



Department of Environmental Quality Air Quality Division
Permit Application Form



Is this a revision to an existing application?
Yes _____ No X
Previous Application #:

Date of Application: 6/22/2015

COMPANY INFORMATION:

Company Name: RKI Exploration & Production, LLC
Address: 210 Park Avenue, Suite 900
City: Oklahoma City State: Oklahoma Zip Code: 73102
Country: USA Phone Number: (405) 949-2221

FACILITY INFORMATION:

Facility Name: Boner Brothers 37-71-32 PAD
New Facility or Existing Facility: New
Facility Description: Oil Production Wellsite/Pad
Facility Class: Minor Operating Status: Operating
Facility Type: Production Site

For Oil & Gas Production Sites ONLY:

First Date of Production (FDOP)/Date of Modification: 3/25/2015
Does production at this facility contain H2S? No

*If yes, contact the Division.

API Number(s): Boner Brothers 37-71-32 3PH (API # 49-009-29708)
Boner Brothers 37-71-32 4PH (API # 49-009-29709)
NAICS Code:

FACILITY LOCATION:

*Enter the facility location in either the latitude/longitude area or section/township/range area. Both are not required.

Physical Address:
City: Zip Code:
State: WY County: Converse

OR

Latitude: Longitude:
Quarter: nw nw Quarter:
Section: 32 Township: 37N Range: 71W

For longitude and latitude, use NAD 83/WGS84 datum and 5 digits after the decimal (i.e. 41.12345, -107.56789)

CONTACT INFORMATION:

*Note that an Environmental AND NSR Permitting Contact is required for your application to be deemed complete by the agency.

Title: Mr. First Name: Jeffrey
Last Name: Ingerson
Company Name: RKI Exploration & Production, LLC
Job Title: Senior Air Permitting Engineer
Address: 210 Park Avenue, Suite 900
City: Oklahoma City State: Oklahoma
Zip Code: 73102
Primary Phone No.: (405) 987-2181 E-mail: jingerson@rkixp.com
Mobile Phone No.: (405) 820-1779 Fax No.: (405) 949-2223
Contact Type: NSR Permitting Contact Start Date: March, 2014

Additional Contact Type (if needed):

Title: First Name: Last Name:

Company Name:

Job Title:

Address:

City: State:

Zip Code:

Primary Phone No.: E-mail:

Mobile Phone No.: Fax No.:

Contact Type: Start Date:

FACILITY APPLICATION INFORMATION:

General Info:

Has the facility changed location or is it a new/ greenfield facility?

Has a Land Use Planning document been included in this application?

Is the facility located in a sage grouse core area?

If the facility is in a sage grouse core area, what is the WER number? _____

** For questions about sage grouse core area, contact WY Game & Fish Department.*

Federal Rules Applicability - Facility Level:

Prevention of Significant Deterioration (PSD):

Non-Attainment New Source Review:

Modeling Section:

Has the Air Quality Division been contacted to determine if modeling is required?

Is a modeling analysis part of this application?

Is the proposed project subject to Prevention of Significant Deterioration (PSD) requirements?

Has the Air Quality Division been notified to schedule a pre-application meeting?

Has a modeling protocol been submitted to and approved by the Air Quality Division?

Has the Air Quality Division received a Q/D analysis to submit to the respective FLMs to determine the need for an AQRV analysis?

Required Attachments:

- Facility Map
- Process Flow Diagram
- Modeling Analysis (if applicable)
- Land Use Planning Document
- Detailed Project Description
- Emissions Calculations

I, Jeffrey L. Ingerson Senior Air Permitting Engineer
 Responsible Official (Printed Name) Title

an Official Representative of the Company, state that I have knowledge of the facts herein set forth and that the same are true and correct to the best of my knowledge and belief. I further certify that the operational information provided and emission rates listed on this application reflect the anticipated emissions due to the operation of this facility. The facility will operate in compliance with all applicable Wyoming Air Quality Standards and Regulations.

Signature: 
 (ink)

Date: 06/20/2015

Specific Emission Unit Attributes:

Separator/Treater

Company Equipment ID: HTR01
Company Equipment Description: Horizontal Heater Treater w/ 0.500 mmbtu burner

Operating Status:
Initial Construction Commencement Date: _____
Initial Operation Commencement Date: 3/25/2015
Most Recent Construction/ Modification Commencement Date: _____

Most Recent Operation Commencement Date: _____

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason:

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Type of Vessel: Is Vessel Heated?
Operating Temperature (F): 100
Operating Pressure (psig): 100

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-111-00

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24
Hours/year: 8760

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Not Affected Not Effectuated Not Affected

New Source Performance Standard are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Affected Not Effectuated Not Affected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Affected Not Effectuated Not Affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected Not Effectuated Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected Not Effectuated Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

HTR01

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)	0.011		0.0026	0.011	AP-42
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)	0.001		0.0002	0.001	AP-42
5.)	Nitrogen Oxides (NOx)	0.147		0.0336	0.147	AP-42
6.)	Carbon monoxide (CO)	0.123		0.0282	0.123	AP-42
7.)	Volatile organic compounds (VOC)	0.008		0.0018	0.008	AP-42
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)	0.003		0.0006	0.003	AP-42
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)	0		0	0	AP-42
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Storage Tank/Silo

Company Equipment ID: OILTNK 01-04
Company Equipment Description: 4 x 400 bbl Oil Storage Tanks

Operating Status:
Initial Construction Commencement Date: _____
Initial Operation Commencement Date: 3/25/2015
Most Recent Construction/ Modification Commencement Date: _____

Most Recent Operation Commencement Date: _____

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason:

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Material Type:
Description of Material Stored: Crude Oil

Capacity: 400 Units:
Maximum Throughput: 179215 Units:
Maximum Hourly Throughput: 20 Units:
Is Tank Heated?:

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-110-20

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24
Hours/year: 8760

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Subject, but exempt

New Source Performance Standard are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____ 0000

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Effected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Effected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

OILTNK 01-04

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)	60.73		0.277	1.215	Tanks Program
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)	0.98		0.004	0.02	Tanks Program
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Storage Tank/Silo

Company Equipment ID: WTRNK 01-02
Company Equipment Description: 2 x 400 bbl Water Storage Tank

Operating Status:
Initial Construction Commencement Date: _____
Initial Operation Commencement Date: 3/25/2015
Most Recent Construction/ Modification Commencement Date: _____

Most Recent Operation Commencement Date: _____

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason:

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Material Type:
Description of Material Stored: Produced Water (1% Oil Carryover)

Capacity: 400 Units:
Maximum Throughput: 1095 Units:
Maximum Hourly Throughput: 1 Units:
Is Tank Heated?:

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-110-20

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24
Hours/year: 8760

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Subject, but exempt

New Source Performance Standard are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____ 0000

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Effected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Effected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

TRTNK 01-02

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)	0.371		0.002	0.007	Tanks Program
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)	0.01		0	0	Tanks Program
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Loading/Unloading/Dump

Company Equipment ID: OIL LOAD
Company Equipment Description: Oil Loadout Facility

Operating Status: Operating
Initial Construction Commencement Date: _____
Initial Operation Commencement Date: 3/25/2015
Most Recent Construction/ Modification Commencement Date: _____

Most Recent Operation Commencement Date: _____
Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason: Construction (Greenfield/New Facility)

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Type of Material: Liquid
Material Description: Crude Oil

Maximum Annual Throughput: 179215 Units: barrels/yr
Maximum Hourly Throughput: 240 Units: barrels/hr
Detailed Description of Loading/Unloading/Dump Source: Crude oil is loaded from storage tanks into tanker trucks for transport to market. Tanker truck vapors are returned to storage tanks for destruction in the vapor combustor (FLR2).

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-112-01

Potential Operating Schedule: Provide the operating schedule for this emission unit.
Hours/day: 24
Hours/year: 8760

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Not Affected Not Effected

New Source Performance Standard are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Affected Not Effected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Affected Not Effected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

Oil Loadout

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)	11.06		0.0505	0.22	AP-42
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)					
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Loading/Unloading/Dump

Company Equipment ID: WTR LOAD
Company Equipment Description: Produced Water Loadout Facility

Operating Status: Operating
Initial Construction Commencement Date: _____
Initial Operation Commencement Date: 3/25/2015
Most Recent Construction/ Modification Commencement Date: _____

Most Recent Operation Commencement Date: _____
Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason: Construction (Greenfield/New Facility)

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Type of Material: Liquid
Material Description: Produced Water w/ 1% Crude Oil

Maximum Annual Throughput: 989 Units: barrels/yr
Maximum Hourly Throughput: 240 Units: barrels/hr
Detailed Description of Loading/Unloading/Dump Source: Crude oil is loaded from storage tanks into tanker trucks for transport to market. Tanker truck vapors are returned to storage tanks for destruction in the vapor combustor (FLR2).

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-112-01

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24
Hours/year: 8760

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Not Effected

New Source Performance Standard are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Effected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Effected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

Water Loadout

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)	0.06		0.0003	0	AP-42
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)					
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Control Equipment:

Flare/Combustor

Manufacturer: Steffes Date Installed: 3/25/2015
Model Name and Number: HP Flare Company Control
SHP-6 Equipment ID: FLR01

Company Control Equipment Description: 6" diameter x 24' high HP Flare Stack (Emergency Use)

Pollutant(s) Controlled:	<input type="checkbox"/> CO	<input type="checkbox"/> NOx	<input type="checkbox"/> Pb	<input type="checkbox"/> SO2	<input checked="" type="checkbox"/> VOC	<input type="checkbox"/> PM
<input type="checkbox"/> PM (FIL)	<input type="checkbox"/> PM Condensible	<input type="checkbox"/> PM 10 (FIL)	<input type="checkbox"/> PM 2.5 (FIL)	<input type="checkbox"/> PM 10	<input type="checkbox"/> PM 2.5	
<input checked="" type="checkbox"/> Other: HAPs						

Design Control Efficiency (%): 98 Capture Efficiency (%): 100
Operating Control Efficiency (%): 98

Flare Type: Elevated- Open Elevated Flare Type: Non-Assisted
Ignition Device: Yes Flame Presence Sensor: Yes
Inlet Gas Temp (F): 100 Flame Presence Type: Thermocouple
Gas Flow Rate (acfm): 115 Outlet Gas Temp (F): 1850

This is the only control equipment on this air contaminant source

If not, this control equipment is: Primary Secondary Parallel

List all other emission units that are also vented to this control equipment: Heater Treater for 4PH during emergency

List all release point IDs associated with this control equipment: Flare Stack 01

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

FLR01
Used 876 hr/yr

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)			1.224	0.536	Other
6.)	Carbon monoxide (CO)			0.306	0.134	Other
7.)	Volatile organic compounds (VOC)					
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)					
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Control Equipment:

Flare/Combustor

Manufacturer: Steffes Date Installed: 3/25/2015
 Model Name and Number: LP Flare Company Control
 Number: SVG-3 Equipment ID: FLR02

Company Control Equipment Description: 3" diameter x 24' high LP Flare Stack

Pollutant(s) Controlled:		<input type="checkbox"/> CO	<input type="checkbox"/> NOx	<input type="checkbox"/> Pb	<input type="checkbox"/> SO2	<input checked="" type="checkbox"/> VOC	<input type="checkbox"/> PM
<input type="checkbox"/> PM (FIL)	<input type="checkbox"/> PM Condensable	<input type="checkbox"/> PM 10 (FIL)	<input type="checkbox"/> PM 2.5 (FIL)	<input type="checkbox"/> PM 10	<input type="checkbox"/> PM 2.5		
<input checked="" type="checkbox"/> Other: HAPs							

Design Control Efficiency (%): 98 Capture Efficiency (%): 100
 Operating Control Efficiency (%): 98

Flare Type: Elevated- Open Elevated Flare Type: Non-Assisted
 Ignition Device: Yes Flame Presence Sensor: Yes
 Inlet Gas Temp (F): 100 Flame Presence Type: Thermocouple
 Gas Flow Rate (acfm): 4.3 Outlet Gas Temp (F): 1850

This is the only control equipment on this air contaminant source

If not, this control equipment is: Primary Secondary Parallel

List all other emission units that are also vented to this control equipment: Oil & Water Tanks, Loadout Facilities

List all release point IDs associated with this control equipment: Flare Stack 02

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

FLR02

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)			0.0002	0.001	
5.)	Nitrogen Oxides (NOx)			0.0257	0.112	Other
6.)	Carbon monoxide (CO)			0.0215	0.094	Other
7.)	Volatile organic compounds (VOC)			0.0014	0.006	
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)			0.0005	0.002	
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)			0	0	
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Fugitives

Company Equipment ID: FUG01

Company Equipment Description: Fugitive Emissions

Operating Status: Operating

Initial Construction Commencement Date: _____

Initial Operation Commencement Date: 3/25/2015

Most Recent Construction/ Modification _____

Commencement Date: _____

Most Recent Operation Commencement Date: _____

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason: Construction (Greenfield/New Facility)

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Type of Fugitive Emission: Fugitive Leaks at O&G

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-115-00

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24

Hours/year: 8760

Control Equipment: Yes No

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS):

Yes Not Affected

New Source Performance Standards are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61):

Yes Not Affected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63):

Yes Not Affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD):

Yes Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review:

Yes Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

FUG01

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)			0.203	0.888	AP-42
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)			0.0002	0.001	AP-42
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Release Point Information:

Complete the table below for *each* release point. Please include release point information for each emission unit. Multiple attachments may be necessary. A release point is a point at which emissions from an emission unit are released into the ambient (outside)air. List each individual release point on a separate pair of lines (release point ID and description). *For longitude and latitude, use NAD 83/WGS84 datum and 5 digits after the decimal (i.e. 41.12345, -107.56789)*

Stack Release Point Information	
Company Release Point ID: FLR01	Release Point Type: <input type="text" value="Vertical"/> Release Point Latitude: <u>43.14399</u> Release Point Longitude: <u>-105.40373</u>
Company Release Point Description: HP Heater Treater Emergency Flare (used 10% ... 876 hrs/yr)	Base Elevation (ft): <u>5067</u> Stack Height (ft): <u>24</u> Stack Diameter (ft): <u>0.5</u> Exit Gas Velocity (ft/s): _____ Exit Gas Temp (F): <u>1850</u> Exit Gas Flow Rate (acfm): _____
Company Release Point ID: FLR02	Release Point Type: <input type="text" value="Vertical"/> Release Point Latitude: <u>43.14399</u> Release Point Longitude: <u>-105.40373</u>
Company Release Point Description: LP Oil & Water Tank Flare 1PH 1-4 Oil Tank Vents 1PH 1-2 Water Tank Vents	Base Elevation (ft): <u>5067</u> Stack Height (ft): <u>24</u> Stack Diameter (ft): <u>0.25</u> Exit Gas Velocity (ft/s): _____ Exit Gas Temp (F): <u>1850</u> Exit Gas Flow Rate (acfm): _____
Company Release Point ID:	Release Point Type: <input type="text"/> Release Point Latitude: _____ Release Point Longitude: _____
Company Release Point Description:	Base Elevation (ft): _____ Stack Height (ft): _____ Stack Diameter (ft): _____ Exit Gas Velocity (ft/s): _____ Exit Gas Temp (F): _____ Exit Gas Flow Rate (acfm): _____
Company Release Point ID:	Release Point Type: <input type="text"/> Release Point Latitude: _____ Release Point Longitude: _____
Company Release Point Description:	Base Elevation (ft): _____ Stack Height (ft): _____ Stack Diameter (ft): _____ Exit Gas Velocity (ft/s): _____ Exit Gas Temp (F): _____ Exit Gas Flow Rate (acfm): _____

Complete the table below for each fugitive (area, volume, line) release point. List each individual release point on a separate line.

Fugitive Release Point Information	
Company Release Point ID: FUG01	Release Point Latitude: <u>43.14399</u> Release Point Longitude: <u>-105.40373</u> Release Height (ft): <u>0.5</u>
Company Release Point Description: Fugitive VOC	
Company Release Point ID:	Release Point Latitude: _____ Release Point Longitude: _____ Release Height (ft): _____
Company Release Point Description:	
Company Release Point ID:	Release Point Latitude: _____ Release Point Longitude: _____ Release Height (ft): _____
Company Release Point Description:	
Company Release Point ID:	Release Point Latitude: _____ Release Point Longitude: _____ Release Height (ft): _____
Company Release Point Description:	

Permit Information and Calculations

FORM 3
Nov. 2012

STATE OF WYOMING
OIL AND GAS CONSERVATION COMMISSION
P. O. Box 2640
Casper Wyoming 82602

WELL COMPLETION OR RECOMPLETION REPORT AND LOG (SUBMIT SINGLE, DUPLICATE ON STATE LAND)

9. API WELL NO. **49-009-29709**

12. COUNTY **CONVERSE** 13. STATE **Wyoming**

5. STATE LEASE SERIAL NO. **FEE**

7. UNIT OR COMMUNITIZATION AGREEMENT

1a. Type of Well Oil Well Gas Well Dry CBM Other: _____

b. Type of Completion New Well Workover Deepen Plug Back Diff. Resvr.
 Initial Final Other _____

2. Name of Operator **RKI EXPLORATION & PRODUCTION**

8. FARM OR LEASE NAME **BONER BROTHERS** **37-71-32**

3. Address **210 PARK AVE, STE. 700 OKLAHOMA CITY, OK 73102**

3a. Phone No. (include area code) **405-949-2221 405-996-5769**

8a. WELL No. **4PH**

Email: **hbrehm@rkixp.com**

4. Location of Well (Report location clearly and in accordance with WOGCC requirements with footages and qtr. qtrs.)

10. FIELD NAME **WC**

At surface **GR 5067' NENE 505' FNL 1265' FEL NAD 83** Lat. **43.14399** Long. **105.403735**

11. SEC. T, R, M, OR BLOCK AND SURVEY **OR AREA 32 T 37N R 71W**

Top prod. Int. TVD **8328'** **NAD 83** Lat. **43.142001** Long. **105.406454**

36. MULTIPLE COMPL.? **NO**
DOCKET OR A.A. DATE:

At total depth **TVD 8312'** **NAD 83** Lat. **43.13235** Long. **105.406488**

14. Date Spudded **12/11/2014** 15. Date T.D. Reached **12/20/2014** 16. Date Completed D & A **3/25/2015** Ready to Prod.

