

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

**Permit Application Analysis
A0000942**

September 9, 2015

NAME OF FIRM: Jonah Energy LLC

NAME OF FACILITY: Stud Horse Butte 13-26 Central Facility

FACILITY LOCATION: SW¼SW¼ of Section 26, T29N, R108W
Latitude: 42.44618° Longitude: -109.69178°
Sublette County, Wyoming

TYPE OF OPERATION: Production Facility

RESPONSIBLE OFFICIAL: Charles Cornell, Sr. Regulatory Lead

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REVIEWING ENGINEERS: Alicia Boltz, Air Quality Engineer
Nathan Henschel, Air Quality Modeler

1. PURPOSE OF APPLICATION

On May 6, 2015, the Division of Air Quality received an application from Jonah Energy LLC to modify the Stud Horse Butte 13-26 Central Facility with the installation of two (2) 1,029 hp (site rated) Caterpillar G3516TA compressor engines and two (2) 1.0 MMBtu/hr indirect heaters. The Stud Horse Butte 13-26 Central Facility is located in the SW¼SW¼ of Section 26, T29N, R108W, approximately twenty-one (21) miles south of Boulder in Sublette County, Wyoming.

The Division received additional information from Johan Energy LLC on August 21, 2015.

Jonah Energy LLC is proposing to install the compressor engines as part of a line pressure reduction project to determine if a decrease in line pressure will result in an increase in production along with a decrease in emissions in the Jonah field.

A map of the facility location is attached as Appendix A.

2. PERMIT HISTORY

The Stud Horse Butte 13-26 Central Facility currently operates under Air Quality Permit MD-16599 issued October 21, 2014 for the addition of production equipment, with one (1) reboiler overheads condenser, one (1) TEG flash tank separator and one (1) common smokeless combustion device to control volatile organic compound and hazardous air pollutant emissions associated with the dehydration unit, condensate tanks, active produced water tanks and pneumatic pumps.

The Stud Horse Butte 9-26, 10-26, 13-26, 14-26, 15-26, 47-26, 49-26, 50-26, 51-26, 60-26, 61-26, 62-26, 64-26, 67-26, 68-26, 69-26, 70-26, 71-26, 72-26, 73-26, 74-26, 75-26, 77-26, 78-26, 108-26, 125-26 and 127-26 well sites produce to this central facility.

3. ESTIMATED EMISSIONS

3.1 Engine

The proposed engines will utilize field gas. The major pollutants emitted from gas combustion include nitrogen oxides (NO_x) with some carbon monoxide (CO) from incomplete combustion. Volatile organic compounds (VOCs) including some hazardous air pollutants (HAPs) will also be emitted from the engines. Emission factors for the engine types and the estimated emissions are shown in the following tables:

Table 1: Engine Emission Factors (g/hp-hr)						
Engine	hp (site rated)	Controls	NO _x	CO	VOC	Formaldehyde ¹
Caterpillar G3516TA	1,029	NSCR/AFRC	0.5	1.5	0.5	0.05

¹ Formaldehyde is the only significant HAP.

Table 2: Engine Emissions									
IMPACT ID	Engine	NO _x		CO		VOC		Formaldehyde ¹	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
ENG001-ENG002	Caterpillar G3516TA	1.1	5.0	3.4	14.9	1.1	5.0	0.11	0.50

¹ Formaldehyde is the only significant HAP emitted from the engines.

3.2 Heaters

The major pollutants emitted from the two (2) 1.0 MMBtu/hr indirect heaters include NO_x and CO. The NO_x and CO emissions were determined with emission factors from AP-42, Tables 1.4-1 and 1.4-2 and a fuel heat value of 1,120 Btu/scf.

A summary of the current facility emissions as well as the proposed facility emissions from the Stud Horse Butte 13-26 Central Facility after the proposed modifications are complete are in Table 3.

