

# **SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN**

## **JACKSON COUNTY, COLORADO**

**GENERAL FIELD PLAN  
MARCH 2016  
REVISED APRIL 2018**

**Prepared for:**

**SANDRIDGE ENERGY, INC. AND SUBSIDIARIES**

**Oklahoma City, Oklahoma**



# **SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN**

**JACKSON COUNTY, COLORADO**

**GENERAL FIELD PLAN  
MARCH 2016  
REVISED APRIL 2018**

**Prepared for:  
Sandridge Energy, Inc. and Subsidiaries  
123 Robert S. Kerr Ave.  
Oklahoma City, OK 73102  
405-429-5500**

**Prepared by:  
LT ENVIRONMENTAL, INC.  
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Arvada, Colorado 80003  
(303) 433-9788**



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**TABLE OF CONTENTS**

PROPERTY OWNER .....	iii
MANAGEMENT APPROVAL AND REVIEW .....	iv
PROFESSIONAL ENGINEER CERTIFICATION .....	v
LOG OF PLAN REVIEW AND AMENDMENTS .....	vi
REGULATORY CROSS REFERENCE.....	xi
1.0 GENERAL APPLICABILITY [40 CFR 112.7(a) and 40 CFR 112.9(a)] .....	1-1
2.0 EMERGENCY CONTACT INFORMATION [40 CFR 112.7(a)(3)(vi)] .....	2-1
3.0 FACILITY LAYOUT [40 CFR 112.7(a)(3)] .....	3-1
3.1 TANKS AND CONTAINERS.....	3-1
3.2 CONTAINMENT.....	3-2
3.3 PIPING.....	3-2
4.0 TANK AND FLOWLINE CONSTRUCTION [40 CFR 112.9(c)(1) and (4)] .....	4-1
5.0 SPILL PREVENTION, RESPONSE, AND CLEANUP [40 CFR 112.7(a)(3) and 40 CFR 112.7(b)] .....	5-1
5.1 SPILL PREVENTION [40 CFR 112.7(a)(3)(ii) and (iii) and 40 CFR 112.7(b)] .....	5-1
5.1.1 Valves .....	5-2
5.1.2 Loading Procedures .....	5-2
5.1.3 Removing Excess Water from Production Tanks .....	5-3
5.1.4 Tank Overflow.....	5-3
5.1.5 Tank Leaks or Ruptures.....	5-3
5.1.6 Separators, Knockout Tanks, and Heater-Treaters .....	5-3
5.1.7 Flowlines and Piping [40 CFR 112.9(d)(4)].....	5-4
5.2 DISCOVERY [40 CFR 112.7(a)(3)(iv)].....	5-4
5.3 RESPONSE [40 CFR 112.7(a)(3)(iv)].....	5-4
5.4 CLEANUP AND DISPOSAL [40 CFR 112.7(a)(3)(v)].....	5-5
6.0 FLOW DIRECTIONS [40 CFR 112.7(b)] .....	6-1
7.0 CONTAINMENT [40 CFR 112.7(c), 40 CFR 112.9(c)(2), and 40 CFR 112.9(d)(2)] .....	7-1



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

---

**TABLE OF CONTENTS CONT.**

8.0 DEVIATIONS [40 CFR 112.7(d)] .....	8-1
9.0 INSPECTIONS AND TANK TESTING [40 CFR 112.7(e) and 40 CFR 112.9(d)] .....	9-1
9.1 FACILITY CONTAINMENT AND DRAINAGE INSPECTIONS [40 CFR 112.9(b)] ...	9-1
9.1.1 Berms/Rainwater .....	9-1
9.1.2 Ditches and Waterways .....	9-2
9.2 FACILITY BULK STORAGE CONTAINERS [40 CFR 112.9(c)] .....	9-2
9.2.1 Tanks .....	9-2
9.2.2 Line Heaters, Separators, Knockout Tanks, and Heater-Treaters .....	9-2
9.2.3 Pressure Relief Valves .....	9-2
9.3 FACILITY TRANSFER OPERATIONS [40 CFR 112.9(d)] .....	9-3
9.3.1 Valves .....	9-3
9.3.2 Flowlines and Piping .....	9-3
9.3.3 Drip Pans .....	9-3
9.3.4 Saltwater Disposal Facilities .....	9-3
9.4 PUMPING EQUIPMENT .....	9-3
10.0 PERSONNEL TRAINING [40 CFR 112.7(f)] .....	10-1
11.0 LOADING RACK/AREA CONTAINMENT [40 CFR 112.7(h)] .....	11-1
12.0 BRITTLE FRACTURE REQUIREMENTS [40 CFR 112.7(i)] .....	12-1
13.0 CONFORMANCE TO OTHER REQUIREMENTS [40 CFR 112.7(j)] .....	13-1
14.0 QUALIFIED OIL-FILLED OPERATIONAL EQUIPMENT [40 CFR 112.7(k)] .....	14-1
APPENDIX A – TABLES	
APPENDIX B – FORMS AND CHECKLISTS	
APPENDIX C – OIL SPILL CONTINGENCY PLAN	
APPENDIX D – FLOWLINE MAINTENANCE PROGRAM	
APPENDIX E – SITE-SPECIFIC INFORMATION	



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
SANDRIDGE EXPLORATION & PRODUCTION LLC  
COLORADO**

**PROPERTY OWNER:**

Sandridge Energy, Inc. and Subsidiaries  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

**PROPERTY ADDRESS:**

Jackson County, Colorado  
(See Appendix E for each site-specific location)

**In the event of an oil release, follow the *Oil Spill Contingency Plan* in  
Appendix C.**

**In the event of a fire or life threatening release, contact 911 and the  
Response Coordinator immediately.**

SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO

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**MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

Sandridge Energy, Inc. and Subsidiaries  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

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This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_



Designated person accountable for oil spill prevention at the facilities:

Name: \_\_\_\_\_

*Clay Harwell*

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

*05/09/18*

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

*EH&R Supervisor*



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and examined the facility.
- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as herein described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented on the Professional Engineer Certification page for each facility included in Appendix E, Site-Specific Information, which must be completed within 6 months of the Professional Engineer Certification date.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado

**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan Amendment, dated June 28, 2016 has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and examined the facility.
- I have verified that this SPCC Plan Amendment has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as herein described in Section 9.0.
- I have verified that this SPCC Plan Amendment is adequate for the facilities with the exceptions presented on the Professional Engineer Certification page for each facility included in Appendix E, Site-Specific Information, which must be completed within 6 months of the Professional Engineer Certification date.



Allison S. White  
Printed Name of Registered Professional Engineer

Allison S. White  
Signature of Registered Professional Engineer

Date 6/28/2016 Registration No. 47798

State Colorado



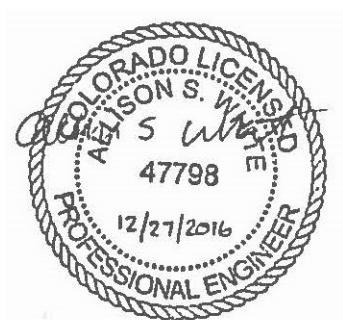
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SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan Amendment, dated December 27, 2016, has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and examined the facility.
- I have verified that this SPCC Plan Amendment has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as herein described in Section 9.0.
- I have verified that this SPCC Plan Amendment is adequate for the facilities with the exceptions presented on the Professional Engineer Certification page for each facility included in Appendix E, Site-Specific Information, which must be completed within 6 months of the Professional Engineer Certification date.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 12/27/2016 Registration No. 47798

State Colorado

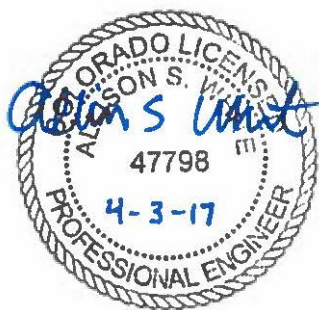
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SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan Amendment, dated April 3, 2017 has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and examined the facility.
- I have verified that this SPCC Plan Amendment has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as herein described in Section 9.0.
- I have verified that this SPCC Plan Amendment is adequate for the facilities with the exceptions presented on the Professional Engineer Certification page for each facility included in Appendix E, Site-Specific Information, which must be completed within 6 months of the Professional Engineer Certification date.



Allison S. White  
Printed Name of Registered Professional Engineer

Allison S White  
Signature of Registered Professional Engineer

Date 4/3/2017 Registration No. 47798

State Colorado

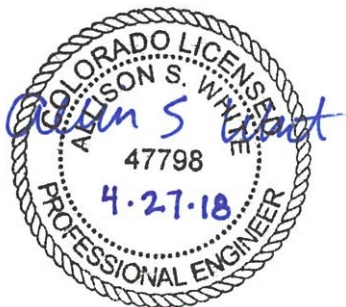
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SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan Amendment, dated April 3, 2017 has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and examined the facility.
- I have verified that this SPCC Plan Amendment has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as herein described in Section 9.0.
- I have verified that this SPCC Plan Amendment is adequate for the facilities with the exceptions presented on the Professional Engineer Certification page for each facility included in Appendix E, Site-Specific Information, which must be completed within 6 months of the Professional Engineer Certification date.



Allison S. White  
Printed Name of Registered Professional Engineer

Allison S. White  
Signature of Registered Professional Engineer

Date 4/27/2018 Registration No. 47798

State Colorado

**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**LOG OF PLAN REVIEW AND AMENDMENTS**

**Non-Technical Amendments**

Non-technical amendments are not required to be certified by a Professional Engineer. Examples of non-technical amendments include, but are not limited to, phone numbers, name changes, or any non-technical text change(s).

**Technical Amendments**

Technical amendments must be certified by a Professional Engineer.

Examples of technical amendments include, but are not limited to the following changes: commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes in product or service; and revision of standard operation or maintenance procedures at a facility.

An amendment made under this section will be prepared within six (6) months of the change and implemented as soon as possible but not later than six (6) months following preparation of the amendment.

**Management Review**

Management will review this SPCC Plan at least once every five (5) years and document the review on the form below.

<b>Amendment/ Review</b>	<b>Date</b>	<b>Management Signature</b>	<b>Affected Section(s)</b>	<b>Technical/ Non- Technical</b>	<b>Professional Engineer Certification?</b>
SPCC Plan Developed	March 2016	See Management Approval included in site-specific information.	Created New SPCC General Field Plan developed for SandRidge Exploration & Production, LLC (SandRidge) tank batteries located in Jackson County, Colorado. Site-specific information for 12 SandRidge tank batteries is added to Appendix E of the SPCC Plan	Technical	Yes

**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**LOG OF PLAN REVIEW AND AMENDMENTS (CONTINUED)**

<b>Amendment/ Review</b>	<b>Date</b>	<b>Management Signature</b>	<b>Affected Section(s)</b>	<b>Technical/ Non- Technical</b>	<b>Professional Engineer Certification?</b>
Amendment 1	6/28/2016	See page iv	Appendix E – Added new site-specific plan	Technical	Yes
Amendment 2	12/27/2016	See page iv	Appendix E – Added new site-specific plan  Updated contact information	Technical	Yes
Amendment 3	4/3/2017	See page iv	Appendix E – Updated 1 site-specific plan  Updated contact information	Technical	Yes
Amendment 4	4/27/2018	See page iv	Appendix E – Updated 1 site-specific plan  Updated contact information	Technical	Yes

**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**REGULATORY CROSS REFERENCE**

<b>Citation</b>	<b>Topic</b>	<b>Section</b>
40 CFR 112.7(a)	General requirements; discussion of facilities' conformance with rule requirements; deviations from SPCC Plan requirements; characteristics of facilities that must be described in the SPCC Plan; spill reporting information in the Plan; emergency procedures.	1.0, 2.0, 3.0, 5.0
40 CFR 112.7(b)	Direction and quantity of flow.	5.1, 6.0
40 CFR 112.7(c)	Secondary containment.	7.0
40 CFR 112.7(d)	Deviations and contingency planning.	8.0
40 CFR 112.7(e)	Inspections, tests, and records.	9.0
40 CFR 112.7(f)	Employee training and discharge prevention procedures.	10.0
40 CFR 112.7(g)	Security (excluding oil production facilities).	Not Applicable
40 CFR 112.7(h)	Loading/unloading (excluding offshore facilities).	11.0
40 CFR 112.7(i)	Brittle fracture evaluation requirements.	12.0
40 CFR 112.7(j)	Conformance with state requirements.	13.0
40 CFR 112.7(k)	Qualified oil-filled operational equipment	14.0
40 CFR 112.8	Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities)	Not Applicable
40 CFR 112.9(a)	General and specific requirements.	1.0
40 CFR 112.9(b)	Oil production facility drainage.	9.1
40 CFR 112.9(c)	Oil production facility bulk storage containers.	4.0, 7.0, 9.0
40 CFR 112.9(d)	Facility transfer operations, oil production facility.	5.1.7, 7.0, 9.0
40 CFR 112.10	Spill Prevention, Control, and Countermeasure Plan requirements for onshore drilling and workover facilities.	Not Applicable
40 CFR 112.20 Appendix C	Substantial harm criteria.	Appendix E



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**1.0 GENERAL APPLICABILITY [40 CFR 112.7(a) and 40 CFR 112.9(a)]**

This Spill Prevention, Control, and Countermeasure (SPCC) Plan has been prepared for SandRidge Energy, Inc. and Subsidiaries (SandRidge) located in Oklahoma City, Oklahoma, for tank batteries located in Jackson County, Colorado. Site-specific information is included in Appendix E of this SPCC Plan. A list of sites is included at the beginning of Appendix E.

This SPCC Plan has been prepared in accordance with the Code of Federal Regulations (CFR), Chapter 40 Sections 112.7 and 112.9 (40 CFR 112.7 and 40 CFR 112.9) as applicable for onshore production facilities. All onshore production facilities that store 1,320 gallons of petroleum, oils, or lubricants (POL), on site in containers 55 gallons or greater are subject to these regulations.

The SPCC Plan is organized as a General Field Plan with site-specific attachments. Sections 1.0 through 13.0 and Appendices A, B, C, and D (General Field Plan) apply to all SandRidge tank batteries located in Jackson County, Colorado. Site-specific information for each location associated with the General Field Plan is included in Appendix E. The following site-specific information for each tank battery is presented in Appendix E.

- Professional Engineer (P.E.) Certification;
- Management Approval;
- Substantial Harm Criteria Checklist;
- Secondary Containment Calculation; and
- Facility Diagram.

**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**2.0 EMERGENCY CONTACT INFORMATION [40 CFR 112.7(a)(3)(vi)]**

SandRidge personnel and designated contractors (hereafter collectively referred to as pumpers) are responsible for discharge prevention at their respective tank batteries. Pumpers are responsible for contacting the Field Operations Manager. The Field Operations Manager is responsible for contacting the Environmental, Health & Safety (EH&S) Supervisor. If the Field Operations Manager is unavailable, the pumper will contact the EH&S Supervisor directly. The EH&S Supervisor is responsible for contacting local, state, and federal agencies and emergency response contractors. Internal contact information for SandRidge and emergency response contractors are provided in Appendix A, Table A-1. Contact numbers for regulatory agencies are provided in Appendix A, Table A-2. A spill response notification flow chart (Colorado Spill Reporting Requirements) is provided at the end of Appendix A.





### 3.0 FACILITY LAYOUT [40 CFR 112.7(a)(3)]

The physical layout of each facility consists of aboveground storage tanks, oil treatment equipment such as separators, and other ancillary equipment associated with each tank battery. All tank batteries are located in Jackson County, Colorado. Tanks may contain natural gas, crude oil, condensate, produced water, or associated exploration and production wastes. Facility diagrams and legal descriptions are provided on the facility layout diagrams included in Appendix E, Site-Specific Information. Site-specific information for each facility, regarding on-site containers, containment volumes, and content, are provided in Appendix E.

A description of the oil-related storage equipment in use at tank batteries is provided in the following sections.

#### 3.1 TANKS AND CONTAINERS

**Aboveground storage tanks** (including drums) with capacities of 55 gallons or greater are addressed in this SPCC Plan in accordance with the requirements of 40 CFR 112.

**Partially buried or bunkered storage tanks** (including open-top tanks buried to the ground surface) are considered aboveground storage tanks for the purpose of these regulations and are addressed in this SPCC Plan. Several of the facilities have partially buried closed-top fiberglass tanks. These partially buried tanks are considered aboveground storage tanks and containment must be constructed to contain a minimum of the aboveground capacity of these containers plus sufficient freeboard to contain precipitation.

**Production tanks and water tanks** are used for the temporary storage of collected oil and water. Production tanks generally contain separated oil or a mix of water and oil. Water tanks contain separated water or condensate.

**Separators, knockout tanks, and heater-treaters** are all used to separate oil, water, and natural gas. The requirements of 40 CFR 112 apply to these process tanks. Although this equipment is rarely full, containment is designed in accordance with the shell capacity of these tanks.

**Methanol and treatment chemical tanks/drums** are not required to be in containment by this SPCC Plan. Methanol and treatment chemicals are not considered POL. However, as a best management practice, containment is recommended.

**Temporary tanks** are often installed during the initial production stages of a well. During the initial production stage, production volumes can vary and be greater than during normal or later stages of production. In order to manage this additional produced water, frac tanks or additional steel tanks may be temporarily installed at a facility. During the period when these tanks are installed on site, adequate secondary containment

must be provided. The tanks, if present, have not been included on the drawings because they are removed within 6 months of the startup of a new well. If the tanks remain on site for more than 6 months, they will be included in the SPCC Plan and the site-specific portion of the SPCC Plan recertified.

### 3.2 CONTAINMENT

**Earthen or Metal berms** are built around bulk storage tanks and operational equipment at each facility. Spilled material may absorb into the soil; however, it will be contained within the berm. All contaminated soil must be removed and treated or disposed of in accordance with appropriate regulatory requirements.

**Portable containment** is generally used for drums or elevated storage tanks of methanol, diesel, motor oil, or treatment chemical. The drum or tank is generally set within the containment.

**General containment** is present at all facilities. The ground surrounding all sites is leveled at the time of tank battery installation to provide a stable base for equipment. The level surface also prevents immediate surface runoff from the site. Given that the sites are leveled at the time of construction, and spills during loadout are expected to be 50 gallons or less, it is unlikely a spill or leak would migrate from the area. Loading operations are directly observed by vacuum truck service personnel and it is anticipated that vacuum truck personnel will be able to shutdown loading operations and close all valves in a relatively short period of time. To prevent livestock from rubbing against valves and opening lines at tank batteries constructed in livestock grazing areas, valve handles are removed from transfer lines. [Note: If general secondary containment is determined to be inadequate, additional general containment must be provided. Corrective actions are presented on the Professional Engineer Certification page associated with each facility and included in Appendix E.]

### 3.3 PIPING

Piping has been installed at each facility running from the well head(s) to the separator or treatment unit for the well(s). From the separator or treatment unit, piping is connected to the oil and water tanks. Piping is used to transport any natural gas associated with production from the treatment units to the Emissions Control Devices (ECDs). Piping at each facility is most often buried where possible to protect against damage from livestock, vehicle traffic, or freezing temperatures.

Aboveground piping is included on the facility diagrams. The location of underground piping shown on the facility diagrams is approximate, as it would be difficult to represent the exact location of buried piping without a full utility locate. The underground piping illustrated on the facility diagrams is provided to show that underground piping is present at the facility and to demonstrate general process flow at each site. Underground piping from wellheads is shown on figures where possible; however, at most facilities, wellheads are hundreds of feet from tank

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**SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN**  
**JACKSON COUNTY, COLORADO**

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batteries, and the exact location of flowlines from the well heads to the separators is not known. Because each of these lines is pressurized, there is a potential for release to the surface.

All aboveground piping containing oil is installed within secondary containment berms with the exception of load lines which may or may not be installed within the containment. Load line locations are illustrated on the facility diagrams included in the site-specific information for each facility. Containment for aboveground piping is discussed in Section 7.0. Load lines are discussed in detail in Sections 5.1.2 and 7.0.

As-builts are not generated for these facilities. Where a wellhead is not located at the tank battery or the facility is a consolidation tank battery where multiple wells or lines are consolidated to a single location, wells contributing to the tank battery are included on the facility diagram.

All heater-treaters/separators and associated piping are in use and the equipment/piping will be shut down if a spill is discovered.



#### **4.0 TANK AND FLOWLINE CONSTRUCTION [40 CFR 112.9(c)(1) and (4)]**

All containers used for the storage of POL must be constructed of materials compatible with the materials stored in each container and the conditions for storage. Oil storage tanks are cylindrical in shape and constructed of steel to American Petroleum Institute (API) specifications. Tanks are painted to inhibit corrosion. The total volume of the tanks is sufficient for normal inflow rates considering time between operator visits, which can vary up to one week between visits. Tanks are equipped with equalizer lines of adequate size for normal inflow rates. Each oil tank is equipped with an over-pressure or relief valve (vent) to protect against excessive internal pressure.

Flowlines are designed for material compatibility; are able to withstand anticipated operating pressures; are protected from corrosion; and have sufficient cover (minimum 3 feet on croplands) to prevent external damage.

Collection rates are measured upon installation to ensure that production and water tanks are of adequate size to prevent overflow in the event that the pumper is not able to perform regularly scheduled site visits. At facilities where a second holding tank is installed with oil/water level equalizing lines as shown on the site-specific facility diagrams included in Appendix E, oil/water is allowed to overflow from the first tank into the second tank if fluid levels reach the top of the first tank. Each tank is equipped with vacuum protection (vent) to prevent container collapse during a pipeline run or oil transfer from the tank.

**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**5.0 SPILL PREVENTION, DISCOVERY, RESPONSE, AND CLEANUP  
[40 CFR 112.7(a)(3) and 40 CFR 112.7(b)]**

SandRidge internal notification and response procedures are included in Appendix A and Appendix C.

**5.1 SPILL PREVENTION [40 CFR 112.7(a)(3)(ii) and (iii) and 40 CFR 112.7(b)]**

The following sections describe potential spill hazards associated with each element of tank battery equipment. In the event of an overflow or rupture, releases must be contained and cleaned up upon discovery. The cause of any spills, leaks, or overflows must be identified and repaired as soon as practicable and processes modified if the release is process related.

Specific information on direction of surface water runoff can be found in Appendix E (Site-Specific Information). Spill rates are highly variable and dependent upon the type of equipment failure, operating pressures, and current production rates (which change over time and may be programmed on an intermittent basis). Spill rates are assumed to vary, up to the total quantity of the largest container over one minute for a catastrophic tank rupture. The maximum release rate at each facility is included in each site-specific table provided in Appendix E.

The table below summarizes the types of failures expected at these facilities, the potential volume released, and the potential spill rate for each type of equipment failure. Refer to the site-specific tables and facility diagrams included in Appendix E to determine which type of equipment is present at each tank battery.

<b>POTENTIAL FAILURE</b>	<b>POTENTIAL VOLUME RELEASED</b>	<b>POTENTIAL SPILL RATE</b>
Complete failure of tank (400 bbls)	Up to 16,800 gallons	Instantaneous
Partial failure of tank	Up to 16,800 gallons	Gradual to instantaneous
Tank overfill	Up to 3,000 gallons	Up to 50 gallons per minute
Pipe/hose/fitting failure	Up to 16,800 gallons	Up to 50 gallons per minute
Leaking pipe or valve failure	Up to 16,800 gallons	Gradual (less than 5 gallons per minute)
Tanker truck leak or failure	Up to 3,000 gallons	Gradual (less than 25 gallons per minute) to instantaneous
Hose leak during transfer	Up to 3,000 gallons	Up to 50 gallons per minute
Pump rupture or failure	Up to 3,000 gallons	Up to 50 gallons per minute
Reasonable (expected) release during loading	Up to 30 gallons	Up to 5 gallons per minute
Separator pressure relief (pop-off valve)	Up to 250 gallons	Up to 30 gallons per minute



### **5.1.1 Valves**

Valves are occasionally moved into the open position by livestock or other animals. This occurrence can be prevented by removing valve handles at tank batteries located in livestock grazing areas or by fencing storage areas to prevent these occurrences. Fencing, if present, is shown on the site-specific facility diagrams included in Appendix E.

### **5.1.2 Loading Procedures**

Small drips at the terminus of the load line are common. These drips are prevented with the implementation of valve maintenance and careful loading procedures by crude oil haulers (pumpers should report sloppy hauling procedures to their supervisors). Drip pans can be installed to collect such drips from the load line; however, drip pans are not required under the 40 CFR 112. If drip pans are installed at a facility, they must be regularly checked and emptied.

Aboveground storage tanks are currently surrounded by metal or earthen berms. Load line valves and drain line valves are located at the base of the aboveground steel tanks. In the event of a failure of the load line valve or drain line valve, the entire content of the tank would drain. Aboveground storage tank drain lines are located entirely within the berm and are connected directly to the water tank (the primary purpose of these lines is to drain excess water that has separated from the oil in the tank). In the event of a drain line failure or a load line failure where the terminus of the load line is located within the berm, the release would be contained within the berm. Therefore, although it is not required, it is recommended that load line connections for all tanks be located within the secondary containment.

If the terminus of the load line is located outside of the berm, the release is expected to remain within the boundaries of the site. The ground surrounding all facilities is leveled at the time of installation to provide a stable base for the equipment. The level surface also prevents runoff from the site. Given that the sites are leveled and a reasonable release during loading operations would be approximately 50 gallons or less, it is unlikely a spill or leak would migrate from the area. [Note: If general containment is determined to be inadequate, additional general containment must be provided. Corrective actions are presented on the Professional Engineer Certification page associated with each facility and included in Appendix E.] The location of tank loadouts at each facility is illustrated on each facility layout included in Appendix E.

Any spill generated from the transfer of liquids, regardless of the spill location, must be cleaned up upon discovery and the cause of the spill determined. In the event of a leaking valve, the valve must be repaired as soon as practicable.

To minimize spills and leaks at the facility, vacuum truck operators are present at all times during the loading process. In the event of a release during loading, absorbent materials carried on the pumpers' vehicles would be used to mitigate the release. In the event of a larger release or during a precipitation event, earthen diversion berms and dikes will be constructed by the pumper to contain the release within the property boundary while awaiting assistance from outside response contractors or SandRidge support operations.

