IGNITE UP WIND AND DO NOT APPROACH ANY CLOSER THAN IS WARRANTED.

4. SELECT THE IGNITION SITE BEST FOR PROTECTION, AND WHICH OFFERS AN EASY ESCAPE ROUTE.

S. BEFORE FIRING, CHECK FOR PRESENCE OF COMBUSTIBLE GAS.

6. AFTER LIGHTING, CONTINUE EMERGENCY ACTION AND PROCEDURE AS BEFORE.

7. ALL UNASSIGNED PERSONNEL WILL LIMIT THEIR ACTIONS TO THOSE DIRECTED BY THE DRILLING FOREMAN.

REMEMBER: AFTER WELL IS IGNITED, BURNING HYDROGEN SULFIDE WILL CONVERT TO SULFUR DIOXIDE, WHICH IS ALSO HIGHLY TOXIC. DO NOT ASSUME THE AREA IS SAFE AFTER THE WELL IS IGNITED.

4. HIGH RISK / EMERGENCY EQUIPMENT REQUIREMENTS

A. SIGNS (ANSI STANDARD ZS3S.I-2002; SAFETY COLOR CODE)

I. ONE SIGN LOCATED AT LOCATION ENTRANCE WITH THE FOLLOWING LANGUAGE:

(LEASE) CAUTION - POTENTIAL POISON GAS HYDROGEN SULFIDE
NO ADMITTANCE WITHOUT AUTHORIZATION

B. WINDSOCK- WIND STREAMERS

I. ONE 36" (IN LENGTH) WINDSOCK LOCATED AT PROTECTION CENTER, AT HEIGHT VISIBLE FROM RIG FLOOR.

2. ONE 36" (IN LENGTH) WINDSOCK LOCATED AT HEIGHT VISIBLE FROM PIT AREAS.

C. HYDROGEN SULFIDE DETECTOR AND ALARMS

I. H2S MONITORS WITH ALARMS WILL BE LOCATED ON THE RIG FLOOR, AT THE BELL NIPPLE, AND AT THE FLOW LINE. ***THESE MONITORS WILL BE SET TO ALARM AT 15 PPM WITH RED LIGHT, AND TO ALARM AT 20 PPM WITH RED LIGHT AND AUDIBLE ALARM.***

2. HAND OPERATED DETECTORS WITH TUBES.

3. H2S MONITOR TESTER.

D. CONDITION FLAGS

I. ONE EACH OF ORANGE, YELLOW, AND RED CONDITION FLAGS TO BE DISPLAYED TO DENOTE CONDITIONS:

GREEN - NORMAL CONDITIONS (POTENTIAL)
YELLOW - POTENTIAL DANGER (MODERATE)
RED - DANGER, H2S PRESENT (EXTREME)

2. CONDITION FLAG SHALL BE POSTED AT LOCATION SIGN ENTRANCE.

E. AUXILIARY RESCUE EQUIPMENT

I. STRETCHER

2. I00' LENGTH OF S/8" NYLON ROPE.

F. MUD INSPECTION DEVICES - GARRETT GAS TRAIN OR HACH TESTER FOR INSPECTION OF SULFIDE CONCENTRATION IN MUD SYSTEM.

G. FIRE EXTINGUISHER - ADEQUATE FIRE EXTINGUISHERS SHALL BE LOCATED AT STRATEGIC LOCATIONS.

H. BLOW OUT PREVENTION EQUIPMENT - THE WELL SHALL HAVE HYDRAULIC BOP EQUIPMENT FOR THE ANTICIPATED BOTTOM HOLE PRESSURE. EQUIPMENT IS TO BE TESTED ON INSTALLATION.

I. COMBUSTIBLE GAS DETECTOR - THERE SHALL BE ONE COMBUSTIBLE GAS DETECTOR ON LOCATION AT ALL TIMES.

J. BOP TESTING - BOP AND CHOKE LINE AND KILL LINE WILL BE TESTED.

K. AUDIO SYSTEM - RADIO COMMUNICATION WILL BE AVAILABLE AT THE ***RIG, RIG FLOOR*** OR ***TRAILER*** AND ***VEHICLES***.

L. SPECIAL CONTROL EQUIPMENT - MAKE SURE OF HYDRAULIC BOP EQUIPMENT WITH REMOTE CONTROL ON GROUND AND ROTATING HEAD.

5. EMERGENCY TELEPHONE NUMBERS

CONTACT PARTY	OFFICE
SOLARIS WATER MIDSTREAM EMERGENCY	
1) **Jason Pyle** HSE Manager	**CELL: 512-750-2723**
2) **Stephen Martinez** SR. VP- Operations and Engineering	**CELL: 432) 556-0262**
3) **Mike Titsworth** Senior Operations Manager	**CELL: 432-703-8052**
STATE POLICE	
EDDY COUNTY	**575-748-9718**
LEA COUNTY	**575-392-5588**
SHERIFF	
EDDY COUNTY	**575-887-1888**
Substation - ARTESIA: 575-748-2323	
LEA COUNTY	**575-396-3611**
Substations - EUNICE: 575-394-2020; HOBBS: 575-393-2515; JAL: 575-394-2121	
EMERGENCY MEDICAL	
EDDY COUNTY	**911 OR 575-746-2701**
LEA COUNTY	**911 OR 575-394-3258**
AIRLIFT - AeroCare (Lubbock): 800-823-1991; AirMed (El Paso): 800-527-2767	
EMERGENCY RESPONSE	
EDDY COUNTY	**575-616-7155**
LEA COUNTY	**575-391-2961**