Table 3: Stud Horse Butte 13-26 Central Facility Emissions

IMPACT ID	Source	NO _x		CO		VOC		HAP		SO ₂		PM ₁₀ /PM _{2.5}	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Existing Emissions¹													
Total Existing Emissions		0.8	3.4	0.4	1.6	1.8	8.1	0.1	0.6	--	--	--	--
Proposed Emissions													
ENG001	Caterpillar G3516TA	1.1	5.0	3.4	14.9	1.1	5.0	0.11	0.50	0.1	0.5	0.2	0.8
ENG002	Caterpillar G3516TA	1.1	5.0	3.4	14.9	1.1	5.0	0.11	0.50	0.1	0.5	0.2	0.8
HET001	1.0 MMBtu/hr indirect heater	0.1	0.4	0.1	0.4	<0.1	<0.1	--	--	<0.1	0.1	<0.1	<0.1
HET002	1.0 MMBtu/hr indirect heater	0.1	0.4	0.1	0.4	<0.1	<0.1	--	--	<0.1	0.1	<0.1	<0.1
Change in Emissions		2.4	10.8	7.0	30.6	2.2	10.0	0.22	1.00	0.2	1.2	0.4	1.6
Total Facility Emissions		3.2	14.2	7.4	32.2	4.0	18.1	0.32	1.60	0.2	1.2	0.4	1.6

¹ Existing emissions from permit analysis for MD-16599 based on 110 BPD total condensate and 13.5 MMCFD total gas.

4. BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Per the requirements of Chapter 6 Section 2 of the Wyoming Air Quality Standards and Regulations (WAQSR), all facilities must demonstrate the use of BACT.

4.1 Engines

The Caterpillar G3516TA engines (ENG001-ENG002) will be controlled to the levels listed in Table 1. These rich burn engines will be equipped with an air/fuel ratio controller (AFRC) and a non-selective catalytic reduction (NSCR) catalyst, which not only controls NO_x but also aids in the destruction of CO, VOC, formaldehyde and other HAPs. The Division considers a NSCR catalyst with an AFRC as representing BACT for these types of engines.

4.2 Heaters

As the emissions associated with the two (2) 1.0 MMBtu/hr indirect heaters are insignificant in nature, the Division has determined BACT has been met.

5. CHAPTER 6, SECTION 2(c)(ii) DEMONSTRATION

Under the Wyoming Air Quality Standards and Regulations (WAQSR), applicants for permits are required to demonstrate to the Administrator of the Air Quality Division (AQD), that “the proposed facility will not prevent the attainment or maintenance of any ambient air quality standard.” [WAQSR Chapter 6, Section 2(c)(ii)].

Options for the Chapter 6 Section 2(c)(ii) Demonstration include:

- a. Ambient ozone modeling for any application requesting increases in VOCs and/or NO_x emissions.
- b. Emission reductions for VOCs and/or NO_x emissions.
- c. Applicants may propose alternate innovative Demonstrations to the AQD.

A Chapter 6, Section 2(c)(ii) demonstration in accordance with the Division’s Interim Policy has been conducted. Emission offset requirements, if applicable; have been applied to this permitting action at a ratio of 1.5:1.0 for VOCs and 1.1:1.0 for NO_x.

To ensure offsets are not being double counted and credits are available for future applications, the Division has developed a spreadsheet to track all permitting actions since April 1, 2008. This spreadsheet has been provided to Jonah Energy LLC to use as part of their demonstration as Appendix B. The following table lists the proposed emission changes:

Table 4: Proposed Emission Reduction		
Source	NO_x	VOC
	tpy	tpy
Current Permitted Emissions	3.4	8.1
Emissions Resulting After Modification	14.2	18.1
Net Change	10.8	10.0
Offset Factor	1.1	1.5
Offset Required	11.9	15.0
Banked Emissions from Previous Reductions *	-95.4	-2,873.1
Total Offsets	-83.5	-2,858.1

* NOTE: These totals include offsets from another current permitting action (A0000944).

This project results in an increase of 10.8 tpy of NO_x emissions and 10.0 tpy of VOC emissions. An offset of 11.9 tpy NO_x and 15.0 tpy VOC is required. Attached to this analysis as Appendix B is Jonah Energy LLC’s demonstration spreadsheet. As shown, permitting actions to date, including this application, have resulted in a decrease in NO_x emissions of 83.5 tpy and a decrease in VOC emissions of 2,858.1 tpy. Therefore, Jonah Energy LLC has met the offset requirements for NO_x and VOC. Based on the demonstration of Jonah Energy LLC, the Division is satisfied that the proposed permitting action will not prevent the attainment or maintenance of any ambient air quality standard as required by WAQSR Chapter 6, Section 2(c)(ii).