### **5.1.3 Removing Excess Water from Production Tanks**

Releases can occur from production tanks (oil tanks) if the production tank drain line valve is left open after draining excess water from the bottom of the production tank to the water tank prior to sale of the oil. If left open too long, oil entering the water tank could exceed the capacity of the water tank causing the water tank to overflow into the berm. This event is prevented by careful observation during such operations. Pumpers may not leave a production facility when draining water from production tanks.

### **5.1.4 Tank Overflow**

Overflows can occur if the tank capacity is not sufficient and product levels are not regularly checked. At SandRidge tank batteries, where multiple production tanks are installed, they are often connected such that the second tank receives production when the first tank is full (site-specific facility diagrams indicating aboveground piping connections are included in Appendix E). This practice reduces overflows in the event a pumper is delayed from his regularly scheduled site visits. Tank overflows from a well are more likely during the initial stages of production. Special care must be exercised during this time as the production rate is higher and may be more variable. Any overflow will be contained within the sized secondary containment.

### **5.1.5 Tank Leaks or Ruptures**

Tank leaks or ruptures are an uncommon cause of spill events. Leaks are minimized by regular inspections for corrosion, seam failure, and gasket integrity at the clean-out access plate. Ruptures may be associated with lightning strikes (tanks are grounded to minimize lightning damage) or explosions (smoking and other ignition sources must be kept away from tank batteries).

### **5.1.6 Separators, Knockout Tanks, and Heater-Treaters**

Separators, knockout tanks, and heater-treaters are pressure vessels and releases are most commonly associated with a "pop-off" valve. This may result in a mist being sprayed over a wide area rather than a fluid flow into the general vicinity of the vessel.

The safety prevention features on SandRidge facilities are dependent on when the facility was built. SandRidge facilities that were in operation prior to January 2016 have the following safety features on each separator: a pressure relief valve, a pre-release rupture disc that is set at a lower

**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

---

pressure than the pressure relief valve and vents to a tank; and a manual wing valve at the well head to stop any liquid from entering the separator.

SandRidge facilities built after January 2016 will include the following safety features on each separator: automatic shut-in of the well at a pressure less than the maximum operating pressure of the separator; a SCADA system for remote pressure monitoring of the facility; and a pressure relief to atmosphere. The wells can also be shut-in manually to stop any liquid from entering the separator.

#### **5.1.7 Flowlines and Piping [40 CFR 112.9(d)(4)]**

Flowlines and piping at production facilities can be sources of releases. The quantity and rates of such events will vary according to failure mode, operating pressures, current production rates, and duration of the release. Buried production lines are located three feet below ground surface to prevent the lines from freezing. Aboveground piping and fittings at production facilities are regularly inspected for signs of corrosion and leakage.

The majority of the piping in the field is constructed of steel and was installed in 2008 or later. The lines are considered low pressure lines (<100 pounds per square inch maximum) and are inspected by the pumper during regularly scheduled site visits. In the event a leak is discovered, the lines will be replaced with pipe constructed of appropriate materials.

A flowline maintenance program is included in Appendix D of this SPCC Plan.

#### **5.2 DISCOVERY [40 CFR 112.7(a)(3)(iv)]**

Discharges are typically discovered during the routine inspections conducted at the facility including weekly informal inspections by pumpers and annual formal SPCC inspections. SandRidge internal reporting and initial spill response procedures are included in the Oil Spill Contingency Plan included in Appendix C. Contact lists and phone numbers of key personnel and organizations to notify if a discharge is discovered are included in Appendix A. A form has been included in Appendix B of this SPCC Plan summarizing the information that must be provided when reporting a discharge.

#### **5.3 RESPONSE [40 CFR 112.7(a)(3)(iv)]**

In the event of a leak or overflow, all valves will be closed and the system shutdown to prevent additional releases while response procedures are initiated. When a spill occurs outside of the containment, or in the event of a large or catastrophic release, personnel must take the necessary precautions to contain the spill to the site.

Immediate notification to designated SandRidge personnel is mandated and is the key to effective spill and release containment and control. Such notification also allows the company to promptly report a spill event to appropriate government agencies, in accordance with applicable regulatory requirements. A spill reporting notification flow chart is provided in Appendix A.





**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

---

Upon discovery, all spills and releases of natural gas, crude oil, condensate, produced water, drilling fluids, methanol, well treatment chemicals, or associated wastes must be immediately reported to the Response Coordinator. In the event that the Response Coordinator cannot be contacted, notification will be made to any of the supervisory personnel listed on the Internal Emergency Notifications table in Appendix A (Table A-1).

The Response Coordinator is responsible for mobilizing appropriate spill response, containment, manpower, and equipment in accordance with the Oil Spill Contingency Plan presented in Appendix C of this SPCC Plan.

In the event a spill impacts surface water, the Response Coordinator is responsible for the initial spill report, by telephone, to the National Response Center (immediately after discovery of the spill), as described on Table A-2 included in Appendix A. The Response Coordinator must also complete the Spill Response Notification Form provided in Appendix B and report to state and local agencies as appropriate. Spills can also be reported online to the National Response Center at the following web address: <http://www.nrc.uscg.mil/nrchp.html>.

- Per Colorado House Bill 13-1278, operators shall report exploration and production (E&P) waste spills/releases that meet any of the following criteria to the Colorado Oil and Gas Conservation Committee (COGCC) Director in writing using COGCC Spill/Release Report, Form 19, and verbally to both the entity with jurisdiction over emergency response within the local municipality if the spill occurred within a municipality or the local county if the spill did not occur within a municipality, and the affected surface owner or the surface owner's appointed tenant as soon as practicable, but not more than twenty-four (24) hours after discovery:
  - A spill/release of any size that impacts or threatens to impact any Waters of the State, a residence or occupied structure, livestock, or a public byway;
  - A spill/release in which one (1) barrel or more of E&P Waste is spilled or released outside of berms or other secondary containment;
  - A spill/release of greater than five (5) barrels regardless of whether the spill/release is completely contained within berms or secondary containment.
- The initial written report to the Director shall include, at a minimum, the location of the spill/release and any information available to the Operator about the type and volume of waste involved.
- In addition to the initial report to the Director, the Operator shall make a supplemental report on Form 19 not more than 10 calendar days after the spill/release is discovered that includes an 8 1/2 x 11 inch topographic map showing the governmental section and location of the spill; all pertinent information about the spill/release known to the Operator that has not been reported previously; and information relating to the initial mitigation, site investigation, and remediation measures conducted by the Operator. The Director may require further supplemental reports or additional information.



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

---

- In addition to the reports required above, a spill/release of any size that impacts or threatens to impact any Surface Water Supply area shall also be reported to the Environmental Release/Incident Report Hotline (1-877-518-5608) and spills/releases that impact or threaten to impact a Surface Water Intake shall be verbally reported to the emergency contact for that facility immediately after discovery.
- Chemical spills and releases shall be reported in accordance with applicable state and federal laws, including the Emergency Planning and Community Right-to-Know Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Oil Pollution Act, and the Clean Water Act, as applicable.
- Any release of oil that causes a sheen on nearby surface waters must be reported immediately to the Colorado Department of Public Health and Environment (CDPHE) Emergency Spill Reporting Line and must be reported to the COGCC as soon as practicable.

#### **5.4 CLEANUP AND DISPOSAL [40 CFR 112.7(a)(3)(v)]**

The Response Coordinator will handle the cleanup and disposal of spilled materials in accordance with regulatory requirements. Exploration and production waste is not considered a hazardous waste; therefore, oil-contaminated soil may be disposed of at a permitted landfarm, or it may be taken to a permitted landfill. [Note: The landfarm or landfill will need to be contacted to ensure that the material can be accepted.]

If assistance is needed, a response contractor (Table A-1) will be called. In the event the material can be salvaged, a vacuum truck contractor will be contacted for removal and the liquid will be properly recycled.



## **6.0 FLOW DIRECTIONS [40 CFR 112.7(b)]**

Site-specific surface water runoff directions depicted on the facility layouts in Appendix E are based on the topography surrounding each site.

All facilities are located in Jackson County. Sites are typically located on rangeland and are located in North Platte River Basin. Watercourses and approximate distances to each watercourse are displayed on each site-specific drawing in Appendix E, where applicable.

## **7.0 CONTAINMENT [40 CFR 112.7(c), 40 CFR 112.9(c)(2), and 40 CFR 112.9(d)(2)]**

Each facility must have general containment sufficient to prevent spills from leaving the site [40 CFR 112.7(c)]. Sized secondary containment (earthen or metal) is required around all tanks sufficient to contain the shell capacity of the largest container located within the containment plus sufficient freeboard for precipitation [40 CFR 112.9(c)]. The owner or operator of a facility with flow-through process vessels may choose to implement the alternate requirements as described below in lieu of sized secondary containment required. Sized secondary containment is not required around separators and heater-treaters; however, flow-through process vessels still require general secondary containment. If general secondary containment is used for separators and heater-treaters, the vessels must also undergo pressure testing regularly and the testing records must be kept for 3 years. Alternatively, sized secondary containment can be used in lieu of general containment, testing and record keeping. The precipitation amount for the 25-year, 24-hour storm in Jackson County, Colorado is assumed to be 2.0 inches.

General containment is present at all facilities. The ground surrounding all sites is leveled at the time of installation to provide a stable base for the equipment. The level surface also prevents runoff from the site. In most locations, water pools at the site from surrounding areas. [Note: If general secondary containment is determined to be inadequate, additional general containment must be provided. Corrective actions are presented on the Professional Engineer Certification page associated with each facility and included in Appendix E.]

All aboveground piping containing oil is installed within secondary containment berms (vent lines are not considered to be oil-containing) with the exception of load lines which may or may not be installed within the containment. Load line locations are illustrated on the facility diagrams included in the site-specific information for each facility. Containment for load lines is discussed below.

Secondary containment in the form of general containment is available at the loading area. Given that the sites are leveled and spills from loadout lines are generally small (<50 gallons), it is unlikely a spill or leak would migrate from the area. Spills from loadout lines are generally small because all loading/unloading operations are directly observed by pumpers. Vacuum truck operators are equipped with secondary containment materials (including absorbent materials) to clean up small leaks, spills, or drips that might occur during unloading of the tanks. Loadout lines have drip pans to prevent small leaks from leaving the site when a pumper is not present. Drip pans are inspected weekly by pumpers and emptied as needed.

Drainage systems are not used at the facilities for containment and therefore there is no drainage from undiked areas at the site.

**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

---

Sized secondary containment calculations are presented in Appendix E, Site-Specific Information. The table refers to length, width, and height of each berm. These values are multiplied to calculate the volume of berms as follows:

$$L * W * H$$

L = Length at the base of the inside of the berm

W = Width at the base of the inside of the berm

H = Height of the berm

For non-rectangular berms, the formula is adjusted to account for berm geometry.

Berm construction and corrected volume are included in the site-specific table for each facility included in Appendix E. The corrected volume presented in the table includes displacement from additional tanks (not including the single largest container) located within the berm and any additional volume or displacement from pads or excavations within the berm. Displacement from additional equipment located in the berm may be estimated and included in the corrected volume.



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

---

**8.0 DEVIATIONS [40 CFR 112.7(d)]**

General secondary containment (as described in Section 3.2) has been provided for all aboveground piping at each facility; however an Oil Spill Contingency Plan has been prepared and is included in Appendix C of this SPCC Plan. The Oil Spill Contingency Plan has been prepared as required under 40 CFR 112.7(d)(1) to meet the requirements of 40 CFR 109. Additionally, a written commitment of manpower is included on Page iv under Management Approval and Review.

This SPCC Plan does not deviate in any other way from the SPCC Plan requirements of 40 CFR 112.



## **9.0 INSPECTIONS AND TANK TESTING [40 CFR 112.7(e) and 40 CFR 112.9(d)]**

Annual inspections will be completed by the Response Coordinator, or designee, using the SPCC Inspection Form included in Appendix B of this SPCC Plan. Annual inspection records will be kept on file for three years at the SandRidge office in Coalmont, Colorado. Additionally, pumpers and roustabouts, as part of their regular routine, are responsible for inspecting production facilities weekly for deficiencies that could result in a release. In the event a deficiency (including evidence of a release) is discovered, the deficiency is noted on the annual inspection form or in the pumper's field log and reported to the field supervisor or Response Coordinator, and repair or cleanup is completed as soon as practicable. In the event of a repair, the line or tank that was repaired will be tested after repairs have been made.

Pressure tests are conducted in response to rapid production drop-offs as indicated by gas meter readings or production tank measurements. Pumpers check pressure gauges during their weekly inspections and should make note of significant pressure drops, pressure drops out of the ordinary, or pressure drops inconsistent with production rate changes.

When necessary, tank testing techniques should be performed in accordance with the Steel Tank Institute *Standard for Inspection of Aboveground Tanks* (SP001).

Facility personnel must inspect the following items and equipment on a regular basis:

- Facility containment and drainage;
- Facility bulk storage containers;
- Facility transfer operations; and
- Pumping equipment.

## **9.1 FACILITY CONTAINMENT AND DRAINAGE INSPECTIONS [40 CFR 112.9(b)]**

### **9.1.1 Berms/Rainwater**

Earthen berms are inspected for adequate capacity, erosion, and oil or water accumulation during weekly routine inspections and during formal annual inspections. Metal berms will be inspected for damage including corrosion of supports and structural damage. Concrete berms and portable containment will be inspected for leaks, cracks, or other signs of failure.

Rainwater that collects in portable or lined containment will generally evaporate. If a substantial amount of precipitation collects within a containment area (precipitation is present for greater than 72 hours), the precipitation will be inspected for oil and any oil present will be removed using absorbent booms or by vacuum truck services. Remaining precipitation (following inspection and oil removal) will be pumped out onto the surrounding ground in a manner that

**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

---

does not allow the precipitation to pool at the base of the containment area. If oil accumulation is discovered and the liquid is from one of the tanks, the source will be found and repaired. Oil removed by vacuum truck services will be properly recycled. Berms are not equipped with drain valves for draining precipitation or oil.

Inspection records, including the presence of oil, the amount of oil removed, and precipitation removed will be recorded in the Precipitation Inspection and Removal Log, included in Appendix B, and will kept on file for three years.

### **9.1.2 Ditches and Waterways**

Drainage ditches in and around the facility, irrigation ditches, roadside ditches, watercourses, ponds, etc. will be inspected by pumpers for oil accumulations on a regular basis. If evidence of a spill is detected, the source will be found and stopped. An earthen dam or other suitable containment will be constructed, and the oil will be removed by vacuum truck or skimming. The material will be transported to a permitted disposal facility.

## **9.2 FACILITY BULK STORAGE CONTAINERS [40 CFR 112.9(c)]**

### **9.2.1 Tanks**

All liquid storage tanks (including crude oil, produced water, saltwater, methanol, fuel, treatment chemicals, lube oil, etc.) and associated piping are visually inspected for leaks, overflows, and signs of potential problems weekly during the pumper's regularly scheduled site visits. Special emphasis is placed on the inspection of bottom seams, patches, flanges, piping connections, sight-glasses, and other openings. The foundation for each tank will also be inspected. Washout and animal holes can cause the foundation to shift and lead to the unstable installation of a tank.

### **9.2.2 Line Heaters, Separators, Knockout Tanks, and Heater-Treaters**

Separators and heater-treaters are visually inspected weekly during the pumper's regularly scheduled site visits. Valves, fittings, inspection plates, and sight glasses are carefully inspected for leaks.

### **9.2.3 Pressure Relief Valves**

Pressure relief valves on equipment are checked for leaks, evidence of leaks, and any signs of failure weekly during the pumper's regularly scheduled site visits.



### **9.3 FACILITY TRANSFER OPERATIONS [40 CFR 112.9(d)]**

#### **9.3.1 Valves**

All flange joints, valve glands and bodies, drip pans, pipe supports, and bleeder and gauge valves are inspected for leaks weekly during routine pumper inspections. Valves should be in their proper position and locked or sealed, if appropriate.

#### **9.3.2 Flowlines and Piping**

Flowlines, injection lines, gathering lines, gas lift lines, and other piping in and around tank batteries, separation facilities, saltwater handling equipment, etc. are inspected for leaks and evidence of spills weekly during the pumper's regularly scheduled site visits. Lines not visible from the road are walked annual during the formal inspection. SandRidge flowline maintenance program is outlined in Appendix D of this SPCC Plan.

#### **9.3.3 Drip Pans**

The liquid level in drip or drain pans will be checked and emptied as necessary. Sufficient freeboard must be allowed for precipitation. Closed-top drip pans are preferred.

#### **9.3.4 Saltwater Disposal Facilities**

Saltwater disposal facilities, if present at tank batteries (see Appendix E), are inspected weekly during routine pumper inspections.

### **9.4 PUMPING EQUIPMENT**

Lube oil storage tanks and the piping systems associated with pumping equipment will be inspected weekly during routine pumper inspections. This includes visually inspecting for leaks around tanks, pumps, and fittings on the piping or tubing.

## **10.0 PERSONNEL TRAINING [40 CFR 112.7(f)]**

Oil-handling personnel must be trained at least once a year in the prevention of oil discharges, discharge procedure protocols, applicable pollution control laws, general facility operations, and the contents of this SPCC Plan. Oil-handling personnel are trained in the following SPCC related topics:

- Spill control equipment;
- Equipment operation and maintenance;
- Containment, vessel, tank, and piping inspection, and maintenance;
- Spill response, containment, and cleanup;
- Company policies on reporting and responding to spills; and
- The contents of this SPCC Plan including site-specific information.

The Response Coordinator provides SPCC compliance training to all oil-handling personnel on an annual basis. Additional tailgate sessions are held as needed before and during certain jobs to review spill potential, necessary precautions, and appropriate responses. Training and tailgate sessions must also include an overview of known discharges releases and any recently developed precautionary measures. A sample SPCC training record form is provided in Appendix B. Training records are maintained by the Response Coordinator at the SandRidge office in Coalmont, Colorado as well as on the SandRidge Intranet.

Pumpers are responsible for discharge prevention at their respective facilities and are responsible for reporting operational, maintenance, and spill prevention issues to facility management.

## **11.0 LOADING RACK/AREA CONTAINMENT [40 CFR 112.7(h)]**

Loading racks are not present at any of the facilities covered by this SPCC Plan.

Vacuum truck service operators remain on site during loading of the product. Vacuum truck service operators remain in visual contact of the equipment at all times. The operator is responsible for inspecting all connecting lines for leaks and drips prior to departure. See Sections 3.2 and 7.0 of this SPCC Plan regarding general containment at the facilities and Section 5.1.2 regarding loading procedures for the loading area containment description.

## **12.0 BRITTLE FRACTURE REQUIREMENTS [40 CFR 112.7(i)]**

If a field-constructed container undergoes repair, alteration, reconstruction, or change in service that might affect the risk for discharge or failure, the container must be evaluated for the risk of failure due to brittle fracture or other catastrophe. This evaluation may be performed using hydrostatic or pressure testing. If necessary, the owner must take the appropriate action to repair or replace the container. There are no field-constructed containers at any of the tank batteries covered by this SPCC Plan.

### **13.0 CONFORMANCE TO OTHER REQUIREMENTS [40 CFR 112.7(j)]**

Tank construction and operation must conform to state and local requirements, including all applicable Uniform Fire Code (UFC) regulations and local fire codes.

Tank battery construction and containment must be constructed and operated in accordance with the COGCC Rules and Regulations.

All spills will be reported to COGCC, the National Response Center (NRC), and the CDPHE, as detailed in the Colorado Spill Reporting Flowchart included in Appendix A.

Releases to surface or subsurface soil or groundwater will be remediated to meet the COGCC, Table 910 standards for soil and groundwater.

#### **14.0 QUALIFIED OIL-FILLED OPERATIONAL EQUIPMENT [40 CFR 112.7(k)]**

There is currently no qualified oil-filled operational equipment in use at facilities covered by this SPCC Plan.

## **APPENDIX A**

### **TABLES**

TABLE A-1  
INTERNAL EMERGENCY NOTIFICATIONS

SandRidge Exploration & Production, LLC – Field Office  
356 JCR 34  
Coalmont, Colorado 80430

<b>Field Operations Manager for the Rockies – Grant Hewins</b>	
Mobile Phone.....	(405) 508-1527
<b>EH&amp;S Supervisor – Clay Harwell</b>	
Mobile Phone.....	(405) 590-7483
Office .....	(580) 430-4605
<b>Production Superintendent for the Rockies – Kellen McLoughlin</b>	
Mobile Phone.....	(432) 813-2077
<b>EH&amp;S Technician – Michael James</b>	
Mobile Phone.....	(405) 519-6634
<b>After Hours Emergency .....</b>	<b>(405) 429-5974</b>

EMERGENCY RESPONSE CONTRACTORS

<b><u>Remediation Contractor – Sessions &amp; Sons</u></b>	
Services include: Vacuum Trucks, Backhoe Service, and Front End Loader	
Office .....	(970) 723-4944
After hours cell .....	Brian Jenkins – (970) 819-5304
<b><u>Remediation Consultant – TSC</u></b>	
Office .....	Lance Bland – (580) 603-4500
After Hours Emergency Number .....	(855) 723-3329





**TABLE A-2**

**NOTIFICATION TO OUTSIDE PARTIES,  
PUBLIC SAFETY OFFICIALS, AND GOVERNMENT AGENCIES**

**GOVERNMENT AGENCY NOTIFICATIONS – VERBAL**

**National Response Center** ..... (800) 424-8802  
(24 hr/day-7 days/week)

**U.S. Environmental Protection Agency Region 8**  
**Emergency Hotline**..... (800) 227-8917  
.....or (303) 312-6312

**Colorado Department of Public Health and Environment, Water Quality Control Division**  
(24 hr/day-7 days/week)..... (877) 518-5608

**Colorado Oil and Gas Conservation Commission**..... (303) 894-2100

**LOCAL EMERGENCY PLANNING COMMITTEE**

**Jackson County**

Kent Crowder  
Jackson County Commissioner  
PO Box 1019  
Walden, CO 80480..... (970) 723-4660

**GOVERNMENT AGENCY NOTIFICATIONS – WRITTEN**

**Colorado Oil and Gas Conservation Commission**  
1120 Lincoln Street, Suite 801  
Denver, CO 80203

TABLE A-2 (Continued)

NOTIFICATION TO OUTSIDE PARTIES,  
PUBLIC SAFETY OFFICIALS, AND GOVERNMENT AGENCIES

PUBLIC SAFETY NOTIFICATION

Jackson County

Police/Fire/Ambulance.....911

Jackson County Sheriff ..... (970) 723-4242

North Park Fire District..... (970) 723-4242

Hospital

Yampa Valley Medical Center ..... (970) 879-1322  
1024 Central Park Drive  
Steamboat Springs, Colorado 80487

Additional Contacts

Department of Wildlife Conservation ..... (303) 297-1142

State Fire Marshal ..... (303) 239-4463

State Highway Patrol..... (303) 239-4501

Water Resource Board ..... (303) 866-3581



# Colorado Release Notification Procedures For E&P Waste

## *First Responder Responsibility*

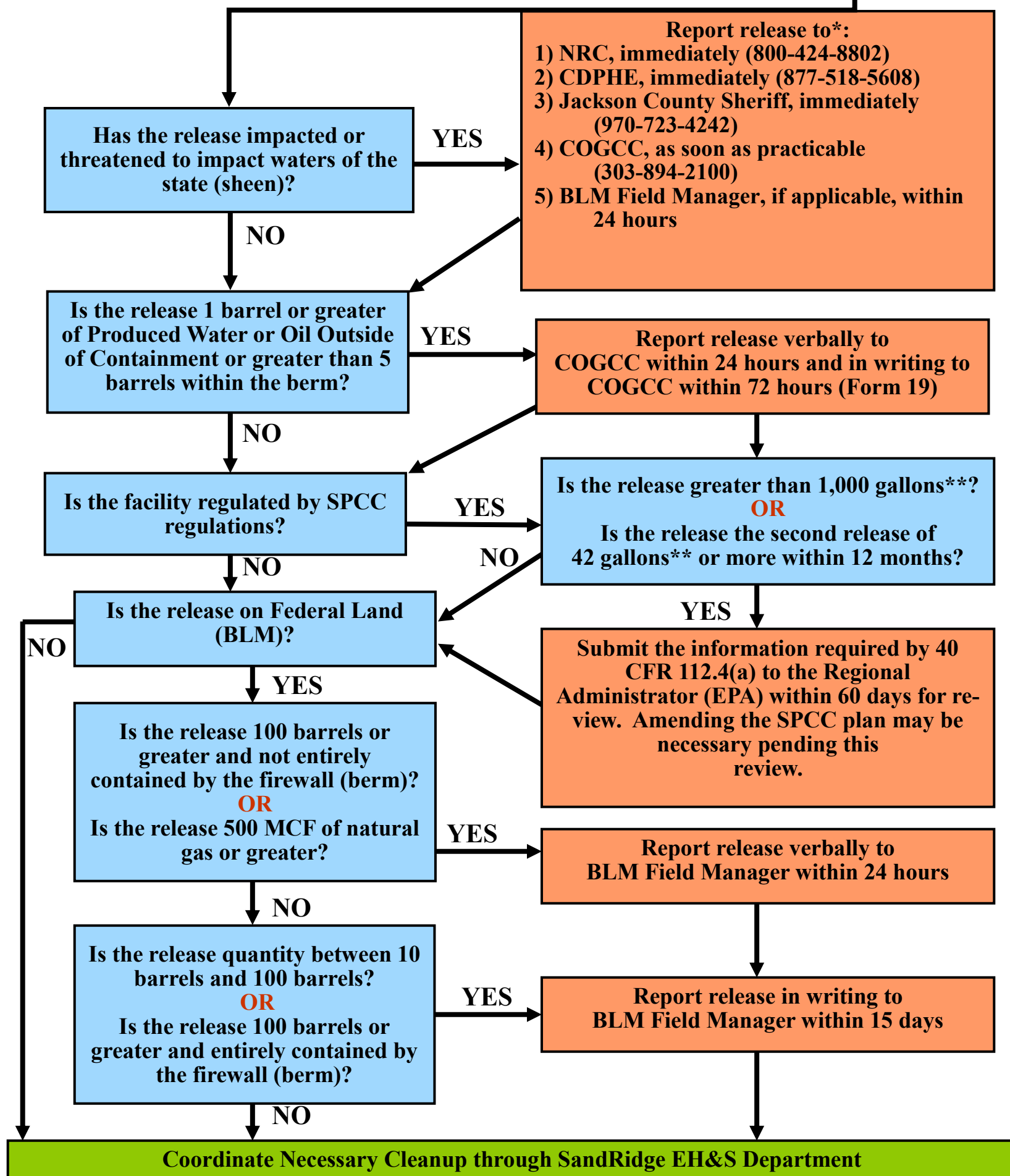
Spill is discovered from a tank, line, or valve

- 1) Safely stop release
- 2) Contain liquids to stop migration
- 3) Determine the quantity and type of release

Call Supervisor:  
Grant Hewins  
(405) 508-1527

Supervisor calls:  
Clay Harwell  
(405) 590-7483 or  
Michael James  
(405) 519-6634

## *Environmental Group Responsibility*



NRC - National Response Center

CDPHE - Colorado Department of Public Health and Environment

COGCC - Colorado Oil and Gas Conservation Commission

EH&S - Environmental, Health and Safety

EPA - Environmental Protection Agency, Region 8 (800) 227-8917

SPCC - Spill Prevention Control and Countermeasures CFR - Code of Federal Regulations

BLM - Bureau of Land Management

MCF - 1,000 cubic feet

\* Written reports to COGCC (within 10 days) and BLM Field Manager (within 15 days) are required.