	CONTACT PARTY	OFFICE
➢	**FIRE DEPARTMENTS**	
	ARTESIA	575-746-5051
	CARLSBAD	575-885-3125
	HOBBS	575-397-9308
	EUNICE	575-394-3258
	JAL	575-395-2221
☒	**POLICE DEPARTMENTS**	
	ARTESIA	575-746-5000
	CARLSBAD	575-885-2111
	HOBBS	575-397-9265
	EUNICE	575-394-2112
	JAL	575-395-2501
➢	**TOTAL SAFETY** EDDY & LEA COUNTIES	575-392-2973
➢	**AMERICAN SAFETY SERVICES** EDDY & LEA COUNTIES	575-746-1096
➢	**WILD WELL CONTROL** MIDLAND, TX	281-784-4700
☒	**NM OIL CONSERVATION DIVISION**	

ARTESIA DIST.2 (EDDY) 575-748-1283 HOBBS DIST.1 (LEA) 575-393-6161

6. SAFETY BRIEFING

SERVICE COMPANY AND VISITING PERSONNEL

A. EACH SERVICE COMPANY THAT WILL BE ON THIS WELL WILL BE NOTIFIED IF THE ZONE CONTAINS H2S.

B. EACH SERVICE COMPANY MUST PROVIDE FOR THE TRAINING AND EQUIPMENT OF THEIR EMPLOYEES BEFORE THEY ARRIVE AT THE WELL SITE.

C. EACH SERVICE COMPANY WILL BE EXPECTED TO ATTEND A SAFETY BRIEFING.

7. EVACUATION PLAN

GENERAL REQUIREMENTS

EVACUATION ROUTES SHOULD BE ESTABLISHED PRIOR TO SPUDDING EACH WELL AND DISCUSSED WITH ALL RIG PERSONNEL.

1. DESIGNATED AREA

A. PARKING AND VISITOR AREA: ALL VEHICLES ARE TO BE PARKED AT A PRE-DETERMINED AND SAFE DISTANCE FROM THE WELLHEAD. THIS WILL BE THE DESIGNATED SMOKING AREA.

B. TWO BRIEFING AREAS ON EITHER SIDE OF THE LOCATION AT THE MAXIMUM ALLOWABLE DISTANCE FROM THE WELL BORE SO THEY OFFSET PREVAILING WINDS PERPENDICULARLY, OR AT A 4S-DEGREE ANGLE IF WIND DIRECTION TENDS TO SHIFT IN THE AREA.

C. IF A MOVABLE H2S SAFETY TRAILER IS USED, IT SHOULD BE KEPT UPWIND OF EXISTING OR PREVAILING WIND DIRECTION. WHEN WIND IS FROM THE PREVAILING DIRECTION, BOTH PROTECTION CENTERS SHOULD BE ACCESSIBLE.

2. EVACUATION IMPLEMENTATION AND PUBLIC SAFETY

TO PROTECT THE PUBLIC FROM HAZARDOUS GAS SITUATIONS ARE AS FOLLOWS:
(NOTE: REFER ALSO TO APPENDIX 'C', POTENTIALLY HAZARDOUS VOLUMES.)

I. WHEN THE COMPANY APPROVED SUPERVISOR (DESIGNATED PERSONNEL, I.E., DRILLING FOREMAN, CONSULTANT, RIG PUSHER, OR DRILLER) DETERMINES THE H2S GAS CANNOT BE LIMITED TO THE WELL LOCATION AND THE PUBLIC WILL BE INVOLVED, HE WILL ACTIVATE THE EVACUATION PLAN. ESCAPE ROUTES ARE NOTED ON AREA MAP.

2. COMPANY FOREMAN OR DESIGNATED PERSONNEL WILL NOTIFY LOCAL GOVERNMENT AGENCIES AND STATE POLICE THAT A HAZARDOUS CONDITION EXISTS AND EVACUATION NEEDS TO BE IMPLEMENTED.

3. COMPANY SAFETY PERSONNEL THAT HAVE BEEN TRAINED IN THE USE OF H2S DETECTION EQUIPMENT AND SELF-CONTAINED BREATHING EQUIPMENT WILL MONITOR H2S CONCENTRATIONS, WIND DIRECTIONS, AND AREA OF EXPOSURE. THEY WILL DELINEATE THE OUTER PERIMETER OF THE HAZARDOUS GAS AREA. EXTENSION TO THE EVACUATION AREA WILL BE DETERMINED FROM INFORMATION GATHERED.

4. LAW ENFORCEMENT PERSONNEL (STATE POLICE, LOCAL POLICE , FIRE DEPARTMENT AND SHERIFF) WILL BE CALLED TO AID IN SETTING UP AND MAINTAINING ROAD BLOCKS. ALSO, THEY WILL AID IN EVACUATION OF THE PUBLIC IF NECESSARY.

IMPORTANT: LAW ENFORCEMENT PERSONNEL WILL NOT BE ASKED TO COME INTO A CONTAMINATED AREA. THEIR ASSISTANCE WILL BE LIMITED TO UNCONTAMINATED AREAS. CONSTANT RADIO CONTACT WILL BE MAINTAINED WITH THEM.

S. AFTER THE DISCHARGE OF GAS HAS BEEN CONTROLLED, COMPANY SAFETY PERSONNEL WILL DETERMINE WHEN THE AREA IS SAFE FOR RE-ENTRY.