17. ELEVATIONS (DF, RKB, RT, GR, etc.)* **5067' GR**

18. Total Depth: MD **12337'** TVD **8312'** 19. Plug back T.D.: MD **12244'** TVD **8313'** 20. Depth Bridge Plug Set: MD **12244'** TVD **8313'** (Requires Prior Approval)

21. Type Electric & other Logs Run (Submit 1 copy and 1 LAS of each), Cased and Open Hole, Btm Hole Press Survey **CEMENT, TVD, MD**

22. Was well cored? No Yes (Submit analysis)
Was DST run? No Yes (Submit report)
Directional Survey? No Yes (Submit copy, w/ cert.)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (Bbl)	Cement Top*	Amount Pulled
13.5"	10.75" J-55	40.5#	0	1759'		610	445	0'	
8.75"	5.5" P-110	20#	0	12337'	n/a	1340	1035	4580'	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 7/8"	7854'							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. of Holes	Perf. Status
A) PARKMAN	8,818'	12,194'	8818'- 8970'	3 1/8"	32	ACTIVE
B)			9066'- 9218'	3 1/8"	32	ACTIVE
C)			9314'- 9466'	3 1/8"	32	ACTIVE
D)			9562'- 9714'	3 1/8"	32	ACTIVE
D)			9810'- 9962'	3 1/8"	32	ACTIVE
D)			10058'- 10210'	3 1/8"	32	ACTIVE
D)			10306'- 10458'	3 1/8"	32	ACTIVE
D)			10554'- 10706'	3 1/8"	32	ACTIVE
D)			10802'- 10954'	3 1/8"	32	ACTIVE
D)			11050'- 11202'	3 1/8"	32	ACTIVE
D)			11298'- 11450'	3 1/8"	32	ACTIVE
D)			11654'- 11698'	3 1/8"	32	ACTIVE
D)			11794'- 11946'	3 1/8"	32	ACTIVE
D)			12042'- 12194'	3 1/8"	32	ACTIVE

26. Perforation Record

Summary: Total Frac Stages: **14** Total Slurry (bbls): **32,541** Total Proppant (lbs): **1,272,360**

28. Production-Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil Bbl	Gas MCF	Water Bbl	Oil Gravity Corr. API	Gas Gravity	Flowback Disposal
3/25/2015	4/12/2015	24	→	987	333	776	38.6	0.78272	2,603

25. Formation: **PARKMAN** Productive Interval: **8,818' - 12,194'**

Choke Size	Tbg. Press Flwg.	Csg. Press.	24 Hr. Rate	Oil Bbl	Gas MCF	Water Bbl	Gas: Oil Ratio	Res. Press.	Well Status	ESP
64/64	PSI 320	180	→	987	333	776	337	3740	PRODUCING	

* See instructions and spaces for additional data on page 2

29. Disposition of Gas (Sold, used for fuel, vented, etc.) **SOLD** Test Witness:

30. Summary of Porous Zones (include Aquifers): Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, firm tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers: **PARKMAN**

Formation	Top	Bottom	Descriptions Contents, Etc.	Name	TVD
PARKMAN	8750'	12194'	OIL-GAS-WATER	FOX HILLS LEWIS TECKLA TEAPOT PARKMAN	6453' 6651' 7358' 7908' 8330'

32. Additional remarks; include plugging procedure (Req. prior approval):

FLOWBACK DISPOSAL TOTAL = 5915 BBLS//WITH 1854 BBLS INTO RIEHLE 37-70-3-1 SWD,
1794' INTO RIEHLE 37-70-3-2 SWD, AND 2267 BBLS INTO RIEHLE 37-70-3-3 SWD.

33. Indicate which items have been attached by placing a check in the appropriate boxes:

Electrical/Mechanical Logs (1 full set) Cased & Open hole.
 Geologic Report
 DST Report
 Directional Survey w/ Certification
 Sundry Notice for plugging and cementing
 Core Analysis
 Press. Survey
 Other: PLAT, BHL, FORM 10, CEMENT, CAS

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) HEATHER BREHM Title REGULATORY ANALYST
 Signature *Heather Brehm* Date 4-22-15

INSTRUCTIONS

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys should be attached hereto, to the extent required by applicable Federal and or State laws and regulations. All attachments should be listed on this form, see space 33.

Space 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Please note all Lat./ Longs. In NAD 83. Calculate all "Top of Producing Intervals" and "BHL" first as distance from the section corner, second as the Lat. /Long. Spacing orders are based on a well location in a section. Well locations must match the surveyed footages.

Space 17: Indicate elevation used for depth measurements given in other spaces on this form and in any attachments.

Space 23: " Sacks Cement " : Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. Show how reported top(s) of cement were determined, i.e. circulated (CIR), or calculated (CAL), or cement bond log (CBL), or temperature survey (TS).

Spaces 25 and 28: If this well is completed for commingled production from more than one pool (multiple zone completion), state in space 25 and 26, and in space 25 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for the pools reported in space 28 through 28c. Submit a separate completion report on this form for each pool separately produced, (not commingled).

Space 27: If a well was fracture treated or stimulated, all data required in Chapter 3, Section 45 must be filed with this Completion Report.

Space 27: If a well was fracture treated or stimulated, provide Summary Data for # of Stages, Total Slurry, Total Proppant

Space 28: Provide well test data for each interval tested or stimulated and flowed.

Space 32: Provide frac flowback disposal volumes and handling and disposal site.

Space 32: Provide final annulus casing pressure.

Space 32 or Attachment: Provide all Stimulation Chemicals by Name, Type, Volumes and CAS #s.

Attach a wellbore diagram whenever possible.

STATE OF WYOMING
OIL AND GAS CONSERVATION COMMISSION
Office of State Oil and Gas Supervisor
P.O. Box 2640
Casper, Wyoming 82602

PRODUCTION TEST AND GAS-OIL RATIO REPORT

OPERATOR RKI EXPLORATION AND PRODUCTION		API NUMBER 49-009-29709
ADDRESS 210 PARK AVE., SUITE 900 OKLAHOMA CITY, OK 73012		WELL NAME & NUMBER BONER BROS 37-71 32-4PH
LEASE NAME BONER BROS	RESERVOIR PARKMAN	FIELD WILDCAT
LOCATION,(quarter-quarter and footages): NE/NE 505' FNL 1,265' FEL Sec. 32 ,Twp. 37 N ,Rge. 71 W		LATITUDE: 43.14399° LONGITUDE: -105.403735° COUNTY CONVERSE

TEST DATA

START OF TEST-DATE 4/12/2015	TIME 6:00 PM	END OF TEST-DATE 4/13/2015	TIME 6:00 PM	DURATION OF TEST 24 HRS
TUBING PRESSURE 320	CASING PRESSURE 180	SEPARATOR PRESSURE 150	SEPARATOR TEMP. 95°F	CHOKE SIZE 64/64
OIL PRODUCTION DURING TEST 987.70 bbls.		GAS PRODUCTION DURING TEST 333.11 MCF		WATER PRODUCTION DURING TEST 776.69 bbls.
OIL GRAVITY 38.6 *API	PRODUCING METHOD (Flowing, pumping, gas lift, etc.) ESP			

GAS PRODUCTION

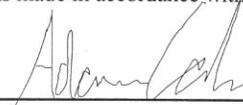
METER MANUFACTURER TOTAL FLOW	ORIFICE WELL TESTER <input checked="" type="checkbox"/>
Flange Tap <input checked="" type="checkbox"/> PIPE TAP <input type="checkbox"/> L-10 <input type="checkbox"/>	CRITICAL FLOW PROVER <input type="checkbox"/>
ORIFICE DIAMETER 1	PIPE DIAMETER (Inside dia.) 2.067
DIFFERENTIAL PRESSURE RANGE 0-400	ORIFICE DIAMETER 1
GAS GRAVITY (Air-1.0) 0.78272 Meas. <input checked="" type="checkbox"/> Est <input type="checkbox"/>	MAX. STATIC PRESSURE RANGE 0-1500
DIFFERENTIAL NO FLOW READING 0.012	PIPE DIAMETER 2
DIFFERENTIAL 200	FLOWING,TEMPERATURE 117°F
	GAS GRAVITY (Air-1.0) 0.78272 Meas. <input checked="" type="checkbox"/> Est <input type="checkbox"/>
	STATIC NO FLOW READING 12.528
	24 HOUR COEFFICIENT N/A
	DIFFERENTIAL 112
	PRESSURE: (Indicate Units) PSIG

TEST RESULTS

DAILY OIL 988 bbls.	DAILY WATER 777 bbls.	DAILY GAS 333.11 MCF	GAS- OIL RATIO 337.26 SCF/STB
------------------------	--------------------------	-------------------------	----------------------------------

I hereby, swear or affirm that the statements herein made are complete and correct, and that the test described was made in accordance with the rules, regulations and Instructions of the Wyoming Oil and Gas Conservation Commission.

SIGNATURE

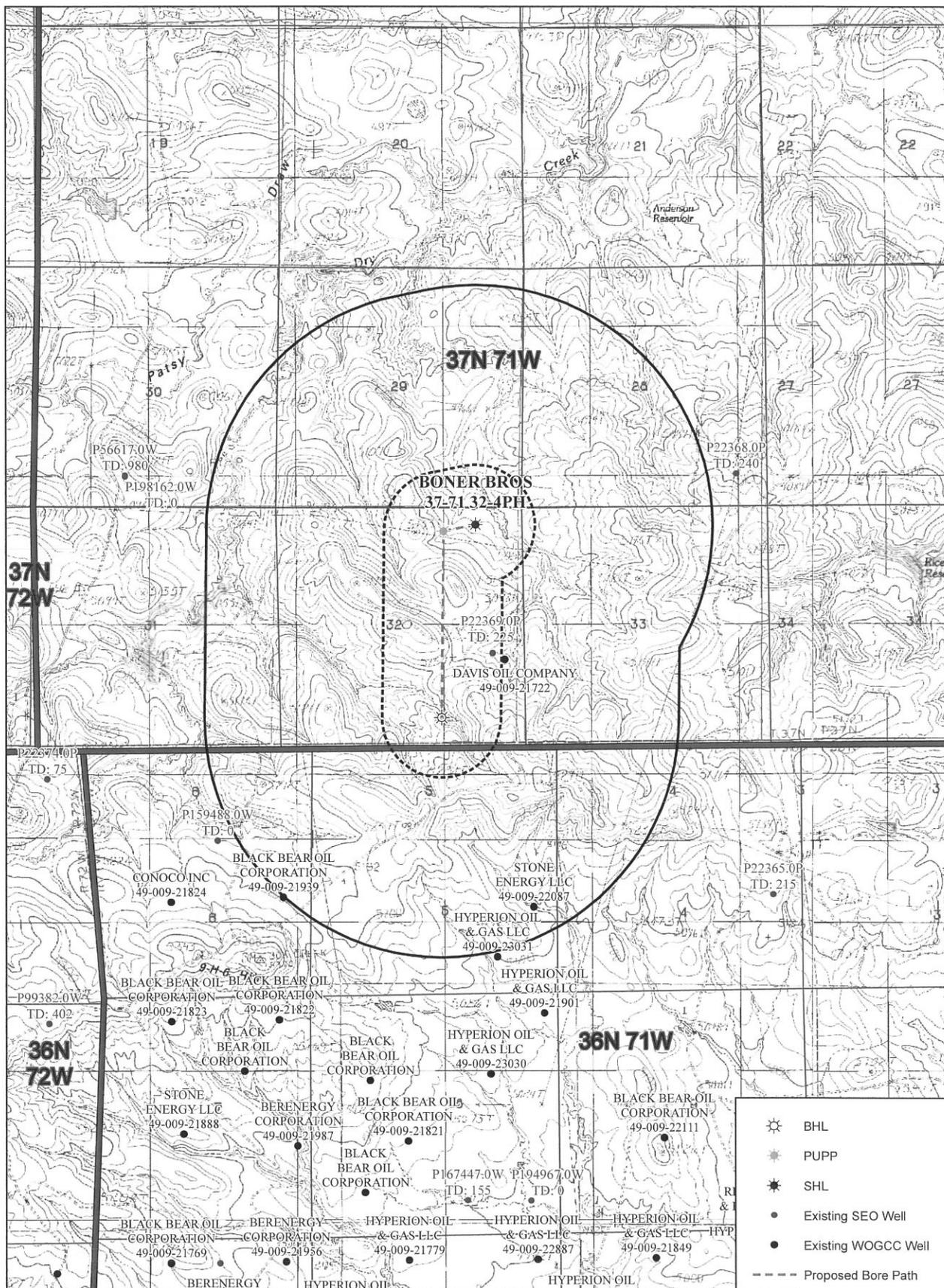


TITLE

SR. PRODUCTION ENGINEER

DATE

4/15/2015



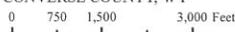
Rev.	Date	Description	By	Proj Engr	Checked	Rev. Request
1	3/19/2014	Moved BHL to 460' FSL	MDR	PDA	RJE	RB
0	3/13/2014	Issued for client review	MDR	PDA	RJE	RB

Client:
 RKI Exploration & Production, LLC
 210 Park Ave
 Suite 900
 Oklahoma City, OK 73102

Prepared By:

 Wood Group PSN - Project & Asset Management
 2615 Aviation Dr Sheridan, WY 82801
 (307) 675-6400 www.woodgroup.com

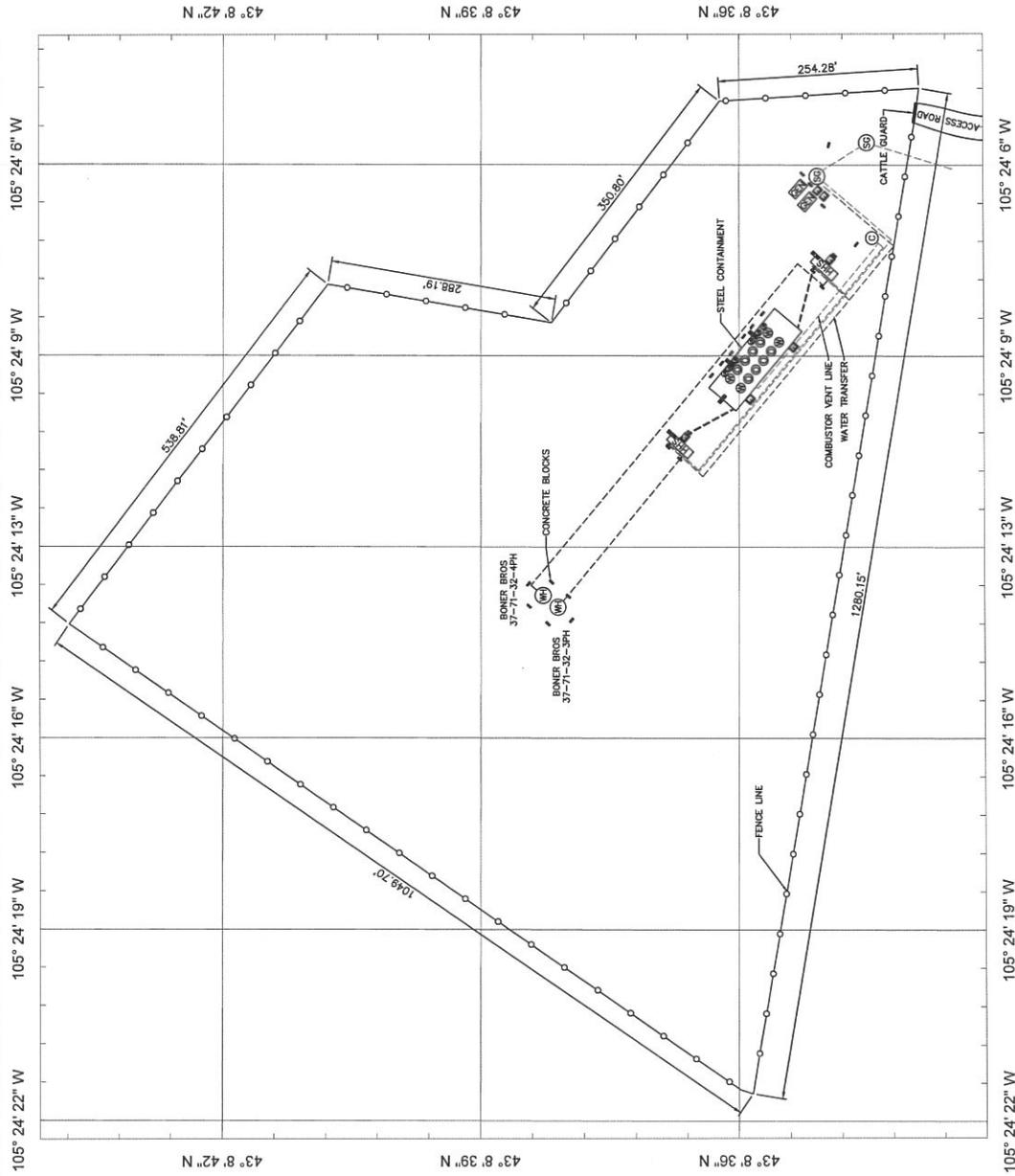
MAP C
 BONER BROS
 37-71-32-4PH
 SEC 32, T37N, R71W
 CONVERSE COUNTY, WY

Land Agent: R. Briscoe	743918	Drawn: MDR	Checked: RJE	Approval: BC	Date: 3/19/2014	Sheet: 1 OF 1	Rev: 1
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Document Path: Y:\TransformedData\RKI\unxd\FedPackage\MapC\BONER BROS 37-71-32-4PH MAP C (REV 1).mxd

LEGEND	
UG	UNDERGROUND
AG	ABOVE GROUND
UP	UTILITY POLE
E	ELECTRICAL PANEL/BOX
SP	SOLAR PANEL
GEN	GENERATOR
	OVERHEAD POWER LINE
	ELECTRIC LINE (UG)
	ELECTRIC LINE (AG)
	OIL FLOWLINE (UG)
	OIL FLOWLINE (AG)
	RECYCLE FLOWLINE (UG)
	RECYCLE FLOWLINE (AG)
	WATER FLOWLINE (UG)
	WATER FLOWLINE (AG)
	GAS FLOWLINE (UG)
	GAS FLOWLINE (AG)
	UNKNOWN FLOWLINE (UG)
	UNKNOWN FLOWLINE (AG)
	EDGE OF PAD
	FENCE
(FWO)	FREE WATER KNOCKOUT
(LO)	LOAD OUT VALVE (OIL)
(LW)	LOAD OUT VALVE (WATER)
MTR	METER BUILDING
PU	PUMPING UNIT
(P)	RECYCLE PUMP
(S)	SEPARATOR
(T)	TANK (OIL)
(W)	TANK (WATER)
(B)	BUILDING
(C)	COMBUSTOR
(H)	HEATER TREATER
(F)	FLARE
(PS)	PURGE SEPARATOR
(W)	WELLHEAD
(SC)	SURVEY CONTROL POINT
(A)	WELD
(R)	RISER (SIZE)
(S)	STAIRS
(TP)	TRANSFER PUMP



BONER BROS 37-71-32-4PH
1"=140'



R&I CONSTRUCTION
 1000 R&I EXPLORATION & PRODUCTION, LLC
 AS-BUILT SITE MAP
 CONVERSE COUNTY, WY.