\*\* Applies to the total amount discharged that reaches navigable water, not the quantity of the discharge alone.

**APPENDIX B**  
**FORMS AND CHECKLISTS**



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**SPILL RESPONSE NOTIFICATION FORM  
SANDRIDGE EXPLORATION & PRODUCTION, LLC**

Reporter's Last Name: \_\_\_\_\_ First: \_\_\_\_\_ M.I.: \_\_\_\_\_  
Reporter's Title/Position: \_\_\_\_\_

**INCIDENT DESCRIPTION**

Date and Time of Discharge: \_\_\_\_\_  
Material Discharged: \_\_\_\_\_

Quantity Discharged (with units): \_\_\_\_\_

Container Type (Container Failure?): \_\_\_\_\_

Material Released in Water? If so, quantity (include units): \_\_\_\_\_

Media Affected: Soil \_\_\_\_\_ Water \_\_\_\_\_ Other (list) \_\_\_\_\_

Spill Location: \_\_\_\_\_

Nearest City: \_\_\_\_\_

Source and Cause of Incident: \_\_\_\_\_

Responsible Party's Name: \_\_\_\_\_

Responsible Party's Address / Phone: \_\_\_\_\_

**IMPACT**

Number of Injuries: \_\_\_\_\_ Number of Deaths: \_\_\_\_\_

Were there Evacuations: \_\_\_\_\_ (Y/N)? If yes, the number of people evacuated: \_\_\_\_\_

Was there any damage: \_\_\_\_\_ (Y/N)? If yes, describe damage including the medium affected and the approximate dollar amount of damage. (Be complete): \_\_\_\_\_



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**SPILL RESPONSE NOTIFICATION FORM (Continued)  
SANDRIDGE EXPLORATION & PRODUCTION, LLC**

**RESPONSE ACTION**

Actions taken to Correct, Control, or Mitigate Incident: \_\_\_\_\_

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**CALLER NOTIFICATIONS**

\_\_\_ National Response Center

\_\_\_ Fire/Rescue

\_\_\_ U.S. EPA

\_\_\_ Hospital

\_\_\_ State Agency

\_\_\_ Other (list) \_\_\_\_\_

**RESPONSE CONTRACTOR**

List names and phone numbers of spill response contractors contacted: \_\_\_\_\_

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**ADDITIONAL INFORMATION**

Any information about the incident not recorded elsewhere in the report?: \_\_\_\_\_

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**NOTE: DO NOT DELAY NOTIFICATION (INTERNAL OR EXTERNAL) PENDING  
COLLECTION OF ALL INFORMATION.**



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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Insert SandRidge Annual Inspection Form



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**PERSONNEL SPILL PREVENTION TRAINING LOG**

**SANDRIDGE EXPLORATION & PRODUCTION, LLC**

(Oil-handling personnel must be trained at least once a year in the prevention of oil discharges, discharge procedure protocols, applicable pollution control laws, general facility operations, and the contents of this SPCC Plan.)

**SIGN IN SHEET**

**TOPICS DISCUSSED:** \_\_\_\_\_

[Note: Required topics must include the facility SPCC Plan.]

NAME (please print)	COMPANY/POSITION	TELEPHONE/EXT.
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		

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

Subject/Issue Identified	Required Action
	Implementation Date:





**SANDRIDGE EXPLORATION & PRODUCTION, LLC.  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

---

**PRECIPITATION INSPECTION AND REMOVAL LOG (DRAINAGE LOG) (40 CFR 112.9(b))**

**SANDRIDGE EXPLORATION & PRODUCTION, LLC**

When precipitation accumulations large enough to reduce secondary containment volume accumulate on site, precipitation may be pumped out of the containment in the event that all oil is removed prior to pumping. In the event that precipitation is pumped out of the containment, the following record documenting inspection for oil and oil and precipitation removal and disposal must be completed.

Note: In the event that vacuum truck services are used to remove precipitation or combined precipitation and produced water or crude oil for disposal at a permitted disposal facility, service records will be considered record of this removal. In the event of a reportable release, release reporting documents are considered record of this removal.

<b>Date</b>	<b>Inspector Name</b>	<b>Oil Present? (Y/N)</b>	<b>Approximate Quantity of Oil Present/Removed (all oil must be removed)</b>	<b>Approximate Volume of Precipitation Present/Removed</b>	<b>Method of Oil Removal/ Disposal</b>	<b>Method of Precipitation Removal</b>	<b>Comments</b>



**APPENDIX C**  
**OIL SPILL CONTINGENCY PLAN**



**SANDRIDGE EXPLORATION & PRODUCITON, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**APPENDIX C**

**TABLE OF CONTENTS**

1.0 INTRODUCTION.....	1
1.1 CRITICAL WATER SUPPLIES .....	1
1.2 EMERGENCY RESPONSE .....	1
1.2.1 Spill Response Team .....	1
1.2.2 Facility Contact Information .....	1
1.2.3 Emergency Contractors .....	2
1.3 EQUIPMENT .....	2
1.4 RESPONSE OFFICE .....	3
1.5 SAFETY MEASURES .....	3
2.0 TYPES OF SPILLS.....	4
2.1 MINOR DISCHARGES .....	4
2.2 MAJOR OR CATASTROPHIC DISCHARGES .....	4
2.3 FLAMMABILITY .....	5
3.0 RESPONSE .....	5
4.0 CONTROL.....	6
4.1 CONTAINMENT ON WATER.....	6
4.1.1 Expedient Booms.....	6
4.1.2 Filter Fences .....	6
4.1.3 Flow Construction .....	7
4.1.4 Siphon Dam .....	7
4.1.5 Removal Process .....	7
4.2 CONTAINMENT ON LAND.....	7
4.3 TREATING AGENTS .....	8



## OIL SPILL CONTINGENCY PLAN

### 1.0 INTRODUCTION

In accordance with 40 CFR 112.7 (d), this Oil Spill Contingency Plan (OSCP) has been prepared as required under 112.7(d)(1) to meet the requirements of 40 CFR 109.5.

### 1.1 CRITICAL WATER SUPPLIES

Following the SPCC Plan site specific facility layout diagram, the Response Coordinator (Response Coordinator) will identify critical water sources near the facility. The Response Coordinator will be responsible for identifying public water supplies and notification of downstream water users of the spill.

### 1.2 EMERGENCY RESPONSE

#### 1.2.1 Spill Response Team

The response team, comprised of trained facility employees including the First Responder (most likely the facility pumper), Field Supervisor, and Response Coordinator, will initiate, support or completely implement the spill response activities. The degree of involvement from internal personnel will depend on the magnitude of the release. It will be the responsibility of the Response Coordinator to act as the Response Coordinator. The Response Coordinator will determine if emergency contractors are needed and to contact them for assistance. If the Response Coordinator is not available, the Field Supervisor for the facility will act as the Response Coordinator.

#### 1.2.2 Facility Contact Information

##### Corporate Contact and Address Information

**SandRidge Exploration & Production, LLC**  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102  
(405) 429-5500

##### Local Facility Contact and Address Information

**SandRidge Exploration & Production, LLC – Field Office**  
356 JCR 34  
Coalmont, Colorado 80430

**Field Operations Manager for the Rockies – Grant Hewins**

Mobile Phone..... (405) 508-1527



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

---

**EH&S Supervisor – Clay Harwell**

Mobile Phone..... (405) 590-7483  
Office ..... (580) 430-4605

**Production Superintendent for the Rockies – Kellen McLoughlin**

Mobile Phone..... (432) 813-2077

**EH&S Technician – Michael James**

Mobile Phone..... (405) 519-6634

**After Hours Emergency** ..... (405) 429-5974

**1.2.3 Emergency Contractors**

**Remediation Contractor – Sessions & Sons**

Services include: Vacuum Trucks, Backhoe Service, and Front End Loader

Office ..... (970) 723-4944  
After Hours Cell..... Brian Jenkins – (970) 819-5304

**Remediation Consultant – TSC**

Office ..... Lance Bland – (580) 603-4500  
After Hours Emergency Number ..... (855) 723-3329

**1.3 EQUIPMENT**

As stated on Page iv of this SPCC Plan, SandRidge is committed to provide all appropriate manpower, equipment, and materials required to expeditiously control and remove any harmful quantity of oil discharged from this facility. SandRidge has contracted with the emergency contractors (above) to provide additional manpower and equipment if necessary.

The availability of equipment, material, and labor is very important. Depending on the terrain and size of the discharge, the following equipment and materials may be needed: dozers, backhoes, tanks or vacuum trucks, pumps, hose, booms, fencing, and/or other materials. SandRidge personnel will be provided with spill cleanup materials for small spills. Additional spill response equipment is kept at the Field Office in Coalmont, Colorado. An inventory of spill response equipment which is provided to the Response Coordinator is provided below.



**SANDRIDGE EXPLORATION & PRODUCTION, LLC  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

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**INVENTORY OF SPILL CLEANUP MATERIALS**

Field Office is located at 356 JCR 34, Coalmont, CO 80430.

<b>MATERIAL</b>	<b>QUANTITY</b>

#### **1.4 RESPONSE OFFICE**

During an oil spill emergency, the closest SandRidge Field Office (Coalmont, Colorado) will be used as the response operations center. The Field Office will provide access to telephones (landlines). Personnel at the response operations center will contact the on-site field response team via cellular phone.

#### **1.5 SAFETY MEASURES**

Safety procedures to be observed during any spill response:

- Do not smoke and remove possible ignition sources.



- Restrict access to the spill area by roping or barricading the entire spill area and establishing one easily controlled point of entry.
- Establish reliable communication between persons entering the spill area and those remaining outside.
- Establish a “buddy system” and rescue mechanism.
- Unless the spill involves a known substance, approach on the assumption that the material is extremely hazardous.
- Always approach a spill site from upwind with a predetermined escape route established.
- If unidentified fuming liquids or gases are present, do not approach the area without assistance or without a breathing apparatus.
- Avoid contact with the spilled material.

## **2.0 TYPES OF SPILLS**

In spite of precautions taken, oil discharges can occur. The location and magnitude of discharges can vary greatly; therefore, this section furnishes general guidelines and usable techniques for containment and cleanup operations.

### **2.1 MINOR DISCHARGES**

Minor discharges include load losses or leaking valves (spilled on land or water). Minor discharges will be discovered by SandRidge facility personnel or by contractor personnel during scheduled daily or monthly visits to the facility. SandRidge will maintain materials and equipment to clean up small spills. Example materials and equipment include shovels, absorbent materials, booms, and gloves.

Most small discharges can be contained and mitigated by SandRidge personnel by constructing diversion berms or the use of sorbent materials. In the event a release occurs that reaches surface water, the methods detailed in Section 4.0 of this OSCP will be implemented.

### **2.2 MAJOR OR CATASTROPHIC DISCHARGES**

The most damaging type of discharge usually occurs when a large volume of oil is lost in a short period of time. This is usually caused by ruptured tanks, equipment failure, major power outages, and/or oil and flowline breaks. In such cases, the containment equipment and manpower will be concentrated well below the leading edge of the discharged oil. This will ensure ample time for installation of containment dikes, dams, and equipment. Example materials and equipment needed to clean up a catastrophic spill include vacuum trucks, backhoes, other heavy equipment, and booms.

The maximum oil discharge anticipated would be based upon the size of the largest oil aboveground storage tank (AST) at the facility (see Appendix E, for the Facility Layout Diagram and containment calculation tables for the largest AST volume). In the event of a catastrophic spill, emergency contractors, the United States Environmental Protection Agency (EPA), and other agencies will be contacted for assistance in the cleanup process.

### **2.3 FLAMMABILITY**

If discharged material is flammable and is located in a congested area, the local fire and police departments will be notified immediately. The fire and police departments will initiate proper evacuation measures.

### **3.0 RESPONSE**

The following procedures will be implemented following spill discovery (most commonly by the pumper) in the event that the release is not hazardous or life threatening. If it is not safe to implement these procedures, the Field Operations Manager (Response Coordinator) should be immediately notified (Step 5). Following these procedures will reduce the quantity of oil released to the environment and facilitate initiation of clean up and disposal procedures.

- 1. Shut off oil supply, if possible, by turning off supply pumps and closing supply valves;**
- 2. Stop valve leaks, if possible, by closing all valves and checking the valve connection for a proper seal;**
- 3. Stop pipe leaks, if possible, by minimizing flow to the leaking pipe or connection;**
- 4. Shut off ignition sources, if possible;**
- 5. Contact the Response Coordinator listed above and in Appendix A. In the event that the Response Coordinator cannot be reached, contact the appropriate EH&S Supervisor;**
- 6. Contain spill and/or dike ahead of spill;**
- 7. Protect nearby people, property, surface waters, and equipment from the spill;**
- 8. The Response Coordinator will evaluate the situation to obtain and direct the personnel, materials, and equipment required to clean up the spill area;**
- 9. The EH&S Supervisor will notify appropriate outside parties, including federal, state, and local governmental agencies and public safety personnel;**
- 10. If necessary, local emergency agencies (e.g., fire department, Jackson County Office of Emergency Management) will be contacted to assist in minimizing public**



exposure by evacuating the public, controlling traffic, assisting in fire control, and providing emergency medical care;

- 11. The EH&S Supervisor (or his designee) will perform a site inspection to verify any spill at the facility of a reportable quantity or if any quantity has reached a waterway, and will report such spills to the appropriate governmental agency.**

## **4.0 CONTROL**

Upon discovery of an accidental discharge, the first action taken is the safeguarding of life and property. The next step is to find the source of discharge and stop additional loss of fluid.

Fast action to contain the discharged fluid is of the utmost importance. It not only reduces the size of the area affected, it also reduces the cost of cleanup operations. The following section details methods for controlling a release.

### **4.1 CONTAINMENT ON WATER**

The above mentioned equipment can be used in the construction of a skimming pond. The use of several booms in conjunction with a skimming pond at the stream edge is depicted in Figures C-1 through C-3.

#### **4.1.1 Expedient Booms**

Described below are simple booms that can be constructed with materials available from local sources.

- Figure C-1 illustrates boom deployment in a lake. Figures C-2 and C-3 illustrate boom deployment in streams.
- Tie several bales of straw or hay (end to end) with steel wire. This acts as a sorbent boom. If you want to use it as a containment-type boom, cover the bales with polyethylene sheets. The boom is attached to a cable and deployed across the stream. Figure C-4 describes this boom.
- Logs or similar material can also be fastened together (end to end) and deployed across the water channel. Oil, however, passes more easily under this type of barrier. This can be remedied by scattering floating sorbent materials in front of the barrier to help contain the oil. The barrier will also be placed at a sharper angle (10°) to the direction of flow.

#### **4.1.2 Filter Fences**

Filter fences can be used to control oil in ditches and streams where, generally, the water depth is four feet or less. This type of containment is very useful since it uses materials available in more areas. This fence can be constructed with chicken or hog wire or chain link fence. Steel or wooden posts can be used for support and hay or straw used for the filter. Posts are driven into the streambed 8 feet to 10 feet apart and set at an angle to the current flow. The wire fencing is

then tied to the posts, always allowing at least one foot of freeboard (wire above water level), and anchoring the fence to each bank of the stream. Straw or hay is broken out of the bales and spread over the water across the full width of the fence, for 15 feet to 20 feet upstream. The depth of the straw or hay will be a minimum of 6 inches thick. In most cases, there will be a series of these filter fences constructed, leaving adequate working space between fences. These fences will be continually maintained and the saturated straw or hay can be replaced as needed (Figure C-4).

#### **4.1.3 Flow Construction**

It may be possible, where water flow volume is low, terrain permits, and sufficient time is available, to construct a catch basin in the stream channel or divert the water into holding ponds. This allows removal of oil by skimmer, vacuum trucks, etc.

#### **4.1.4 Siphon Dam**

Figure C-5 illustrates two types of temporary catch basin construction using submerged pipe openings to carry water past the surface barrier which, in turn, retains the floating oil. Care will be taken in selection of pipe diameter or number of pipes used to ensure adequate discharge to prevent the dike from overflowing by trapped water.

#### **4.1.5 Removal Process**

Ideally, oil removal will be a two-stage operation. The first step is to consolidate the oil slick as much as possible. The greater oil thickness allows more efficient use of skimming equipment. Oil recovered by this process can often be placed back into the production system and thus recovered. The second stage is to remove the remaining oil slick. This is done by covering the slick with floating sorbent materials and retrieving the saturated materials manually.

Practically, oil is diverted to the most suitable or accessible point where removal equipment can be located. Wind and water currents can be used to help float the oil into pockets for removal. However, wind and water currents can also hinder the operation. Always be aware of these two factors.

### **4.2 CONTAINMENT ON LAND**

The following controls can be used to contain oil spills on land:

- Available on-site secondary containment;
- Vacuum trucks to assist in the recovery of free product within containment;
- Backhoes in the event of a catastrophic spill to remove contaminated soil from a facility. Contaminated soil will be transported to an approved disposal facility for treatment;
- Temporary containment pits, ponds, or curbs to prevent the continued flow of oil off site; and

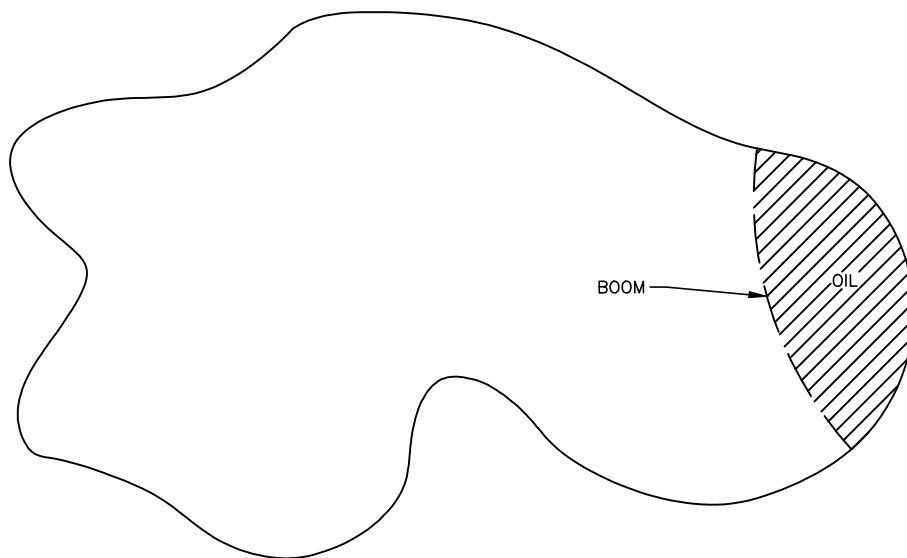
- Absorbent sock and sorbent materials along the shoreline to prevent the continued flow of oil off site.

### **4.3 TREATING AGENTS**

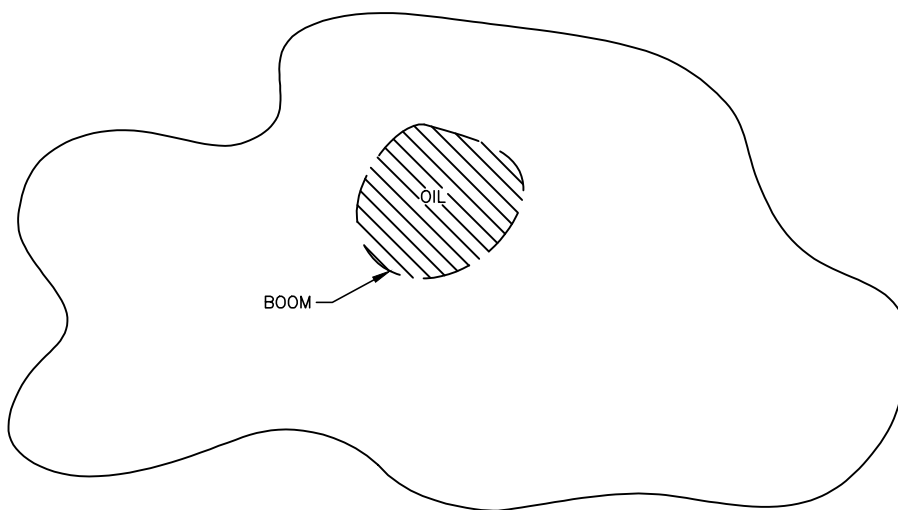
Oil spill treating agents are generally classified as dispersants, collecting agents, sinking agents, burning agents, or gelling agents.

Chemical agents are not allowed to be used without prior approval of the EPA.

SandRidge does not keep chemical agents on hand and does not intend for them to be used on any oil spill unless approval is first received from management and then subsequent approval is received from the EPA.