IT IS THE RESPONSIBILITY OF EVERY CONTRACTOR EMPLOYED BY SOLARIS WATER MIDSTREAM, LLC TO HAVE ALL THIER EMPLOYEES CERTIFIED IN H2S SAFETY.

ALL PERSONNEL ON A SOLARIS WATER MIDSTREAM, LLC SITE WILL BE REQUIRED TO HAVE ON THEIR PERSON (OR ON SITE) AN H2S TRAINING CERTIFICATE CARD THAT IS VALID FOR THE CURRENT DATE.

APPENDIX 'A'

TRAINING REQUIREMENTS

WHEN WORKING IN AN AREA WHERE ***ANY LEVEL*** OF HYDROGEN SULFIDE GAS (H2S) MIGHT BE ENCOUNTERED, DEFINITE TRAINING REQUIREMENTS MUST BE CARRIED OUT. ALL COMPANIES WILL INSURE THAT ALL PERSONNEL AT THE WELL SITE WILL HAVE HAD ADEQUATE TRAINING IN THE FOLLOWING:

1. HAZARDS AND CHARACTERISTICS OF H2S.
2. PHYSICAL EFFECTS OF HYDROGEN SULFIDE ON THE HUMAN BODY.
3. TOXICITY OF HYDROGEN SULFIDE AND SULFUR DIOXIDE.
4. H2S DETECTION.
5. EMERGENCY RESCUE.
6. RESUSCITATORS.
7. FIRST AID AND ARTIFICIAL RESPIRATION.
8. EFFECTS OF H2S ON METALS.
9. LOCATION SAFETY.

IT IS THE RESPONSIBILITY OF EVERY CONTRACTOR EMPLOYED BY SOLARIS WATER MIDSTREAM OPERATING, LLC TO HAVE ALL THIER EMPLOYEES CERTIFIED IN H2S SAFETY.

ALL PERSONNEL ON A SOLARIS WATER MIDSTREAM, LLC SITE WILL BE REQUIRED TO HAVE ON THEIR PERSON AN H2S TRAINING CERTIFICATE CARD THAT IS VALID FOR THE CURRENT DATE.

This plan was developed exclusively for Solaris Water Midstream, LLC
No part of the content may be copied or used for
other purposes by any other entity without the consent of
SOS Consulting, LLC I 903-488-9850 I info@sosconsulting.us

APPENDIX 'A' (continued)

FIRST AID FOR H2S POISONING

DO NOT PANIC - REMAIN CALM - THINK!

I. HOLD YOUR BREATH. (DO NOT INHALE FIRST - JUST STOP BREATHING.)

2. PUT ON BREATHING APPARATUS.

3. REMOVE VICTIM(S) TO FRESH AIR AS QUICKLY AS POSSIBLE. (GO UP-WIND FROM SOURCE OR AT RIGHT ANGLE TO THE WIND - NOT DOWNWIND.)

4. YELL (!) ***"SOMEONE CALL 911". YELL!!***

S. BRIEFLY APPLY CHEST PRESSURE - ARM LIFT METHOD OF ARTIFICIAL RESPIRATION TO CLEAN THE VICTIM'S LUNGS AND TO AVOID INHALING ANY TOXIC GAS DIRECTLY FROM THE VICTIM'S LUNGS.

6. PROVIDE FOR PROMPT TRANSPORTATION TO THE HOSPITAL, AND CONTINUE GIVING ARTIFICIAL RESPIRATION IF NEEDED.

7. HOSPITAL(S) OR MEDICAL FACILITIES NEED TO BE INFORMED, BEFORE-HAND, OF THE POSSIBILITY OF H2S GAS POISONING - NO MATTER HOW REMOTE THE POSSIBILITY IS.

8. NOTIFY EMERGENCY ROOM PERSONNEL THAT THE VICTIM(S) HAS BEEN EXPOSED TO H2S GAS.

BESIDES BASIC FIRST AID, EVERYONE ON LOCATION SHOULD HAVE A GOOD WORKING KNOWLEDGE OF ARTIFICIAL RESPIRATION, AS WELL AS FIRST AID FOR EYES AND SKIN CONTACT WITH H2S AND S20 GAS OR SULFURIC ACID.

EVERYONE NEEDS TO MASTER THESE NECESSARY SKILLS.

APPENDIX 'B'

STATUS CHECK LIST

APPLICABLE TO ALL OPERATIONS WHEN LEVELS ARE EXPECTED THAT APPROACH OR ARE ABOVE 100 PPM H2S.

NOTE: ALL ITEMS ON THIS LIST MUST BE COMPLETED BEFORE DRILLING TO PRODUCTION CASING POINT.

1. SIGN AT LOCATION ENTRANCE.

2. TWO (2) WINDSOCKS LOCATED AS REQUIRED.

3. TWO (2) 30-MINUTE PRESSURE DEMAND AIR PACKS ON LOCATION FOR ALL RIG PERSONNEL AND MUD LOGGERS.

4. AIR PACK INSPECTED FOR READY USE.

5. CASCADE SYSTEM AND HOSE LINE HOOK-UP.

6. CASCADE SYSTEM FOR REFILLING AIR BOTTLES.

7. SAFE BREATHING AREAS SETUP.

8. CONDITION FLAG ON LOCATION AND READY FOR USE.

9. H2S DETECTION SYSTEM HOOKED UP.

10. H2S ALARM SYSTEM HOOKED UP AND READY.

11. OXYGEN RESUSCITATOR ON LOCATION AND TESTED FOR USE.

12. STRETCHER ON LOCATION AT SAFETY TRAILER.

13. 1 - 100' LENGTH OF 5/8" NYLON ROPE ON LOCATION.