NO.	DATE	PROJECT DESCRIPTION	PROJ. AVE.	ISSUED FOR APPROVAL	REV. NUMBER	BY	DATE	DESCRIPTION
1					1			
2					2			
3					3			
4					4			
5					5			
6					6			
7					7			
8					8			
9					9			
10					10			



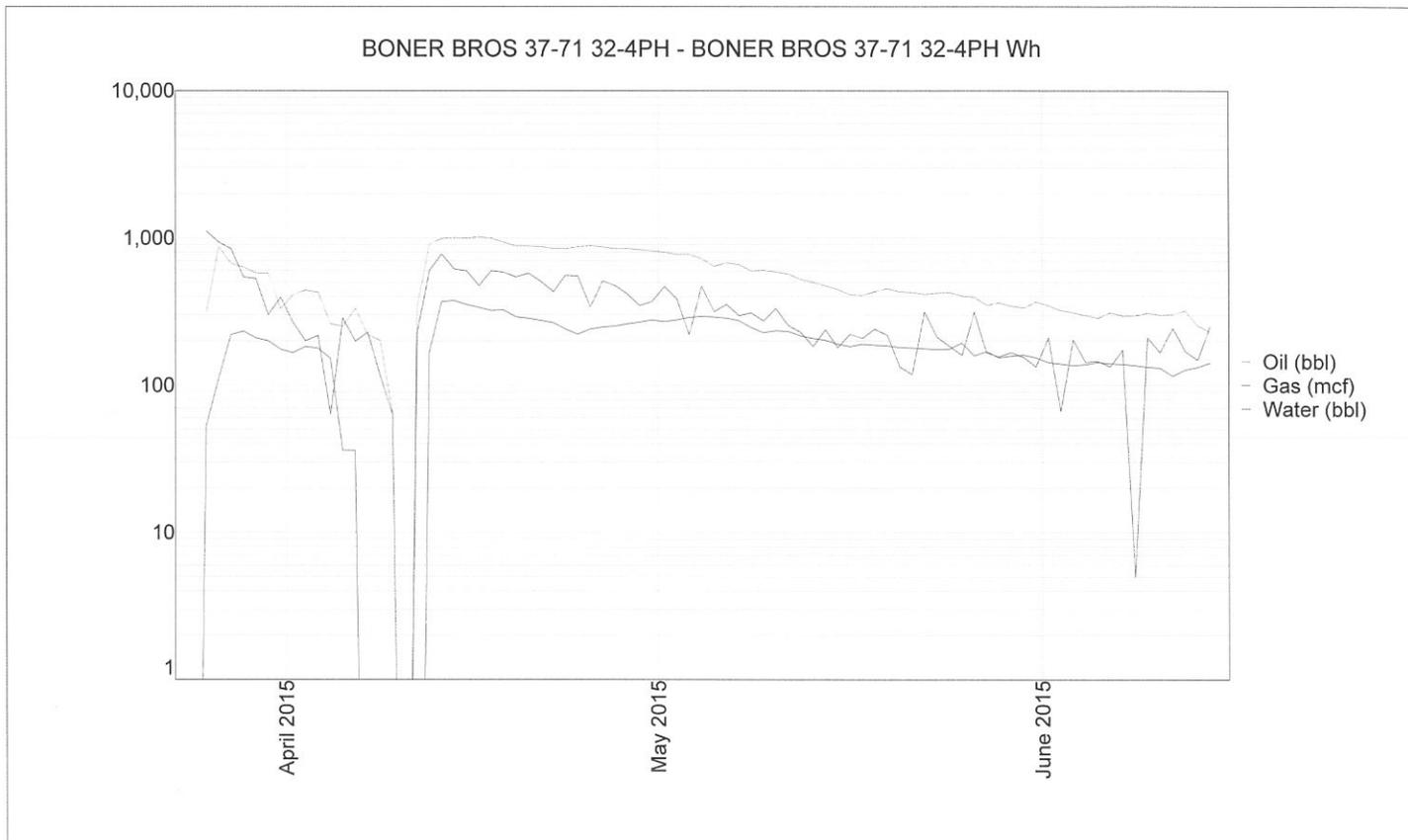
Daily Production Report

Date: 6/15/2015

Time: 9:08 AM

BONER BROS 37-71 32-4PH - BONER BROS 37-71 32-4PH Wh

Selected Time Frame: 04/12/2015 - 05/11/2015



Daily Production

Date	Oil	Gas	Water
05/11/2015	569.70	232	255.00
05/10/2015	588.03	234	331.68
05/09/2015	604.70	228	273.34
05/08/2015	598.45	247	310.01
05/07/2015	661.38	274	296.68
05/06/2015	677.22	285	353.33
05/05/2015	641.80	291	314.96
05/04/2015	723.48	293	470.04
05/03/2015	774.74	289	219.97
05/02/2015	770.15	277	383.31
05/01/2015	801.83	271	468.33
04/30/2015	813.50	277	370.01
04/29/2015	831.83	268	346.66
04/28/2015	847.25	260	416.69
04/27/2015	842.67	252	474.30
04/26/2015	867.26	248	509.36
04/25/2015	886.43	240	339.97
04/24/2015	871.01	221	550.06
04/23/2015	844.34	241	556.67
04/22/2015	843.92	265	429.99
04/21/2015	873.51	275	506.65

Notes

<DT> = Down Time

<GM> = Gas Meter



Daily Production Report

BONER BROS 37-71 32-4PH - BONER BROS 37-71 32-4PH Wh

Selected Time Frame: 04/12/2015 - 05/11/2015

Date: 6/15/2015

Time: 9:08 AM

Daily Production

Date	Oil	Gas	Water
04/20/2015	878.51	284	575.00
04/19/2015	879.76	291	543.29
04/18/2015	934.35	324	585.04
04/17/2015	991.45	321	598.35
04/16/2015	1,016.87	337	473.30
04/15/2015	993.12	352	596.66
04/14/2015	1,001.45	375	616.67
04/13/2015	987.70	369	776.69
04/12/2015	911.43	167	601.69
Total:	24,527.82	8,289	13,543.70
Average:	817.59	276	451.46

Notes

<DT> = Down Time

<GM> = Gas Meter

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 4PH
 ne ne 32, T37N, R71W
 Converse County, Wyoming

Production Heater Treater (HTR-1)

Burner Size:	0.50	mmbtu/hr
Operating Hours:	8,760	hrs
Fuel:	1,490	BTU/scf
Fuel Consumption:	336	scf/hr
Fuel Consumption:	2.940	mmscf/yr

EMISSIONS FACTORS per AP42

NOx	100	lb/mmscf
CO	84	lb/mmscf
VOC	5.50	lb/mmscf
PM	7.60	lb/mmscf
SOx	0.60	lb/mmscf
HAPs	1.88	lb/mmscf

CONTROLLED

	EF lb/mmscf	EF lb/hr	Emissions ton/yr	Remarks
NOx	100	0.0336	0.147	AP42 - Chapter 1.4
CO	84	0.0282	0.123	AP42 - Chapter 1.4
VOC	5.50	0.0018	0.008	AP42 - Chapter 1.4
PM	7.60	0.0026	0.011	AP42 - Chapter 1.4
SOx	0.60	0.0002	0.001	AP42 - Chapter 1.4
HAPs	1.88	0.0006	0.003	AP42 - Chapter 1.4

NOTES:

HAPs Emissions Factor is a summation of individual factors for Formaldehyde, Benzene, Hexane, and Toluene in Table 1.4-3.

Input Value
Calculated Value

* Project Setup Information *

Project File : M:\Users\JIngerson\Wyoming Air Applications\Boner Brother 37-71-32 PAD\Boner B
Flowsheet Selection : Oil Tank with Separator
Calculation Method : RVP Distillation
Control Efficiency : 98.0%
Known Separator Stream : Low Pressure Oil
Entering Air Composition : No

Filed Name : Wyoming PRB Area
Well Name : Boner Brothers 37-71-32 4PH Oil Tank Flash
Well ID : API # 49-009-29709
Permit Number : WDEQ Application
Date : 2015.06.15

* Data Input *

Separator Pressure : 100.00[psig]
Separator Temperature : 100.00[F]
Ambient Pressure : 12.14[psia]
Ambient Temperature : 55.00[F]
C10+ SG : 0.81647
C10+ MW : 232.897

-- Low Pressure Oil -----

No.	Component	mol %
1	H2S	0.0000
2	O2	0.0000
3	CO2	0.0340
4	N2	0.0060
5	C1	1.0540
6	C2	0.5890
7	C3	1.6400
8	i-C4	1.0340
9	n-C4	3.5340
10	i-C5	1.4290
11	n-C5	1.9670
12	C6	1.6700
13	C7	5.9430
14	C8	11.3860
15	C9	9.2690
16	C10+	56.7240
17	Benzene	0.2020
18	Toluene	0.4790
19	E-Benzene	0.1680
20	Xylenes	1.2940
21	n-C6	1.3310
22	224Trimethylp	0.2470

-- Sales Oil -----

Production Rate : 491[bb1/day]
Days of Annual Operation : 365 [days/year]
API Gravity : 38.2
Reid Vapor Pressure : 6.60[psia]

* Calculation Results *

-- Emission Summary -----

Item Uncontrolled Uncontrolled Controlled Controlled

	[ton/yr]	[lb/hr]	[ton/yr]	[lb/hr]
Total HAPs	0.980	0.224	0.020	0.004
Total HC	95.600	21.826	1.912	0.437
VOCs, C2+	73.605	16.805	1.472	0.336
VOCs, C3+	60.730	13.865	1.215	0.277

Uncontrolled Recovery Info.

Vapor	6.1200	[MSCFD]
HC Vapor	6.0300	[MSCFD]
GOR	12.46	[SCF/bbl]

-- Emission Composition -----

No	Component	Uncontrolled [ton/yr]	Uncontrolled [lb/hr]	Controlled [ton/yr]	Controlled [lb/hr]
1	H2S	0.000	0.000	0.000	0.000
2	O2	0.000	0.000	0.000	0.000
3	CO2	1.460	0.333	1.460	0.333
4	N2	0.237	0.054	0.237	0.054
5	C1	21.994	5.021	0.440	0.100
6	C2	12.875	2.939	0.258	0.059
7	C3	21.701	4.955	0.434	0.099
8	i-C4	7.722	1.763	0.154	0.035
9	n-C4	18.957	4.328	0.379	0.087
10	i-C5	3.665	0.837	0.073	0.017
11	n-C5	3.767	0.860	0.075	0.017
12	C6	1.077	0.246	0.022	0.005
13	C7	1.486	0.339	0.030	0.007
14	C8	1.042	0.238	0.021	0.005
15	C9	0.331	0.076	0.007	0.002
16	C10+	0.002	0.000	0.000	0.000
17	Benzene	0.090	0.021	0.002	0.000
18	Toluene	0.071	0.016	0.001	0.000
19	E-Benzene	0.010	0.002	0.000	0.000
20	Xylenes	0.064	0.015	0.001	0.000
21	n-C6	0.690	0.158	0.014	0.003
22	224Trimethylp	0.057	0.013	0.001	0.000
	Total	97.298	22.214	1.946	0.444

-- Stream Data -----

No.	Component	MW	LP Oil mol %	Flash Oil mol %	Sale Oil mol %	Flash Gas mol %	W&S Gas mol %	Total Emissions mol %
1	H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	CO2	44.01	0.0340	0.0166	0.0111	1.1424	1.0658	1.1256
4	N2	28.01	0.0060	0.0005	0.0001	0.3573	0.0393	0.2877
5	C1	16.04	1.0540	0.2418	0.0957	52.7462	24.3561	46.5328
6	C2	30.07	0.5890	0.3769	0.2970	14.0891	16.1168	14.5329
7	C3	44.10	1.6400	1.4325	1.3255	14.8447	23.3357	16.7030
8	i-C4	58.12	1.0340	0.9906	0.9617	3.7970	7.0524	4.5094
9	n-C4	58.12	3.5340	3.4460	3.3774	9.1337	17.9816	11.0701
10	i-C5	72.15	1.4290	1.4302	1.4231	1.3534	3.0464	1.7239
11	n-C5	72.15	1.9670	1.9765	1.9714	1.3625	3.2339	1.7721
12	C6	86.16	1.6700	1.6913	1.6960	0.3129	0.8722	0.4353
13	C7	100.20	5.9430	6.0309	6.0568	0.3489	1.1304	0.5199
14	C8	114.23	11.3860	11.5618	11.6182	0.1977	0.7496	0.3185
15	C9	128.28	9.2690	9.4138	9.4615	0.0523	0.2301	0.0912
16	C10+	232.90	56.7240	57.6153	57.9134	0.0001	0.0009	0.0003
17	Benzene	78.11	0.2020	0.2047	0.2054	0.0277	0.0789	0.0389
18	Toluene	92.13	0.4790	0.4863	0.4885	0.0172	0.0580	0.0262
19	E-Benzene	106.17	0.1680	0.1706	0.1715	0.0019	0.0073	0.0031
20	Xylenes	106.17	1.2940	1.3141	1.3207	0.0124	0.0495	0.0205
21	n-C6	86.18	1.3310	1.3489	1.3533	0.1914	0.5578	0.2716
22	224Trimethylp	114.24	0.2470	0.2507	0.2518	0.0114	0.0372	0.0170
	MW		173.15	175.39	176.09	30.44	42.25	33.02
	Stream Mole Ratio		1.0000	0.9845	0.9795	0.0155	0.0043	0.0198
	Heating Value	[BTU/SCF]				1747.66	2384.84	1887.11
	Gas Gravity	[Gas/Air]				1.05	1.46	1.14

Bubble Pt. @ 100F	[psia]	45.96	17.65	12.14
RVP @ 100F	[psia]	11.77	7.67	6.65
Spec. Gravity @ 100F		0.712	0.713	0.713

* Project Setup Information *

Project File : M:\Users\JIngerson\Wyoming Air Applications\Boner Brother 37-71-32 PAD\Boner B
 Flowsheet Selection : Oil Tank with Separator
 Calculation Method : RVP Distillation
 Control Efficiency : 98.0%
 Known Separator Stream : Low Pressure Oil
 Entering Air Composition : No

Filed Name : Wyoming PRB Area
 Well Name : Boner Brothers 37-71-32 4PH Water Tank Flash w/ 1% Oil
 Well ID : API # 49-009-29709
 Permit Number : WDEQ Application
 Date : 2015.06.15

* Data Input *

Separator Pressure : 100.00[psig]
 Separator Temperature : 100.00[F]
 Ambient Pressure : 12.14[psia]
 Ambient Temperature : 55.00[F]
 C10+ SG : 0.81647
 C10+ MW : 232.897

-- Low Pressure Oil -----

No.	Component	mol %
1	H2S	0.0000
2	O2	0.0000
3	CO2	0.0340
4	N2	0.0060
5	C1	1.0540
6	C2	0.5890
7	C3	1.6400
8	i-C4	1.0340
9	n-C4	3.5340
10	i-C5	1.4290
11	n-C5	1.9670
12	C6	1.6700
13	C7	5.9430
14	C8	11.3860
15	C9	9.2690
16	C10+	56.7240
17	Benzene	0.2020
18	Toluene	0.4790
19	E-Benzene	0.1680
20	Xylenes	1.2940
21	n-C6	1.3310
22	224Trimethylp	0.2470

-- Sales Oil -----

Production Rate : 3[bbl/day]
 Days of Annual Operation : 365 [days/year]
 API Gravity : 38.2
 Reid Vapor Pressure : 6.60[psia]

* Calculation Results *

-- Emission Summary -----

Item	Uncontrolled	Uncontrolled	Controlled	Controlled
------	--------------	--------------	------------	------------

	[ton/yr]	[lb/hr]	[ton/yr]	[lb/hr]
Total HAPs	0.010	0.002	0.000	0.000
Total HC	0.584	0.133	0.012	0.003
VOCs, C2+	0.450	0.103	0.009	0.002
VOCs, C3+	0.371	0.085	0.007	0.002

Uncontrolled Recovery Info.