ALONG SHORELINE



OPEN LAKE

FIGURE C-1  
BOOM DEPLOYMENT IN LAKES



H: EPA

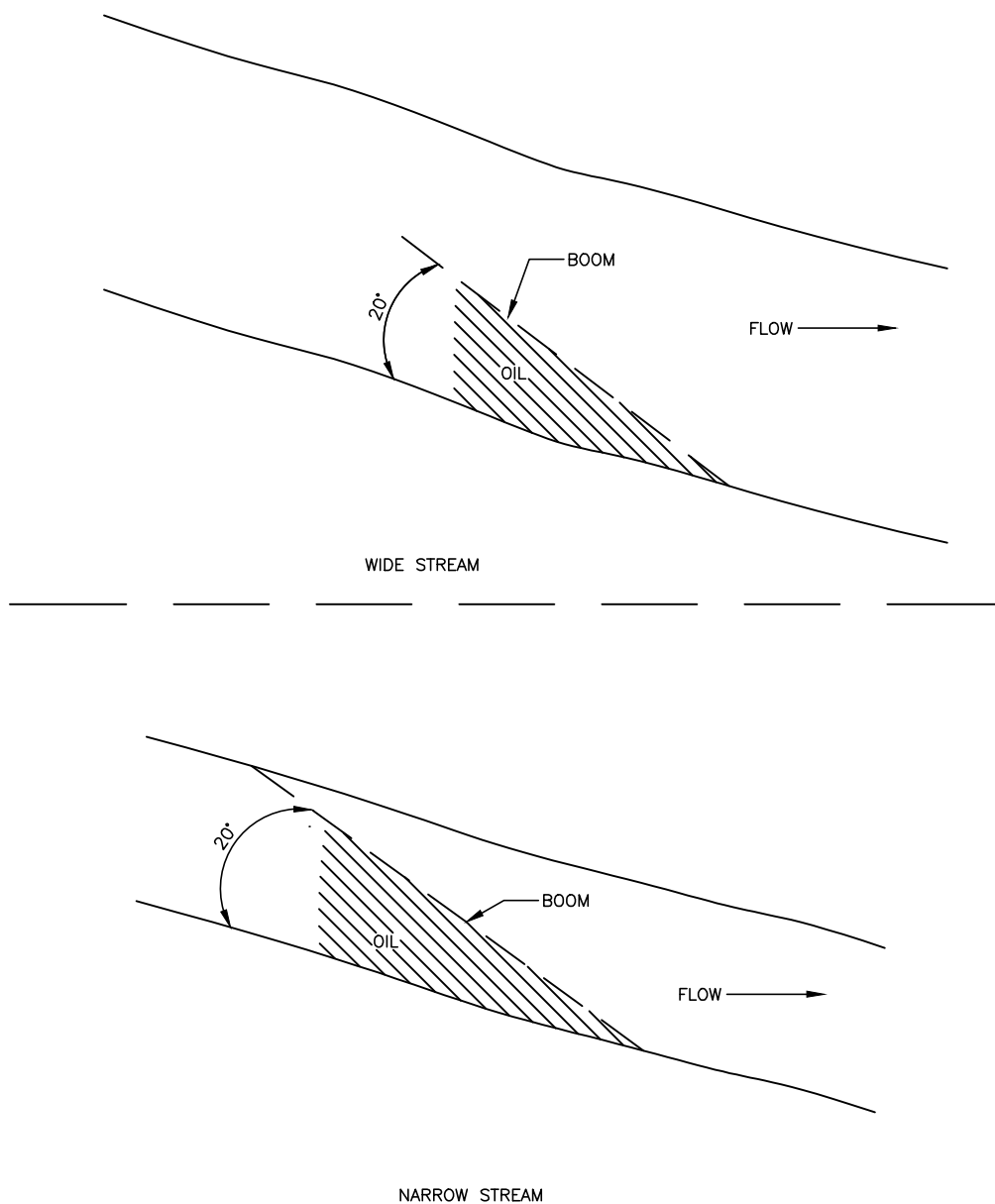


FIGURE C-2  
BOOM DEPLOYMENT IN FAST-FLOWING STREAM



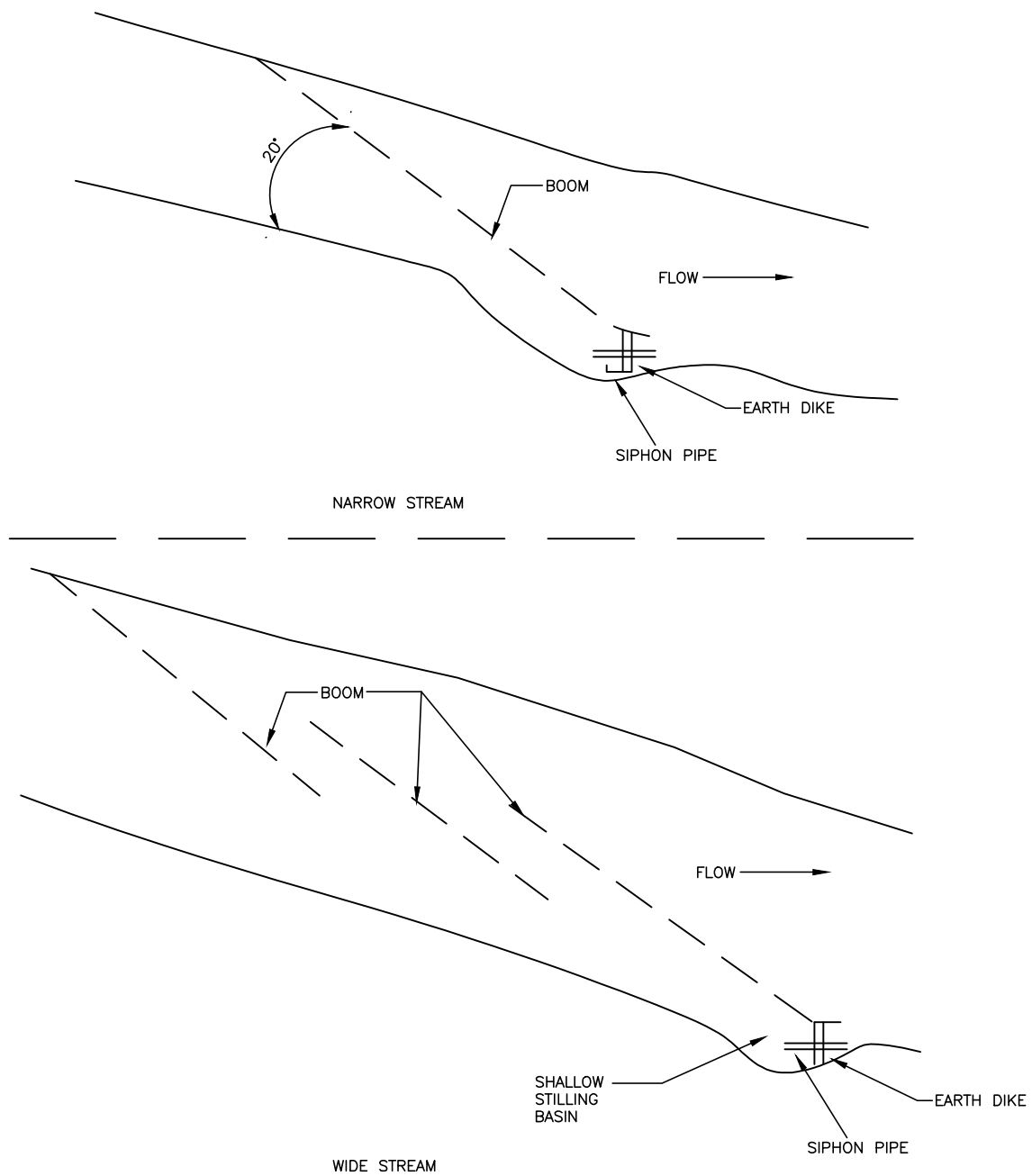


FIGURE C-3  
BOOM DEPLOYMENT IN FAST-FLOWING STREAM  
ALTERNATE METHOD



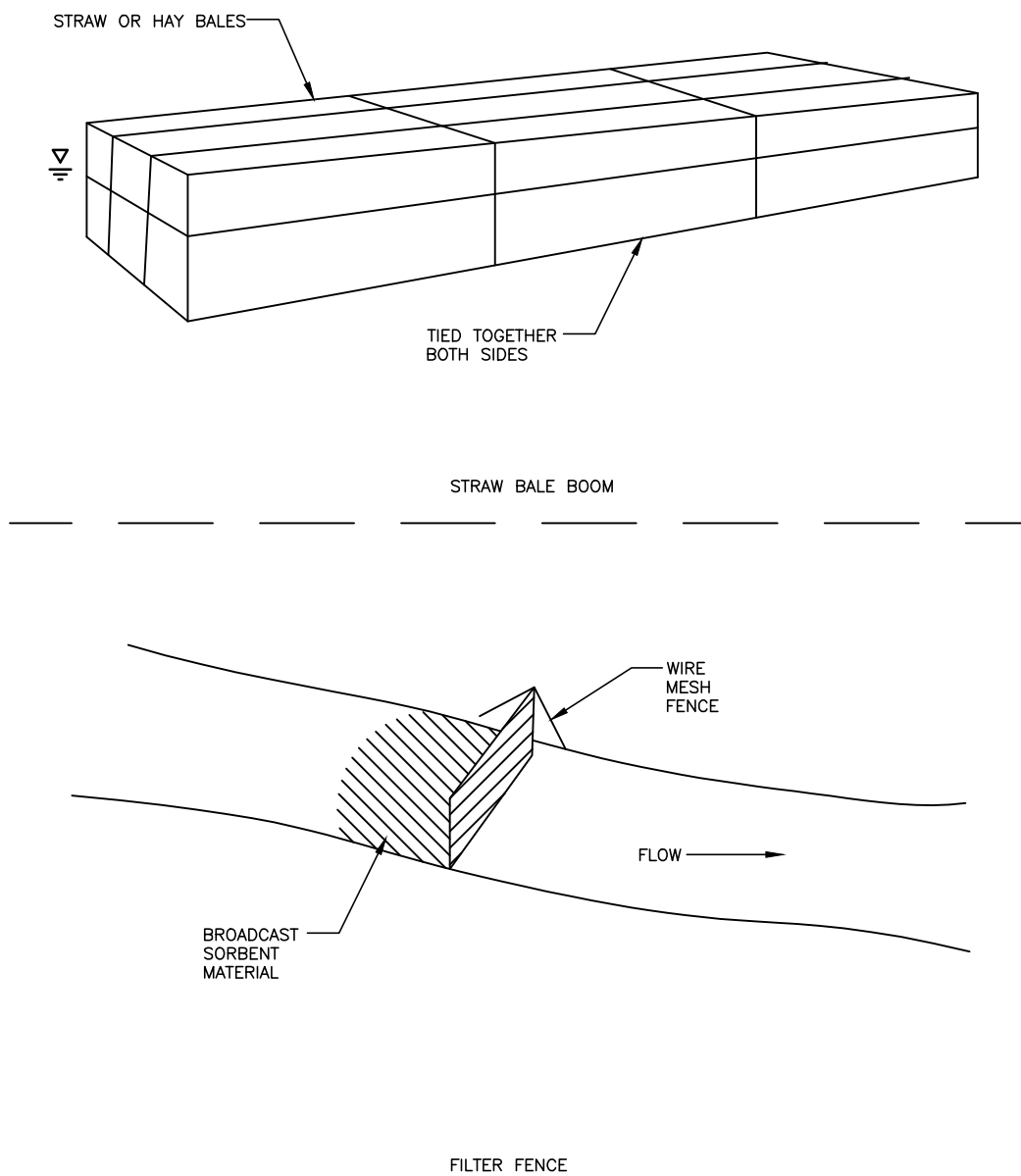


FIGURE C-4  
EXPEDIENT BOOM AND FILTER FENCE  
OIL RELEASE CONTINGENCY PLAN



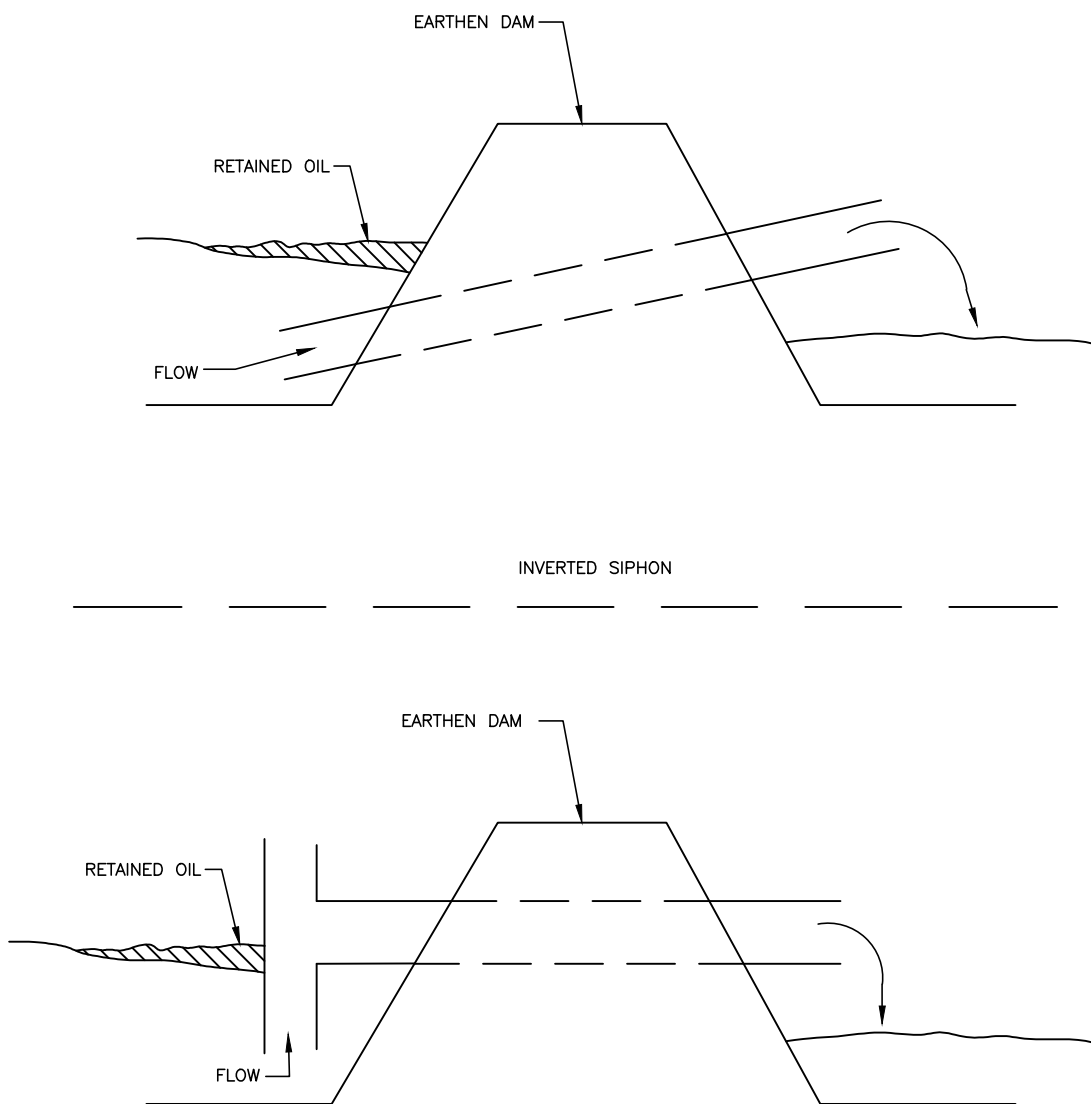


FIGURE C-5  
EARTHEN DAM CONSTRUCTION





**APPENDIX D**  
**FLOWLINE MAINTENANCE PROGRAM**



### **FLOWLINE MAINTENANCE PROGRAM [40 CFR 112.9(d)(4)]**

Flowlines and piping at production facilities can be sources of releases. The quantity and rates of such events will vary according to failure mode, operating pressures, production rates, and duration of the release.

Flowlines and intra-facility gathering lines and associated valves and equipment are compatible with the type of production fluids, their potential corrosivity, volume and pressure, and other conditions expected in the operational environment.

The majority of the piping in the field is constructed of steel and was installed in 2008 or later. The lines are considered low pressure lines (<100 pounds per square inch maximum) and are inspected by the pumper during regularly scheduled site visits.

Aboveground flowlines and associated appurtenances are visually inspected weekly during the pumper's regularly scheduled site visits for leaks, oil discharges, corrosion, or other conditions that could lead to a discharge as described in 40 CFR 112.1(b). Buried flowlines are inspected whenever they are exposed.

Appropriate corrective actions or repairs are made to any flowline, intra-facility gathering line, or associated appurtenances if evidence of a discharge is present. Evidence of a discharge includes product that has surfaced above the flowline. Suspected releases, including significant loss of pressure in the line or significant reduction in product recovered in the production tanks will be investigated.

In the event a leak is discovered, the lines will be replaced with pipe constructed of appropriate materials. All repaired or replaced flowlines are pressure tested prior to being put into operation. Lines are tested up to 100 psi utilizing water truck pumps.

Actions are initiated promptly to stabilize and remediate any accumulations of oil discharges associated with flowlines, intra-facility gathering lines, and associated appurtenances.

Releases are reported to the appropriate supervisor and cleanup personnel upon discovery. Oil and impacted media are removed or remediated as soon as practicable.

**APPENDIX E**  
**SITE-SPECIFIC INFORMATION**



**SITE INDEX  
SANDRIDGE ENERGY  
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN  
JACKSON COUNTY, COLORADO**

<b>SITE NAME</b>	<b>ASSOCIATED WELLS</b>	<b>PE CERTIFICATION DATE</b>	<b>COUNTY</b>	<b>LATITUDE</b>	<b>LONGITUDE</b>
BIGHORN 0780 17 CENTRAL FACILITY	CASTLE 0780 1-17H20 HEBRON 0780 4-7H HEBRON 0780 3-18H HEBRON 0780 4-18H MUTUAL 0780 2-8H MUTUAL 0780 3-8H MUTUAL 0780 4-8H	12/27/16 revised 4/27/2018	JACKSON	40.583103	-106.400892
BUFFALO DITCH 1-32H, 2-32H		03/24/16	JACKSON	40.53609	-106.38779
COALMONT 3-13H		03/24/16	JACKSON	40.57915	-106.4419
GREGORY 1-09H		06/28/16	JACKSON	40.58529	-106.38681
GRIZZLY 3-32H		03/24/16	JACKSON	40.6278	-106.39447
HEBRON 1-18H, 5-18H, 1-18HR, 2-18H	HEBRON 1-18H HEBRON 0780 2-18H HEBRON 1-18HR HEBRON 5-18H	3/24/2016 revised 4/3/2017	JACKSON	40.58394	-106.41455
HEBRON 2-7H, 3-12H CENTRAL FACILITY		03/24/16	JACKSON	40.59431	-106.41383
MUTUAL 2-30H, 4-30H		03/24/16	JACKSON	40.54198	-106.41436
MUTUAL 7-17H		03/24/16	JACKSON	40.58393	-106.4055
PETERSON RIDGE 1-20H		03/24/16	JACKSON	40.64459	-106.39447
SPICER 3-32H		03/24/16	JACKSON	40.652836	-106.40461
SURPRISE 2-08H		03/24/16	JACKSON	40.51548	-106.38852
SURPRISE 4-06H, DAMFINO 2-06H		03/24/16	JACKSON	40.51256	-106.41678
VANETA 1-32 SWD		03/24/16	JACKSON	40.54037	-106.3908



Bighorn 0780 17 Central Facility



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Bighorn 0780 17 Central Facility

Inspector: Matt Church

Facility ID: 446174

Date: 1/22/2018

Latitude: 40.583103

Longitude: -106.400892

County: Jackson

State: CO

#### SITE INVENTORY – PRODUCTION TANKS

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	PW	1,100 bbl	15'6" x 33'	Steel	In berm
2	PW	1,100 bbl	15'6" x 33'	Steel	In berm
3	PW	1,100 bbl	15'6" x 33'	Steel	In berm
4	PW	1,100 bbl	15'6" x 33'	Steel	In berm
5	PW	1,100 bbl	15'6" x 33'	Steel	In berm
6	PW	1,100 bbl	15'6" x 33'	Steel	In berm
7	Oil	1,100 bbl	15'6" x 33'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Steel    Containment Shape: Rectangle

Length: 150' Width: 66' Height: 3.25', Capacity: 5,730 bbl

Total Containment Capacity: 5,730 bbl

Tank Displacement: 655 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 294 bbl

Available Containment Capacity: 4,781 bbl

Largest Tank: 3,300 bbl\*

#### NOTES

bbl – barrel

PW – Produced Water

\* - The produced water tanks are manifolded together at the bottom in groups of three, meaning that the largest tank is the capacity of three tanks; i.e., 3 x 1,100 bbl = 3,300 bbl



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:

Largest Bulk Oil Storage Tank:  bbl

### Dike Dimensions:

Length (ft.)	<input type="text" value="150"/>	Available Dike Capacity	<input type="text" value="5,730"/> bbl
Width (ft.)	<input type="text" value="66"/>		
Height (ft.)	<input type="text" value="3.25"/>		

### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="15.5"/>	Displacement:	<input type="text" value="655"/> bbl
No. Tanks	<input type="text" value="7"/>		

Diameter (ft.)	<input type="text"/>	Displacement:	<input type="text" value="0"/> bbl
No. Tanks	<input type="text"/>		

Total:  bbl

### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<input type="text" value="2"/> feet	<input type="text" value="0.167"/>	<input type="text" value="294"/> bbl
-------------	-------------------------------------	------------------------------------	--------------------------------------

Total Dike Capacity:  bbl

Largest Tank:  bbl

Is Containment Satisfactory:



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Bighorn 0780 17 Central Facility

Inspector: Matt Church

API Number: 446174

Date: 1/22/2018

Latitude: 40.59431

Longitude: -106.41383

County: Jackson

State: CO

#### SITE INVENTORY – PRODUCTION TANKS – Berm 1

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
2	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
3	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
4	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
5	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
6	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
7	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
8	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
9	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
10	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
11	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
12	Oil	1,100 bbl	15'6" x 33'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Steel    Containment Shape: Rectangle

Length: 200' Width: 66' Height: 3', Capacity: 7,053 bbl

Total Containment Capacity: 7,053 bbl

Tank Displacement: 1,209 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 392 bbl

Available Containment Capacity: 5,452 bbl

Largest Tank: 4,400 bbl\*

#### NOTES

bbl – barrel

PW – Produced Water

\* - The tanks are manifolded together at the bottom in groups of four, meaning that the largest tank is the capacity of four tanks; i.e., 4 x 1,100 bbl = 4,400 bbl.





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:

Largest Bulk Oil Storage Tank:  bbl

### Dike Dimensions:

Length (ft.)	<input type="text" value="200"/>	Available Dike Capacity	<input type="text" value="7,053"/> bbl
Width (ft.)	<input type="text" value="66"/>		
Height (ft.)	<input type="text" value="3"/>		

### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="15.5"/>	Displacement:	<input type="text" value="1,209"/> bbl
No. Tanks	<input type="text" value="12"/>		

Diameter (ft.)	<input type="text"/>	Displacement:	<input type="text" value="0"/> bbl
No. Tanks	<input type="text"/>		

Total:  bbl

### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<input type="text" value="2"/> feet	<input type="text" value="0.167"/>	<input type="text" value="392"/> bbl
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Total Dike Capacity:  bbl

Largest Tank:  bbl

Is Containment Satisfactory:



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Bighorn 0780 17 Central Facility

Inspector: Matt Church

API Number: 446174

Date: 1/22/2018

Latitude: 40.59431

Longitude: -106.41383

County: Jackson

State: CO

#### SITE INVENTORY – PRODUCTION TANKS – Berm 2

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
2	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
3	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
4	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
5	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
6	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
7	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
8	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
9	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
10	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
11	Oil	1,100 bbl	15'6" x 33'	Steel	In berm
12	Oil	1,100 bbl	15'6" x 33'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Steel    Containment Shape: Rectangle

Length: 200' Width: 66' Height: 3', Capacity: 7,053 bbl

Total Containment Capacity: 7,053 bbl

Tank Displacement: 1,209 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 392 bbl

Available Containment Capacity: 5,452 bbl

Largest Tank: 4,400 bbl\*

#### NOTES

bbl – barrel

PW – Produced Water

\* - The tanks are manifolded together at the bottom in groups of four, meaning that the largest tank is the capacity of four tanks; i.e., 4 x 1,100 bbl = 4,400 bbl.



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:

Largest Bulk Oil Storage Tank:  bbl

### Dike Dimensions:

Length (ft.)	<input type="text" value="200"/>	Available Dike Capacity	<input type="text" value="7,053"/> bbl
Width (ft.)	<input type="text" value="66"/>		
Height (ft.)	<input type="text" value="3"/>		

### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="15.5"/>	Displacement:	<input type="text" value="1,209"/> bbl
No. Tanks	<input type="text" value="12"/>		

Diameter (ft.)	<input type="text"/>	Displacement:	<input type="text" value="0"/> bbl
No. Tanks	<input type="text"/>		

Total:  bbl

### 24hr/25 yr. Rain Event Displacement:

Rain	<input type="text" value="2"/> (inch)	<input type="text" value="0.167"/> feet	<input type="text" value="392"/> bbl
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Total Dike Capacity:  bbl

Largest Tank:	<input type="text" value="4,400"/> bbl	Is Containment Satisfactory:	<input type="text" value="YES"/>
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123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Bighorn 0780 17 Central Facility

Inspector: Matt Church

API Number: 446174

Date: 1/22/2018

Latitude: 40.583103

Longitude: -106.400892

County: Jackson

State: CO

#### SITE INVENTORY – PROCESS EQUIPMENT

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
HT	Mix	300 bbl	8' x 34'	H. Steel	In berm
HT	Mix	300 bbl	8' x 34'	H. Steel	In berm
HT	Mix	300 bbl	8' x 34'	H. Steel	In berm
HT	Mix	300 bbl	8' x 34'	H. Steel	In berm
Scrubber	Mix	8 bbl	2.5' x 9'	V. Steel	In berm
Combustor	Fumes (exempt)			V. Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle (Irregular)

Length: 650.54' Width: 650.54' Height: 1', Capacity: 79,480 bbl

Total Containment Capacity: 79,480 bbl

Process Equipment Displacement: 21 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 13,247 bbl

Available Containment Capacity: 66,212 bbl

Largest Tank: 300 bbl

#### NOTES

Bbl – barrel

HT – Heater-Treater

V. Steel – Vertical Steel

H. Steel – Horizontal Steel

Containment has an irregular shape; length and width create an equivalent area.

Total containment capacity takes in to account tank containments on site.



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: Bighorn 0780 17 Central Facility

Largest Bulk Oil Storage Tank: 300 bbl

Dike Dimensions (Irregular):

Length (ft.)	668.06	Available Dike Capacity	79,480	bbl
Width (ft.)	668.06			
Height (ft.)	1			

Additional Dike Dimensions if needed:

Length (ft.)		Available Dike Capacity	0	bbl
Width (ft.)				
Height (ft.)				

Total Dike Capacity: 79,480 bbl

Tank Displacement (Vertical Tanks):

Diameter (ft.)	8	Displacement:	20	bbl
No. Tanks	4			

Diameter (ft.)	2.5	Displacement:	1	bbl
No. Tanks	1			

Total: 21 bbl

24hr/25 yr. Rain Event Displacement:

Rain (inch)	2	feet	0.167	13,247	bbl
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Total Dike Capacity: 66,212 bbl

Largest Tank: 300 bbl

Is Containment Satisfactory: YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: BIGHORN 0780 17 CENTRAL FACILITY  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Clay Harwell", written over a horizontal line.

Designated person accountable for oil spill prevention at the facilities:

Name: \_\_\_\_\_

*Clay Harwell*

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

*05/08/18*

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

*ELLS & R Supervisor*



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: BIGHORN 0780 17 CENTRAL FACILITY**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

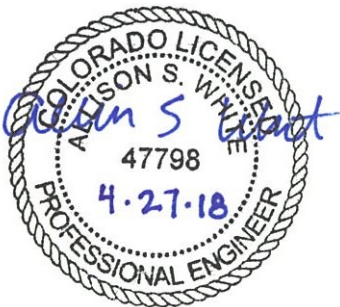
BIGHORN 0780 17 CENTRAL FACILITY

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

None

Allison S. White

Printed Name of Registered Professional Engineer



Allison S. White

Signature of Registered Professional Engineer

Date April 27, 2018

Registration No. 47798

State Colorado

**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM  
CRITERIA CHECKLIST [40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

YES \_\_\_\_\_ NO X

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

YES \_\_\_\_\_ NO X

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

YES X NO \_\_\_\_\_

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

YES \_\_\_\_\_ NO X

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

YES \_\_\_\_\_ NO X

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature \_\_\_\_\_ Title EHSR Supervisor

Name (please type or print) CLAY HARWELL Date 05/09/11

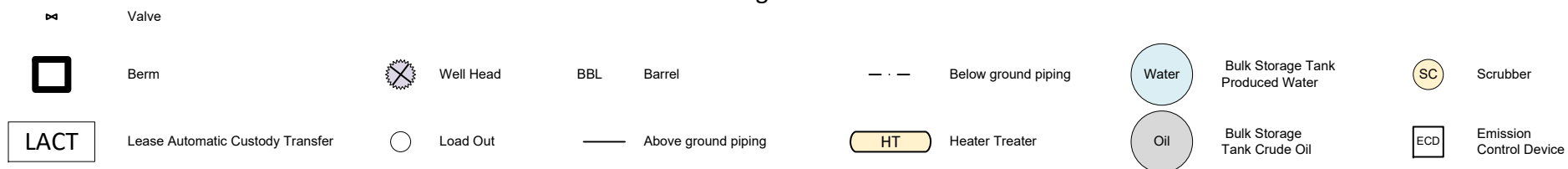
<sup>1</sup> If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

<sup>2</sup> For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2 (c).