14. ALL RIG CREW AND SUPERVISORS TRAINED AS REQUIRED.

15. ALL OUTSIDE SERVICE CONTRACTORS ADVISED OF POTENTIAL H2S HAZARD ON WELL.

16. NO SMOKING SIGN POSTED.

17. HAND OPERATED H2S DETECTOR WITH TUBES ON LOCATION AND CHECKED BY DATE IS WITHIN CURRENT TIME FRAME.

APPENDIX 'B' (continued)

PROCEDURAL CHECK LIST

PERFORM DURING EACH TOUR:

I. CHECK FIRE EXTINGUISHERS TO SEE THAT THEY HAVE THE PROPER CHARGE.

2. CHECK BREATHING EQUIPMENT TO ENSURE THAT IT HAS NOT BEEN TAMPERED WITH.

3. MAKE SURE ALL THE H2S DETECTION SYSTEM IS OPERATIVE. PERFORM EACH WEEK:

4. CHECK EACH PIECE OF BREATHING EQUIPMENT TO MAKE SURE THAT DEMAND REGULATOR IS WORKING. THIS REQUIRES THAT THE BOTTLE BE OPENED AND THE MASK ASSEMBLY BE PUT ON TIGHT ENOUGH SO THAT WHEN YOU INHALE, YOU RECEIVE AIR.

S. BLOW OUT PREVENTER SKILLS ARE APPROPRIATELY COVERED BY CREW.

6. CHECK SUPPLY PRESSURE ON BOP ACCUMULATOR STAND BY SOURCE.

7. CHECK ALL SCBA UNITS FOR OPERATION:

DEMAND REGULATOR

ESCAPE BOTTLE AIR VOLUMES

SUPPLY BOTTLE OF AIR VOLUME

8. CHECK BREATHING EQUIPMENT MASK ASSEMBLY TO SEE THAT STRAPS ARE LOOSENED AND TURNED BACK, READY TO PUT ON.

9. CHECK PRESSURE ON BREATHING EQUIPMENT AIR BOTTLES TO MAKE SURE THEY ARE CHARGED TO FULL VOLUME.

I0. CONFIRM PRESSURE ON ALL SUPPLY AIR BOTTLES.

II. PERFORM BREATHING EQUIPMENT DRILLS WITH ON-SITE PERSONNEL.

I2. CHECK THE FOLLOWING FOR AVAILABILITY:

EMERGENCY TELEPHONE LIST (PAGES 8 & 9)

HAND OPERATED H2S DETECTORS AND TUBES

APPENDIX 'B' (continued)

SITE SPECIFIC PLAN CHECK LIST (NEW PLAN)

IF A WELL, FACILITY OR OPERATION IS REASONABLY EXPECTED TO INVOLVE A POTENTIALLY HAZARDOUS VOLUME OF H2S WITH CONCENTRATIONS APPROACHING I00 PPM, THE PERSON SHALL DEVELOP A H2S CONTINGENCY PLAN THAT THE PERSON WILL USE TO ALERT AND PROTECT THE PUBLIC IN ACCORDANCE WITH THE SUBSECTIONS B THROUGH I OF I9.IS.II.9 NMAC.

I. A SITE SPECIFIC PLAN WILL BE DEVELOPED AND SUBMITTED TO THE NMOCD OR OTHER APPLICABLE AGENCIES AND TO THE APPLICABLE COUNTY EMERGENCY COORDINATOR.

2. THIS PLAN AND ALL PARTS INCLUDING APPENDICES SHALL BE THE BASIS OF SUCH SITE SPECIFIC PLAN AND BEYOND THAT, ADDITIONAL REQUIREMENTS INCLUDE:

A. **SITE IDENTIFICATION** INCLUDING API NUMBER IF APPLICABLE AND LOCATION INCLUDING LAT / LONG COORDINATES.

B. **MAPS AND DRAWINGS** TO DEPICT THE AREA OF EXPOSURE AND PUBLIC AREAS AND PUBLIC ROADS WITHIN AREA OF EXPOSURE. MAPS SHALL INCLUDE POTENTIAL LEVEL 2 (S00 PPM) AND LEVEL 3 (I00 PPM) AREA OF EXPOSURE RADII BY CALCULATION. (APPENDIX 'C', PG.I9.) IF ROADS ARE INVOLVED, ROAD BLOCKS SHOULD BE DESIGNATED ON MAPS. (COORDINATE WITH LAW ENFORCEMENT AGENCIES.)

C. **TRAINING AND DRILLS** INCLUDING TRAINING IN THE RESPONSIBILITIES AND DUTIES OF ESSENTIAL PERSONNEL AND PERIODIC ON-SITE OR CLASSROOM DRILLS OR EXERCISES THAT SIMULATE A RELEASE, AND SHALL DESCRIBE HOW THE PERSON WILL DOCUMENT THE TRAINING, DRILLS AND ATTENDANCE.

D. **RESIDENT TRAINING.** WHEN APPLICABLE, THE H2S CONTINGENCY PLAN SHALL ALSO PROVIDE FOR TRAINING OF RESIDENTS AS APPROPRIATE ON THE PROPER PROTECTIVE MEASURES TO BE TAKEN IN THE EVENT OF A RELEASE, AND SHALL PROVIDE FOR BRIEFING OF PUBLIC OFFICIALS ON ISSUES SUCH AS EVACUATION OR SHELTER-IN-PLACE PLANS.