Vapor	37.3800 x1E-3	[MSCFD]
HC Vapor	36.8600 x1E-3	[MSCFD]
GOR	12.46	[SCF/bbl]

-- Emission Composition

No	Component	Uncontrolled [ton/yr]	Uncontrolled [lb/hr]	Controlled [ton/yr]	Controlled [lb/hr]
1	H2S	0.000	0.000	0.000	0.000
2	O2	0.000	0.000	0.000	0.000
3	CO2	0.009	0.002	0.009	0.002
4	N2	0.001	0.000	0.001	0.000
5	C1	0.134	0.031	0.003	0.001
6	C2	0.079	0.018	0.002	0.000
7	C3	0.133	0.030	0.003	0.001
8	i-C4	0.047	0.011	0.001	0.000
9	n-C4	0.116	0.026	0.002	0.001
10	i-C5	0.022	0.005	0.000	0.000
11	n-C5	0.023	0.005	0.000	0.000
12	C6	0.007	0.002	0.000	0.000
13	C7	0.009	0.002	0.000	0.000
14	C8	0.006	0.001	0.000	0.000
15	C9	0.002	0.000	0.000	0.000
16	C10+	0.000	0.000	0.000	0.000
17	Benzene	0.001	0.000	0.000	0.000
18	Toluene	0.000	0.000	0.000	0.000
19	E-Benzene	0.000	0.000	0.000	0.000
20	Xylenes	0.000	0.000	0.000	0.000
21	n-C6	0.004	0.001	0.000	0.000
22	224Trimethylp	0.000	0.000	0.000	0.000
	Total	0.593	0.135	0.012	0.003

-- Stream Data

No.	Component	MW	LP Oil mol %	Flash Oil mol %	Sale Oil mol %	Flash Gas mol %	W&S Gas mol %	Total Emissions mol %
1	H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	CO2	44.01	0.0340	0.0166	0.0111	1.1424	1.0658	1.1256
4	N2	28.01	0.0060	0.0005	0.0001	0.3573	0.0393	0.2877
5	C1	16.04	1.0540	0.2418	0.0957	52.7462	24.3561	46.5328
6	C2	30.07	0.5890	0.3769	0.2970	14.0891	16.1168	14.5329
7	C3	44.10	1.6400	1.4325	1.3255	14.8447	23.3357	16.7030
8	i-C4	58.12	1.0340	0.9906	0.9617	3.7970	7.0524	4.5094
9	n-C4	58.12	3.5340	3.4460	3.3774	9.1337	17.9816	11.0701
10	i-C5	72.15	1.4290	1.4302	1.4231	1.3534	3.0464	1.7239
11	n-C5	72.15	1.9670	1.9765	1.9714	1.3625	3.2339	1.7721
12	C6	86.16	1.6700	1.6913	1.6960	0.3129	0.8722	0.4353
13	C7	100.20	5.9430	6.0309	6.0568	0.3489	1.1304	0.5199
14	C8	114.23	11.3860	11.5618	11.6182	0.1977	0.7496	0.3185
15	C9	128.28	9.2690	9.4138	9.4615	0.0523	0.2301	0.0912
16	C10+	232.90	56.7240	57.6153	57.9134	0.0001	0.0009	0.0003
17	Benzene	78.11	0.2020	0.2047	0.2054	0.0277	0.0789	0.0389
18	Toluene	92.13	0.4790	0.4863	0.4885	0.0172	0.0580	0.0262
19	E-Benzene	106.17	0.1680	0.1706	0.1715	0.0019	0.0073	0.0031
20	Xylenes	106.17	1.2940	1.3141	1.3207	0.0124	0.0495	0.0205
21	n-C6	86.18	1.3310	1.3489	1.3533	0.1914	0.5578	0.2716
22	224Trimethylp	114.24	0.2470	0.2507	0.2518	0.0114	0.0372	0.0170
	MW		173.15	175.39	176.09	30.44	42.25	33.02
	Stream Mole Ratio		1.0000	0.9845	0.9795	0.0155	0.0043	0.0198
	Heating Value	[BTU/SCF]				1747.66	2384.84	1887.11
	Gas Gravity	[Gas/Air]				1.05	1.46	1.14

Bubble Pt. @ 100F	[psia]	45.96	17.65	12.14
RVP @ 100F	[psia]	11.77	7.67	6.65
Spec. Gravity @ 100F		0.712	0.713	0.713

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 4PH
 ne ne 32, T37N, R71W
 Converse County, Wyoming

Oil Loadout

Source ID Number: **OIL LOAD-1**
 Name: **Oil Truck Loadout**

Throughput Value (gal/yr): **7,523,964**

Liquid Temperature (°F): 55
 Vapor Pressure (psia): 6.65
 Hours Per Day: 24
 Load Frequency (trucks/yr): 1075
 Molecular Weight (lb/lb-mole): 30.46
 Saturation Factor: 0.6
 Days Per Year: 365
 Load Duration (min/truck): 60.00

Loading Loss (lb/1000 gal) = $(12.46 * S * P * M) / T$ (AP-42 Section 5.2 (1/95)) where:

S = Saturation Factor = dedicated normal service
 P = True Vapor Pressure of liquid loaded*, psia
 M = Molecular Weight of Vapors, lb/lb-mole
 T = Temp. of bulk liquid loaded, deg. R = (deg. F + 460)

Loading Loss (lb VOC/1000 gal) = **2.94 lb/1000 gal**

Pollutant	Loading Loss (lb/1000 gal)	Throughput (gal/yr)	Estimated Emissions (lb/yr)	Source of Emission Factor
VOC	2.94	7523964	22127.24	AP42
			2.5259 lb/hr	

Pollutant	Loading Loss (lb/1000 gal)	Throughput (gal/yr)	Estimated Emissions (lb/yr)	Source of Emission Factor
VOC	0.06	7523964	442.54	Combustor specs
			0.0505 lb/hr	

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 4PH
 ne ne 32, T37N, R71W
 Converse County, Wyoming

Water Loadout

Source ID Number: **WATER LOAD-1**
 Name: **Water Truck Loadout**

Throughput Value (gal/yr): **41,483** (assumed 1% oil in water is source of emissions)

Liquid Temperature (°F): 55
 Vapor Pressure (psia): 6.65
 Hours Per Day: 24
 Load Frequency (trucks/yr): 6
 Molecular Weight (lb/lb-mole): 30.44
 Saturation Factor: 0.6
 Days Per Year: 365
 Load Duration (min/truck): 60.00

Loading Loss (lb/1000 gal) = $(12.46 * S * P * M) / T$ (AP-42 Section 5.2 (1/95)) where:

S = Saturation Factor = dedicated normal service
 P = True Vapor Pressure of liquid loaded*, psia
 M = Molecular Weight of Vapors, lb/lb-mole
 T = Temp. of bulk liquid loaded, deg. R = (deg. F + 460)

Loading Loss (lb VOC/1000 gal) = **2.94 lb/1000 gal**

Pollutant	Loading Loss		Throughput		Estimated Emissions	Source of Emission Factor
	(lb/1000 gal)	2.94	(gal/yr)	41483		
VOC			(lb/yr)	121.90	(tpy)	0.06
						AP42
						0.0139 lb/hr

Pollutant	Loading Loss		Throughput		Estimated Emissions	Source of Emission Factor
	(lb/1000 gal)	0.06	(gal/yr)	41483		
VOC			(lb/yr)	2.44	(tpy)	0.00
						0.0003 lb/hr
						Combustor specs

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 4PH
 ne ne 32, T37N, R71W
 Converse County, Wyoming

HP Production Flare (FLR-1)

Flare Size:	1,100	mcf nominal
Flare Size:	64	mmbtu/hr with 1361 btu/scf gas
Operating Hours:	876	hrs (10%/year usage)
Gas BTU Value:	1,267	BTU/scf
Gas to Flare:	6,900	scf/hr (166 mcf production rate)
Gas to Flare:	6.044	mmscf/yr
Gas to Flare:	8.742	mmbtu/hr (144 mcf production rate)
Gas to Flare:	7,658	mmbtu/yr

EMISSIONS FACTORS per WDEQ Guidance Document

NOx	0.140	lb/mmbtu
CO	0.035	lb/mmbtu

CONTROLLED

	EF lb/mmbtu	EF lb/hr	Emissions ton/yr	Remarks
NOx	0.140	1.224	0.536	WDEQ Guidance
CO	0.035	0.306	0.134	WDEQ Guidance

NOTES:

Input Value

Calculated Value

RKI Exploration & Production, LLC
Boner Brothers 37-71-32 4PH
ne ne 32, T37N, R71W
Converse County, Wyoming

Low Pressure Flare (FLR-2)

Burner Size:	8.61	mmbtu/hr
Operating Hours:	8,760	hrs
Fuel:	1,748	BTU/scf

Fuel Consumption:	6.157	mscfd ... from E&P TANKS Output
Fuel Consumption:	2,247	mscf/yr
Fuel Consumption:	2.247	mmscf/yr

EMISSIONS FACTORS per AP42

NOx	100	lb/mmscf
CO	84	lb/mmscf
VOC	5.50	lb/mmscf
PM	7.60	lb/mmscf
SOx	0.60	lb/mmscf
HAPs	1.88	lb/mmscf

CONTROLLED

	EF <u>lb/mmscf</u>	EF <u>lb/hr</u>	Emissions <u>ton/yr</u>	<u>Remarks</u>
NOx	100	0.0257	0.112	AP42 - Chapter 1.4
CO	84	0.0215	0.094	AP42 - Chapter 1.4
VOC	5.50	0.0014	0.006	AP42 - Chapter 1.4
PM	7.60	0.0019	0.009	AP42 - Chapter 1.4
SOx	0.60	0.0002	0.001	AP42 - Chapter 1.4
HAPs	1.88	0.0005	0.002	AP42 - Chapter 1.4

NOTES:

HAPs Emissions Factor is a summation of individual factors for Formaldehyde, Benzene, Hexane, and Toluene in Table 1.4-3.

Input Value

Calculated Value

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 4PH
 ne ne 32, T37N, R71W
 Converse County, Wyoming

Fugitive Emissions (FUG-1)

Uncontrolled Emissions

Wt Percent Gas: 100.00 Per E&P TANKS Output of Flash Gas Composition
 Wt Percent HC: 96.59 Per E&P TANKS Output of Flash Gas Composition
 Wt Percent VOC: 27.08 Per E&P TANKS Output of Flash Gas Composition
 Wt Percent HAPs: 0.57 Per E&P TANKS Output of Flash Gas Composition

Equipment Type	Gas Leak EF lb/hr/source	Source Count	Percent HC	Percent VOC	Percent HAPs	Operated Hours	Gas Rate lb/hr	Leak Rate in Tons Per Year			
								Gas Rate tpy	HC Rate tpy	VOC Rate tpy	HAPs Rate tpy
Valves	0.005420	75	96.59	27.08	0.57	8,760	0.3926	1.720	1.661	0.466	0.000
Flanges	0.000241	118	96.59	27.08	0.57	8,760	0.0275	0.120	0.116	0.033	0.000
Connectors	0.000458	124	96.59	27.08	0.57	8,760	0.0549	0.240	0.232	0.065	0.000
Other	0.016666	17	96.59	27.08	0.57	8,760	0.2737	1.199	1.158	0.325	0.000
Open Ended Lines	0.003080	-	96.59	27.08	0.57	8,760	-	-	-	-	-
Pumps	0.028750	-	96.59	27.08	0.57	8,760	-	-	-	-	-
Totals							0.749	3.279	3.167	0.888	0.001

Notes: See attached Flash Gas Composition from E&P Tanks output for VOC and HAPs weight percent calculations.

Oil and Gas Production Operations leak emissions factors from EPA 453/R-95-017.



AMERICAN MOBILE RESEARCH, INC.

P.O. BOX 2909
CASPER, WYOMING 82602

(307) 235-4590 PHONE
(307) 265-4489 FAX

EXTENDED HYDROCARBON (GLYCALC) LIQUID STUDY CERTIFICATE OF ANALYSIS

Company **RKI EXPLORATION AND PRODUCTION**
Lab Number CR-14390
Date Sampled 6-6-2014

Study Number CR-8
Date Tested 6-10-2014

Sample Identification **SHELDON DRAW UNIT 37-71-9-1PH PRESSURIZED CRUDE OIL
PARKMAN FORMATION**

Sample Location DOUGLAS, WYOMING.
Sample Pressure 120 PSIG
Type Sample SPOT
Test Method GPA 2186

Sample Temperature 120 F
County CONVERSE
Sampling Method GPA-2174

<u>Components</u>	<u>Mole %</u>	<u>Weight %</u>	<u>Liq. Vol. %</u>
Hydrogen Sulfide	0.000	0.000	0.000
Oxygen	0.000	0.000	0.000
Carbon Dioxide	0.034	0.009	0.008
Nitrogen	0.006	0.001	0.001
Methane	1.054	0.097	0.253
Ethane	0.589	0.102	0.223
Propane	1.640	0.415	0.639
iso-Butane	1.034	0.345	0.479
n-Butane	3.534	1.179	1.576
iso-Pentane	1.429	0.592	0.739
n-Pentane	1.967	0.815	1.009
Hexanes	1.670	0.826	0.971
Heptanes	5.943	3.419	3.879
Octanes	11.386	7.468	8.251
Nonanes	9.269	6.826	7.378
Decanes+	56.724	75.851	72.529
Benzene.....	0.202	0.091	0.080
Toluene.....	0.479	0.253	0.227
Ethylbenzene.....	0.168	0.102	0.092
Xylenes.....	1.294	0.789	0.711
n-Hexane	1.331	0.659	0.774
2,2,4-Trimethylpentane..	0.247	0.162	0.182
Totals.....	<u>100.000</u>	<u>100.000</u>	<u>100.000</u>

ADDITIONAL BETX DATA

Components	Mole %	Weight %	Liq. Vol. %
2-Methylpentane	1.194	0.591	0.695
3-Methylpentane	0.476	0.235	0.277
n-Hexane	1.331	0.659	0.774
2,2,4-Trimethylpentane	0.247	0.162	0.182
Benzene	0.202	0.091	0.080
Toluene	0.479	0.253	0.227
Ethylbenzene	0.168	0.102	0.092
m-Xylene	0.194	0.118	0.107
p-Xylene	0.776	0.473	0.427
o-Xylene	0.324	0.197	0.178

API GRAVITY AT 60/60 F, calculated	49.7
SPECIFIC GRAVITY AT 60/60 F, calculated	0.78071
RELATIVE SPECIFIC GRAVITY OF DECANES+ (C10+) FRACTION, calculated	0.81647
AVERAGE MOLECULAR WEIGHT	174.168
AVERAGE MOLECULAR WEIGHT OF DECANES+ (C10+) FRACTION, calculated	232.897
TRUE VAPOR PRESSURE AT 100 F, PSIA, calculated	64.056
AVERAGE BOILING POINT, F, calculated	393.889
CUBIC FEET OF GAS / GALLON OF LIQUID, as Ideal Gas, calculated	17.984
BTU / GALLON OF LIQUID AT 14.73 PSIA, calculated	124,441.80
LBS / GALLON OF LIQUID, calculated	6.509

NOTATION: ALL CALCULATIONS PERFORMED USING PHYSICAL CONSTANTS FROM GPA 2145-09, THE TABLES OF PHYSICAL CONSTANTS FOR HYDROCARBONS AND OTHER COMPOUNDS OF INTEREST TO THE NATURAL GAS INDUSTRY.

James A. Kane, President
American Mobile Research, Inc.



AMERICAN MOBILE RESEARCH, INC.

P.O. BOX 2909
CASPER, WYOMING 82602

(307) 235-4590 PHONE
(307) 265-4489 FAX

EXTENDED HYDROCARBON LIQUID STUDIES

CERTIFICATE OF ANALYSIS

Company..... RKI EXPLORATION AND PRODUCTION

Lab Number..... CR-14390

Study Number..... CR-9

Date Sampled..... 6-6-2014

Date Tested..... 6-11-2014

Sample Identification..... SHELDON DRAW UNIT 37-71-9-1PH FLASHED CRUDE OIL
PARKMAN FORMATION

Sample Location..... WYOMING.

Sample Pressure..... N/A

Sample Temperature....N/A

Flowrate..... N/A

County..... CONVERSE

Test Method..... VARIOUS

Sample Container..... 1-QUART BOTTLE

TEST PERFORMED

RESULTS

API GRAVITY AT 60/60 F (ASTM D-287), observed	38.2
SPECIFIC GRAVITY AT 60/60 F (ASTM D-1657), calculated	0.8338
REID VAPOR PRESSURE (ASTM D-323), PSIG AT 100 F, observed	6.6
TOTAL SULFUR CONTENT (ASTM D-5453), PPMW	N/A
TRUE VAPOR PRESSURE (ASTM 2889), PSIA AT 100 F, observed	N/A
BASIC SEDIMENT AND WATER CONTENT (BSW), % BY VOLUME	N/A
COPPER STRIP CORROSION (ASTM D-130), 1 HOUR AT 100 F, observed	N/A
FREE WATER, observed	N/A

NOTATION : ALL TESTING PROVIDED ABOVE WAS PERFORMED IN ACCORDANCE TO METHODOLOGY
OUTLINED BY THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).

James A. Kane, President

American Mobile Research, Inc.