SITE LOCATION: SandRidge E&P Bighorn 0780 17



Buffalo Ditch 1-32H, 2-32H



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Buffalo Ditch 1-32H, 2-32H

Inspector: Brett Terrel

API Number: 05057064630300, 05057064640100

Date: 12-18-15

Latitude: 40.53609

Longitude: -106.38779

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	400 bbl	12' x 20'	Steel	In berm
2	Oil	400 bbl	12' x 20'	Steel	In berm
3	Oil	400 bbl	12' x 20'	Steel	In berm
4	Oil	400 bbl	12' x 20'	Steel	In berm
5	Oil	400 bbl	12' x 20'	Steel	In berm
6	PW	400 bbl	12' x 20'	Steel	In berm
7	PW	400 bbl	12' x 20'	Steel	In berm
8	Oil	400 bbl	12' x 20'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 54' Width: 69' Height: 2', Capacity: 1203 bbl

Total Containment Capacity: 1203 bbl

Tank Displacement: 282 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 111 bbl

Available Containment Capacity: 811 bbl

Largest Tank: 400 bbl

#### NOTES

bbl – barrel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name:

Largest Bulk Oil Storage Tank:  bbl

#### Dike Dimensions:

Length (ft.)	<input type="text" value="54"/>	Available Dike Capacity	<input type="text" value="1203"/> bbl
Width (ft.)	<input type="text" value="69"/>		
Height (ft.)	<input type="text" value="2"/>		

#### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text" value="0"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="12"/>	Displacement:	<input type="text" value="282"/> bbl
No. Tanks	<input type="text" value="8"/>		

Diameter (ft.)	<input type="text"/>	Displacement:	<input type="text" value="0"/> bbl
No. Tanks	<input type="text"/>		

Total:  bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<input type="text" value="2"/> feet	<input type="text" value="0.167"/>	<input type="text" value="111"/> bbl
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Total Dike Capacity:  bbl

Largest Tank:  bbl      Is Containment Satisfactory:



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Buffalo Ditch 1-32H, 2-32H

Inspector: Brett Terrel

API Number: 05057064630300, 05057064640100

Date: 12-18-15

Latitude: 40.53609

Longitude: -106.38779

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
HT	Mix	101 bbl	6' x 20'	V. Steel	In berm
HT	Mix	101 bbl	6' x 20'	V. Steel	In berm
Separator	Mix	9 bbl	30" x 10'	H. Steel	In berm
Scrubber	Condensate	2.3 bbl	16" x 6'	V. Steel	In berm
Chem Tank	Glycol (exempt)	11 bbl	4' x 6'	E. Steel	In berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	Outside berm
Flare	Fumes (exempt)		16" x 22'	V. Steel	Outside berm
Flare	Fumes (exempt)		6" x 21'	V. Steel	Outside berm
Building			10' x 10'	V. Steel	Outside berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 62' Width: 46' Height: 1', Capacity: 458 bbl

Total Containment Capacity: 458 bbl

Process Equipment Displacement: 10 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 86 bbl

Available Containment Capacity: 364 bbl

Largest Tank: 101 bbl

#### NOTES

bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:

Buffalo Ditch 1-32H, 2-32H

Largest Bulk Oil Storage Tank:

101

bbl

Dike Dimensions:

Length (ft.)

62

Width (ft.)

46

Height (ft.)

1

Available Dike Capacity

304

bbl

Additional Dike Dimensions if  
needed:

Length (ft.)

Width (ft.)

Height (ft.)

Available Dike Capacity

0

bbl

Total Dike  
Capacity:

304

bbl

Tank Displacement (Vertical  
Tanks):

Diameter (ft.)

6

No. Tanks

2

Displacement:

10

bbl

Diameter (ft.)

No. Tanks

Displacement:

0

bbl

Total:

0

bbl

24hr/25 yr. Rain Event  
Displacement:

Rain (inch)

2

feet

0.167

85

bbl

Total Dike Capacity:

364

bbl

Largest Tank:

101

bbl

Is Containment Satisfactory:

YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: BUFFALO DITCH 1-32H, 2-32H  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: BUFFALO DITCH 1-32H, 2-32H  
PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

BUFFALO DITCH 1-32H, 2-32H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

Repair tank containment berm to a minimum height of 2 feet to maintain sufficient capacity.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: BUFFALO DITCH 1-32H, 2-32H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

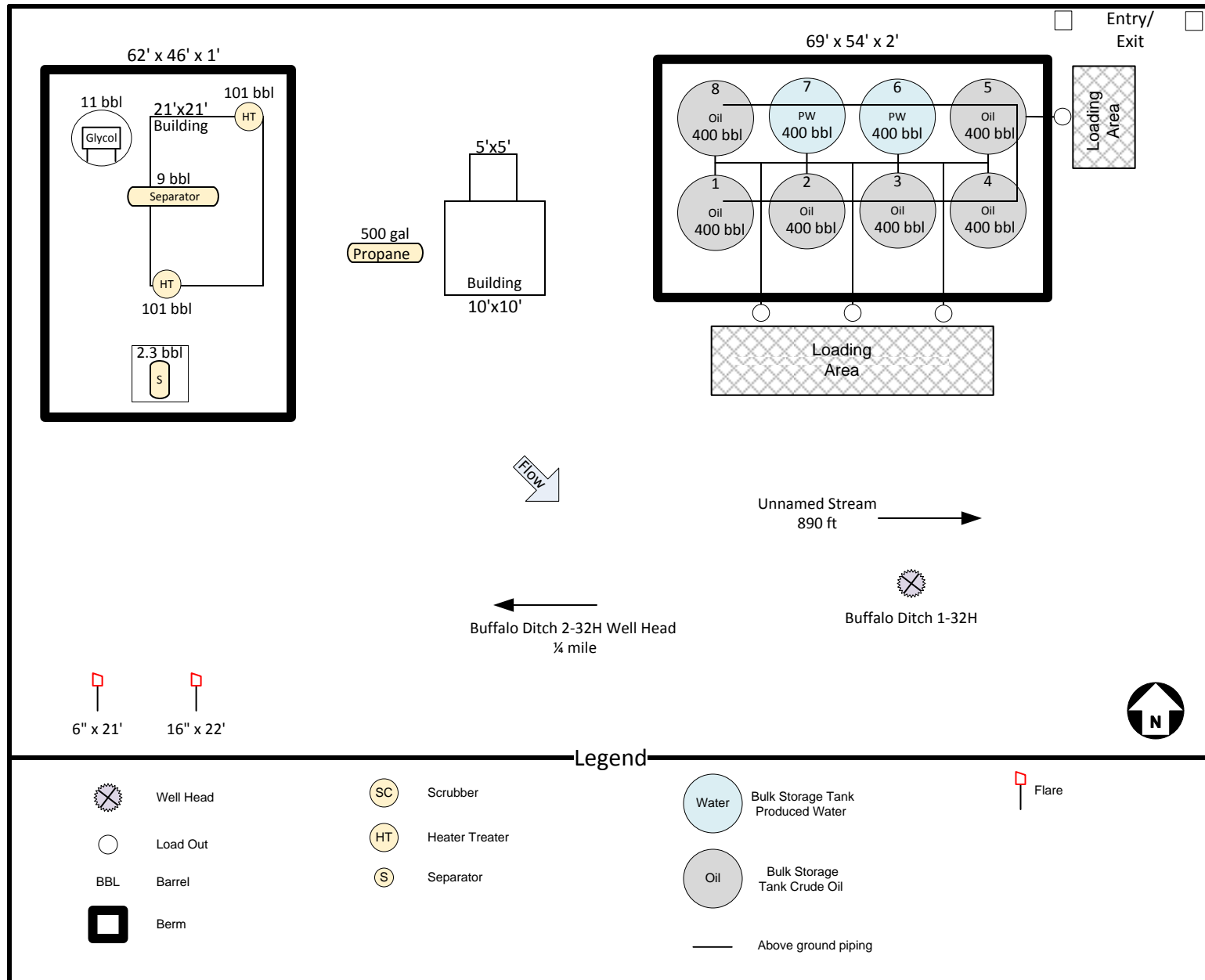
Dale Birdwell

Name (please type or print)

March 24, 2016

Date

# SITE LOCATION: SandRidge E&P Buffalo Ditch 1-32H, 2-32H



Coalmont 3-13H



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Coalmont 3-13H

Inspector: Brett Terrel

API Number: 05-057-06508

Date: 12-16-15

Latitude: 40.57915

Longitude: -106.44190

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	400 bbl	15'6 x 12'	Steel	In berm
2	Oil	400 bbl	15'6 x 12'	Steel	In berm
3	Oil	400 bbl	15'6 x 12'	Steel	In berm
4	PW	400 bbl	15'6 x 12'	Steel	In berm
5	PW	400 bbl	15'6 x 12'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 94' Width: 74' Height: 2', Capacity: 2345 bbl

Total Containment Capacity: 2345 bbl

Tank Displacement: 269 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 206 bbl

Available Containment Capacity: 1870 bbl

Largest Tank: 400 bbl

#### NOTES

bbl – barrel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:

Coalmont 3-13H

Largest Bulk Oil Storage Tank:

400

bbl

Dike Dimensions:

Length (ft.)

94

Width (ft.)

74

Height (ft.)

2

Available Dike Capacity

2345

bbl

Additional Dike Dimensions if  
needed:

Length (ft.)

Width (ft.)

Height (ft.)

Available Dike Capacity

0

bbl

Total Dike  
Capacity:

2345

bbl

Tank Displacement (Vertical  
Tanks):

Diameter  
(ft.)

15.6

No. Tanks

5

Displacement:

269

bbl

Diameter  
(ft.)

No. Tanks

Displacement:

0

bbl

Total:

269

bbl

24hr/25 yr. Rain Event  
Displacement:

Rain (inch)

2

feet

0.167

206

bbl

Total Dike Capacity:

1870

bbl

Largest  
Tank:

400

bbl

Is Containment Satisfactory:

YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Coalmont 3-13H

Inspector: Brett Terrel

API Number: 05-057-06508

Date: 12-16-15

Latitude: 40.57915

Longitude: -106.44190

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Line Heater	Glycol (exempt)	50 bbl	5' x 18'	H. Steel	In berm
Separator	Mix	19 bbl	3' x 15'	H. Steel	In berm
Scrubber	Mix	8 bbl	3' x 6'	V. Steel	In berm
Fuel Tank	Propane (exempt)	500 gal	37" x 120"	H. Steel	In berm
Combustor	Fumes (exempt)		2' x 20'	V. Steel	Outside berm
Combustor	Fumes (exempt)		50" x 14'	V. Steel	Outside berm
Flare	Fumes (exempt)		6" x 20'	V. Steel	Outside berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 49' Width: 23' Height: 1', Capacity: 167 bbl

Total Containment Capacity: 167 bbl

Process Equipment Displacement: 3 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 33 bbl

Available Containment Capacity: 131 bbl

Largest Tank: 19 bbl

#### NOTES

Bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: Coalmont 3-13H

Largest Bulk Oil Storage Tank: 19 bbl

#### Dike Dimensions:

Length (ft.)	49	Available Dike Capacity	167 bbl
Width (ft.)	23		
Height (ft.)	1		

Additional Dike Dimensions if needed:

Length (ft.)		Available Dike Capacity	0 bbl
Width (ft.)			
Height (ft.)			

Total Dike Capacity: 167 bbl

Tank Displacement (Vertical Tanks):

Diameter (ft.)	3	Displacement:	0 bbl
No. Tanks	2		

Diameter (ft.)		Displacement:	0 bbl
No. Tanks			

Total: 0 bbl

24hr/25 yr. Rain Event Displacement:

Rain (inch)	2.4	feet	0.2000	40 bbl
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Total Dike Capacity: 161 bbl

Largest Tank: 19 bbl

Is Containment Satisfactory: YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: COALMONT 3-13H  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: COALMONT 3-13H**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

COALMONT 3-13H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

Repair tank containment berm to a minimum height of 2 feet to maintain sufficient capacity.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: COALMONT 3-13H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

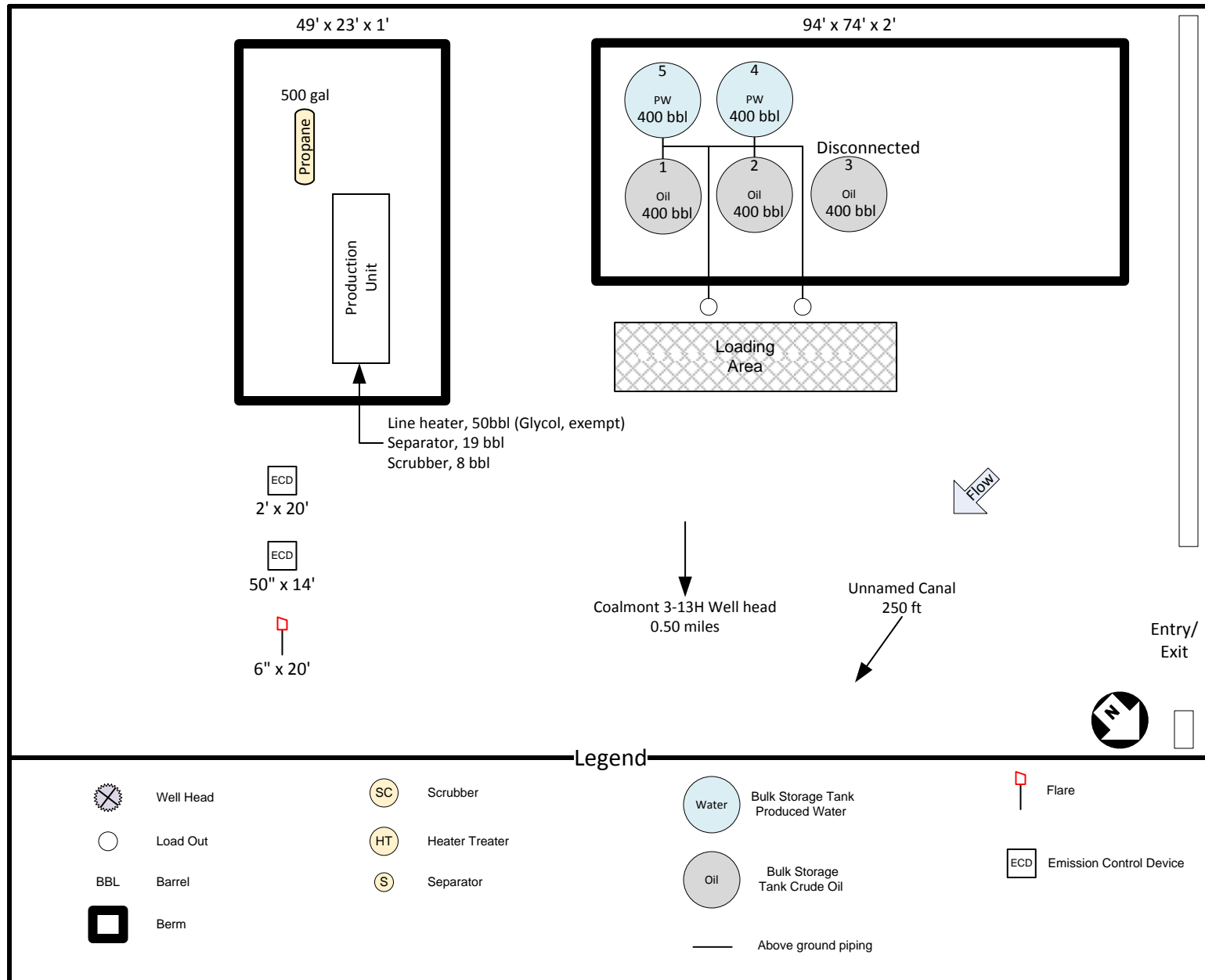
Dale Birdwell

Name (please type or print)

March 24, 2016

Date

# SITE LOCATION: SandRidge E&P Coalmont 3-13H



GREGORY 1-09H



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**FACILITY INFORMATION**

Well Name: Gregory 1-09H

Inspector: Michael James

API Number: 05-057-06539

Date: 6-21-2016

Latitude: 40.58529

Longitude: -106.38681

County: Jackson

State: CO

**SITE INVENTORY**

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	PW	400 bbl	12' x 20'	Steel	In berm
2	Oil	400 bbl	12' x 20'	Steel	In berm
3	Oil	400 bbl	12' x 20'	Steel	In berm
4	Oil	400 bbl	12' x 20'	Steel	In berm
5	Oil	400 bbl	12' x 20'	Steel	In berm
6	Oil	400 bbl	12' x 20'	Steel	In berm
7	PW	400 bbl	12' x 20'	Steel	In berm
9	Separator	9 bbl	30" x 10'	Steel	In berm

**CONTAINMENT INFORMATION**

Containment Material: Metal    Containment Shape: Rectangle

Length: 78' Width: 50' Height: 1.5', Capacity: 1,070 bbl

Total Containment Capacity: 1,070 bbl

Tank Displacement: 218 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 116 bbl

Available Containment Capacity: 736 bbl

Largest Tank: 400 bbl

**NOTES**

bbl – barrel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name:

Gregory 1-09H

Largest Bulk Oil Storage Tank:

400

bbl

Dike Dimensions:

Length (ft.)

78

Width (ft.)

50

Height (ft.)

1.5

Available Dike Capacity

1,070

bbl

Additional Dike Dimensions if  
needed:

Length (ft.)

Width (ft.)

Height (ft.)

Available Dike Capacity

0

bbl

Total Dike  
Capacity:

1,070

bbl

Tank Displacement (Vertical  
Tanks):

Diameter (ft.)

12

No. Tanks

8

Displacement:

217

bbl

Diameter (ft.)

2.5

No. Tanks

1

Displacement:

1

bbl

Total:

218

bbl

24hr/25 yr. Rain Event  
Displacement:

Rain (inch)

2

feet

0.167

116

bbl

Total Dike Capacity:

736

bbl

Largest  
Tank:

400

bbl

Is Containment Satisfactory:

YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Gregory 1-09H

Inspector: Michael James

API Number: 05-057-06539

Date: 6-21-2016

Latitude: 40.58529

Longitude: -106.39447

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Line Heater	Glycol (exempt)	50 bbls	5' x 18'	V. Steel	In berm
Separator	Mix	19 bbls	3' x 15'	V. Steel	In berm
Scrubber	Mix	8 bbls	3' x 6'	H. Steel	In berm
Combustor	Fumes (exempt)		50" x 14'	V. Steel	Outside berm
Combustor	Fumes (exempt)		2' x 20'	V. Steel	Outside berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Irregular

Length: 24' Width: 29.75' Height: 1', Capacity: 109 bbl

Total Containment Capacity: 109 bbl

Process Equipment Displacement: 1 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 21 bbl

Available Containment Capacity: 87 bbl

Largest Tank: 19 bbl

#### NOTES

Bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: Gregory 1-09H

Largest Bulk Oil Storage Tank: 19 bbl

#### Dike Dimensions:

Length (ft.)	24	Available Dike Capacity	109 bbl
Width (ft.)	29.75		
Height (ft.)	1		

Additional Dike Dimensions if needed:

Length (ft.)		Available Dike Capacity		bbl
Width (ft.)				
Height (ft.)				

Total Dike Capacity: 109 bbl

Tank Displacement (Vertical Tanks):

Diameter (ft.)	3	Displacement:	1	bbl
No. Tanks	2			

Diameter (ft.)		Displacement:	0	bbl
No. Tanks				

Total: 1 bbl

24hr/25 yr. Rain Event Displacement:

Rain (inch)	2	feet	0.167	21	bbl
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Total Dike Capacity: 87 bbl

Largest Tank: 19 bbl

Is Containment Satisfactory: YES





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Gregory 1-09H

Inspector: Michael James

API Number: 05-057-06539

Date: 6-21-2016

Latitude: 40.58529

Longitude: -106.39447

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Free Water Knock Out (FWKO)	Mixed	22 bbls	4' x 10'	H. Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangular

Length: 21' Width: 29' Height: 1', Capacity: 92 bbl

Total Containment Capacity: 92 bbl

Process Equipment Displacement: 0 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 18 bbl

Available Containment Capacity: 74 bbl

Largest Tank: 22 bbl

#### NOTES

Bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: Gregory 1-09H

Largest Bulk Oil Storage Tank: 22 bbl

#### Dike Dimensions:

Length (ft.)	21	Available Dike Capacity	92 bbl
Width (ft.)	29		
Height (ft.)	1		

Additional Dike Dimensions if needed:

Length (ft.)		Available Dike Capacity		bbl
Width (ft.)				
Height (ft.)				

Total Dike Capacity: 92 bbl

Tank Displacement (Vertical Tanks):

Diameter (ft.)		Displacement:	0	bbl
No. Tanks				

Diameter (ft.)		Displacement:	0	bbl
No. Tanks				

Total: 0 bbl

24hr/25 yr. Rain Event Displacement:

Rain (inch)	2	feet	0.167	18	bbl
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Total Dike Capacity: 74 bbl

Largest Tank: 22 bbl      Is Containment Satisfactory: YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: GREGORY 1-09H  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: June 28, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: GREGORY 1-09H**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

GREGORY 1-09H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

None.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 6/28/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: GREGORY 1-09H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

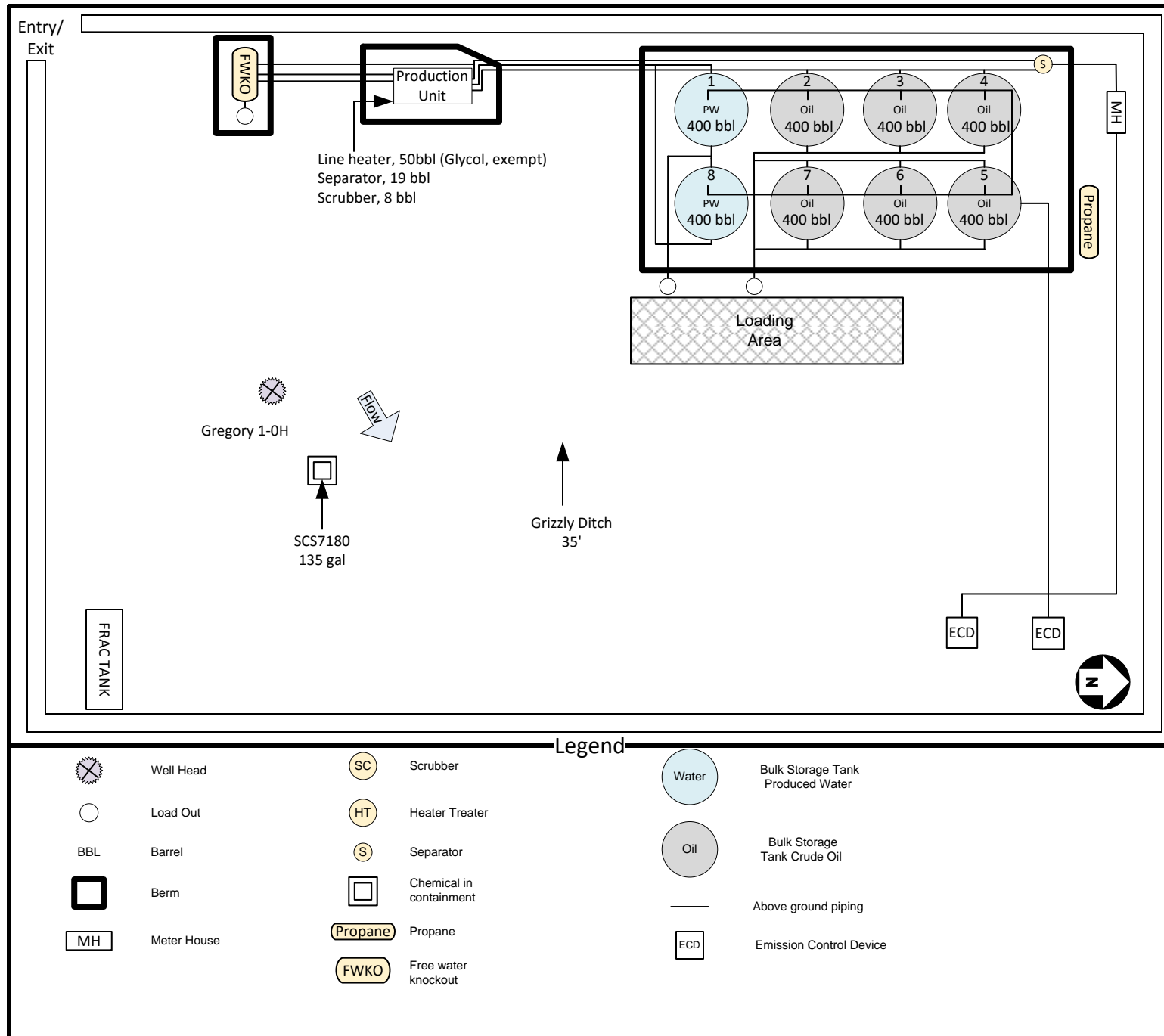
Dale Birdwell

Name (please type or print)

June 28, 2016

Date

# SITE LOCATION: SandRidge E&P Gregory 1-09H



Grizzly 3-32H



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Grizzly 3-32H

Inspector: Brett Terrel

API Number: 05-057-06523

Date: 12-16-15

Latitude: 40.62780

Longitude: -106.39447

County: Jackson

State: CO

#### SITE INVENTORY – PRODUCTION TANKS

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	400 bbl	15'6 x 12'	Steel	In berm
2	Oil	400 bbl	15'6 x 12'	Steel	In berm
3	PW	400 bbl	15'6 x 12'	Steel	In berm
4	PW	400 bbl	15'6 x 12'	Steel	In berm
5	Oil	400 bbl	15'6 x 12'	Steel	In berm
6	Oil	400 bbl	15'6 x 12'	Steel	In berm
7	PW	400 bbl	15'6 x 12'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 88' Width: 47' Height: 1.33', Capacity: 877 bbl

Total Containment Capacity: 877 bbl

Tank Displacement: 268 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 123 bbl

Available Containment Capacity: 486 bbl

Largest Tank: 400 bbl

#### NOTES

bbl – barrel

PW – Produced Water





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:   
Largest Bulk Oil Storage Tank:  bbl

### Dike Dimensions:

Length (ft.)	<input type="text" value="88"/>	Available Dike Capacity	<input type="text" value="877"/> bbl
Width (ft.)	<input type="text" value="47"/>		
Height (ft.)	<input type="text" value="1.33"/>		

### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text" value="0"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="15.5"/>	Displacement:	<input type="text" value="268"/> bbl
No. Tanks	<input type="text" value="7"/>		

Diameter (ft.)	<input type="text"/>	Displacement:	<input type="text" value="0"/> bbl
No. Tanks	<input type="text"/>		

Total:  bbl

### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<input type="text" value="2"/> feet	<input type="text" value="0.167"/>	<input type="text" value="123"/> bbl
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Total Dike Capacity:  bbl

Largest Tank:  bbl

Is Containment Satisfactory:



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Grizzly 3-32H

Inspector: Brett Terrel

API Number: 05-057-06523

Date: 12-16-15

Latitude: 40.62780

Longitude: -106.39447

County: Jackson

State: CO

#### SITE INVENTORY – PROCESS EQUIPMENT

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Line Heater	Glycol (exempt)	50 bbls	5' x 18'	V. Steel	In berm
Separator	Mix	19 bbls	3' x 15'	V. Steel	In berm
Scrubber	Mix	8 bbls	3' x 6'	H. Steel	In berm
Combustor	Fumes (exempt)		50" x 14'	V. Steel	In berm
Combustor	Fumes (exempt)		2' x 20'	V. Steel	In berm
Combustor	Fumes (exempt)		4' x 24'	V. Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Irregular

Length: 53' Width: 31' Height: .5', Capacity: 131 bbl

Length: 46' Width: 12' Height: .5', Capacity: 38 bbl

Total Containment Capacity: 169 bbl

Process Equipment Displacement: 3 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 65 bbl

Available Containment Capacity: 102 bbl

Largest Tank: 19 bbl

#### NOTES

Bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:

Grizzly 3-32H

Largest Bulk Oil Storage Tank:

19

bbl

Dike Dimensions:

Length (ft.)