E. **COORDINATION WITH STATE EMERGENCY PLANS**. THE H2S CONTINGENCY PLAN SHALL DESCRIBE HOW THE PERSON WILL COORDINATE EMERGENCY RESPONSE ACTIONS UNDER THE PLAN WITH THE DIVISION AND THE NEW MEXICO STATE POLICE CONSISTENT WITH THE NEW MEXICO HAZARDOUS MATERIALS EMERGENCY RESPONSE PLAN.

F. **PLAN ACTIVATION.** THE PERSON SHALL ACTIVATE THE H2S CONTINGENCY PLAN CONTINGENCY PLAN WHEN A RELEASE CREATES A H2S CONCENTRATION GREATER THAN THE ACTIVATION LEVEL SET FORTH IN THE H2S CONTINGENCY PLAN. AT A MINIMUM, THE PERSON SHALL ACTIVATE THE PLAN WHENEVER A RELEASE MAY CREATE A H2S CONCENTRATION OF MORE THAN I00 PPM IN A PUBLIC AREA, S00 PPM AT A PUBLIC ROAD OR I00 PPM 3000 FEET FROM THE SITE OF RELEASE.

APPENDIX 'C'

GENERAL INFORMATION

TOXIC EFFECTS OF HYDROGEN SULFIDE

HYDROGEN SULFIDE IS EXTREMELY TOXIC. THE ACCEPTABLE CEILING CONCENTRATION FOR EIGHT-HOUR EXPOSURE IS I0 PPM, WHICH IS .00I% BY VOLUME.

HYDROGEN SULFIDE IS HEAVIER THAN AIR (SPECIFIC GRAVITY - I.I92) AND COLORLESS. IT FORMS AN EXPLOSIVE MIXTURE WITH AIR BETWEEN 4.3 AND 46.0 PERCENT BY VOLUME.

HYDROGEN SULFIDE IS ALMOST AS TOXIC AS HYDROGEN CYANIDE AND IS BETWEEN FIVE AND SIX TIMES MORE TOXIC THAN CARBON MONOXIDE.

TOXICITY DATA FOR HYDROGEN SULFIDE AND VARIOUS OTHER GASES ARE COMPARED IN TABLE I.

PHYSICAL EFFECTS AT VARIOUS HYDROGEN SULFIDE EXPOSURE LEVELS ARE SHOWN IN TABLE II.

TABLE I

TOXICITY OF VARIOUS GASES

COMMON NAME	*CHEMICAL FORMULA*	*SPECIFIC GRAVITY*	*THRESHOLD LIMIT (1)*	*HAZARDOUS LIMIT (2)*	*LETHAL CONCENTRATION (3)*
HYDROGEN SULFIDE	**H2S**	**1.19**	**10 PPM**	**100 PPM/HR**	**600 PPM**
HYDROGEN CYANIDE	**HCN**	**0.94**	**10 PPM**	**150 PPM/HR**	**300 PPM**
SULFUR DIOXIDE	**SO2**	**2.21**	**2 PPM**	**N/A**	**1000 PPM**
CHLORINE	**CL2**	**2.45**	**1 PPM**	**150 PPM/HR**	**1000 PPM**
CARBON MONOXIDE	**CO**	**0.97**	**50 PPM**	**150 PPM/HR**	**1000 PPM**
CARBON DIOXIDE	**CO2**	**1.52**	**5000 PPM**	**5%**	**10%**
METHANE	**CH4**	**0.55**	**90,000 PPM**	**COMBUSTIBLE @ 5% IN AIR**	**N/A**

(I) THRESHOLD LIMIT - CONCENTRATION AT WHICH IT IS BELIEVED THAT ALL WORKERS MAY BE REPEATEDLY EXPOSED DAY AFTER DAY WITHOUT ADVERSE EFFECTS.

(2) HAZARDOUS LIMIT - CONCENTRATION THAT MAY CAUSE DEATH WITH PROLONGED EXPOSURE.

(3) LETHAL CONCENTRATION - CONCENTRATION THAT WILL CAUSE DEATH WITH SHORT-TERM EXPOSURE.

APPENDIX 'C' (continued)

TABLE II

PHYSICAL EFFECTS OF HYDROGEN SULFIDE

CONCENTRATION	*PHYSICAL EFFECTS*
0.001 or 10 PPM	**OBVIOUS AND UNPLEASANT ODOR. SAFE FOR 8 HOURS OF EXPOSURE.**
0.002 or 20 PPM	**MAY STING EYES AND THROAT. MAY CAUSE FLU-LIKE SYMPTOMS.**
0.010 or 100 PPM	**KILLS SMELL IN 3 - 15 MINUTES. STINGS EYES AND THROAT. MAY HAVE SOME DIZZINESS AFTER PROLONGED EXPOSURE.**
0.050 or 500 PPM	**DIZZINESS; BREATHING CEASES IN A FEW MINUTES; NEEDS PROMPT RESUSCITATION. MAY CAUSE LUNG DAMAGE OR DEATH AFTER 4 HOURS EXPOSURE.**
0.070 or 700 PPM	**UNCONSCIOUS QUICKLY; DEATH WILL RESULT IF NOT RESCUED PROMPTLY.**
0.100 or 1000 ppm	**UNCONSCIOUS AT ONCE; FOLLOWED BY DEATH WITHIN MINUTES.**

SCBA'S SHOULD BE WORN WHEN...