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 3PH & 4PH
 well ne 32, T37N, R71W
 Converse County, Wyoming

Oil Tank Flash Gas Analysis from E&P TANKS 2.0 Run (06/15/2015)

Component	(1) mol %	(2) mol fraction	(3) Comp MW	(4) Gas MW	(5) HC MW	(6) VOC MW	(7) HAP MW
H2S	-	-	34.08	-	-	-	-
O2	-	-	32.00	-	-	-	-
CO2	1.1424	0.0114	44.01	0.5028	-	-	-
N2	0.3573	0.0036	28.01	0.1001	-	-	-
C1	52.7460	0.5275	16.04	8.4615	8.4615	-	-
C2	14.0891	0.1409	30.07	4.2365	4.2365	-	-
C3	14.8447	0.1484	44.10	6.5459	6.5459	-	-
i-C4	3.7970	0.0380	58.12	2.2069	2.2069	-	-
n-C4	9.1337	0.0913	58.12	5.3087	5.3087	-	-
i-C5	1.3534	0.0135	72.15	0.9765	0.9765	-	-
n-C5	1.3625	0.0136	72.15	0.9830	0.9830	-	-
C6	0.3129	0.0031	86.18	0.2696	0.2696	-	-
C7	0.3489	0.0035	100.20	0.3496	0.3496	-	-
C8	0.1977	0.0020	114.23	0.2258	0.2258	-	-
C9	0.0523	0.0005	128.26	0.0671	0.0671	-	-
C10+	0.0001	0.0000	142.28	0.0001	0.0001	-	-
Benzene	0.0277	0.0003	78.11	0.0216	0.0216	0.0216	-
Toluene	0.0172	0.0002	92.14	0.0158	0.0158	0.0158	-
E-Benzene	0.0019	0.0000	106.17	0.0020	0.0020	0.0020	-
Xylenes	0.0124	0.0001	106.17	0.0132	0.0132	0.0132	-
n-C6	0.1914	0.0019	86.18	0.1649	0.1649	0.1649	-
224 Trimethylpentane	0.0114	0.0001	114.24	0.0130	0.0130	0.0130	-
Totals	100.0000	1.0000		30.4647	29.8619	17.1639	0.2306

Wt % HC: 98.02
 Wt % VOCs: 56.34
 Wt % HAPs: 0.76



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EXTENDED HYDROCARBON GAS (GLYCALC) STUDY CERTIFICATE OF ANALYSIS

Company **RKI EXPLORATION AND PRODUCTION**
Lab Number CR-14390
Date Sampled 6-6-2014

Study Number CR-7
Date Tested 6-9-2014

Sample Identification **SHELDON DRAW UNIT 37-71-9-1PH GAS
PARKMAN FORMATION**

Sample Location DOUGLAS, WYOMING.
Sample Pressure 58 PSIG
Type Sample SPOT
Test Method GPA-2286

Sample Temperature ... 92 F
County CONVERSE
Moisture Content..... N/A

Components	Mole %	Weight %	Liq. Vol. %
Carbon Dioxide.....	0.596	1.221	0.535
Hydrogen Sulfide.....	0.000	0.000	0.000
Nitrogen.....	1.678	2.189	0.970
Methane.....	79.529	59.407	70.873
Ethane.....	7.206	10.089	10.130
Propane.....	6.545	13.438	9.479
iso-Butane.....	0.765	2.070	1.316
n-Butane.....	2.150	5.819	3.563
iso-Pentane.....	0.436	1.465	0.838
n-Pentane.....	0.472	1.586	0.899
Cyclopentane.....	0.025	0.082	0.039
n-Hexane.....	0.101	0.405	0.218
Cyclohexane.....	0.031	0.121	0.055
Other Hexanes	0.129	0.518	0.279
Heptanes.....	0.241	1.124	0.584
Methylcyclohexane.....	0.036	0.165	0.076
2,2,4-Trimethylpentane...	0.015	0.080	0.041
Benzene.....	0.005	0.018	0.007
Toluene.....	0.008	0.034	0.014
Ethylbenzene.....	0.002	0.010	0.004
Xylenes.....	0.004	0.020	0.008
C8+ Heavies.....	0.026	0.138	0.070
Totals	100.000	100.000	100.000

ADDITIONAL BETX DATA

Components	Mole %	Weight %	Liq. Vol. %
Cyclopentane	0.025	0.082	0.039
Cyclohexane	0.031	0.121	0.055
2-Methylpentane	0.092	0.370	0.199
3-Methylpentane	0.037	0.148	0.079
n-Hexane	0.101	0.405	0.218
Methylcyclohexane	0.036	0.165	0.076
2,2,4-Trimethylpentane	0.015	0.080	0.041
Benzene	0.005	0.018	0.007
Toluene	0.008	0.034	0.014
Ethylbenzene	0.002	0.010	0.004
m-Xylene	0.001	0.003	0.001
p-Xylene	0.002	0.012	0.005
o-Xylene	0.001	0.005	0.002

SPECIFIC GRAVITY AT 60/60 F, calculated.....	0.7415
TOTAL GPM (ETHANE INCLUSIVE).....	5.241
CALCULATED BTU / REAL CF AT 14.73 PSIA, dry basis.....	1267.187
CALCULATED BTU / REAL CF AT 14.73 PSIA, wet basis.....	1245.394
AVERAGE MOLECULAR WEIGHT.....	21.476
MOLAR MASS RATIO.....	0.7415
RELATIVE DENSITY ($G \times Z$ (Air) / Z), calculated.....	0.7443
IDEAL GROSS HEATING VALUE, BTU / IDEAL CF AT 14.696 PSIA, calculated.....	1259.605
COMPRESSIBILITY FACTOR (Z).....	0.99630
PROPANE GPM.....	1.7985
BUTANE GPM.....	0.9258
GASOLINE GPM (PENTANE AND HEAVIER).....	0.5943

NOTATION: ALL CALCULATIONS PERFORMED USING PHYSICAL CONSTANTS FROM GPA 2145-09, THE TABLES OF PHYSICAL CONSTANTS FOR HYDROCARBONS AND OTHER COMPOUNDS OF INTEREST TO THE NATURAL GAS INDUSTRY.

James A. Kane, President
American Mobile Research, Inc.

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 3PH & 4PH
 ne ne 32, T37N, R71W
 Converse County, Wyoming

Flare Gas Analysis from AMR Analysis (6/6/2014)

Parkman Formation

<u>Component</u>	(1) mol %	(2) mol fraction	(3) Comp MW	(4) Gas MW	(5) HC MW	(6) VOC MW	(7) HAP MW
H2S	-	-	34.08	-	-	-	-
O2	-	-	32.00	-	-	-	-
CO2	0.5960	0.0060	44.01	0.2623	-	-	-
N2	1.6780	0.0168	28.01	0.4701	-	-	-
C1	79.5290	0.7953	16.04	12.7580	12.7580	-	-
C2	7.2060	0.0721	30.07	2.1668	2.1668	-	-
C3	6.5450	0.0655	44.10	2.8861	2.8861	2.8861	-
i-C4	0.7650	0.0077	58.12	0.4446	0.4446	0.4446	-
n-C4	2.1500	0.0215	58.12	1.2496	1.2496	1.2496	-
i-C5	0.4610	0.0046	72.15	0.3326	0.3326	0.3326	-
n-C5	0.4720	0.0047	72.15	0.3405	0.3405	0.3405	-
C6	0.1960	0.0020	86.18	0.1689	0.1689	0.1689	-
C7	0.2410	0.0024	100.20	0.2415	0.2415	0.2415	-
C8	0.0260	0.0003	114.23	0.0297	0.0297	0.0297	-
C9	-	-	128.26	-	-	-	-
C10+	-	-	142.28	-	-	-	-
Benzene	0.0050	0.0001	78.11	0.0039	0.0039	0.0039	0.0039
Toluene	0.0080	0.0001	92.14	0.0074	0.0074	0.0074	0.0074
E-Benzene	0.0020	0.0000	106.17	0.0021	0.0021	0.0021	0.0021
Xylenes	0.0040	0.0000	106.17	0.0042	0.0042	0.0042	0.0042
n-C6	0.1010	0.0010	86.18	0.0870	0.0870	0.0870	0.0870
224 Trimethylpentane	0.0150	0.0002	114.24	0.0171	0.0171	0.0171	0.0171
Totals	100.0000	1.0000	-	21.4726	20.7402	5.8154	0.1218

Wt % HC: 96.59
 Wt % VOCs: 27.08
 Wt % HAPs: 0.57

RKI Exploration & Production LLC

210 Park Avenue, Suite 900, Oklahoma City, OK 73102
405-949-2221 Fax 405-949-2223

June 20, 2015

Cole Anderson
NSR Program Manager
Department of Environmental Quality, Air Quality Division
Herschler Building, 2-E
122 West 25th Street
Cheyenne, WY 82002



Re: *Air Permit Application*
RKI Exploration & Production LLC
Boner Brothers 37-71-32 3PH (API#: 49-009-29708)
Boner Brothers 37-71-32 4PH (API#: 49-009-29709)

Dear Mr. Anderson:

Pursuant to the requirements of the Wyoming Air Quality Standards and Regulations New Source Review permitting program and the associated Chapter 6 Section 2 (C6 S2) Oil and Gas Production Facilities Permitting Guidance document dated September 2013, RKI Exploration & Production LLC submits this *C6 S2 Application for an Air Quality Permit* for the subject wells.

Boner Brothers 37-71-32 3PH is an oil well situated in Converse County. First day of production (FDOP) was March 25, 2015.

Boner Brothers 37-71-32 4PH is an oil well situated in Converse County. First day of production (FDOP) was March 25, 2015.

New equipment on site consists of 8 oil and 4 produced water storage tanks, 2 two-phase separators (unfired), 2 heater-treaters, and liquid load out facilities. A shared combination high and low pressure flare is also installed. Gas is flowing to a pipeline connection; but is represented in this application as being flared for a maximum of 876 hours per year to account for processing plant curtailments. Produced liquids are loaded out by truck.

Average daily production 30 days after FDOP for 3PH was 463-bbl oil, 229-bbl water and 240-mcf gas.

Average daily production 30 days after FDOP for 4PH was 818-bbl oil, 451-bbl water and 276-mcf gas.

Should you have any questions concerning this request, please contact me at the phone number or email address listed in the application.

Sincerely,


Jeffrey L. Ingerson
Senior Air Permitting Engineer

Reviewer HMB
cc: _____
Modeler _____
D.E. _____
File A0001229
IMP FID 26911



Department of Environmental Quality Air Quality Division
Permit Application Form



Is this a revision to an existing application?
 Yes _____ No X
 Previous Application #:

Date of Application: 6/22/2015

COMPANY INFORMATION:

Company Name: RKI Exploration & Production, LLC
 Address: 210 Park Avenue, Suite 900
 City: Oklahoma City State: Oklahoma Zip Code: 73102
 Country: USA Phone Number: (405) 949-2221

FACILITY INFORMATION:

Facility Name: Boner Brothers 37-71-32 PAD
 New Facility or Existing Facility: New
 Facility Description: Oil Production Wellsite/Pad
 Facility Class: Minor Operating Status: Operating
 Facility Type: Production Site

For Oil & Gas Production Sites ONLY:

First Date of Production (FDOP)/Date of Modification: 3/25/2015
 Does production at this facility contain H2S?* No
 *If yes, contact the Division.
 API Number(s): Boner Brothers 37-71-32 3PH (API # 49-009-29708)
Boner Brothers 37-71-32 4PH (API # 49-009-29709)
 NAICS Code: _____

FACILITY LOCATION:

*Enter the facility location in either the latitude/longitude area or section/township/range area. Both are not required.
 Physical Address: _____
 City: _____ Zip Code: _____
 State: WY County: Converse
OR
 Latitude: _____ Longitude: _____
 Quarter Quarter: nw nw Quarter: _____
 Section: 32 Township: 37N Range: 71W
For longitude and latitude, use NAD 83/WGS84 datum and 5 digits after the decimal (i.e. 41.12345, -107.56789)

CONTACT INFORMATION:

*Note that an Environmental AND NSR Permitting Contact is required for your application to be deemed complete by the agency.
 Title: Mr. First Name: Jeffrey
 Last Name: Ingerson
 Company Name: RKI Exploration & Production, LLC
 Job Title: Senior Air Permitting Engineer
 Address: 210 Park Avenue, Suite 900
 City: Oklahoma City State: Oklahoma
 Zip Code: 73102
 Primary Phone No.: (405) 987-2181 E-mail: jingerson@rkixp.com
 Mobile Phone No.: (405) 820-1779 Fax No.: (405) 949-2223
 Contact Type: NSR Permitting Contact Start Date: March, 2014

Additional Contact Type (if needed):

Title: First Name: Last Name:

Company Name:

Job Title:

Address:

City: State:

Zip Code:

Primary Phone No.: E-mail:

Mobile Phone No.: Fax No.:

Contact Type: Start Date:

FACILITY APPLICATION INFORMATION:

General Info:

Has the facility changed location or is it a new/ greenfield facility?

Has a Land Use Planning document been included in this application?

Is the facility located in a sage grouse core area? *

If the facility is in a sage grouse core area, what is the WER number? _____

** For questions about sage grouse core area, contact WY Game & Fish Department.*

Federal Rules Applicability - Facility Level:

Prevention of Significant Deterioration (PSD):

Non-Attainment New Source Review:

Modeling Section:

Has the Air Quality Division been contacted to determine if modeling is required?

Is a modeling analysis part of this application?

Is the proposed project subject to Prevention of Significant Deterioration (PSD) requirements?

Has the Air Quality Division been notified to schedule a pre-application meeting?

Has a modeling protocol been submitted to and approved by the Air Quality Division?

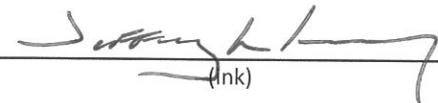
Has the Air Quality Division received a Q/D analysis to submit to the respective FLMs to determine the need for an AQRV analysis?

Required Attachments:

- Facility Map
- Process Flow Diagram
- Modeling Analysis (if applicable)
- Land Use Planning Document
- Detailed Project Description
- Emissions Calculations

I, Jeffrey L. Ingerson Senior Air Permitting Engineer
Responsible Official (Printed Name) Title

an Official Representative of the Company, state that I have knowledge of the facts herein set forth and that the same are true and correct to the best of my knowledge and belief. I further certify that the operational information provided and emission rates listed on this application reflect the anticipated emissions due to the operation of this facility. The facility will operate in compliance with all applicable Wyoming Air Quality Standards and Regulations.

Signature: 
(Ink)

Date: 06/20/2015

Specific Emission Unit Attributes:

Separator/Treater

Company Equipment ID: HTR01
Company Equipment Description: Horizontal Heater Treater w/ 0.500 mmbtu burner

Operating Status: Operating

Initial Construction Commencement Date: _____

Initial Operation Commencement Date: 3/25/2015

Most Recent Construction/ Modification _____

Commencement Date: _____

Most Recent Operation Commencement Date: _____

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason: Construction (Greenfield/New Facility)

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Type of Vessel: Heater-Treater Is Vessel Heated? Yes

Operating Temperature (F): 100

Operating Pressure (psig): 100

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-111-00

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24

Hours/year: 8760

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Not Affected

New Source Performance Standards are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Affected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

HTR01

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)	0.011		0.0026	0.011	AP-42
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)	0.001		0.0002	0.001	AP-42
5.)	Nitrogen Oxides (NOx)	0.147		0.0336	0.147	AP-42
6.)	Carbon monoxide (CO)	0.123		0.0282	0.123	AP-42
7.)	Volatile organic compounds (VOC)	0.008		0.0018	0.008	AP-42
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)	0.003		0.0006	0.003	AP-42
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)	0		0	0	AP-42
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Storage Tank/Silo

Company Equipment ID: OILTNK 01-04
Company Equipment Description: 4 x 400 bbl Oil Storage Tanks

Operating Status:

Initial Construction Commencement Date: _____

Initial Operation Commencement Date: 3/25/2015

Most Recent Construction/ Modification _____

Commencement Date: _____

Most Recent Operation Commencement Date: _____

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason:

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Material Type:
Description of Material Stored: Crude Oil

Capacity: 400 Units:

Maximum Throughput: 101470 Units:

Maximum Hourly Throughput: 12 Units:

Is Tank Heated?:

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-110-20

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24

Hours/year: 8760

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Subject, but exempt

New Source Performance Standard are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____ 0000

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Effected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Effected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

OILTNK 01-04

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)	34.385		0.157	0.688	Tanks Program
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)	0.56		0.003	0.011	Tanks Program
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Storage Tank/Silo

Company Equipment ID: WTRNK 01-02

Company Equipment Description: 2 x 400 bbl Water Storage Tank

Operating Status: Operating

Initial Construction Commencement Date:

Initial Operation Commencement Date: 3/25/2015

Most Recent Construction/ Modification

Commencement Date:

Most Recent Operation Commencement Date:

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason: Construction (Greenfield/New Facility)

If reason is Reconstruction or Temporary Permit or Other, please explain below:

Material Type: Liquid

Description of Material Stored: Produced Water (1% Oil Carryover)

Capacity: 400 Units: barrels

Maximum Throughput: 365 Units: barrels/yr

Maximum Hourly Throughput: 1 Units: barrels/hr

Is Tank Heated?: No

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-110-20

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24

Hours/year: 8760

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): **Subject, but exempt**

New Source Performance Standard are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____ **0000**

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): **Not Effected**

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): **Not Effected**

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): **Not Affected**

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: **Not Affected**

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

TRTNK 01-02

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)	0.124		0.001	0.002	Tanks Program
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)	0		0	0	Tanks Program
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Loading/Unloading/Dump

Company Equipment ID: _____ **OIL LOAD**
Company Equipment Description: _____ **Oil Loadout Facility**

Operating Status:

Initial Construction Commencement Date: _____

Initial Operation Commencement Date: _____ **3/25/2015**

Most Recent Construction/ Modification _____

Commencement Date: _____

Most Recent Operation Commencement Date: _____

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason:

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Type of Material:

Material Description: _____ **Crude Oil**

Maximum Annual Throughput: _____ **101470** Units:

Maximum Hourly Throughput: _____ **240** Units:

Detailed Description of Loading/Unloading/Dump Source: _____ **Crude oil is loaded from storage tanks**

into tanker trucks for transport to market. Tanker truck vapors are returned to storage tanks for

destruction in the vapor combustor (FLR2).