53

Width (ft.)

31

Height (ft.)

0.5

Available Dike Capacity

131

bbl

Additional Dike Dimensions if  
needed:

Length (ft.)

46

Width (ft.)

12

Height (ft.)

0.5

Available Dike Capacity

38

bbl

Total Dike  
Capacity:

169

bbl

Tank Displacement (Vertical  
Tanks):

Diameter (ft.)

3

No. Tanks

2

Displacement:

3

bbl

Diameter (ft.)

No. Tanks

Displacement:

0

bbl

Total:

0

bbl

24hr/25 yr. Rain Event  
Displacement:

Rain (inch)

2

feet

0.167

65

bbl

Total Dike Capacity:

102

bbl

Largest Tank:

19

bbl

Is Containment Satisfactory:

YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: GRIZZLY 3-32H**  
**MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: GRIZZLY 3-32H**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

GRIZZLY 3-32H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

Repair tank containment berm to a minimum height of 16 inches to maintain sufficient capacity. Repair process equipment containment berm to a minimum height of 6 inches to maintain sufficient capacity.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: GRIZZLY 3-32H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

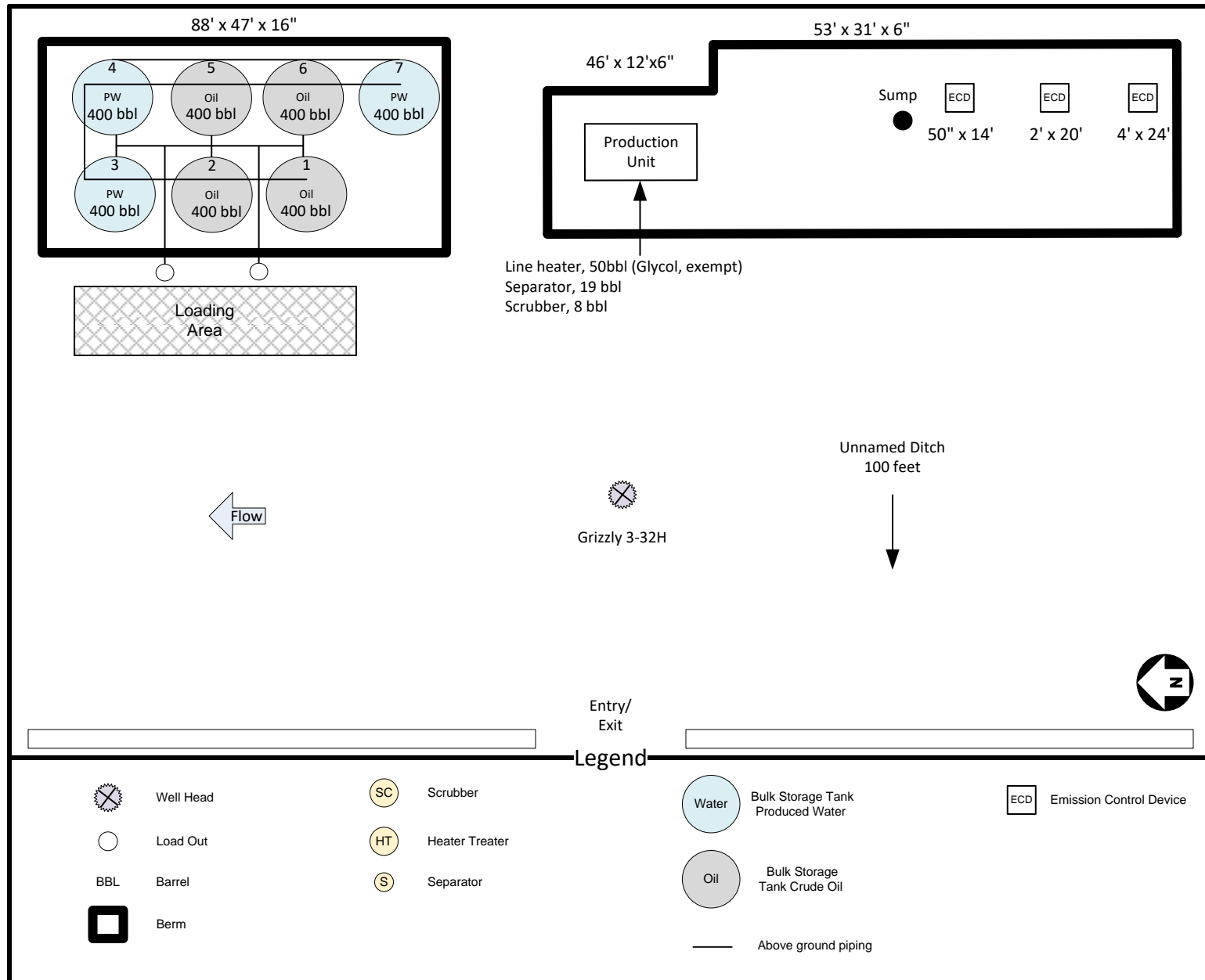
Dale Birdwell

Name (please type or print)

March 24, 2016

Date

# SITE LOCATION: SandRidge E&P Grizzly 3-32H



Hebron 1-18H, 5-18H, 1-18HR, 2-18H





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Hebron 1-18H, 5-18H, 1-18HR, 2-18H

Inspector: Michael James

API Number: 0505706501, 0505706502, 0505706536, 0505706540

Date: 02-22-17

Latitude: 40.584322

Longitude: -106.415828

County: Jackson

State: CO

#### SITE INVENTORY – PRODUCTION TANKS

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1 (4085)	Oil	400 bbl	12' x 20'	Steel	In berm
2 (4084)	Oil	400 bbl	12' x 20'	Steel	In berm
3 (4083)	Oil	400 bbl	12' x 20'	Steel	In berm
4 (4080)	Oil	400 bbl	12' x 20'	Steel	In berm
5 (4079)	Oil	400 bbl	12' x 20'	Steel	In berm
6 (4078)	Oil	400 bbl	12' x 20'	Steel	In berm
7 (0403)	PW	400 bbl	12' x 20'	Steel	In berm
8 (0404)	PW	400 bbl	12' x 20'	Steel	In berm
9 (0402)	PW	400 bbl	12' x 20'	Steel	In berm
10 (0401)	PW	400 bbl	12' x 20'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 82' Width: 34' Height: 1.5', Capacity: 714 bbl

Total Containment Capacity: 714 bbl

Tank Displacement: 332 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 83 bbl

Available Containment Capacity: 299 bbl

Largest Tank: 400 bbl

#### NOTES

Bbl – Barrel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name: **Hebron 1-18H, 5-18H, 1-18HR, 2-18H**  
Largest Bulk Oil Storage Tank: **400** bbl

### Dike Dimensions:

Length (ft.)	<b>82</b>	Available Dike Capacity	<b>714</b> bbl
Width (ft.)	<b>34</b>		
Height (ft.)	<b>1.5</b>		

### Additional Dike Dimensions if needed:

Length (ft.)		Available Dike Capacity	<b>0</b> bbl
Width (ft.)			
Height (ft.)			

Total Dike Capacity: **714** bbl

### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<b>12</b>	Displacement:	<b>332</b> bbl
No. Tanks	<b>9</b>		

Diameter (ft.)		Displacement:	<b>0</b> bbl
No. Tanks			

Total: **332** bbl

### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<b>2</b> feet	<b>0.167</b>	<b>83</b> bbl
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Total Dike Capacity: **299** bbl

Largest Tank:	<b>400</b> bbl	Is Containment Satisfactory:	<b>NO</b>
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123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Hebron 1-18H, 5-18H, 1-18HR, 2-18H

Inspector: Michael James

API Number: 0505706501, 0505706502, 0505706536, 0505706540

Date: 02-22-17

Latitude: 40.584322

Longitude: -106.415828

County: Jackson

State: CO

#### SITE INVENTORY – PROCESS EQUIPMENT

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Separator	Mix	9 bbl	2.5' x 10'	H. Steel	In berm
HT	Mix	101 bbl	6' x 20'	V. Steel	In berm
HT	Mix	101 bbl	6' x 20'	V. Steel	In berm
Separator	Mix	3 bbl	2' x 5'	V. Steel	In berm
Building	Equipment		15' x 29'	H. Steel	In berm
Combustor	Fumes (exempt)		2' x 10'	V. Steel	Outside berm
Flare	Fumes (exempt)		6" x 37'	V. Steel	Outside berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	Outside berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	Outside berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 48' Width: 29' Height: 1.5', Capacity: 320 bbl

Total Containment Capacity: 320 bbl

Process Equipment Displacement: 9 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 41 bbl

Available Containment Capacity: 269 bbl

Largest Tank: 101 bbl

#### NOTES

Bbl – Barrel

Gal - Gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: **Hebron 1-18H, 5-18H, 1-18HR, 2-18H**

Largest Bulk Oil Storage Tank: **101** bbl

#### Dike Dimensions:

Length (ft.)	<b>48</b>	Available Dike Capacity	<b>320</b> bbl
Width (ft.)	<b>29</b>		
Height (ft.)	<b>1.5</b>		

#### Additional Dike Dimensions if needed:

Length (ft.)		Available Dike Capacity	<b>0</b> bbl
Width (ft.)			
Height (ft.)			

Total Dike Capacity: **320** bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<b>6</b>	Displacement:	<b>8</b> bbl
No. Tanks	<b>2</b>		

Diameter (ft.)	<b>2.5</b>	Displacement:	<b>1</b> bbl
No. Tanks	<b>1</b>		

Total: **9** bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<b>2</b> feet	<b>0.167</b>	<b>41</b> bbl
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Total Dike Capacity: **269** bbl

Largest Tank: **101** bbl

Is Containment Satisfactory: **YES**



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### **FACILITY INFORMATION**

Well Name: Hebron 1-18H, 5-18H, 1-18HR, 2-18H

Inspector: Michael James

API Number: 0505706501, 0505706502, 0505706536, 0505706540

Date: 02-22-17

Latitude: 40.584322

Longitude: -106.415828

County: Jackson

State: CO

#### **SITE INVENTORY – PRODUCTION TANKS**

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Separator	Mix	23 bbl	4' x 10'	H. Steel	Building
Separator	Mix	23 bbl	4' x 10'	H. Steel	Building

#### **CONTAINMENT INFORMATION**

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 34' Width: 11' Height: 0.583', Capacity: 34 bbl

Total Containment Capacity: 34 bbl

Tank Displacement: 1 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 0 bbl (building)

Available Containment Capacity: 33 bbl

Largest Tank: 23 bbl

#### **NOTES**

Bbl – Barrel

H. Steel – horizontal steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name:   
Largest Bulk Oil Storage Tank:  bbl

#### Dike Dimensions:

Length (ft.)	<input type="text" value="34"/>	Available Dike Capacity	<input type="text" value="34"/> bbl
Width (ft.)	<input type="text" value="11"/>		
Height (ft.)	<input type="text" value="0.583"/>		

#### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text" value="0"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="4"/>	Displacement:	<input type="text" value="1"/> bbl
No. Tanks	<input type="text" value="2"/>		

Diameter (ft.)	<input type="text"/>	Displacement:	<input type="text" value="0"/> bbl
No. Tanks	<input type="text"/>		

Total:  bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<input type="text" value="0"/> feet	<input type="text" value="0"/>	<input type="text" value="0"/> bbl
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Total Dike Capacity:  bbl

Largest Tank:	<input type="text" value="23"/> bbl	Is Containment Satisfactory:	<input type="text" value="YES"/>
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123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: HEBRON 1-18H, 5-18H, 1-18HR, 2-18H  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

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This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: April 3, 2017

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: HEBRON 1-18H, 5-18H, 1-18HR, 2-18H**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and examined the following tank batteries:

HEBRON 1-18H, 5-18H, 1-18HR, 2-18H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

Increase the height of the tank battery berm to at least 2 feet throughout.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 4/3/2017 Registration No. 47798

State Colorado





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: HEBRON 1-18H, 5-18H, 1-18HR, 2-18H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

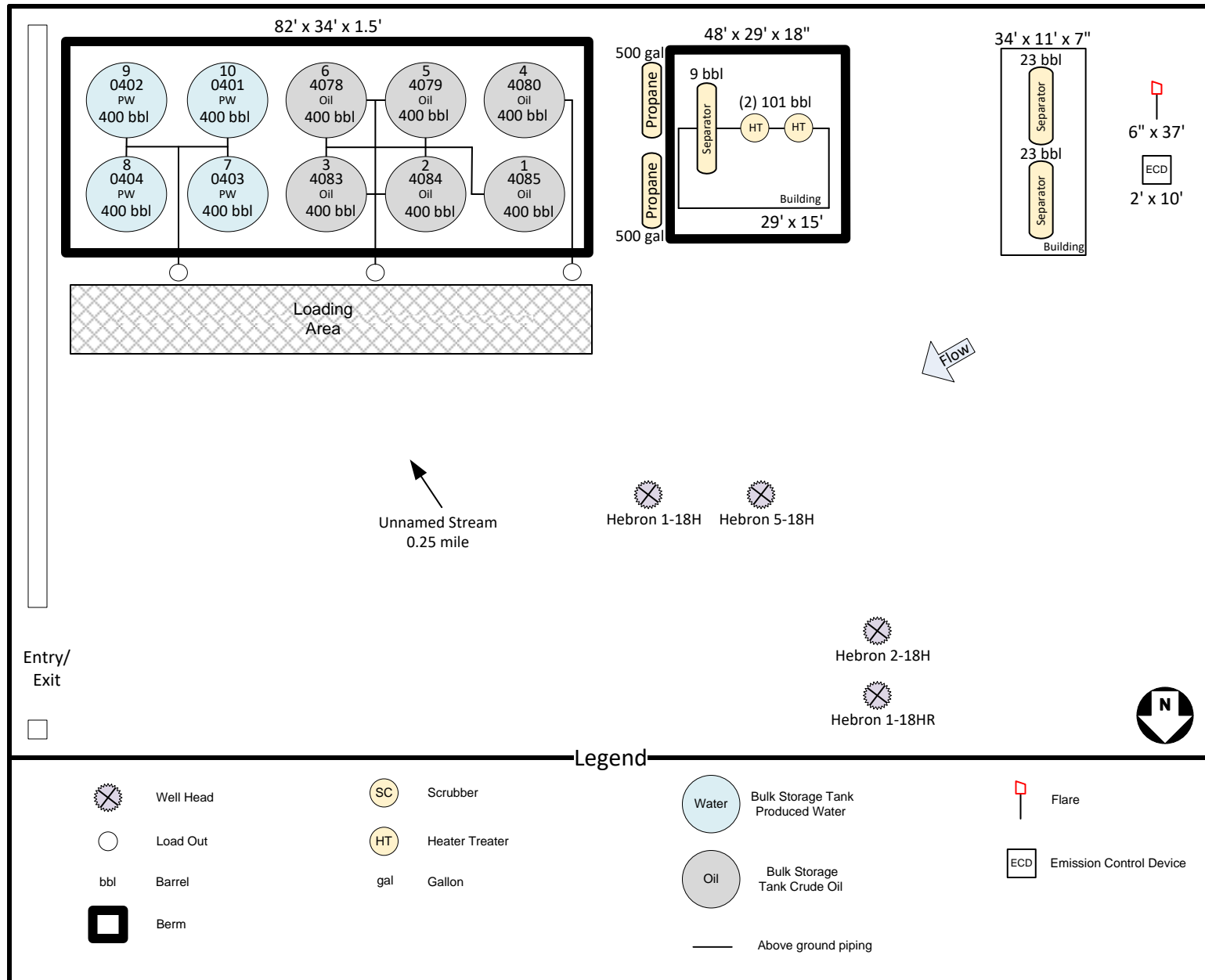
Dale Birdwell

Name (please type or print)

April 3, 2017

Date

# SITE LOCATION: SandRidge E&P Hebron 1-18H, 5-18H, 1-18HR, 2-18H



Hebron 2-7H, 3-12H Central Facility



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Hebron 2-7H, 3-12H Central Facility

Inspector: Brett Terrel

API Number: 05-057-06498

Date: 12-16-15

Latitude: 40.59431

Longitude: -106.41383

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	400 bbl	15'6 x 12'	Steel	In berm
2	PW	400 bbl	15'6 x 12'	Steel	In berm
3	Oil	400 bbl	15'6 x 12'	Steel	In berm
4	Oil	400 bbl	15'6 x 12'	Steel	In berm
5	Oil	400 bbl	15'6 x 12'	Steel	In berm
6	Oil	400 bbl	15'6 x 12'	Steel	In berm
7	Oil	400 bbl	15'6 x 12'	Steel	In berm
8	Oil	400 bbl	15'6 x 12'	Steel	In berm
9	PW	400 bbl	15'6 x 12'	Steel	In berm
10	Oil	400 bbl	15'6 x 12'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 97' Width: 53' Height: 1.5', Capacity: 1301 bbl

Length: 47' Width: 30' Height: 1.5', Capacity: 340 bbl

Total Containment Capacity: 1641 bbl

Tank Displacement: 454 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 195 bbl

Available Containment Capacity: 992 bbl

Largest Tank: 400 bbl

#### NOTES

bbl – barrel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: Hebron 2-7H, 3-12H Central Facility  
Largest Bulk Oil Storage Tank: 400 bbl

#### Dike Dimensions:

Length (ft.)	97	Available Dike Capacity	1301 bbl
Width (ft.)	53		
Height (ft.)	1.5		

#### Additional Dike Dimensions if needed:

Length (ft.)	47	Available Dike Capacity	340 bbl
Width (ft.)	30		
Height (ft.)	1.5		

Total Dike Capacity: 1641 bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	15.5	Displacement:	454 bbl
No. Tanks	10		

Diameter (ft.)		Displacement:	0 bbl
No. Tanks			

Total: 454 bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	2	feet	0.167	195 bbl
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Total Dike Capacity: 992 bbl

Largest Tank:	400 bbl	Is Containment Satisfactory:	YES
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123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Hebron 2-7H, 3-12H Central Facility

Inspector: Brett Terrel

API Number: 05-057-06499, 05-057-06498

Date: 12-26-15

Latitude: 40.59431

Longitude: -106.41383

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Line Heater	Glycol (exempt)	50 bbl	5' x 18'	H. Steel	In berm
Separator	Mix	19 bbl	3' x 15'	H. Steel	In berm
Scrubber	Mix	8 bbl	3' x 6'	H. Steel	In berm
Line Heater	Glycol (exempt)	50 bbl	5' x 18'	H. Steel	In berm
Separator	Mix	19 bbl	3' x 15'	H. Steel	In berm
Scrubber	Mix	8 bbl	3' x 6'	H. Steel	In berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	In berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	In berm
Chem Tank	Glycol (exempt)	11 bbl	4' x 5'	E. Steel	In berm
Combustor	Fumes (exempt)		50" x 14'	V. Steel	Outside berm
Combustor	Fumes (exempt)		2' x 20'	V. Steel	Outside berm
Flare	Fumes (exempt)		6" x 20'	V. Steel	Outside berm
Building	Locked (exempt)		19' 25'	Steel	Outside berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 77' Width: 47' Height: 1', Capacity: 605 bbl

Total Containment Capacity: 605 bbl

Process Equipment Displacement: 15 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 107 bbl

Available Containment Capacity: 483 bbl

Largest Tank: 19 bbl

#### NOTES

Bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:

Largest Bulk Oil Storage Tank:  bbl

### Dike Dimensions:

Length (ft.)	<input type="text" value="77"/>	Available Dike Capacity	<input type="text" value="605"/> bbl
Width (ft.)	<input type="text" value="47"/>		
Height (ft.)	<input type="text" value="1"/>		

### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text" value="0"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="3"/>	Displacement:	<input type="text" value="15"/> bbl
No. Tanks	<input type="text" value="4"/>		

Diameter (ft.)	<input type="text"/>	Displacement:	<input type="text" value="0"/> bbl
No. Tanks	<input type="text"/>		

Total:  bbl

### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<input type="text" value="2"/> feet	<input type="text" value="0.167"/>	<input type="text" value="107"/> bbl
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Total Dike Capacity:  bbl

Largest Tank:  bbl      Is Containment Satisfactory:



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: HEBRON 2-7H, 3-12H CENTRAL FACILITY  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

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This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: HEBRON 2-7H, 3-12H CENTRAL FACILITY**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

HEBRON 2-7H, 3-12H CENTRAL FACILITY

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

None



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: HEBRON 2-7H, 3-12H CENTRAL FACILITY**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

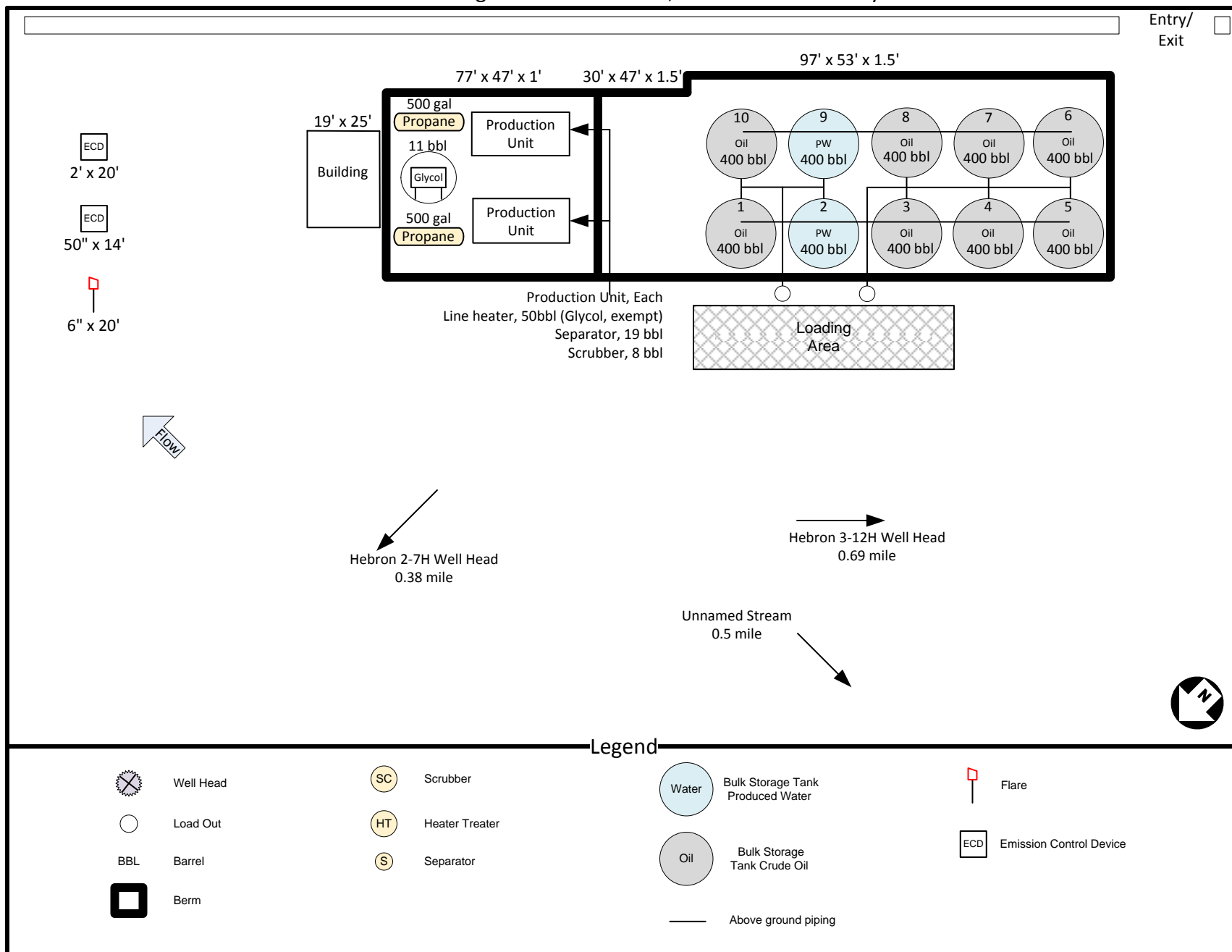
Dale Birdwell

Name (please type or print)

March 24, 2016

Date

# SITE LOCATION: SandRidge E&P Hebron 2-7H, 3-12H Central Facility



Mutual 2-30H, 4-30H



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Mutual 2-30H, 4-30H

Inspector: Brett Terrel

API Number: 05-057-06465, 05-057-06488

Date: 12-17-15

Latitude: 40.54198

Longitude: -106.41436

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	400 bbl	15'6 x 12'	Steel	In berm
2	Oil	400 bbl	15'6 x 12'	Steel	In berm
3	Oil	400 bbl	15'6 x 12'	Steel	In berm
4	Oil	400 bbl	15'6 x 12'	Steel	In berm
5	Oil	400 bbl	15'6 x 12'	Steel	In berm
6	Oil	400 bbl	15'6 x 12'	Steel	In berm
7	Oil	400 bbl	15'6 x 12'	Steel	In berm
8	PW	400 bbl	15'6 x 12'	Steel	In berm
9	PW	400 bbl	15'6 x 12'	Steel	In berm
10	PW	400 bbl	15'6 x 12'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 92' Width: 55' Height: 2', Capacity: 1639 bbl

Total Containment Capacity: 1639 bbl

Tank Displacement: 605 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 150 bbl

Available Containment Capacity: 884 bbl

Largest Tank: 400 bbl

#### NOTES

bbl – barrel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name:   
Largest Bulk Oil Storage Tank:  bbl

#### Dike Dimensions:

Length (ft.)	<input type="text" value="92"/>	Available Dike Capacity	<input type="text" value="1639"/> bbl
Width (ft.)	<input type="text" value="55"/>		
Height (ft.)	<input type="text" value="2"/>		

#### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text" value="0"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="15.5"/>	Displacement:	<input type="text" value="605"/> bbl
No. Tanks	<input type="text" value="10"/>		

Diameter (ft.)	<input type="text"/>	Displacement:	<input type="text" value="0"/> bbl
No. Tanks	<input type="text"/>		

Total:  bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<input type="text" value="2"/> feet	<input type="text" value="0.167"/>	<input type="text" value="150"/> bbl
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Total Dike Capacity:  bbl

Largest Tank:  bbl

Is Containment Satisfactory:



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Mutual 2-30H, 4-30H

Inspector: Brett Terrel

API Number: 05-057-06465, 05-057-06488

Date: 12-17-15

Latitude: 40.54198

Longitude: -106.41436

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Line Heater	Glycol (exempt)	50 bbl	5' x 18'	H. Steel-PU	In berm
Separator	Mix	19 bbl	3' x 15'	H. Steel-PU	In berm
Scrubber	Mix	8 bbl	3' x 6'	V. Steel-PU	In berm
Building	Jet Pump (exempt)		19' x 25'	Steel	In berm
Building	Equip dumps(exempt)		19' x 25'	Steel	In berm
Separator	Mix	19 bbl	4' x 8'	H. Steel	In berm
HT	Mix	101 bbl	6' x 20'	V. Steel	In berm
Scrubber	Condensate	1.4 bbl	16" x 5'	V. Steel	In berm
Separator	Condensate	19 bbl	30" x 10'	V. Steel	In berm
Chem Tank	Glycol (exempt)	11 bbl	4' x 5'	E. Steel	In berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	In berm
Combustor	Fumes (exempt)		8' x 20'	V. Steel	In berm
Combustor	Fumes (exempt)		30" x 18'	V. Steel	In berm
Combustor	Fumes (exempt)		30" x 18'	V. Steel	In berm
Flare	Fumes (exempt)		16" x 9'	V. Steel	In berm
Combustor	Fumes (exempt)		50" x 14'	V. Steel	In berm
Flare	Fumes (exempt)		6" x 21'	V. Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 98' Width: 55' Height: 1', Capacity: 875 bbl

Length: 44' Width: 41' Height: 1', Capacity: 275 bbl

Length: 77' Width: 26' Height: 1', Capacity: 300 bbl

Total Containment Capacity: 1450 bbl

Process Equipment Displacement: 17 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 273 bbl

Available Containment Capacity: 1177 bbl

Largest Tank: 101 bbl

#### NOTES

Bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: Mutual 2-30H, 4-30H

Largest Bulk Oil Storage Tank: 101 bbl

#### Dike Dimensions:

Length (ft.)	98	Available Dike Capacity	875	bbl
Width (ft.)	55			
Height (ft.)	1			

Length (ft.)	44	Available Dike Capacity	275	bbl
Width (ft.)	41			
Height (ft.)	1			

Length (ft.)	77	Available Dike Capacity	300	bbl
Width (ft.)	26			
Height (ft.)	1			

Total Dike Capacity: 1450 bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	6	Displacement:	5	bbl
No. Tanks	1			

Other Equipment Displacement: 12 bbl

Total: 17 bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	2	feet	0.167	273	bbl
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Total Dike Capacity: 1177 bbl

Largest Tank:	101	bbl	Is Containment Satisfactory:	YES
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123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: MUTUAL 2-30H, 4-30H  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: MUTUAL 2-30H, 4-30H**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

MUTUAL 2-30H, 4-30H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

None.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: MUTUAL 2-30H, 4-30H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

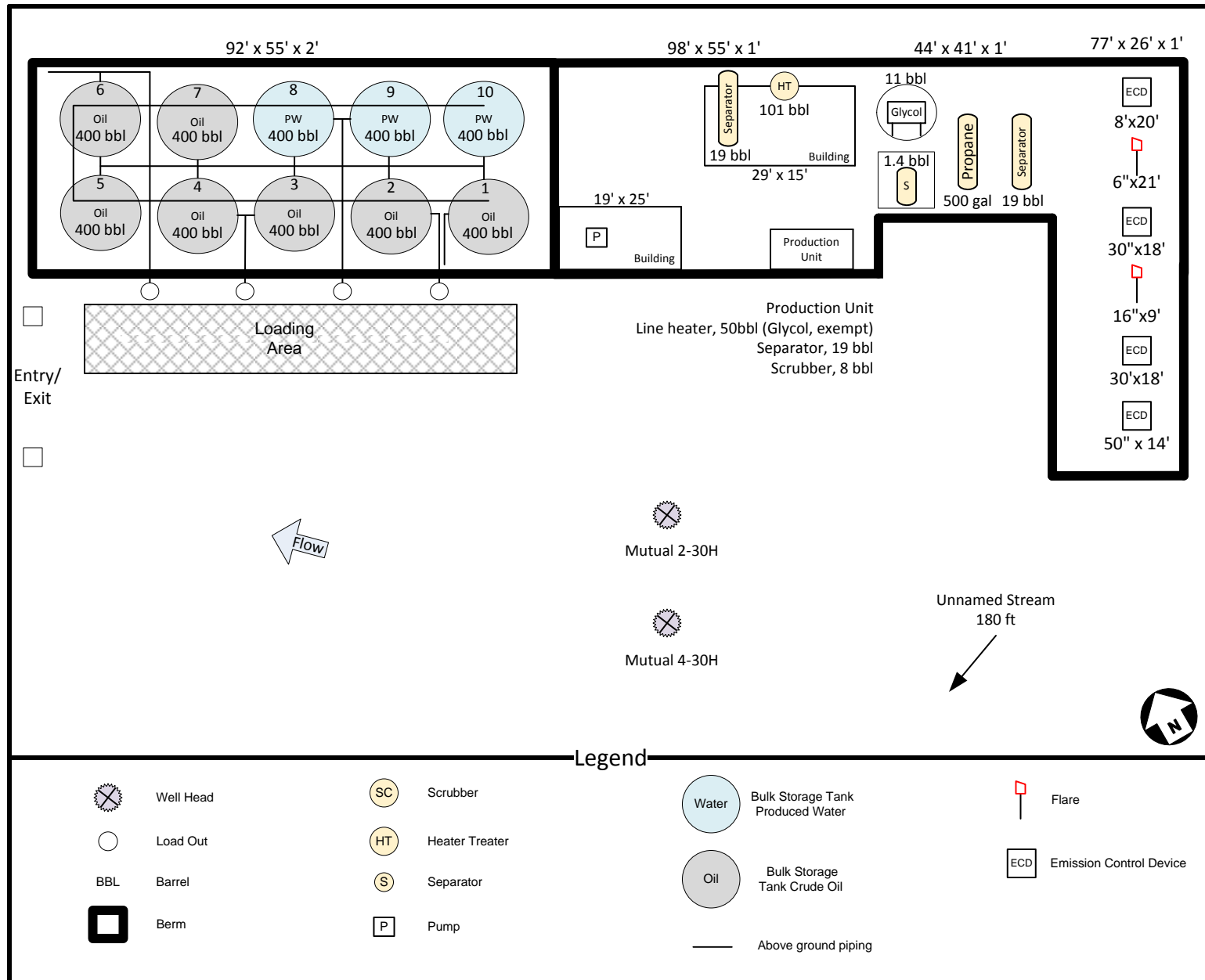
Dale Birdwell

Name (please type or print)

March 24, 2016

Date

# SITE LOCATION: SandRidge E&P Mutual 2-30H, 4-30H



Mutual 7-17H



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Mutual 7-17H

Inspector: Brett Terrel

API Number: 05057064720000

Date: 12-17-15

Latitude: 40.58393

Longitude: -106.40550

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	400 bbl	15'6 x 12'	Steel	In berm
2	Oil	400 bbl	15'6 x 12'	Steel	In berm
3	Oil	400 bbl	15'6 x 12'	Steel	In berm
4	Oil	400 bbl	15'6 x 12'	Steel	In berm
5	Oil	400 bbl	15'6 x 12'	Steel	In berm
6	PW	400 bbl	15'6 x 12'	Steel	In berm
7	PW	400 bbl	15'6 x 12'	Steel	In berm
8	Mix	400 bbl	15'6 x 12'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 81' Width: 60' Height: 2', Capacity: 1585 bbl

Total Containment Capacity: 1585 bbl

Tank Displacement: 470 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 144 bbl

Available Containment Capacity: 970 bbl

Largest Tank: 400 bbl

#### NOTES

bbl – barrel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:

Mutual 7-17H

Largest Bulk Oil Storage Tank:

400

bbl

Dike Dimensions:

Length (ft.)

81

Width (ft.)

60

Height (ft.)

2

Available Dike Capacity

1585

bbl

Additional Dike Dimensions if  
needed:

Length (ft.)

Width (ft.)

Height (ft.)

Available Dike Capacity

0

bbl

Total Dike  
Capacity:

1585

bbl

Tank Displacement (Vertical  
Tanks):

Diameter  
(ft.)

15.5

No. Tanks

8

Displacement:

470

bbl

Diameter  
(ft.)

No. Tanks

Displacement:

0

bbl

Total:

470

bbl

24hr/25 yr. Rain Event  
Displacement:

Rain (inch)

2

feet

0.167

144

bbl

Total Dike Capacity:

970

bbl

Largest  
Tank:

400

bbl

Is Containment Satisfactory:

YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Mutual 7-17H

Inspector: Brett Terrel

API Number: 05057064720000

Date: 12-17-15

Latitude: 40.58393

Longitude: -106.40550

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Separator	Mix	13 bbl	3' x 10'	H. Steel	In berm
Scrubber	Mix	8 bbl	30"x10'	H. Steel	In berm
Scrubber	Condensate	1.4 bbl	16" x 5'	V. Steel	In berm
HT	Mix	75 bbl	6' x 15'	H. Steel	In berm
Chem Tank	Glycol (exempt)	6 bbl	3' x 5'	E. Steel	In berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	Outside berm
Combustor	Fumes (exempt)		50" x 14'	V. Steel	Outside berm
Combustor	Fumes (exempt)		16" x 21'	V. Steel	Outside berm
Flare	Fumes (exempt)		6" x 37'	V. Steel	Outside berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 38' Width: 46' Height: 1', Capacity: 279 bbl

Total Containment Capacity: 279 bbl

Process Equipment Displacement: 9 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 52 bbl

Available Containment Capacity: 218 bbl

Largest Tank: 75 bbl

#### NOTES

bl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name:

Largest Bulk Oil Storage Tank:  bbl

#### Dike Dimensions:

Length (ft.)	<input type="text" value="38"/>	Available Dike Capacity	<input type="text" value="279"/> bbl
Width (ft.)	<input type="text" value="46"/>		
Height (ft.)	<input type="text" value="1"/>		

#### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text" value="0"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="6"/>	Displacement:	<input type="text" value="5"/> bbl
No. Tanks	<input type="text" value="1"/>		

Other equipment Displacement:  bbl

Total:  bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<input type="text" value="2"/> feet	<input type="text" value="0.167"/>	<input type="text" value="52"/> bbl
-------------	-------------------------------------	------------------------------------	-------------------------------------

Total Dike Capacity:  bbl

Largest Tank:  bbl

Is Containment Satisfactory:



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: MUTUAL 7-17H  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: MUTUAL 7-17H**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

MUTUAL 7-17H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

Repair tank containment berm to a minimum height of 2 feet to maintain sufficient capacity.

Install earthen berm around the 1.4 barrel scrubber at the north side of the site.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: MUTUAL 7-17H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

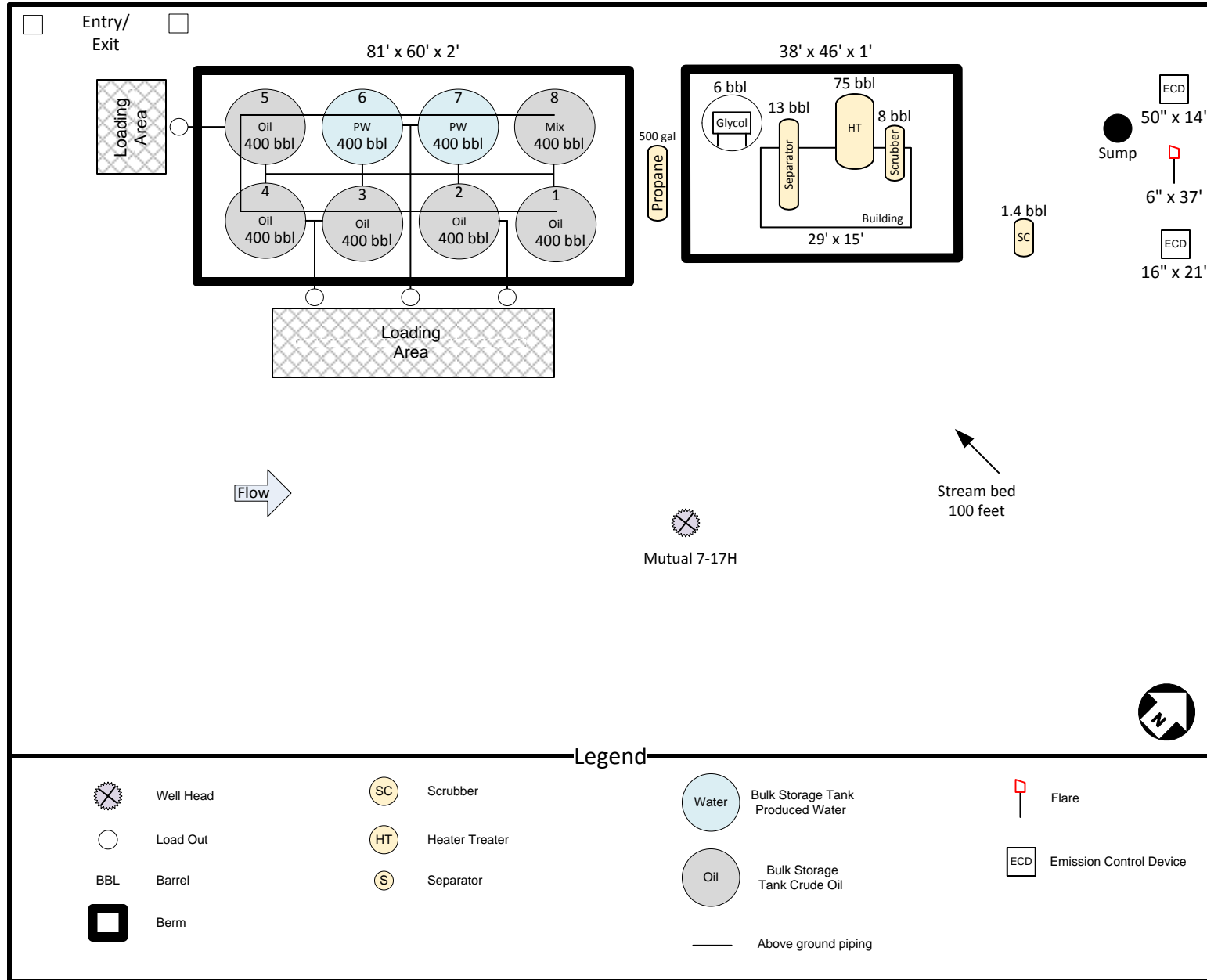
Dale Birdwell

Name (please type or print)

March 24, 2016

Date

# SITE LOCATION: SandRidge E&P Mutual 7-17H



Peterson Ridge 1-20H



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**FACILITY INFORMATION**

Well Name: Peterson Ridge 1-20H

Inspector: Brett Terrel

API Number: 05-057-06469

Date: 12-16-15

Latitude: 40.64459

Longitude: -106.39447

County: Jackson

State: CO

**SITE INVENTORY**

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	400 bbl	15'6 x 12'	Steel	In berm
2	Oil	400 bbl	15'6 x 12'	Steel	In berm
3	PW	400 bbl	15'6 x 12'	FG	In berm
4	PW	400 bbl	15'6 x 12'	FG	In berm
5	Oil	400 bbl	15'6 x 12'	Steel	In berm
6	Oil	400 bbl	15'6 x 12'	Steel	In berm

**CONTAINMENT INFORMATION**

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 63' Width: 44' Height: 2', Capacity: 895 bbl

Total Containment Capacity: 895 bbl

Tank Displacement: 336 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 82 bbl

Available Containment Capacity: 477 bbl

Largest Tank: 400 bbl

**NOTES**

bbl – barrel

FG - Fiberglass

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name:

Peterson Ridge 1-20H

Largest Bulk Oil Storage Tank:

400

bbl

Dike Dimensions:

Length (ft.)

63

Width (ft.)

44

Height (ft.)

2

Available Dike Capacity

895

bbl

Additional Dike Dimensions if  
needed:

Length (ft.)

Width (ft.)

Height (ft.)

Available Dike Capacity

0

bbl

Total Dike  
Capacity:

895

bbl

Tank Displacement (Vertical  
Tanks):

Diameter  
(ft.)

15.5

No. Tanks

6

Displacement:

336

bbl

Diameter  
(ft.)

No. Tanks

Displacement:

0

bbl

Total:

336

bbl

24hr/25 yr. Rain Event  
Displacement:

Rain (inch)

2

feet

0.167

82

bbl

Total Dike Capacity:

477

bbl

Largest  
Tank:

400

bbl

Is Containment Satisfactory:

YES





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Peterson Ridge 1-20H

Inspector: Brett Terrel

API Number: 05-057-06469

Date: 12-16-15

Latitude: 4.064459

Longitude: -106.39447

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Line Heater	Glycol (exempt)	50 bbl	18' x 5'	H. Steel	In berm
Separator	Mix	19 bbl	15' x 3'	H. Steel	In berm
Scrubber	Mix	8 bbl	6' x 3'	H. Steel	In berm
Combustor	Fumes (exempt)		2' x 20'	V. Steel	In berm
Combustor	Fumes (exempt)		50" x 14'	V. Steel	In berm
Flare	Fumes (exempt)		6" x 20'	V. Steel	In berm
Fuel tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 70' Width: 15' Height: 1', Capacity: 155 bbl

Total Containment Capacity: 187bbl

Process Equipment Displacement: 6 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 31 bbl

Available Containment Capacity: 118 bbl

Largest Tank: 19 bbl

#### NOTES

Bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name: Peterson Ridge 1-20H  
Largest Bulk Oil Storage Tank: 19 bbl

### Dike Dimensions:

Length (ft.)	70
Width (ft.)	15
Height (ft.)	1

Available Dike Capacity 155 bbl

### Additional Dike Dimensions if needed:

Length (ft.)	
Width (ft.)	
Height (ft.)	

Available Dike Capacity 0 bbl

Total Dike Capacity: 155 bbl

### Tank Displacement (Vertical Tanks):

Diameter (ft.)	3
No. Tanks	1

Displacement: 3 bbl

Other equipment Displacement: 3 bbl

Total: 6 bbl

### 24hr/25 yr. Rain Event Displacement:

Rain (inch) 2 feet 0.167 31 bbl

Total Dike Capacity: 118 bbl

Largest Tank: 19 bbl

Is Containment Satisfactory: YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: PETERSON RIDGE 1-20H  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: PETERSON RIDGE 1-20H**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

PETERSON RIDGE 1-20H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

Repair tank containment berm to a minimum height of 2 feet to maintain sufficient capacity.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: PETERSON RIDGE 1-20H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

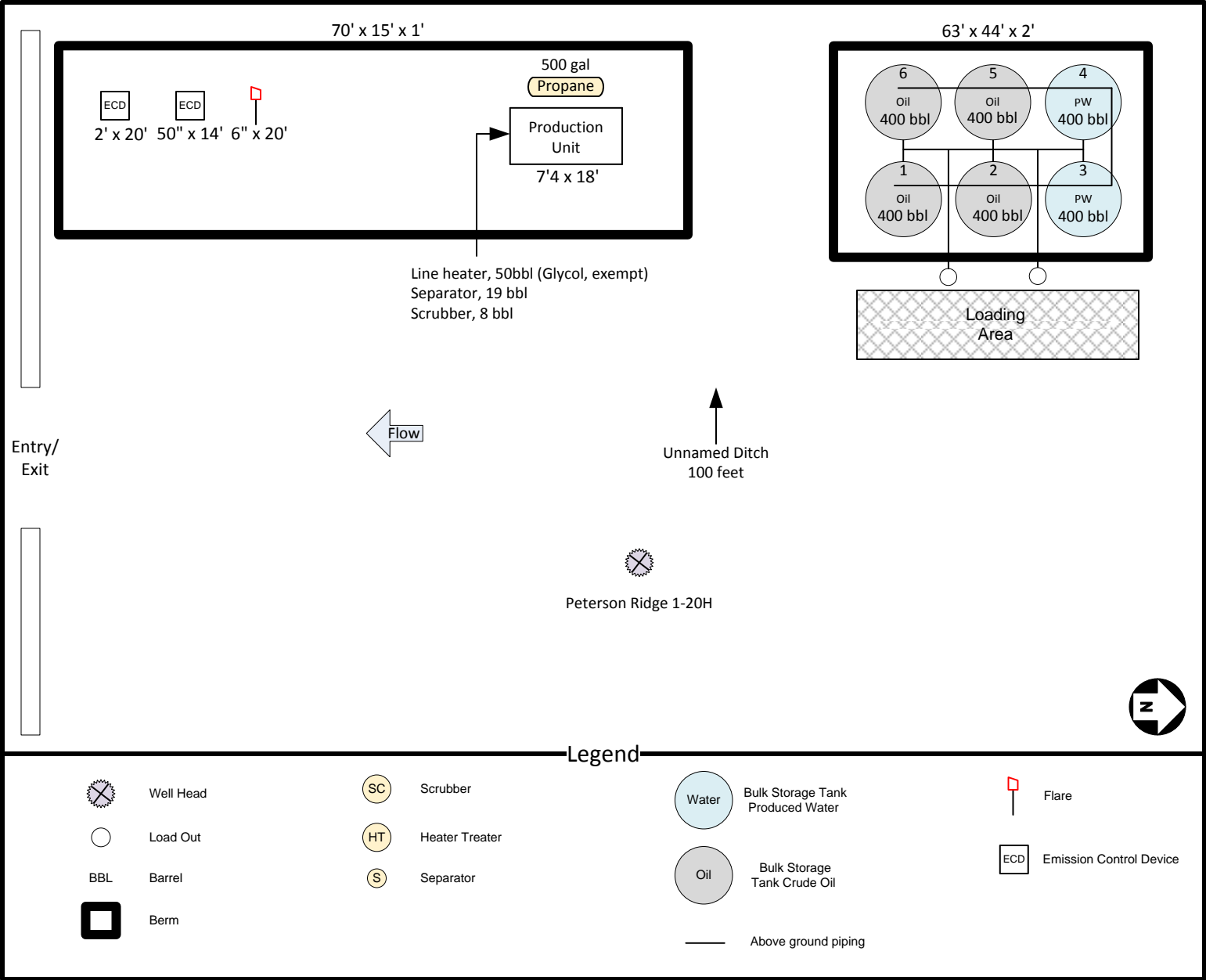
Dale Birdwell

Name (please type or print)

March 24, 2016

Date

SITE LOCATION: SandRidge E&P Peterson Ridge 1-20H



Spicer 3-32H



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**FACILITY INFORMATION**

Well Name: Spicer 3-32H

Inspector: Brett Terrel

API Number: 05-057-06469

Date: 12-17-15

Latitude: 40.652836

Longitude: -106.40461

County: Jackson

State: CO

**SITE INVENTORY**

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	PW	400 bbl	15'6 x 12'	Steel	In berm
2	Oil	400 bbl	15'6 x 12'	Steel	In berm
3	Oil	400 bbl	15'6 x 12'	Steel	In berm
4	Oil	400 bbl	15'6 x 12'	Steel	In berm
5	Oil	400 bbl	15'6 x 12'	Steel	In berm
6	PW	400 bbl	15'6 x 12'	Steel	In berm
7	PW	400 bbl	15'6 x 12'	Steel	In berm

**CONTAINMENT INFORMATION**

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 84' Width: 43' Height: 2', Capacity: 1200 bbl

Total Containment Capacity: 1200 bbl

Tank Displacement: 403 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 107 bbl

Available Containment Capacity: 689 bbl

Largest Tank: 400 bbl

**NOTES**

bbl – barrel

PW – Produced Water





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name:

Spicer 3-32H

Largest Bulk Oil Storage Tank:

400

bbl

Dike Dimensions:

Length (ft.)

84

Width (ft.)

43

Height (ft.)

2

Available Dike Capacity

1200

bbl

Additional Dike Dimensions if  
needed:

Length (ft.)

Width (ft.)

Height (ft.)

Available Dike Capacity

0

bbl

Total Dike  
Capacity:

1200

bbl

Tank Displacement (Vertical  
Tanks):

Diameter (ft.)

15.5

No. Tanks

7

Displacement:

403

bbl

Diameter (ft.)