I. ANY EMPLOYEE WORKS NEAR THE TOP OR ON TOP OF ANY TANK UNLESS TESTS REVEAL LESS THAN I0 PPM OF H2S.

2. WHEN BREAKING OUT ANY LINE WHERE H2S CAN REASONABLY BE EXPECTED.

3. WHEN SAMPLING AIR IN AREAS TO DETERMINE IF TOXIC CONCENTRATIONS OF H2S EXISTS.

4. WHEN WORKING IN AREAS WHERE OVER I00 PPM H2S HAS BEEN DETECTED.

S. AT ANY TIME THERE IS A DOUBT AS TO THE H2S LEVEL IN THE AREA TO BE ENTERED.

APPENDIX 'C' (continued)

POTENTIALLY HAZARDOUS VOLUMES

THIS IS THE VOLUME OF H2S GAS OF SUCH CONCENTRATION THAT:

1. THE I00-PPM (LEVEL 3) RADIUS OF EXPOSURE INCLUDES A PUBLIC AREA;
2. THE S00-PPM (LEVEL 2) RADIUS OF EXPOSURE INCLUDES A PUBLIC ROAD;
3. THE I00-PPM RADIUS OF EXPOSURE EXCEEDS 3000 FEET.

(I) RADIUS OF EXPOSURE MEANS THE RADIUS CONSTRUCTED WITH THE POINT OF ESCAPE AS ITS STARTING POINT AND ITS LENGTH.

(2) PUBLIC AREA IS A BUILDING OR STRUCTURE THAT IS NOT ASSOCIATED WITH THE WELL, FACILITY OR OPERATION FOR WHICH THE RADIUS OF EXPOSURE IS BEING CALCULATED AND THAT IS USED AS A DWELLING, OFFICE, PLACE OF BUSINESS, CHURCH, SCHOOL, HOSPITAL OR GOVERNMENT BUILDING, OR A PORTION OF A PARK, CITY, TOWN, VILLAGE OR DESIGNATED SCHOOL BUS STOP OR OTHER SIMILAR AREA WHERE MEMBERS OF THE PUBLIC MAY REASONABLY BE EXPECTED TO BE PRESENT.

(3) PUBLIC ROAD MEANS A FEDERAL, STATE, MUNICIPAL OR COUNTY ROAD OR HIGHWAY.

RADIUS OF EXPOSURE

THE RADIUS OF EXPOSURE IS CALCULATED USING THE FOLLOWING PASQUILL-GIFFORD DERIVED EQUATION (OR BY OTHER SUCH METHOD) AS FOLLOWS:

A. FOR DETERMINING THE 100-PPM (LEVEL 3) RADIUS OF EXPOSURE:

$$X = [(I.S89)(H2S\ CONCENTRATION)(Q)]^{(0.6258)}$$

WHERE *"X" IS THE RADIUS OF EXPOSURE IN FEET, THE H2S CONCENTRATION IS THE DECIMAL EQUIVALENT OF THE MOLE OR VOLUME FRACTION OF H2S IN THE GASEOUS MIXTURE;*

AND *"Q" IS THE ESCAPE RATE EXPRESSED IN CUBIC FEET PER DAY (CORRECTED FOR STANDARD CONDITIONS OF 14.73 PSI ABSOLUTE AND 60 DEGREES FAHRENHEIT)*

B. FOR DETERMINING THE 500-PPM (LEVEL 2) RADIUS OF EXPOSURE:

$$X = [(0.4S46)(H2S\ CONCENTRATION)(Q)]^{(0.6258)}$$

WHERE *"X" IS THE RADIUS OF EXPOSURE IN FEET, THE H2S CONCENTRATION IS THE DECIMAL EQUIVALENT OF THE MOLE OR VOLUME FRACTION OF H2S IN THE GASEOUS MIXTURE;*

AND *"Q" IS THE ESCAPE RATE EXPRESSED IN CUBIC FEET PER DAY (CORRECTED FOR STANDARD CONDITIONS OF 14.73 PSI ABSOLUTE AND 60 DEGREES FAHRENHEIT)*

C. FOR A WELL BEING DRILLED, COMPLETED, RECOMPLETED, WORKED OVER OR SERVICED IN AN AREA WHERE INSUFFICIENT DATA EXISTS TO CALCULATE A RADIUS OF EXPOSURE BUT WHERE H2S COULD REASONABLY BE EXPECTED TO BE PRESENT IN CONCENTRATIONS IN EXCESS OF 100 PPM IN THE GASEOUS MIXTURE, A 100 PPM RADIUS OF EXPOSURE EQUAL TO 3000 FEET IS ASSUMED.

APPENDIX 'C' (continued)

REGULATORY THRESHOLD

A. DETERMINATION OF H2S CONCENTRATION

1. THE H2S CONCENTRATION IN THE GASEOUS MIXTURE WITHIN WELLS, FACILITIES OR OPERATIONS SHALL BE DETERMINED EITHER BY TESTING, TESTING A REPRESENTATIVE SAMPLE OR USING PROCESS KNOWLEDGE IN LIEU OF TESTING. IF THE PERSON USES A REPRESENTATIVE SAMPLE OR PROCESS KNOWLEDGE, THE CONCENTRATION DERIVED FROM THE REPRESENTATIVE SAMPLE OR PROCESS KNOWLEDGE SHALL BE REASONABLY REPRESENTATIVE OF THE H2S CONCENTRATION WITHIN THE WELL OR FACILITY.

2. THE TESTS USED TO MAKE THE DETERMINATION SHALL BE CONDUCTED IN ACCORDANCE WITH APPLICABLE ASTM OR GPA STANDARDS OR BY STANDARDLY ACCEPTED METHOD.