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-112-01

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: _____ **24**

Hours/year: _____ **8760**

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Not Affected Not Effectuated

New Source Performance Standard are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Affected Not Effectuated

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Affected Not Effectuated

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

Oil Loadout

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)	6.27		0.0286	0.13	AP-42
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)					
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Loading/Unloading/Dump

Company Equipment ID: WTR LOAD

Company Equipment Description: Produced Water Loadout Facility

Operating Status: Operating

Initial Construction Commencement Date: _____

Initial Operation Commencement Date: 3/25/2015

Most Recent Construction/ Modification Commencement Date: _____

Most Recent Operation Commencement Date: _____

Most Recent Operation Commencement Date: _____

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason: Construction (Greenfield/New Facility)

If reason is **Reconstruction** or **Temporary Permit** or **Other**, please explain below:

Type of Material: Liquid

Material Description: Produced Water w/ 1% Crude Oil

Maximum Annual Throughput: 501 Units: barrels/yr

Maximum Hourly Throughput: 240 Units: barrels/hr

Detailed Description of Loading/Unloading/Dump Source: Crude oil is loaded from storage tanks into tanker trucks for transport to market. Tanker truck vapors are returned to storage tanks for destruction in the vapor combustor (FLR2).

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-112-01

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24

Hours/year: 8760

Control Equipment: Yes

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Not Affected

New Source Performance Standard are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Affected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

Water Loadout

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)	0.03		0.0001	0	AP-42
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)					
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

FLR01
Used 876 hr/yr

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)			1.064	0.466	Other
6.)	Carbon monoxide (CO)			0.266	0.117	Other
7.)	Volatile organic compounds (VOC)					
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)					
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Control Equipment:

Flare/Combustor

Manufacturer: Steffes Date Installed: 3/25/2015
Model Name and Number: LP Flare Company Control
Equipment ID: FLR02

Company Control Equipment Description: 3" diameter x 24' high LP Flare Stack

Pollutant(s) Controlled:	<input type="checkbox"/> CO	<input type="checkbox"/> NOx	<input type="checkbox"/> Pb	<input type="checkbox"/> SO2	<input checked="" type="checkbox"/> VOC	<input type="checkbox"/> PM		
<input type="checkbox"/> PM (FIL)	<input type="checkbox"/> PM Condensible	<input type="checkbox"/> PM 10 (FIL)	<input type="checkbox"/> PM 2.5 (FIL)	<input type="checkbox"/> PM 10	<input type="checkbox"/> PM 2.5			
<input checked="" type="checkbox"/> Other: HAPs								

Design Control Efficiency (%): 98 Capture Efficiency (%): 100

Operating Control Efficiency (%): 98

Flare Type: Elevated- Open Elevated Flare Type: Non-Assisted
Ignition Device: Yes Flame Presence Sensor: Yes
Inlet Gas Temp (F): 100 Flame Presence Type: Thermocouple
Gas Flow Rate (acfm): 2.4 Outlet Gas Temp (F): 1850

This is the only control equipment on this air contaminant source

If not, this control equipment is: Primary Secondary Parallel

List all other emission units that are also vented to this control equipment: Oil & Water Tanks, Loadout Facilities

List all release point IDs associated with this control equipment: Flare Stack 02

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

FLR02

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)			0.0001	0	
5.)	Nitrogen Oxides (NOx)			0.0145	0.063	Other
6.)	Carbon monoxide (CO)			0.0122	0.053	Other
7.)	Volatile organic compounds (VOC)			0.0008	0.003	
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)			0.0003	0.001	
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)			0	0	
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Specific Emission Unit Attributes:

Fugitives

Company Equipment ID: FUG01

Company Equipment Description: Fugitive Emissions

Operating Status: Operating

Initial Construction Commencement Date: _____

Initial Operation Commencement Date: 3/25/2015

Most Recent Construction/ Modification _____

Commencement Date: _____

Most Recent Operation Commencement Date: _____

Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Reason: Construction (Greenfield/New Facility)

If reason is *Reconstruction* or *Temporary Permit* or *Other*, please explain below:

Type of Fugitive Emission: Fugitive Leaks at O&G

SCC Codes: List all Source Classification Code(s) (SCC) that describe the process(es) performed by the emission source (e.g., 1-02-002-04).

1-00-115-00

Potential Operating Schedule: Provide the operating schedule for this emission unit.

Hours/day: 24

Hours/year: 8760

Control Equipment: Yes No

If yes, please fill out and attach the appropriate Control Device and Release Point Information worksheets.

Best Available Control Technology (BACT): Was a BACT Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed BACT: _____

*If yes, attach BACT Analysis with this application.

Lowest Achievable Emission Rate (LAER): Was a LAER Analysis completed for this emission unit?

Yes No

Pollutant: _____

Proposed LAER: _____

*If yes, attach LAER Analysis with this application.

Federal and State Rule Applicability:

New Source Performance Standards (NSPS): Not Affected Not Effected

New Source Performance Standards are listed under 40 CFR 60- Standards of Performance for New Stationary Sources.

NSPS Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61): Not Affected Not Effected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Part 61 NESHAP Subpart: _____

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63): Not Affected Not Effected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63

Part 63 NESHAP Subpart: _____

Prevention of Significant Deterioration (PSD): Not Affected Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review: Not Affected Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

Emissions Information- The following tables request information needed to determine the applicable requirements and the compliance status of this emission unit with those requirements.

FUG01

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Criteria Pollutants:

1.)	Particulate emissions (PE/PM) (formerly particulate matter, PM)					
2.)	PM #10 microns in diameter (PE/PM10)					
3.)	PM #2.5 microns in diameter (PE/PM2.5)					
4.)	Sulfur dioxide (SO2)					
5.)	Nitrogen Oxides (NOx)					
6.)	Carbon monoxide (CO)					
7.)	Volatile organic compounds (VOC)	0.888		0.203	0.888	AP-42
8.)	Lead (Pb)					
9.)	Total Hazardous Air Pollutants (HAPs)	0.001		0.0002	0.001	AP-42
10.)	Fluoride (F)					
11.)	Hydrogen Sulfide (H2S)					
12.)	Mercury (Hg)					
13.)	Total Reduced Sulfur (TRS)					
14.)	Sulfuric Acid Mist (SAM)					

**Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.*

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Greenhouse Gases (GHGs)

Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (lbs/hr)	Potential to Emit (tons/yr)	Basis for Determination
	Potential to Emit (PTE)	Units			

Pollutants:

1.)					
2.)					
3.)					
4.)					
5.)					
6.)					
7.)					
8.)					

Release Point Information:

Complete the table below for *each* release point. Please include release point information for each emission unit. Multiple attachments may be necessary. A release point is a point at which emissions from an emission unit are released into the ambient (outside)air. List each individual release point on a separate pair of lines (release point ID and description). *For longitude and latitude, use NAD 83/WGS84 datum and 5 digits after the decimal (i.e. 41.12345, -107.56789)*

Stack Release Point Information	
Company Release Point ID: FLR01	Release Point Type: <input type="text" value="Vertical"/> Release Point Latitude: <u>43.14394</u> Release Point Longitude: <u>-105.40379</u>
Company Release Point Description: HP Heater Treater Emergency Flare (used 10% ... 876 hrs/yr)	Base Elevation (ft): <u>5067</u> Stack Height (ft): <u>24</u> Stack Diameter (ft): <u>0.5</u> Exit Gas Velocity (ft/s): _____ Exit Gas Temp (F): <u>1850</u> Exit Gas Flow Rate (acfm): _____
Company Release Point ID: FLR02	Release Point Type: <input type="text" value="Vertical"/> Release Point Latitude: <u>43.14394</u> Release Point Longitude: <u>-105.40379</u>
Company Release Point Description: LP Oil & Water Tank Flare 1PH 1-4 Oil Tank Vents 1PH 1-2 Water Tank Vents	Base Elevation (ft): <u>5067</u> Stack Height (ft): <u>24</u> Stack Diameter (ft): <u>0.25</u> Exit Gas Velocity (ft/s): _____ Exit Gas Temp (F): <u>1850</u> Exit Gas Flow Rate (acfm): _____
Company Release Point ID:	Release Point Type: <input type="text"/> Release Point Latitude: _____ Release Point Longitude: _____
Company Release Point Description:	Base Elevation (ft): _____ Stack Height (ft): _____ Stack Diameter (ft): _____ Exit Gas Velocity (ft/s): _____ Exit Gas Temp (F): _____ Exit Gas Flow Rate (acfm): _____
Company Release Point ID:	Release Point Type: <input type="text"/> Release Point Latitude: _____ Release Point Longitude: _____
Company Release Point Description:	Base Elevation (ft): _____ Stack Height (ft): _____ Stack Diameter (ft): _____ Exit Gas Velocity (ft/s): _____ Exit Gas Temp (F): _____ Exit Gas Flow Rate (acfm): _____

Complete the table below for each fugitive (area, volume, line) release point. List each individual release point on a separate line.

Fugitive Release Point Information	
Company Release Point ID: FUG01	Release Point Latitude: <u>43.14394</u> Release Point Longitude: <u>-105.40379</u> Release Height (ft): <u>0.5</u>
Company Release Point Description: Fugitive VOC	
Company Release Point ID:	Release Point Latitude: _____ Release Point Longitude: _____ Release Height (ft): _____
Company Release Point Description:	
Company Release Point ID:	Release Point Latitude: _____ Release Point Longitude: _____ Release Height (ft): _____
Company Release Point Description:	
Company Release Point ID:	Release Point Latitude: _____ Release Point Longitude: _____ Release Height (ft): _____
Company Release Point Description:	

Permit Information and Calculations

29. Disposition of Gas (<i>Sold, used for fuel, vented, etc.</i>)			Test Witness:		
Sold					
30. Summary of Porous Zones (include Aquifers): <small>Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.</small>			31. Formation (Log) Markers:		
			Parkman		
Formation	Top	Bottom	Descriptions Contents, Etc.	Name	TVD
Parkman	8700'	11960'	Oil, Gas, Water	Fox Hill	6425'
				Lewis	6535'
				Teckla	7334'
				Poison Draw	7433'
				Teapot	7862'
				Parkman	8294'
32. Additional remarks; include plugging procedure (Req. prior approval):					
Flowback Disposal Totals = 5,853 with 1,717 into Riehle 37-70 3-1SWD, 2,302 into Riehle 37-70 3-2SWD, 1,834 into Riehle 37-70 3-3SWD					
33. Indicate which items have been attached by placing a check in the appropriate boxes:					
<input checked="" type="checkbox"/> Electrical/ Mechanical Logs (1 full set) Cased & Open hole.		<input type="checkbox"/> Geologic Report		<input type="checkbox"/> DST Report	
<input type="checkbox"/> Sundry Notice for plugging and cementing		<input type="checkbox"/> Core Analysis		<input checked="" type="checkbox"/> Directional Survey w/ Certification	
				<input checked="" type="checkbox"/> Other: <u>Plat,Form 10,Cement,BHL</u>	
34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*					
Name (please print) <u>Gwyn Smith</u>			Title <u>Sr. Regulatory Analyst</u>		
Signature _____			Date <u>4/20/2015</u>		

INSTRUCTIONS

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys should be attached hereto, to the extent required by applicable Federal and or State laws and regulations. All attachments should be listed on this form, see space 33.

Space 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Please note all Lat./ Longs. In NAD 83. Calculate all "Top of Producing Intervals" and "BHL" first as distance from the section corner, second as the Lat. /Long. Spacing orders are based on a well location in a section. Well locations must match the surveyed footages.

Space 17: Indicate elevation used for depth measurements given in other spaces on this form and in any attachments.

Space 23: " Sacks Cement " : Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. Show how reported top(s) of cement were determined, i.e. circulated (CIR), or calculated (CAL), or cement bond log (CBL), or temperature survey (TS).

Spaces 25 and 28: If this well is completed for commingled production from more than one pool (multiple zone completion), state in space 25 and 26, and in space 25 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for the pools reported in space 28 through 28c. Submit a separate completion report on this form for each pool separately produced, (not commingled).

Space 27: If a well was fracture treated or stimulated, all data required in Chapter 3, Section 45 must be filed with this Completion Report.

Space 27: If a well was fracture treated or stimulated, provide Summary Data for # of Stages, Total Slurry, Total Proppant

Space 28: Provide well test data for each interval tested or stimulated and flowed.

Space 32: Provide frac **flowback disposal volumes and handling and disposal site.**

Space 32: Provide final annulus casing pressure.

Space 32 or Attachment: Provide all Stimulation Chemicals by Name, Type, Volumes and CAS #s.

Attach a wellbore diagram whenever possible.

STATE OF WYOMING
OIL AND GAS CONSERVATION COMMISSION
Office of State Oil and Gas Supervisor
P.O. Box 2640
Casper, Wyoming 82602

PRODUCTION TEST AND GAS-OIL RATIO REPORT

OPERATOR RKI EXPLORATION AND PRODUCTION		API NUMBER 49-009-29708
ADDRESS 210 PARK AVE., SUITE 900 OKLAHOMA CITY, OK 73012		WELL NAME & NUMBER BONER BROS 37-71 32-3PH
LEASE NAME BONER BROS	RESERVOIR PARKMAN	FIELD WILDCAT
LOCATION (quarter-quarter and footages): NE/NE 525' FNL 1,280' FEL Sec. 32 , Twp. 37 N , Rge. 71 W		COUNTY CONVERSE

TEST DATA

START OF TEST-DATE 4/10/2015	TIME 5:30 PM	END OF TEST-DATE 4/11/2015	TIME 5:30 PM	DURATION OF TEST 24 HRS
TUBING PRESSURE 320	CASING PRESSURE 190	SEPARATOR PRESSURE 150	SEPARATOR TEMP. 95°F	CHOKE SIZE 64/64
OIL PRODUCTION DURING TEST 1,035.21 bbls.		GAS PRODUCTION DURING TEST 359.29 MCF		WATER PRODUCTION DURING TEST 729.95 bbls.
OIL GRAVITY 37.5 *API	PRODUCING METHOD (Flowing, pumping, gas lift, etc.) ESP			

GAS PRODUCTION

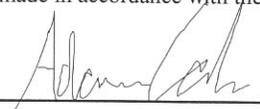
METER MANUFACTURER TOTAL FLOW	ORIFICE WELL TESTER <input checked="" type="checkbox"/>
Flange Tap <input checked="" type="checkbox"/> PIPE TAP <input type="checkbox"/> L-10 <input type="checkbox"/>	CRITICAL FLOW PROVER <input type="checkbox"/>
ORIFICE DIAMETER 1	ORIFICE DIAMETER 1
DIFFERENTIAL PRESSURE RANGE 0-1000	PIPE DIAMETER 2
GAS GRAVITY (Air-1.0) 0.83042 Meas. <input checked="" type="checkbox"/> Est <input type="checkbox"/>	GAS GRAVITY (Air-1.0) 0.83042 Meas. <input checked="" type="checkbox"/> Est <input type="checkbox"/>
DIFFERENTIAL NO FLOW READING 0.003	24 HOUR COEFFICIENT N/A
DIFFERENTIAL 210	PSIG

TEST RESULTS

DAILY OIL 1,035 bbls.	DAILY WATER 730 bbls.	DAILY GAS 359.29 MCF	GAS- OIL RATIO 347.07 SCF/STB
--------------------------	--------------------------	-------------------------	----------------------------------

I hereby, swear or affirm that the statements herein made are complete and correct, and that the test described was made in accordance with the rules, regulations and Instructions of the Wyoming Oil and Gas Conservation Commission.

SIGNATURE

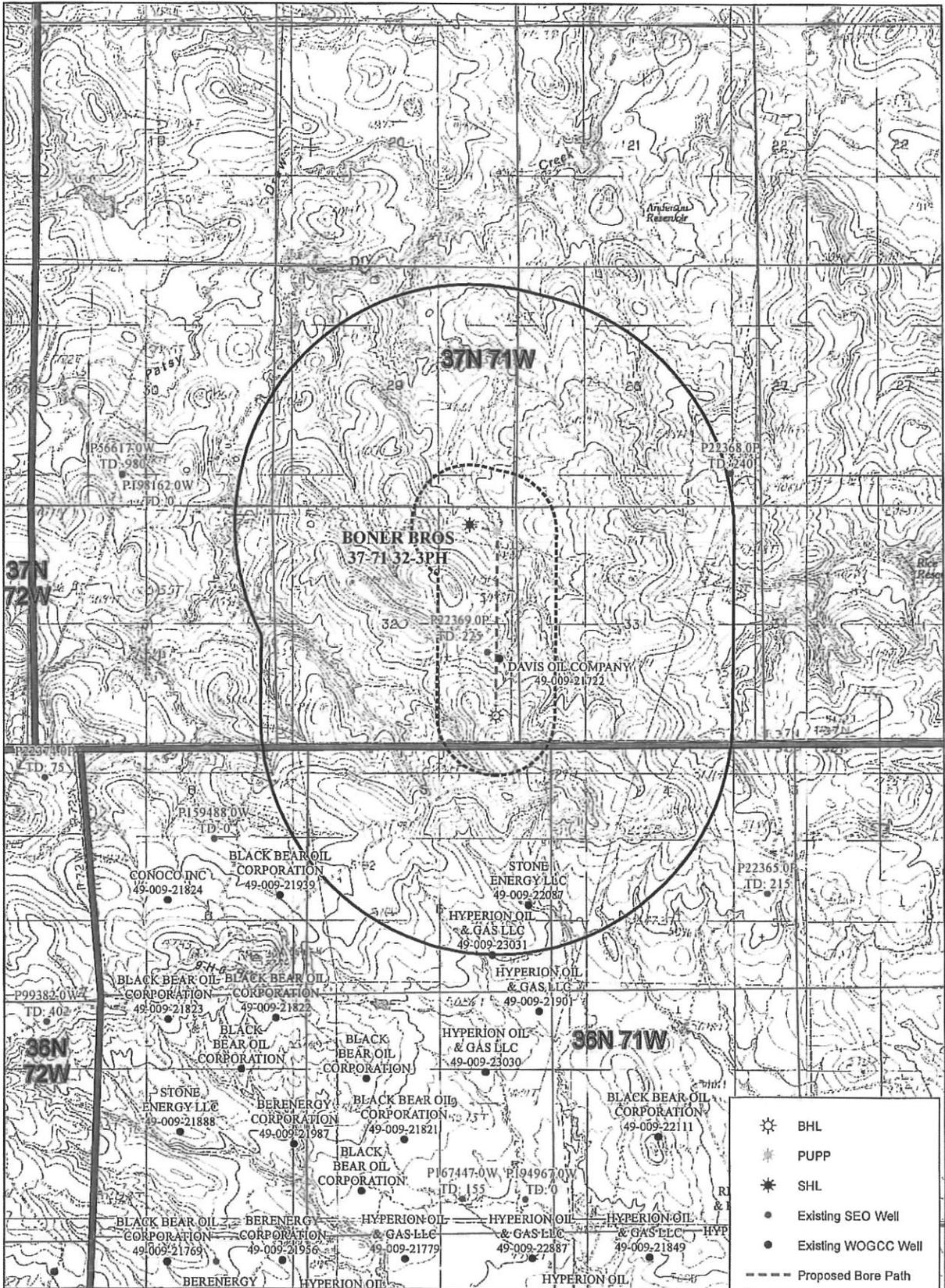


TITLE

SR. PRODUCTION ENGINEER

DATE

4/15/2015



Rev.	Date	Description	By	Proj. Eng.	Checked	Rev. Request
1	3/19/2014	Moved BHL to 460' FSL	MDR	FDA	RJE	RB
0	3/13/2014	Issued for client review	MDR	FDA	RJE	RB