6. CHAPTER 6, SECTION 3 APPLICABILITY

The Stud Horse Butte 13-26 Central Facility is not a “major source” as defined by Chapter 6, Section 3 of the Wyoming Air Quality Standards and Regulations (WAQSR). Therefore, Jonah Energy LLC shall obtain an operating permit in accordance with Chapter 6, Section 2 of the WAQSR.

7. NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (MACT)

EPA’s current promulgated NESHAP rules under 40 CFR part 63, subpart ZZZZ apply to major sources of HAP emissions, as well as area sources of HAP emissions. Since the Stud Horse Butte 13-26 Central Facility has the potential to emit less than 10 tpy of any individual HAP, or 25 tpy of any combination of HAPs, the facility is considered an area source of HAPs, and engines at this facility will be subject to all applicable requirements of 40 CFR part 63, subpart ZZZZ - *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*.

8. PREVENTION OF SIGNIFICANT DETERIORATION (PSD)

The Stud Horse Butte 13-26 Central Facility is not a “major stationary source” as defined by Chapter 6, Section 4 of the WAQSR. Therefore, the Stud Horse Butte 13-26 Central Facility is not subject to PSD review under Chapter 6, Section 4.

9. CHAPTER 6, SECTION 13 – NON-ATTAINMENT PERMIT REQUIREMENTS

The Stud Horse Butte 13-26 Central Facility is located in an area that has been designated as non-attainment for ozone. Since the facility is a minor source (less than 100 tpy of NO_x and VOC based on a “Marginal” classification for the area) this permitting action is not subject to the non-attainment permitting requirements of Chapter 6, Section 13 of the WAQSR.

10. NEW SOURCE PERFORMANCE STANDARDS (NSPS)

The engines at this facility are subject to applicable requirements of 40 CFR part 60, subpart JJJJ - *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* based on the manufacture date of the engines.

40 CFR part 60, subpart OOOO - *Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution* applies to any new, modified or reconstructed emission source installed after August 23, 2011. The affected emission sources include centrifugal and reciprocating compressors, continuous bleed pneumatic controllers, and storage vessels. The affected emission sources at the Stud Horse Butte 13-26 Central Facility are subject to all applicable requirements of 40 CFR part 60, subpart OOOO based on the installation/modification date.

11. PROJECTED IMPACT ON EXISTING AMBIENT AIR QUALITY

11.1 Annual NO₂

The Division has reviewed the applicant’s ambient air quality impact analysis for the Stud Horse Butte 13-26 Central Facility. Included in the modeling analysis were emissions and stack parameters from the newly proposed sources, which comprise the bulk of the NO_x emissions from the facility, along with additional sources within ten (10) km of the facility.