3. IF A CHANGE OR ALTERATION MAY MATERIALLY INCREASE THE H2S CONCENTRATION IN A WELL, FACILITY OR OPERATION, TESTING SHALL BE CONDUCTED TO MAKE A NEW DETERMINATION.

B.* CONCENTRATIONS DETERMINED TO BE BELOW 100 PPM** - IF THE H2S CONCENTRATION IN A GIVEN WELL, FACILITY OR OPERATION IS LESS THAN 100 PPM, NO FURTHER ACTIONS SHALL BE REQUIRED ***EXCEPT AS PROVIDED IN THIS H2S CONTINGENCY PLAN CONCERNING "NORMAL / LOW H2S CONDITIONS".

C. CONCENTRATIONS DETERMINED TO BE ABOVE 100 PPM

1. IF THE H2S CONCENTRATION IN A GIVEN WELL, FACILITY OR OPERATION IS DETERMINED TO BE 100 PPM OR GREATER, THEN THE RADIUS OF EXPOSURE SHALL BE CALCULATED TO COMPLY WITH APPLICABLE REQUIREMENTS OF STATE AND FEDERAL LAW.

2. IF CALCULATION OF THE RADIUS OF EXPOSURE REVEALS THAT A POTENTIALLY HAZARDOUS VOLUME IS PRESENT, THE RESULTS OFTHE H2S CONCENTRATION DETERMINATION AND THE CALCULATION OF THE RADIUS OF EXPOSURE SHALL BE PROVIDED TO NMOCD AND BLM. FOR A WELL, FACILITY OR OPERATION, THE ACCOMPLISH THE DETERMINATIONS, CALCULATIONS AND SUBMISSIONS WILL BE MADE BEFORE OPERATIONS BEGIN.

D. RECALCULATION - OF THE RADIUS OF EXPOSURE SHALL BE PERFORMED IF:

1. THE H2S CONCENTRATION IN A WELL, FACILITY OR OPERATION INCREASES TO 100 PPM OR GREATER.

2. THE CONCENTRATION OF H2S INCREASES BY A FACTOR OF 25% IN AN AREA THAT PREVIOUSLY HAD A H2S CONCENTRATION OF 100 PPM OR GREATER.

IF A POTENTIALLY HAZARDOUS VOLUME IS PRESENT, THE RESULTS SHALL BE PROVIDED TO THE NMOCD AND BLM (IF APPLICABLE) WITHIN 60 DAYS.

This plan was developed exclusively for Solaris Water Midstream, LLC
No part of the content may be copied or used for
other purposes by any other entity without the consent of
SOS Consulting, LLC | 903-488-9850 | info@sosconsulting.us

APPENDIX 'D'

INCIDENT RESPONSE PROTOCOL

FOLLOW THE PLAN

! ! ! AN EMERGENCY HAS OCCURRED ! ! !

1. **IMPLEMENT PLAN** - COMPANY FOREMAN OR DESIGNATED PERSON IS IMMEDIATE INCIDENT COMMANDER. (SAFETY CONSULTANT IF ON SITE.)

2. **ASSESS SITUATION** - DIRECT ALL PERSONNEL TO REPORT TO SAFETY BREIFING AREA. NOTIFY TO EVACUATE PUBLIC IF APPLICABLE.

3. **CONTROL SITUATION IF POSSIBLE** - DON BREATHING AND SAFETY APPARTUS; SHUT DOWN OPERATIONS AND WELL.

   BACK-UP DESIGNEE SHOULD: ***(EMERGENCY NUMBERS PAGES 8 & 9)***

   A. REPORT INCIDENT TO COUNTY EMERGENCY RESPONSE & STATE POLICE.
   B. CALL **911** OR MEDICAL IF NECESSARY. ***(GIVE FIRST AID, PAGE 12)***
   C. CALL COUNTY SHERIFF, OTHER EMERGENCY AGENCIES.
   D. CALL SAFETY COMPANY, COMPANY REPS IF NOT ALREADY ON SITE.
   E. ESTABLISH RADIO COMMUNICATION WITH EMERGENCY RESPONDERS.

4. **ATTEMPT RESCUE IF REQUIRED** - QUALIFIED PERSONNEL MUST BE MASKED UP AND BUDDY SYSTEM ONLY. ***(PER TRAINING AND CERTIFICATION.)***

5. **CONTROL OR PARTIAL CONTROL**

   A. MAKE DECISION TO IGNITE WELL IF REQUIRED. ***(PAGE 6)***
   B. BRIEF PERSONNEL ASSEMBLY IN SAFETY AREA - GIVE INSTRUCTIONS TO EVACUATE NON-ESSENTIAL PERSONNEL.

6. **BRIEF LAW ENFORCEMENT AND COUNTY EMERGENCY RESPONDERS.**

   A. STATE POLICE WILL BE IN CONTROL OF INCIDENT BEYOND LOCATION.
   B. COMPANY PERSONNEL WILL FOLLOW INSTRUCTIONS OF STATE POLICE, LOCAL EMERGENCY PERSONNEL AND COOPERATE WITH ALL PARTIES TO ENSURE SAFE OPERATIONS MOVING FORWARD.
   C. IF WELL IS OUT OF CONTROL (BLOWOUT), A NEW INCIDENT COMMANDER MAY BE DESIGNATED FOR THE DURATION OF THE EVENT.

7. **INCIDENT IS CONTROLLED** AND SHUT DOWN OR, INCIDENT OPERATIONS WILL CONTINUE UNTIL RESOLVED.