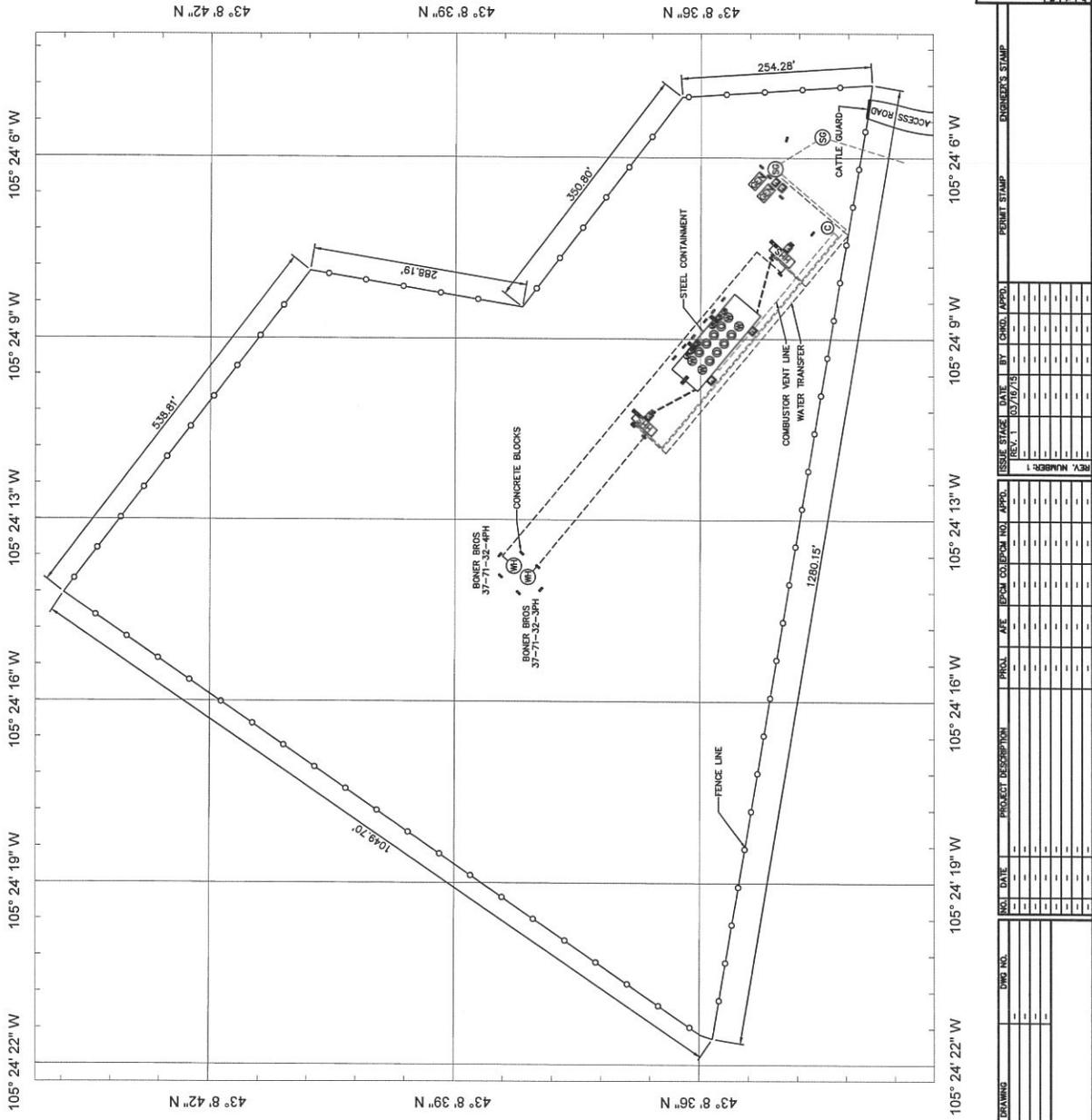
- BHL
- PUPP
- SHL
- Existing SEO Well
- Existing WOGCC Well
- Proposed Bore Path
- 1 Mile Buffer
- 1/4 Mile Buffer

Client: RKI Exploration & Production, LLC 210 Park Ave Suite 900 Oklahoma City, OK 73102		Prepared By: WOOD GROUP PSN Wood Group PSN - Project & Asset Management 2615 Aviation Dr Sheridan, WY 82801 (307) 675-6400 www.woodgroup.com		MAP C BONER BROS 37-71 32-3PH SEC 32, T37N, R71W CONVERSE COUNTY, WY 			
Land Agent: R. Briscoe	743918	Drawn: MDR	Checked: RJE	Approval: BC	Date: 3/19/2014	Sheet: 1 OF 1	Rev: 1

Document Path: X:\TransformedData\RC\lmsa\FedPackage\MapC\BONER BROS 37-71 32-3PH.MAP C (REV 1).mxd

LEGEND	
UG	UNDERGROUND
AG	ABOVE GROUND
UP	UTILITY POLE
E	ELECTRICAL PANEL/BOX
SP	SOLAR PANEL
GEN	GENERATOR
	OVERHEAD POWER LINE
	ELECTRIC LINE (UG)
	ELECTRIC LINE (AG)
	OIL FLOWLINE (UG)
	OIL FLOWLINE (AG)
	RECYCLE FLOWLINE (UG)
	RECYCLE FLOWLINE (AG)
	WATER FLOWLINE (UG)
	WATER FLOWLINE (AG)
	GAS FLOWLINE (UG)
	GAS FLOWLINE (AG)
	UNKNOWN FLOWLINE (UG)
	UNKNOWN FLOWLINE (AG)
	EDGE OF PAD
	FENCE
(FWK)	FREE WATER KNOCKOUT
(L)	LOAD OUT VALVE (OIL)
(LW)	LOAD OUT VALVE (WATER)
MTR	METER BUILDING
PU	PUMPING UNIT
(P)	RECYCLE PUMP
(S)	SEPARATOR
(T)	TANK (OIL)
(TW)	TANK (WATER)
BLDG	BUILDING
(C)	COMBUSTOR
(H)	HEATER TREATER
(F)	FLARE
(FS)	FLARE SEPARATOR
(W)	WELLHEAD
(S)	SURVEY CONTROL POINT
(W)	WELD
(R)	RISER (SIZE)
(S)	STAIRS
(TP)	TRANSFER PUMP

BONER BROS 37-71-32-3PH
1"=140'



DATE	15/03/2015	PROJECT	BONER BROS 37-71-32-3PH
TIME	10:30 AM	SCALE	1"=140'
BY	AS-BUILT	PROJECT NO.	AS-BUILT SITE MAP
CHECKED BY		CLIENT	BONER BROS
APPROVED BY		CLIENT ADDRESS	CONVERSE COUNTY, WY.

REV. NO.	DATE	BY	CHG. APPR.
1	10/03/15		

KEY NUMBER	DESCRIPTION
1	AS-BUILT SITE MAP

DATE	DESCRIPTION	PREP.	DATE	DESCRIPTION	APPR.

DATE	DESCRIPTION	PREP.	DATE	DESCRIPTION	APPR.

REFERENCE DRAWING	DWG NO.	DATE	DESCRIPTION



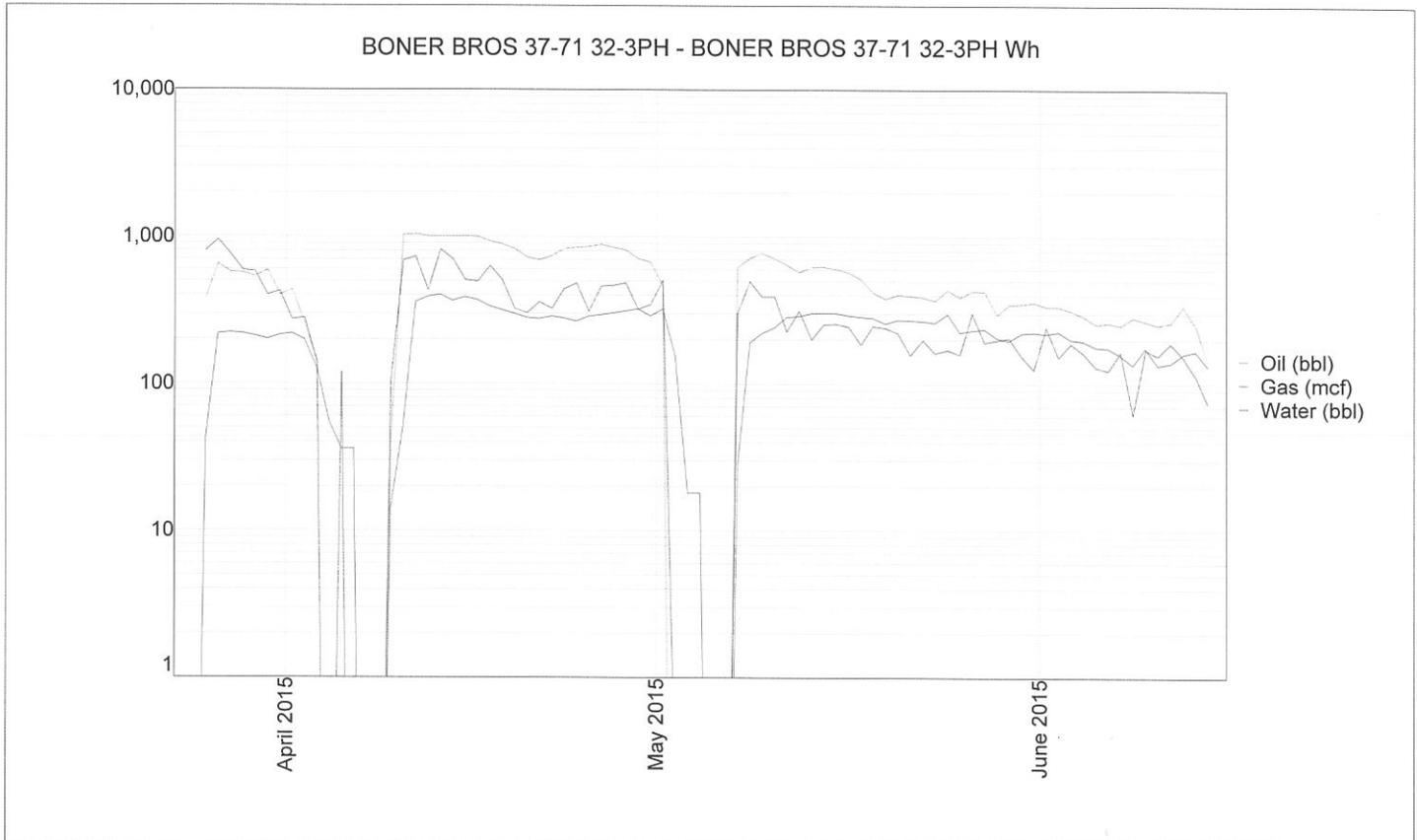
Daily Production Report

Date: 6/15/2015

Time: 9:07 AM

BONER BROS 37-71 32-3PH - BONER BROS 37-71 32-3PH Wh

Selected Time Frame: 05/07/2015 - 06/05/2015



Daily Production

Date	Oil	Gas	Water
06/05/2015	255.05	178	130.00
06/04/2015	289.22	195	161.67
06/03/2015	314.65	200	188.32
06/02/2015	334.65	226	151.67
06/01/2015	335.48	219	241.66
05/31/2015	358.40	224	125.00
05/30/2015	350.07	221	154.31
05/29/2015	345.07	197	205.00
05/28/2015	294.23	205	198.35
05/27/2015	425.92	235	191.63
05/26/2015	428.00	231	301.70
05/25/2015	388.41	224	158.34
05/24/2015	435.92	299	169.98
05/23/2015	369.24	260	161.67
05/22/2015	388.41	267	198.35
05/21/2015	397.16	270	156.64
05/20/2015	403.83	272	221.68
05/19/2015	379.66	257	239.99
05/18/2015	418.83	281	246.66
05/17/2015	513.85	286	185.01
05/16/2015	573.86	292	244.99

Notes

<DT> = Down Time

<GM> = Gas Meter



Daily Production Report

BONER BROS 37-71 32-3PH - BONER BROS 37-71 32-3PH Wh

Selected Time Frame: 05/07/2015 - 06/05/2015

Date: 6/15/2015

Time: 9:07 AM

Daily Production

Date	Oil	Gas	Water
05/15/2015	604.29	303	256.00
05/14/2015	624.71	304	253.33
05/13/2015	621.37	302	199.99
05/12/2015	575.53	289	313.32
05/11/2015	642.63	284	226.66
05/10/2015	710.98	241	390.03
05/09/2015	773.90	221	391.67
05/08/2015	713.48	190	496.67
05/07/2015	618.46	27	300.01
Total:	13,885.28	7,201	6,860.32
Average:	462.84	240	228.68

Notes

<DT> = Down Time

<GM> = Gas Meter

RKI Exploration & Production, LLC
Boner Brothers 37-71-32 3PH
ne ne 32, T37N, R71W
Converse County, Wyoming

Production Heater Treater (HTR-1)

Burner Size: 0.50 mmbtu/hr
Operating Hours: 8,760 hrs
Fuel: 1,490 BTU/scf

Fuel Consumption: 336 scf/hr
Fuel Consumption: 2.940 mmscf/yr

EMISSIONS FACTORS per AP42

NOx	100	lb/mmscf
CO	84	lb/mmscf
VOC	5.50	lb/mmscf
PM	7.60	lb/mmscf
SOx	0.60	lb/mmscf
HAPs	1.88	lb/mmscf

CONTROLLED

	<u>EF</u>	<u>EF</u>	<u>Emissions</u>	<u>Remarks</u>
	<u>lb/mmscf</u>	<u>lb/hr</u>	<u>ton/yr</u>	
NOx	100	0.0336	0.147	AP42 - Chapter 1.4
CO	84	0.0282	0.123	AP42 - Chapter 1.4
VOC	5.50	0.0018	0.008	AP42 - Chapter 1.4
PM	7.60	0.0026	0.011	AP42 - Chapter 1.4
SOx	0.60	0.0002	0.001	AP42 - Chapter 1.4
HAPs	1.88	0.0006	0.003	AP42 - Chapter 1.4

NOTES:

HAPs Emissions Factor is a summation of individual factors for Formaldehyde, Benzene, Hexane, and Toluene in Table 1.4-3.

Input Value

Calculated Value

 * Project Setup Information *

Project File : M:\Users\JIngerson\Wyoming Air Applications\Boner Brother 37-71-32 PAD\Boner B
 Flowsheet Selection : Oil Tank with Separator
 Calculation Method : RVP Distillation
 Control Efficiency : 98.0%
 Known Separator Stream : Low Pressure Oil
 Entering Air Composition : No

Filed Name : Wyoming PRB Area
 Well Name : Boner Brothers 37-71-32 3PH Oil Tank Flash
 Well ID : API # 49-009-29708
 Permit Number : WDEQ Application
 Date : 2015.06.15

 * Data Input *

Separator Pressure : 100.00 [psig]
 Separator Temperature : 100.00 [F]
 Ambient Pressure : 12.14 [psia]
 Ambient Temperature : 55.00 [F]
 C10+ SG : 0.81647
 C10+ MW : 232.897

-- Low Pressure Oil -----

No.	Component	mol %
1	H2S	0.0000
2	O2	0.0000
3	CO2	0.0340
4	N2	0.0060
5	C1	1.0540
6	C2	0.5890
7	C3	1.6400
8	i-C4	1.0340
9	n-C4	3.5340
10	i-C5	1.4290
11	n-C5	1.9670
12	C6	1.6700
13	C7	5.9430
14	C8	11.3860
15	C9	9.2690
16	C10+	56.7240
17	Benzene	0.2020
18	Toluene	0.4790
19	E-Benzene	0.1680
20	Xylenes	1.2940
21	n-C6	1.3310
22	224Trimethylp	0.2470

-- Sales Oil -----

Production Rate : 278 [bbl/day]
 Days of Annual Operation : 365 [days/year]
 API Gravity : 38.2
 Reid Vapor Pressure : 6.60 [psia]

 * Calculation Results *

-- Emission Summary -----
 Item Uncontrolled Uncontrolled Controlled Controlled

	[ton/yr]	[lb/hr]	[ton/yr]	[lb/hr]
Total HAPs	0.560	0.128	0.011	0.003
Total HC	54.128	12.358	1.083	0.247
VOCs, C2+	41.675	9.515	0.834	0.190
VOCs, C3+	34.385	7.850	0.688	0.157

Uncontrolled Recovery Info.