No. Tanks

Displacement:

0

bbl

Total:

403

bbl

24hr/25 yr. Rain Event  
Displacement:

Rain (inch)

2

feet

0.167

107

bbl

Total Dike Capacity:

689

bbl

Largest  
Tank:

400

bbl

Is Containment Satisfactory:

YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Spicer 3-32H

Inspector: Brett Terrel

API Number: 05-057-06469

Date: 12-17-15

Latitude: 40.52836

Longitude: -106.40461

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Line Heater	Glycol (exempt)	50 bbl	5' x 18'	H. Steel	In berm
Separator	Mix	19 bbl	3' x 15'	H. Steel	In berm
Scrubber	Mix	8 bbl	3' x 6'	V. Steel	In berm
Combuster	Fumes (exempt)		50" x 14'	V. Steel	In berm
Combuster	Fumes (exempt)		2' x 20'	V. Steel	In berm
Flare	Fumes (exempt)		6" x 20'	V. Steel	In berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	Outside berm
Building	Locked (exempt)		19' x 25'	H. Steel	Outside berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Irregular

Length: 17' Width: 39' Height: 1', Capacity: 99 bbl

Length: 41' Width: 17' Height: 1', Capacity: 104 bbl

Total Containment Capacity: 203 bbl

Process Equipment Displacement: 3 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 41 bbl

Available Containment Capacity: 158bbl

Largest Tank: 19 bbl

#### NOTES

Bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: Spicer 3-32H  
Largest Bulk Oil Storage Tank: 19 bbl

#### Dike Dimensions:

Length (ft.)	17	Available Dike Capacity	99 bbl
Width (ft.)	39		
Height (ft.)	1		

#### Additional Dike Dimensions if needed:

Length (ft.)	41	Available Dike Capacity	104 bbl
Width (ft.)	17		
Height (ft.)	1		

Total Dike Capacity: 203 bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	3	Displacement:	3 bbl
No. Tanks	1		

Diameter (ft.)		Displacement:	0 bbl
No. Tanks			

Total: 0 bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	2 feet	0.167	41 bbl
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Total Dike Capacity: 158 bbl

Largest Tank: 19 bbl      Is Containment Satisfactory: YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: SPICER 3-32H**  
**MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: SPICER 3-32H**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

SPICER 3-32H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

Repair tank containment berm to a minimum height of 2 feet to maintain sufficient capacity.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: SPICER 3-32H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

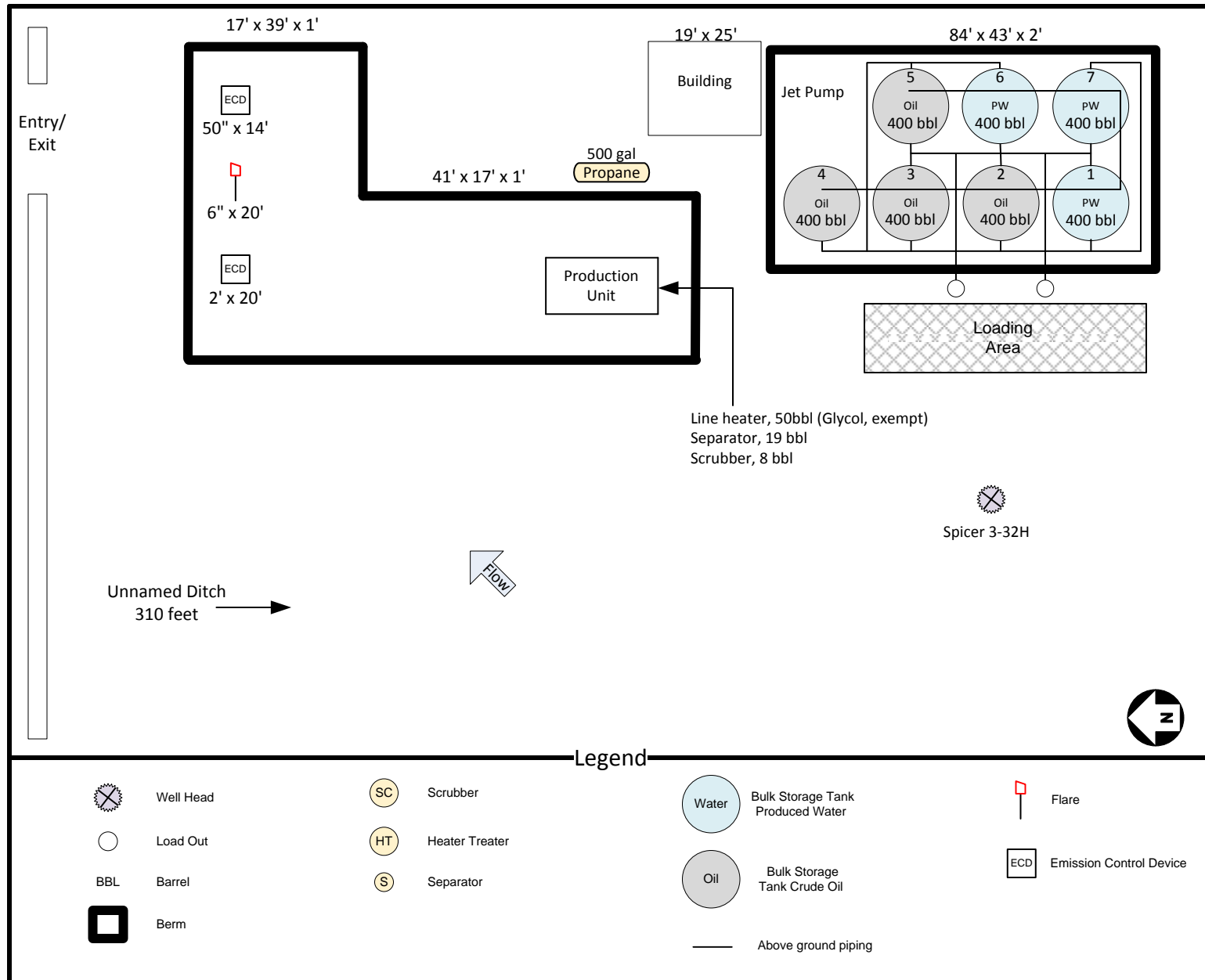
Dale Birdwell

Name (please type or print)

March 24, 2016

Date

# SITE LOCATION: SandRidge E&P Spicer 3-32H



Surprise 2-08H





123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Surprise 2-08H

Inspector: Brett Terrel

API Number: 05-057-06526

Date: 12-18-15

Latitude: 40.51548

Longitude: -106.38852

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	400 bbl	15'6 x 12'	Steel	In berm
2	PW	400 bbl	15'6 x 12'	Steel	In berm
3	PW	400 bbl	15'6 x 12'	Steel	In berm
4	Oil	400 bbl	15'6 x 12'	Steel	In berm
5	Oil	400 bbl	15'6 x 12'	Steel	In berm
6	Oil	400 bbl	15'6 x 12'	Steel	In berm
7	Oil	400 bbl	15'6 x 12'	Steel	In berm
8	Oil	400 bbl	15'6 x 12'	Steel	In berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 84' Width: 49' Height: 2', Capacity: 1336 bbl

Total Containment Capacity: 1336 bbl

Tank Displacement: 470 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 122 bbl

Available Containment Capacity: 743 bbl

Largest Tank: 400 bbl

#### NOTES

bbl – barrel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name:

Surprise 2-08H

Largest Bulk Oil Storage Tank:

400

bbl

Dike Dimensions:

Length (ft.)

84

Width (ft.)

49

Height (ft.)

2

Available Dike Capacity

1336

bbl

Additional Dike Dimensions if  
needed:

Length (ft.)

Width (ft.)

Height (ft.)

Available Dike Capacity

0

bbl

Total Dike  
Capacity:

1336

bbl

Tank Displacement (Vertical  
Tanks):

Diameter (ft.)

15.5

No. Tanks

8

Displacement:

470

bbl

Diameter (ft.)

No. Tanks

Displacement:

0

bbl

Total:

470

bbl

24hr/25 yr. Rain Event  
Displacement:

Rain (inch)

2.4

feet

0.2000

147

bbl

Total Dike Capacity:

782

bbl

Largest  
Tank:

400

bbl

Is Containment Satisfactory:

YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Surprise 2-08H

Inspector: Brett Terrel

API Number: 05-057-06526

Date: 12-18-15

Latitude: 40.51548

Longitude: -106.38852

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Line Heater	Glycol (exempt)	50 bbl	5' x 18'	H. Steel	In berm
Separator	Mix	19 bbl	3' x 15'	H. Steel	In berm
Scrubber	Mix	8 bbl	3' x 6'	V. Steel	In berm
Combustor	Fumes (exempt)		6' x 20'	V. Steel	In berm
Combustor	Fumes (exempt)		4' x 20'	V. Steel	In berm
Combustor	Fumes (exempt)		4' x 20'	V. Steel	In berm
Combustor	Fumes (exempt)		2' x 30'	V. Steel	In berm
Flare	Fumes (exempt)		6" x 21'	V. Steel	In berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	Outside berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Irregular

Length: 44' Width: 27' Height: 1', Capacity: 180 bbl

Length: 64' Width: 42' Height: 1', Capacity: 430 bbl

Total Containment Capacity: 610 bbl

Process Equipment Displacement: 3 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 115 bbl

Available Containment Capacity: 492 bbl

Largest Tank: 19 bbl

#### NOTES

Bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: Surprise 2-08H

Largest Bulk Oil Storage Tank: 19 bbl

#### Dike Dimensions:

Length (ft.)	44	Available Dike Capacity	180 bbl
Width (ft.)	27		
Height (ft.)	1		

#### Additional Dike Dimensions if needed:

Length (ft.)	64	Available Dike Capacity	430 bbl
Width (ft.)	42		
Height (ft.)	1		

Total Dike Capacity: 610 bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	3	Displacement:	3 bbl
No. Tanks	1		

Diameter (ft.)		Displacement:	0 bbl
No. Tanks			

Total: 3 bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	2 feet	0.167	115 bbl
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Total Dike Capacity: 492 bbl

Largest Tank: 19 bbl

Is Containment Satisfactory: YES



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: SURPRISE 2-08H**  
**MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: SURPRISE 2-08H**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

SURPRISE 2-08H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

None.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: SURPRISE 2-08H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Dale Birdwell  
Name (please type or print)

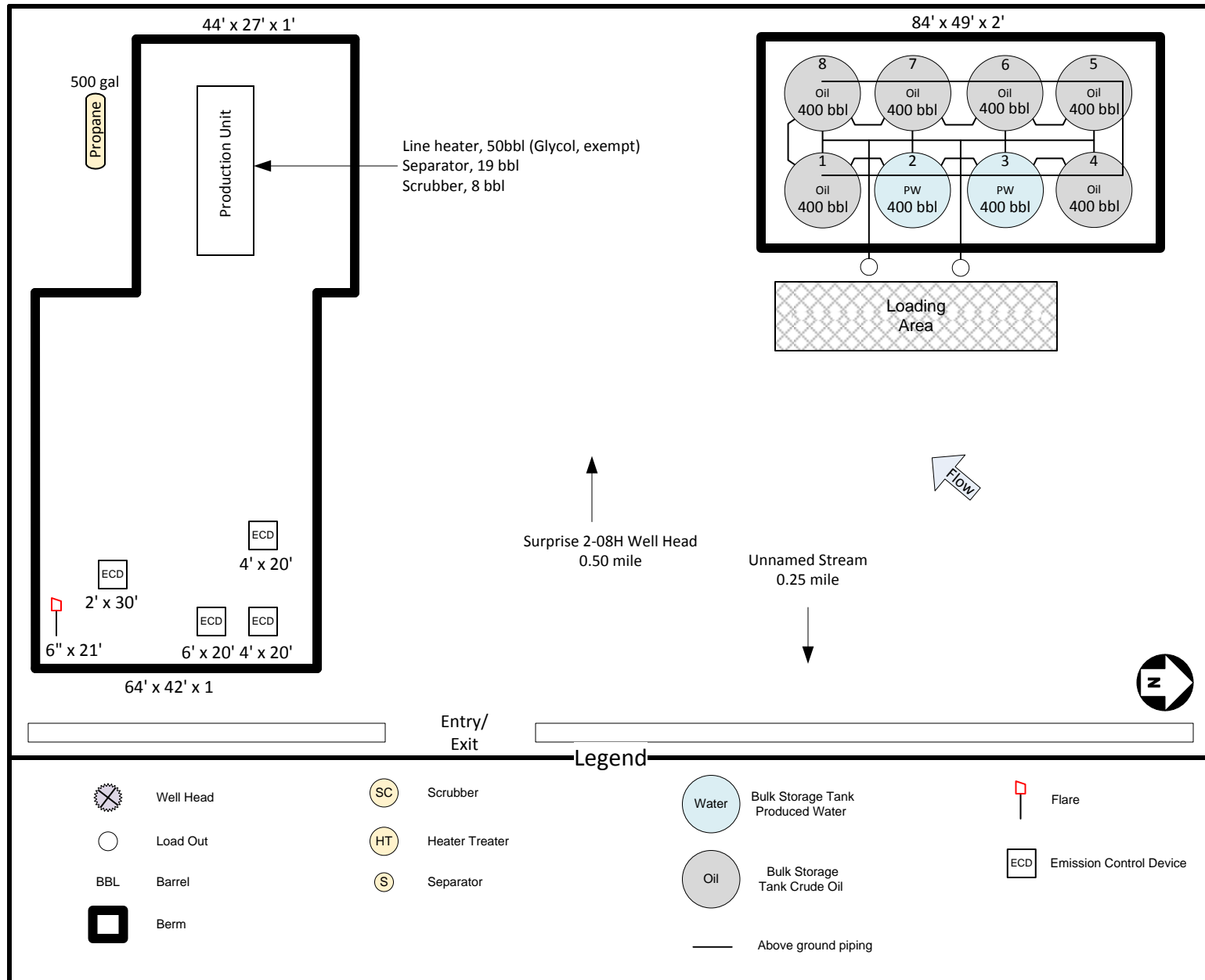
Senior EH&S Specialist

Title

March 24, 2016

Date

# SITE LOCATION: SandRidge E&P Surprise 2-08H





Surprise 4-06H, Damfino 2-06H



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**FACILITY INFORMATION**

Well Name: Surprise 4-06H, Damfino 2-06H

Inspector: Brett Terrel

API Number: 05-057-06480, 05-057-06482

Date: 12-18-15

Latitude: 40.51256

Longitude: -106.41678

County: Jackson

State: CO

**SITE INVENTORY**

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	Oil	400 bbl	15'6 x 12'	Steel	In berm
2	Oil	400 bbl	15'6 x 12'	Steel	In berm
3	PW	400 bbl	15'6 x 12'	Steel	In berm
4	Oil	400 bbl	15'6 x 12'	Steel	In berm
5	Oil	400 bbl	15'6 x 12'	Steel	In berm
6	Oil	400 bbl	15'6 x 12'	Steel	In berm
7	PW	400 bbl	15'6 x 12'	Steel	In berm
8	PW	400 bbl	15'6 x 12'	Steel	In berm
9	Oil	400 bbl	15'6 x 12'	Steel	In berm
Building	Jet Pump (exempt)		19' x 25'	Steel	In Berm

**CONTAINMENT INFORMATION**

Containment Material: Dirt/Rock    Containment Shape: Irregular

Length: 60' Width: 58' Height: 2', Capacity: 1144 bbl

Length: 22' Width: 25' Height: 2', Capacity: 159 bbl

Total Containment Capacity: 1303 bbl

Tank Displacement: 538 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 119 bbl

Available Containment Capacity: 646 bbl

Largest Tank: 400 bbl

**NOTES**

bbl – barrel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: Surprise 4-06H, Damfino 2-06H  
Largest Bulk Oil Storage Tank: 400 bbl

#### Dike Dimensions:

Length (ft.)	60	Available Dike Capacity	1144 bbl
Width (ft.)	58		
Height (ft.)	2		

#### Additional Dike Dimensions if needed:

Length (ft.)	22	Available Dike Capacity	159 bbl
Width (ft.)	25		
Height (ft.)	2		

Total Dike Capacity: 1303 bbl

#### Tank Displacement (Vertical Tanks):

Diameter (ft.)	15.5	Displacement:	538 bbl
No. Tanks	9		

Diameter (ft.)		Displacement:	0 bbl
No. Tanks			

Total: 538 bbl

#### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	2 feet	0.167	119 bbl
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Total Dike Capacity: 646 bbl

Largest Tank:	400 bbl	Is Containment Satisfactory:	YES
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123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Surprise 4-06H, Damfino 2-06H

Inspector: Brett Terrel

API Number: 05-057-06480, 05-057-06482

Date: 12-18-15

Latitude: 40.51256

Longitude: -106.41678

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
Line Heater	Glycol (exempt)	50 bbl	5' x 18'	H. Steel	In berm
Separator	Mix	19 bbl	3' x 15'	H. Steel	In berm
Scrubber	Mix	8 bbl	3' x 6'	V. Steel	In berm
HT	Mix	101 bbl	6' x 20'	V. Steel	In berm
Separator	Mix	4 bbl	2' x 7'	H. Steel	In berm
Chem Tank	Glycol (exempt)	11 bbl	4' x 5'	E. Steel	In berm
Fuel Tank	Propane (exempt)	500 gal	3' x 10'	H. Steel	Outside berm
Scrubber	Condensate	1.4 bbl	16" x 5'	V. Steel	Outside berm
Combustor	Fumes (exempt)		50" x 14'	V. Steel	Outside berm
Combustor	Fumes (exempt)		2' x 10'	V. Steel	Outside berm
Flare	Fumes (exempt)		6" x 21'	V. Steel	Outside berm

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 55' Width: 41' Height: 1', Capacity: 366 bbl

Total Containment Capacity: 366 bbl

Process Equipment Displacement: 10 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 67 bbl

Available Containment Capacity: 289 bbl

Largest Tank: 101 bbl

#### NOTES

bbl – barrel

Gal - gallon

HT – Heater-Treater

V. Steel – Vertical Steel

E. Steel – Elevated Steel

H. Steel – Horizontal Steel



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

## DIKE VOLUME CALCULATION

Facility Name:

Largest Bulk Oil Storage Tank:  bbl

### Dike Dimensions:

Length (ft.)	<input type="text" value="55"/>	Available Dike Capacity	<input type="text" value="366"/> bbl
Width (ft.)	<input type="text" value="41"/>		
Height (ft.)	<input type="text" value="1"/>		

### Additional Dike Dimensions if needed:

Length (ft.)	<input type="text"/>	Available Dike Capacity	<input type="text" value="0"/> bbl
Width (ft.)	<input type="text"/>		
Height (ft.)	<input type="text"/>		

Total Dike Capacity:  bbl

### Tank Displacement (Vertical Tanks):

Diameter (ft.)	<input type="text" value="6"/>	Displacement:	<input type="text" value="5"/> bbl
No. Tanks	<input type="text" value="1"/>		

Other equipment Displacement:  bbl

Total:  bbl

### 24hr/25 yr. Rain Event Displacement:

Rain (inch)	<input type="text" value="2"/> feet	<input type="text" value="0.167"/>	<input type="text" value="67"/> bbl
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Total Dike Capacity:  bbl

Largest Tank:  bbl

Is Containment Satisfactory:



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: SURPRISE 4-06H, DAMFINO 2-06H  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: SURPRISE 4-06H, DAMFINO 2-06H  
PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

SURPRISE 4-06H, DAMFINO 2-06H

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

The 1.4 bbl scrubber located on the north side of the production equipment berm requires sized secondary containment. Recommend earthen berm with a minimum height of 1 foot and footprint of 7-feet by 7-feet or equivalent.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: SURPRISE 4-06H, DAMFINO 2-06H**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

Dale Birdwell

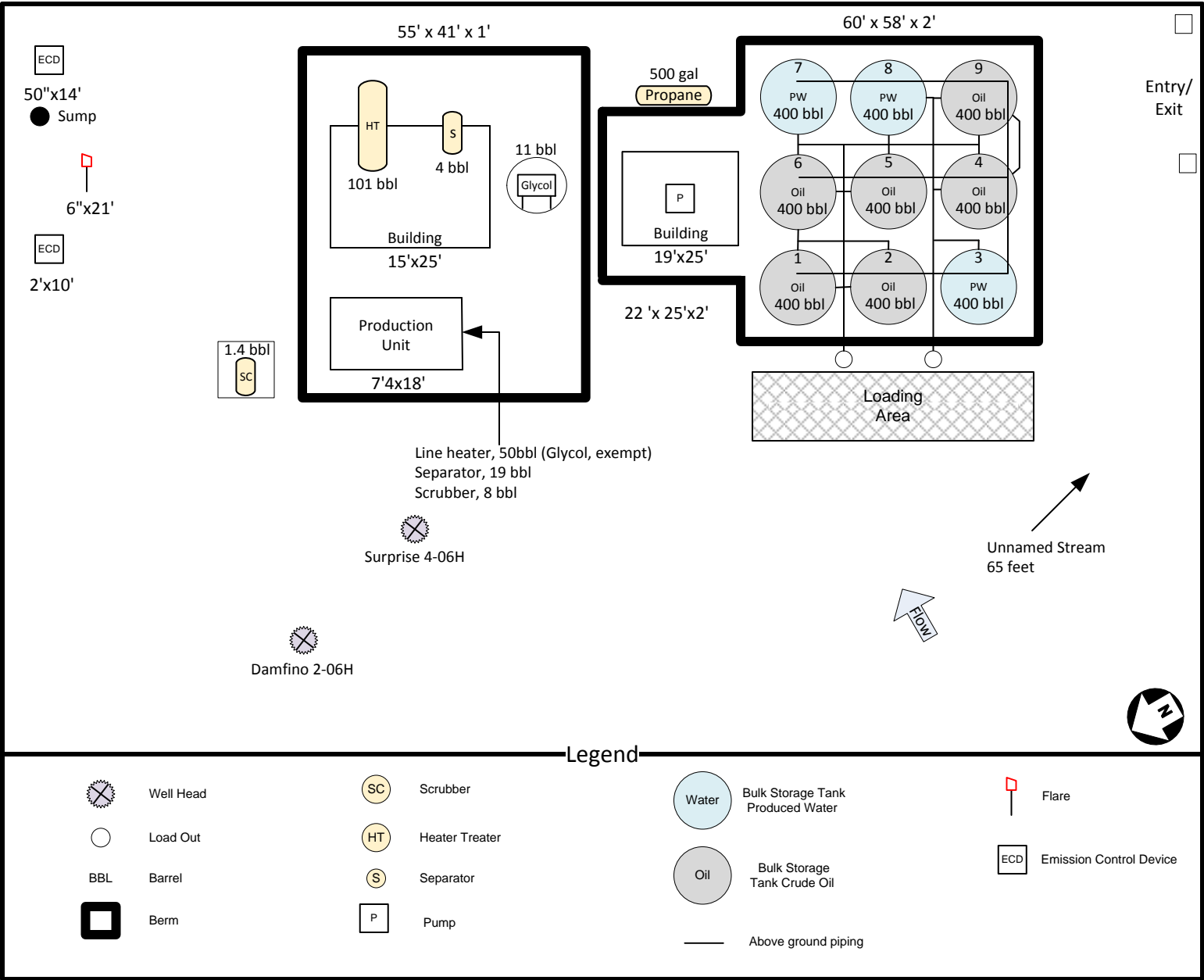
Name (please type or print)

March 24, 2016

Date



SITE LOCATION: SandRidge E&P Surprise 4-06H, Damfino 2-06H



Vaneta 1-32 SWD



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

#### FACILITY INFORMATION

Well Name: Vaneta 1-32 SWD

Inspector: Brett Terrel

API Number: 05057064670000

Date: 12-18-15

Latitude: 40.54037

Longitude: -106.39080

County: Jackson

State: CO

#### SITE INVENTORY

Bulk Storage ID	Contents	Volume	Dimensions (DxH)	Storage Types	Location
1	PW	400 bbl	12" x 20'	Steel	In berm
1	PW	400 bbl	12" x 20'	Steel	In berm
1	PW	400 bbl	12" x 20'	Steel	In berm
1	PW	400 bbl	12" x 20'	Steel	In berm
1	PW	400 bbl	12" x 20'	Steel	In berm
1	PW	400 bbl	12" x 20'	Steel	In berm
Separator	Mix	9 bbl	30" x 10'	H. Steel	Outside berm
Fuel Tank	Propane (exempt)	1000 gal	3' x 10'	H. Steel	Outside berm
Chem Tank	Glycol (exempt)	11 bbl	4' x 5'	E. Steel	Plastic contain

#### CONTAINMENT INFORMATION

Containment Material: Dirt/Rock    Containment Shape: Rectangle

Length: 73' Width: 36' Height: 2', Capacity: 816 bbl

Total Containment Capacity: 816 bbl

Tank Displacement: 201 bbl

24hr/25 year Rain Event: 2" Rain Displacement: 78 bbl

Available Containment Capacity: 537 bbl

Largest Tank: 400 bbl

#### NOTES

bbl – barrel

E. Steel – Elevated Steel

Gal - gallon

H. Steel – Horizontal Steel

PW – Produced Water



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

### DIKE VOLUME CALCULATION

Facility Name: **Vaneta 1-32 SWD**  
Largest Bulk Oil Storage Tank: **400** bbl

Dike Dimensions:

Length (ft.)	<b>73</b>	Available Dike Capacity	<b>816</b> bbl
Width (ft.)	<b>36</b>		
Height (ft.)	<b>2</b>		

Additional Dike Dimensions if needed:

Length (ft.)		Available Dike Capacity	<b>0</b> bbl
Width (ft.)			
Height (ft.)			

Total Dike Capacity: **816** bbl

Tank Displacement (Vertical Tanks):

Diameter (ft.)	<b>12</b>	Displacement:	<b>201</b> bbl
No. Tanks	<b>6</b>		

Diameter (ft.)		Displacement:	<b>0</b> bbl
No. Tanks			

Total: **201** bbl

24hr/25 yr. Rain Event Displacement:

Rain (inch)	<b>2.4</b> feet	<b>0.167</b>	<b>78</b> bbl
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Total Dike Capacity: **537** bbl

Largest Tank: **400** bbl      Is Containment Satisfactory: **YES**



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: VANETA SWD  
MANAGEMENT APPROVAL AND REVIEW**

Owner/Operator Responsible for Facilities:

SandRidge Exploration & Production, LLC  
123 Robert S. Kerr Ave.  
Oklahoma City, Oklahoma 73102

---

This Spill Prevention, Control, and Countermeasure (SPCC) Plan will be implemented as herein described. In addition, necessary manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged is hereby committed.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the facilities:

Name: Dale Birdwell

Date: March 24, 2016

Title: Senior EH&S Specialist



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: VANETA SWD**  
**PROFESSIONAL ENGINEER CERTIFICATION**

By means of this Professional Engineer Certification, I hereby attest to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this SPCC Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and the following tank batteries:

VANETA SWD

- I have verified that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in Section 9.0.
- I have verified that this SPCC Plan is adequate for the facilities with the exceptions presented below:

Repair tank containment berm to a minimum height of 2 feet to maintain sufficient capacity.

Install earthen berm around the separator building at the west side of the site to provide containment for the 9-bbl separator.



Allison S. White

Printed Name of Registered Professional Engineer

Allison S. White

Signature of Registered Professional Engineer

Date 3/24/2016 Registration No. 47798

State Colorado



123 Robert S. Kerr Avenue  
Oklahoma City, OK 73102

**SITE NAME: VANETA SWD**  
**CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**  
**[40 CFR 112, Appendix C]**

Does the facility transfer oil over water to or from vessels *and* does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?

NO

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons *and* has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

NO

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Senior EH&S Specialist

Title

Dale Birdwell

Name (please type or print)

March 24, 2016

Date

# SITE LOCATION: SandRidge E&P Vaneta SWD