8. **REGULATORY REPORTING** & PAPERWORK IS COMPLETED AS APPLICABLE - DETERMINE CAUSE OF FAILURE, VOLUMES, ETC. EVENT IS TERMINATED.

Section 8 – Other Information

Proposed horizontal/directional/multi-lateral plan submission: N/A, vertical SWD well.

ACKNOWLEDGMENT FORM FOR CORPORATE SURETY:

STATE OF TEXAS)
) ss.
COUNTY OF HARRIS)

On this 13th day of February, 2019, before me personally appeared Janie Cermeno to me personally known, who, being by me duly sworn, did say that s/he is Attorney-in-Fact of Argonaut Insurance Company and that this instrument was signed and sealed on behalf of said corporation by authority of its board of directors, and acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

May 7, 2019 — My Commission Expires

Jessica Richmond — Notary Public printed name

Notary signature

(Notary seal)

JESSICA RICHMOND
NOTARY PUBLIC,
STATE OF TEXAS
My Commission Expires
MAY 07, 2019

(Note: Corporate surety attach power of attorney.)

APPROVED this _____day of _____, 20_____.

_____
COMMISSIONER OF PUBLIC LANDS

Received by OCD: 3/17/2021 9:54:11 AM

Bond No. SUR0022025
AS-0145885

Argonaut Insurance Company
Deliveries Only: 225 W. Washington, 24th Floor
Chicago, IL 60606
United States Postal Service: P.O. Box 469011, San Antonio, TX 78246

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the Argonaut Insurance Company, a Corporation duly organized and existing under the laws of the State of Illinois and having its principal office in the County of Cook, Illinois does hereby nominate, constitute and appoint:

Philip N. Bair, Eric S. Feighl, Joyce A. Johnson, Janie Cermeno, Jessica Richmond, John L. Hohlt, Brian R. Welch

Their true and lawful agent(s) and attorney(s)-in-fact, each in their separate capacity if more than one is named above, to make, execute, seal and deliver for and on its behalf as surety, and as its act and deed any and all bonds, contracts, agreements of indemnity and other undertakings in suretyship provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

$75,000,000.00

This Power of Attorney is granted and is signed and sealed under and by the authority of the following Resolution adopted by the Board of Directors of Argonaut Insurance Company:

"RESOLVED, That the President, Senior Vice President, Vice President, Assistant Vice President, Secretary, Treasurer and each of them hereby is authorized to execute powers of attorney, and such authority can be executed by use of facsimile signature, which may be attested or acknowledged by any officer or attorney, of the Company, qualifying the attorney or attorneys named in the given power of attorney, to execute in behalf of, and acknowledge as the act and deed of the Argonaut Insurance Company, all bond undertakings and contracts of suretyship, and to affix the corporate seal thereto."

IN WITNESS WHEREOF, Argonaut Insurance Company has caused its official seal to be hereunto affixed and these presents to be signed by its duly authorized officer on the 8th day of May, 2017.

Argonaut Insurance Company

by: _____

Joshua C. Betz , Senior Vice President

STATE OF TEXAS
COUNTY OF HARRIS SS:

On this 8th day of May, 2017 A.D., before me, a Notary Public of the State of Texas, in and for the County of Harris, duly commissioned and qualified, came THE ABOVE OFFICER OF THE COMPANY, to me personally known to be the individual and officer described in, and who executed the preceding instrument, and he acknowledged the execution of same, and being by me duly sworn, deposed and said that he is the officer of the said Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate Seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said corporation, and that Resolution adopted by the Board of Directors of said Company, referred to in the preceding instrument is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my Official Seal at the County of Harris, the day and year first above written.

Kathleen M. Meeks
(Notary Public)

I, the undersigned Officer of the Argonaut Insurance Company, Illinois Corporation, do hereby certify that the original POWER OF ATTORNEY of which the foregoing is a full, true and correct copy is still in full force and effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand, and affixed the Seal of said Company, on the 13th day of February 2019

James Bluzard , Vice President-Surety

THIS DOCUMENT IS NOT VALID UNLESS THE WORDS ARGO POWER OF ATTORNEY AND THE SERIAL NUMBER IN THE UPPER RIGHT HAND CORNER ARE IN BLUE, AND THE DOCUMENT IS ISSUED ON WATERMARKED PAPER. IF YOU HAVE QUESTIONS ON AUTHENTICITY OF THIS DOCUMENT CALL (210) 321 - 8400.

ARGO POWER OF ATTORNEY

Released to Imaging: 5/27/2021 11:10:28 AM

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 19244

COMMENTS

Operator: SOLARIS WATER MIDSTREAM, LLC 907 Tradewinds Blvd, Suite B Midland, TX 79706	OGRID: 371643
	Action Number: 19244
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 5/17/2021	5/17/2021
kpickford	BL SWD-2094	5/17/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 19244

CONDITIONS

Operator: SOLARIS WATER MIDSTREAM, LLC 907 Tradewinds Blvd, Suite B Midland, TX 79706	OGRID: 371643
	Action Number: 19244
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Surface casing must be set 25' below top of Rustler Anhydrite or salt in order to seal off protectable water	5/17/2021
kpickford	Will require a File As Drilled C-102 and a Deviation Survey	5/17/2021
kpickford	Notify OCD 24 hours prior to casing & cement	5/17/2021
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	5/17/2021
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	5/17/2021
kpickford	Cement is required to circulate on both surface and intermediate1 strings of casing	5/17/2021