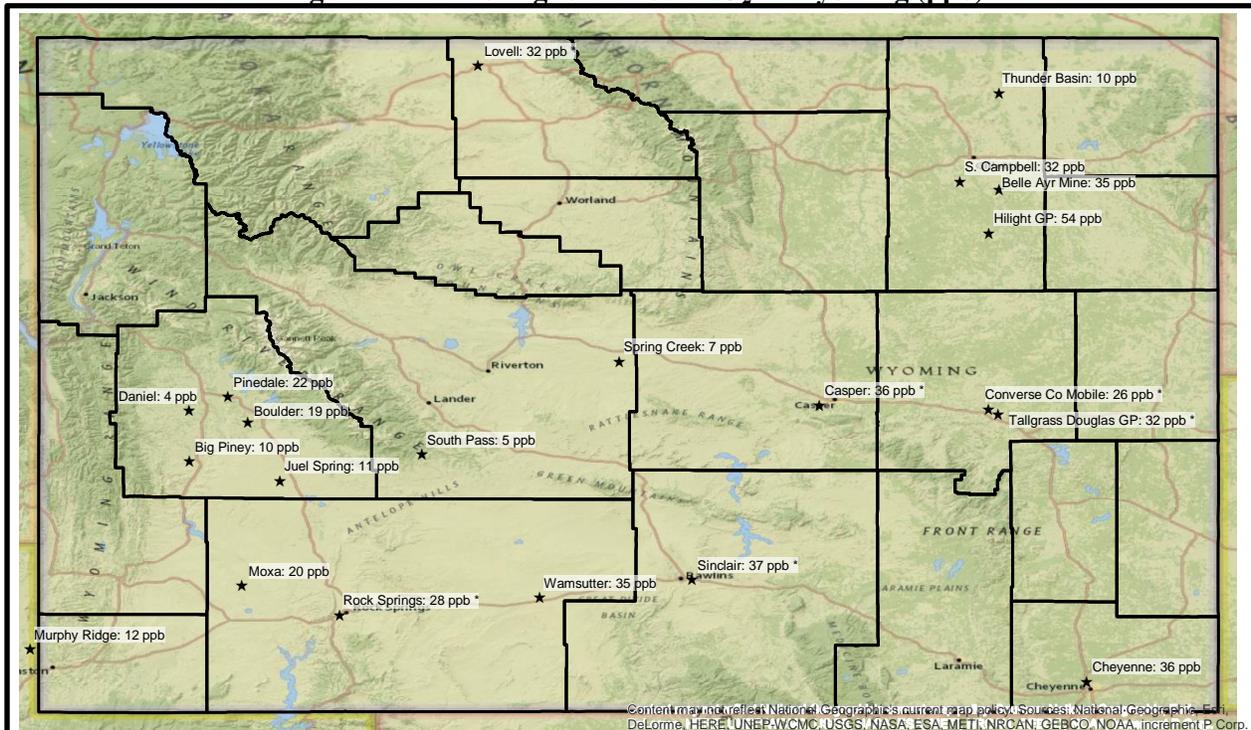
The applicant processed and used a meteorological dataset that included five (5) years of surface data collected from January 1, 2010 through December 31, 2014 at the Division’s Juel Spring meteorological tower located fifteen (15) miles southeast of the Jonah Gas Field, in Sublette County, Wyoming. AERMET version 15181 was used to produce the dataset described here. Upper-air data consisting of twice-daily soundings from the nearest upper-air monitoring station (Riverton, Wyoming) were merged with the surface meteorological data.

According to the Division’s verification model runs using the EPA’s AERMOD system, the maximum modeled annual NO_x concentration was 16.6 µg/m³. Supplement C to the Guideline on Air Quality Models allows the use of the ambient ratio method, which provides for a twenty-five percent (25%) reduction in modeled NO_x concentrations for purposes of estimating nitrogen dioxide (NO₂) concentrations. Multiplying the maximum annual model predicted NO_x concentration by 0.75 yields an annual NO₂ concentration of 12.5 µg/m³. When a background concentration of 1.9 µg/m³ is added, the total WAAQS concentration is 14.4 µg/m³, which is well below the annual WAAQS standard of 100 µg/m³ and the PSD Increment value of 25.0 µg/m³. Hence, the modeling analysis shows compliance with the annual WAAQS for NO₂.

11.2 1-hr NO₂

Statewide monitoring of NO₂ on the basis of a 1-hour averaging period indicates that the 1-hour NAAQS of 100 ppb is not threatened at any of twenty-one (21) monitoring sites through 2014 (see Figure 1 below). Several of the Wyoming monitors are located in areas of concentrated industrial development. Based on the current statewide 1-hour NO₂ monitoring and the minor-source NO_x emissions total from the Stud Horse Butte 13-26 Central Facility, the Division is satisfied that the operation of the Stud Horse Butte 13-26 Central Facility will not prevent the attainment or maintenance of the 1-hour NAAQS for NO₂.

Figure 1: Monitoring for 1-Hour NO₂ in Wyoming (ppb)



Note: To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour averages must not exceed 100 ppb. Concentrations shown in the figure above from Wyoming monitoring stations are 3-year (2012-2014) averages of the 98th percentile of the daily maximum 1-hour averages. If three years of data were not available for a particular station, the 98th percentile of the daily maximum 1-hour averages over the period of available data is shown.