Vapor	3.4600	[MSCFD]
HC Vapor	3.4200	[MSCFD]
GOR	12.45	[SCF/bbl]

-- Emission Composition -----

No	Component	Uncontrolled [ton/yr]	Uncontrolled [lb/hr]	Controlled [ton/yr]	Controlled [lb/hr]
1	H2S	0.000	0.000	0.000	0.000
2	O2	0.000	0.000	0.000	0.000
3	CO2	0.826	0.189	0.826	0.189
4	N2	0.134	0.031	0.134	0.031
5	C1	12.453	2.843	0.249	0.057
6	C2	7.290	1.664	0.146	0.033
7	C3	12.287	2.805	0.246	0.056
8	i-C4	4.372	0.998	0.087	0.020
9	n-C4	10.733	2.450	0.215	0.049
10	i-C5	2.075	0.474	0.042	0.009
11	n-C5	2.133	0.487	0.043	0.010
12	C6	0.610	0.139	0.012	0.003
13	C7	0.841	0.192	0.017	0.004
14	C8	0.590	0.135	0.012	0.003
15	C9	0.187	0.043	0.004	0.001
16	C10+	0.001	0.000	0.000	0.000
17	Benzene	0.051	0.012	0.001	0.000
18	Toluene	0.040	0.009	0.001	0.000
19	E-Benzene	0.005	0.001	0.000	0.000
20	Xylenes	0.036	0.008	0.001	0.000
21	n-C6	0.390	0.089	0.008	0.002
22	224Trimethylp	0.032	0.007	0.001	0.000
	Total	55.086	12.577	1.102	0.252

-- Stream Data -----

No.	Component	MW	LP Oil mol %	Flash Oil mol %	Sale Oil mol %	Flash Gas mol %	W&S Gas mol %	Total Emissions mol %
1	H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	CO2	44.01	0.0340	0.0166	0.0111	1.1424	1.0658	1.1256
4	N2	28.01	0.0060	0.0005	0.0001	0.3573	0.0393	0.2877
5	C1	16.04	1.0540	0.2418	0.0957	52.7462	24.3561	46.5328
6	C2	30.07	0.5890	0.3769	0.2970	14.0891	16.1168	14.5329
7	C3	44.10	1.6400	1.4325	1.3255	14.8447	23.3357	16.7030
8	i-C4	58.12	1.0340	0.9906	0.9617	3.7970	7.0524	4.5094
9	n-C4	58.12	3.5340	3.4460	3.3774	9.1337	17.9816	11.0701
10	i-C5	72.15	1.4290	1.4302	1.4231	1.3534	3.0464	1.7239
11	n-C5	72.15	1.9670	1.9765	1.9714	1.3625	3.2339	1.7721
12	C6	86.16	1.6700	1.6913	1.6960	0.3129	0.8722	0.4353
13	C7	100.20	5.9430	6.0309	6.0568	0.3489	1.1304	0.5199
14	C8	114.23	11.3860	11.5618	11.6182	0.1977	0.7496	0.3185
15	C9	128.28	9.2690	9.4138	9.4615	0.0523	0.2301	0.0912
16	C10+	232.90	56.7240	57.6153	57.9134	0.0001	0.0009	0.0003
17	Benzene	78.11	0.2020	0.2047	0.2054	0.0277	0.0789	0.0389
18	Toluene	92.13	0.4790	0.4863	0.4885	0.0172	0.0580	0.0262
19	E-Benzene	106.17	0.1680	0.1706	0.1715	0.0019	0.0073	0.0031
20	Xylenes	106.17	1.2940	1.3141	1.3207	0.0124	0.0495	0.0205
21	n-C6	86.18	1.3310	1.3489	1.3533	0.1914	0.5578	0.2716
22	224Trimethylp	114.24	0.2470	0.2507	0.2518	0.0114	0.0372	0.0170
	MW		173.15	175.39	176.09	30.44	42.25	33.02
	Stream Mole Ratio		1.0000	0.9845	0.9795	0.0155	0.0043	0.0198
	Heating Value	[BTU/SCF]				1747.66	2384.84	1887.11
	Gas Gravity	[Gas/Air]				1.05	1.46	1.14

Bubble Pt. @ 100F	[psia]	45.96	17.65	12.14
RVP @ 100F	[psia]	11.77	7.67	6.65
Spec. Gravity @ 100F		0.712	0.713	0.713

* Project Setup Information *

Project File : M:\Users\JIngerson\Wyoming Air Applications\Boner Brother 37-71-32 PAD\Boner B
 Flowsheet Selection : Oil Tank with Separator
 Calculation Method : RVP Distillation
 Control Efficiency : 98.0%
 Known Separator Stream : Low Pressure Oil
 Entering Air Composition : No

Filed Name : Wyoming PRB Area
 Well Name : Boner Brothers 37-71-32 3PH Water Tank Flash w/ 1% Oil
 Well ID : API # 49-009-29708
 Permit Number : WDEQ Application
 Date : 2015.06.15

* Data Input *

Separator Pressure : 100.00[psig]
 Separator Temperature : 100.00[F]
 Ambient Pressure : 12.14[psia]
 Ambient Temperature : 55.00[F]
 C10+ SG : 0.81647
 C10+ MW : 232.897

-- Low Pressure Oil -----

No.	Component	mol %
1	H2S	0.0000
2	O2	0.0000
3	CO2	0.0340
4	N2	0.0060
5	C1	1.0540
6	C2	0.5890
7	C3	1.6400
8	i-C4	1.0340
9	n-C4	3.5340
10	i-C5	1.4290
11	n-C5	1.9670
12	C6	1.6700
13	C7	5.9430
14	C8	11.3860
15	C9	9.2690
16	C10+	56.7240
17	Benzene	0.2020
18	Toluene	0.4790
19	E-Benzene	0.1680
20	Xylenes	1.2940
21	n-C6	1.3310
22	224Trimethylp	0.2470

-- Sales Oil -----

Production Rate : 1[bbl/day]
 Days of Annual Operation : 365 [days/year]
 API Gravity : 38.2
 Reid Vapor Pressure : 6.60[psia]

* Calculation Results *

-- Emission Summary -----

Item	Uncontrolled	Uncontrolled	Controlled	Controlled
------	--------------	--------------	------------	------------

	[ton/yr]	[lb/hr]	[ton/yr]	[lb/hr]
Total HAPs	0.000	0.000	0.000	0.000
Total HC	0.195	0.045	0.004	0.001
VOCs, C2+	0.150	0.034	0.003	0.001
VOCs, C3+	0.124	0.028	0.002	0.001

Uncontrolled Recovery Info.

Vapor	12.4600 x1E-3	[MSCFD]
HC Vapor	12.2900 x1E-3	[MSCFD]
GOR	12.46	[SCF/bbl]

-- Emission Composition -----

No	Component	Uncontrolled [ton/yr]	Uncontrolled [lb/hr]	Controlled [ton/yr]	Controlled [lb/hr]
1	H2S	0.000	0.000	0.000	0.000
2	O2	0.000	0.000	0.000	0.000
3	CO2	0.003	0.001	0.003	0.001
4	N2	0.000	0.000	0.000	0.000
5	C1	0.045	0.010	0.001	0.000
6	C2	0.026	0.006	0.001	0.000
7	C3	0.044	0.010	0.001	0.000
8	i-C4	0.016	0.004	0.000	0.000
9	n-C4	0.039	0.009	0.001	0.000
10	i-C5	0.007	0.002	0.000	0.000
11	n-C5	0.008	0.002	0.000	0.000
12	C6	0.002	0.000	0.000	0.000
13	C7	0.003	0.001	0.000	0.000
14	C8	0.002	0.000	0.000	0.000
15	C9	0.001	0.000	0.000	0.000
16	C10+	0.000	0.000	0.000	0.000
17	Benzene	0.000	0.000	0.000	0.000
18	Toluene	0.000	0.000	0.000	0.000
19	E-Benzene	0.000	0.000	0.000	0.000
20	Xylenes	0.000	0.000	0.000	0.000
21	n-C6	0.001	0.000	0.000	0.000
22	224Trimethylp	0.000	0.000	0.000	0.000
	Total	0.197	0.045	0.004	0.001

-- Stream Data -----

No.	Component	MW	LP Oil mol %	Flash Oil mol %	Sale Oil mol %	Flash Gas mol %	W&S Gas mol %	Total Emissions mol %
1	H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	CO2	44.01	0.0340	0.0166	0.0111	1.1424	1.0658	1.1256
4	N2	28.01	0.0060	0.0005	0.0001	0.3573	0.0393	0.2877
5	C1	16.04	1.0540	0.2418	0.0957	52.7462	24.3561	46.5328
6	C2	30.07	0.5890	0.3769	0.2970	14.0891	16.1168	14.5329
7	C3	44.10	1.6400	1.4325	1.3255	14.8447	23.3357	16.7030
8	i-C4	58.12	1.0340	0.9906	0.9617	3.7970	7.0524	4.5094
9	n-C4	58.12	3.5340	3.4460	3.3774	9.1337	17.9816	11.0701
10	i-C5	72.15	1.4290	1.4302	1.4231	1.3534	3.0464	1.7239
11	n-C5	72.15	1.9670	1.9765	1.9714	1.3625	3.2339	1.7721
12	C6	86.16	1.6700	1.6913	1.6960	0.3129	0.8722	0.4353
13	C7	100.20	5.9430	6.0309	6.0568	0.3489	1.1304	0.5199
14	C8	114.23	11.3860	11.5618	11.6182	0.1977	0.7496	0.3185
15	C9	128.28	9.2690	9.4138	9.4615	0.0523	0.2301	0.0912
16	C10+	232.90	56.7240	57.6153	57.9134	0.0001	0.0009	0.0003
17	Benzene	78.11	0.2020	0.2047	0.2054	0.0277	0.0789	0.0389
18	Toluene	92.13	0.4790	0.4863	0.4885	0.0172	0.0580	0.0262
19	E-Benzene	106.17	0.1680	0.1706	0.1715	0.0019	0.0073	0.0031
20	Xylenes	106.17	1.2940	1.3141	1.3207	0.0124	0.0495	0.0205
21	n-C6	86.18	1.3310	1.3489	1.3533	0.1914	0.5578	0.2716
22	224Trimethylp	114.24	0.2470	0.2507	0.2518	0.0114	0.0372	0.0170
	MW		173.15	175.39	176.09	30.44	42.25	33.02
	Stream Mole Ratio		1.0000	0.9845	0.9795	0.0155	0.0043	0.0198
	Heating Value	[BTU/SCF]				1747.66	2384.84	1887.11
	Gas Gravity	[Gas/Air]				1.05	1.46	1.14

Bubble Pt. @ 100F	[psia]	45.96	17.65	12.14
RVP @ 100F	[psia]	11.77	7.67	6.65
Spec. Gravity @ 100F		0.712	0.713	0.713

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 3PH
 ne ne 32, T37N, R71W
 Converse County, Wyoming

Oil Loadout

Source ID Number: **OIL LOAD-1**
 Name: **Oil Truck Loadout**

Throughput Value (gal/yr): **4,261,740**

Liquid Temperature (°F): 55
 Vapor Pressure (psia): 6.65
 Hours Per Day: 24
 Load Frequency (trucks/yr): 609
 Molecular Weight (lb/lb-mole): 30.46
 Saturation Factor: 0.6
 Days Per Year: 365
 Load Duration (min/truck): 60:00

Loading Loss (lb/1000 gal) = $(12.46 * S * P * M) / T$ (AP-42 Section 5.2 (1/95)) where:

S = Saturation Factor = dedicated normal service
 P = True Vapor Pressure of liquid loaded*, psia
 M = Molecular Weight of Vapors, lb/lb-mole
 T = Temp. of bulk liquid loaded, deg. R = (deg. F + 460)

Loading Loss (lb VOC/1000 gal) = **2.94 lb/1000 gal**

Uncontrolled Emissions

Pollutant	Loading Loss (lb/1000 gal)	Throughput (gal/yr)	Estimated Emissions (tpy)	Source of Emission Factor
VOC	2.94	4261740	12533.36	AP42
			1.4307 lb/hr	

Controlled Emissions

Pollutant	Loading Loss (lb/1000 gal)	Throughput (gal/yr)	Estimated Emissions (tpy)	Source of Emission Factor
VOC	0.06	4261740	250.67	Combustor specs
			0.0286 lb/hr	

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 3PH
 ne ne 32, T37N, R71W
 Converse County, Wyoming

Water Loadout

Source ID Number: **WATER LOAD-1**
 Name: **Water Truck Loadout**

Throughput Value (gal/yr): **21,063** (assumed 1% oil in water is source of emissions)

Liquid Temperature (°F): 55
 Vapor Pressure (psia): 6.65
 Hours Per Day: 24
 Load Frequency (trucks/yr): 4
 Molecular Weight (lb/lb-mole): 30.44
 Saturation Factor: 0.6
 Days Per Year: 365
 Load Duration (min/truck): 60.00

Loading Loss (lb/1000 gal) = $(12.46 * S * P * M) / T$ (AP-42 Section 5.2 (1/95)) where:

S = Saturation Factor = dedicated normal service
 P = True Vapor Pressure of liquid loaded*, psia
 M = Molecular Weight of Vapors, lb/lb-mole
 T = Temp. of bulk liquid loaded, deg. R = (deg. F + 460)

Loading Loss (lb VOC/1000 gal) = **2.94 lb/1000 gal**

Pollutant	Loading Loss		Throughput		Estimated Emissions		Source of Emission Factor
	(lb/1000 gal)	2.94	(gal/yr)	21063	(lb/yr)	(tpy)	
VOC					61.89	0.03	AP42
						0.0071 lb/hr	

Pollutant	Loading Loss		Throughput		Estimated Emissions		Source of Emission Factor
	(lb/1000 gal)	0.06	(gal/yr)	21063	(lb/yr)	(tpy)	
VOC					1.24	0.00	Combustor specs
						0.0001 lb/hr	

RKI Exploration & Production, LLC
Boner Brothers 37-71-32 3PH
ne ne 32, T37N, R71W
Converse County, Wyoming

HP Production Flare (FLR-1)

Flare Size:	1,100	mcf nominal
Flare Size:	64	mmbtu/hr with 1361 btu/scf gas
Operating Hours:	876	hrs (10%/year usage)
Gas BTU Value:	1,267	BTU/scf
Gas to Flare:	6,000	scf/hr (144 mcf production rate)
Gas to Flare:	5.256	mmscf/yr
Gas to Flare:	7.602	mmbtu/hr (144 mcf production rate)
Gas to Flare:	6,659	mmbtu/yr

EMISSIONS FACTORS per WDEQ Guidance Document

NO _x	0.140	lb/mmbtu
CO	0.035	lb/mmbtu

CONTROLLED

	<u>EF</u>	<u>EF</u>	<u>Emissions</u>	<u>Remarks</u>
	<u>lb/mmbtu</u>	<u>lb/hr</u>	<u>ton/yr</u>	
NO _x	0.140	1.064	0.466	WDEQ Guidance
CO	0.035	0.266	0.117	WDEQ Guidance

NOTES:

Input Value

Calculated Value

RKI Exploration & Production, LLC
Boner Brothers 37-71-32 3PH
ne ne 32, T37N, R71W
Converse County, Wyoming

Low Pressure Flare (FLR-2)

Burner Size: 8.61 mmbtu/hr
Operating Hours: 8,760 hrs
Fuel: 1,748 BTU/scf

Fuel Consumption: 3.472 mscfd ... from E&P TANKS Output
Fuel Consumption: 1,267 mscf/yr
Fuel Consumption: 1.267 mmscf/yr

EMISSIONS FACTORS per AP42

NOx	100	lb/mmscf
CO	84	lb/mmscf
VOC	5.50	lb/mmscf
PM	7.60	lb/mmscf
SOx	0.60	lb/mmscf
HAPs	1.88	lb/mmscf

CONTROLLED

	EF lb/mmscf	EF lb/hr	Emissions ton/yr	Remarks
NOx	100	0.0145	0.063	AP42 - Chapter 1.4
CO	84	0.0122	0.053	AP42 - Chapter 1.4
VOC	5.50	0.0008	0.003	AP42 - Chapter 1.4
PM	7.60	0.0011	0.005	AP42 - Chapter 1.4
SOx	0.60	0.0001	0.000	AP42 - Chapter 1.4
HAPs	1.88	0.0003	0.001	AP42 - Chapter 1.4

NOTES:

HAPs Emissions Factor is a summation of individual factors for Formaldehyde, Benzene, Hexane, and Toluene in Table 1.4-3.

Input Value

Calculated Value

RKI Exploration & Production, LLC
 Boner Brothers 37-71-32 3PH
 ne ne 32, T37N, R71W
 Converse County, Wyoming

Fugitive Emissions (FUG-1)

Uncontrolled Emissions

Wt Percent Gas: 100.00 Per E&P TANKS Output of Flash Gas Composition
 Wt Percent HC: 96.59 Per E&P TANKS Output of Flash Gas Composition
 Wt Percent VOC: 27.08 Per E&P TANKS Output of Flash Gas Composition
 Wt Percent HAPs: 0.57 Per E&P TANKS Output of Flash Gas Composition

Equipment Type	Gas Leak EF lb/hr/source	Source Count	Percent HC	Percent VOC	Percent HAPs	Operated Hours	Gas Rate lb/hr	Leak Rate in Tons Per Year			
								Gas Rate tpy	HC Rate tpy	VOC Rate tpy	HAPs Rate tpy
Valves	0.005420	75	96.59	27.08	0.57	8,760	0.3926	1.720	1.661	0.466	0.000
Flanges	0.000241	118	96.59	27.08	0.57	8,760	0.0275	0.120	0.116	0.033	0.000
Connectors	0.000458	124	96.59	27.08	0.57	8,760	0.0549	0.240	0.232	0.065	0.000
Other	0.016666	17	96.59	27.08	0.57	8,760	0.2737	1.199	1.158	0.325	0.000
Open Ended Lines	0.003080	-	96.59	27.08	0.57	8,760	-	-	-	-	-
Pumps	0.028750	-	96.59	27.08	0.57	8,760	-	-	-	-	-
Totals							0.749	3.279	3.167	0.888	0.001

Notes: See attached Flash Gas Composition from E&P Tanks output for VOC and HAPs weight percent calculations.

Oil and Gas Production Operations leak emissions factors from EPA 453/R-95-017.