* Less than three (3) years of complete data reported

11.3 Formaldehyde

Annual formaldehyde concentrations were estimated to be 1.57 $\mu\text{g}/\text{m}^3$, according to the applicant's analysis. Using this concentration to estimate the associated inhalation cancer risk from the facility and surrounding sources, the cumulative inhalation risk assessment equates to approximately 2.0/100,000 people. It must be noted that this estimate is extremely conservative based on the assumption that the sampled population will be exposed to the maximum model predicted concentration of the carcinogen of interest for twenty-four (24) hours per day over a period of seventy (70) years.

12. PROPOSED PERMIT CONDITIONS

The Division proposes to issue an Air Quality Permit to Jonah Energy LLC to modify the Stud Horse Butte 13-26 Central Facility with the following conditions:

1. That authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being constructed or installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rules, standards, permits or orders.
2. That all substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as conditions of this permit.
3. That a permit to operate, in accordance with Chapter 6, Section 2(a)(iii) of the WAQSR, is required after a 120 day start-up period in order to operate this facility.
4. That all notifications, reports and correspondences associated with this permit shall be submitted to the Stationary Source Compliance Program Manager, Air Quality Division, 122 West 25th Street, Cheyenne, WY 82002 and a copy shall be submitted to the District Engineer, Air Quality Division, 510 Meadowview Drive, Lander, WY 82520. Submissions may also be done electronically through <https://airimpact.wyo.gov> to satisfy requirements of this permit.
5. That written notification of the actual date of initial start-up for each source is required fifteen (15) days after start-up in accordance with Chapter 6, Section 2(i)(ii) of the WAQSR. For the engines, such notification shall be submitted on a complete Engine Installation/Removal form. The form can be downloaded from the Air Quality website <http://deq.wyoming.gov/aqd/> or obtained from the Air Quality Division.
6. That upon shutdown and removal of an engine from the facility, written notification is required within fifteen (15) days of removal. Such notification shall be submitted on a complete Engine Installation/Removal form.
7. Unless engine replacement is specifically authorized for a unit in this permit, once an engine is removed from the facility, an engine cannot be installed and operated in its place unless authorized by an appropriate permit modification.

8. That the date of commencement of construction shall be reported to the Administrator within thirty (30) days of commencement. In accordance with Chapter 6, Section 2(h) of the WAQSR, approval to construct or modify shall become invalid if construction is not commenced within twenty-four (24) months after receipt of such approval or if construction is discontinued for a period of twenty-four (24) months or more. The Administrator may extend the period based on satisfactory justification of the requested extension.
9. That performance tests be conducted, in accordance with Chapter 6, Section 2(j) of the WAQSR, within thirty (30) days of achieving a maximum design rate but not later than ninety (90) days following initial start-up, and a written report of the results be submitted. The operator shall provide fifteen (15) days prior notice of the test date. If a maximum design rate is not achieved within ninety (90) days of start-up, the Administrator may require testing be done at the rate achieved and again when a maximum rate is achieved.
10. Initial performance tests, as required by Condition 9 of this permit, shall be conducted on the following sources:
 - i. Caterpillar G3516TA engines (ENG001-ENG002):

NO_x, CO, and VOC Emissions: Testing shall follow 40 CFR part 60, subpart JJJ §60.4244, except that §60.8 only applies to an engine subject to 40 CFR part 60, subpart JJJ. For the initial performance test, testing shall not consist of Method 19 or ASTM Methods.

A test protocol shall be submitted for review and approval prior to testing. Engine horsepower, inlet temperature to the catalyst, pressure drop across the catalyst and other operating conditions shall be recorded during each test run and submitted with the test report. Results shall be submitted to this Division within forty-five (45) days of completion.

11. That emissions from the following engines shall be limited as follows:

Engine	hp	IMPACT ID	NO _x			CO			VOC		
			g/hp-hr	lb/hr	tpy	g/hp-hr	lb/hr	tpy	g/hp-hr	lb/hr	tpy
Caterpillar G3516TA	1,029	ENG001-ENG002	0.5	1.1	5.0	1.5	3.4	14.9	0.5	1.1	5.0

12. Upon completion of the modification authorized by this permit, the engine configuration for the Stud Horse Butte 13-26 Central Facility shall be limited to two (2) engines consisting of the following:

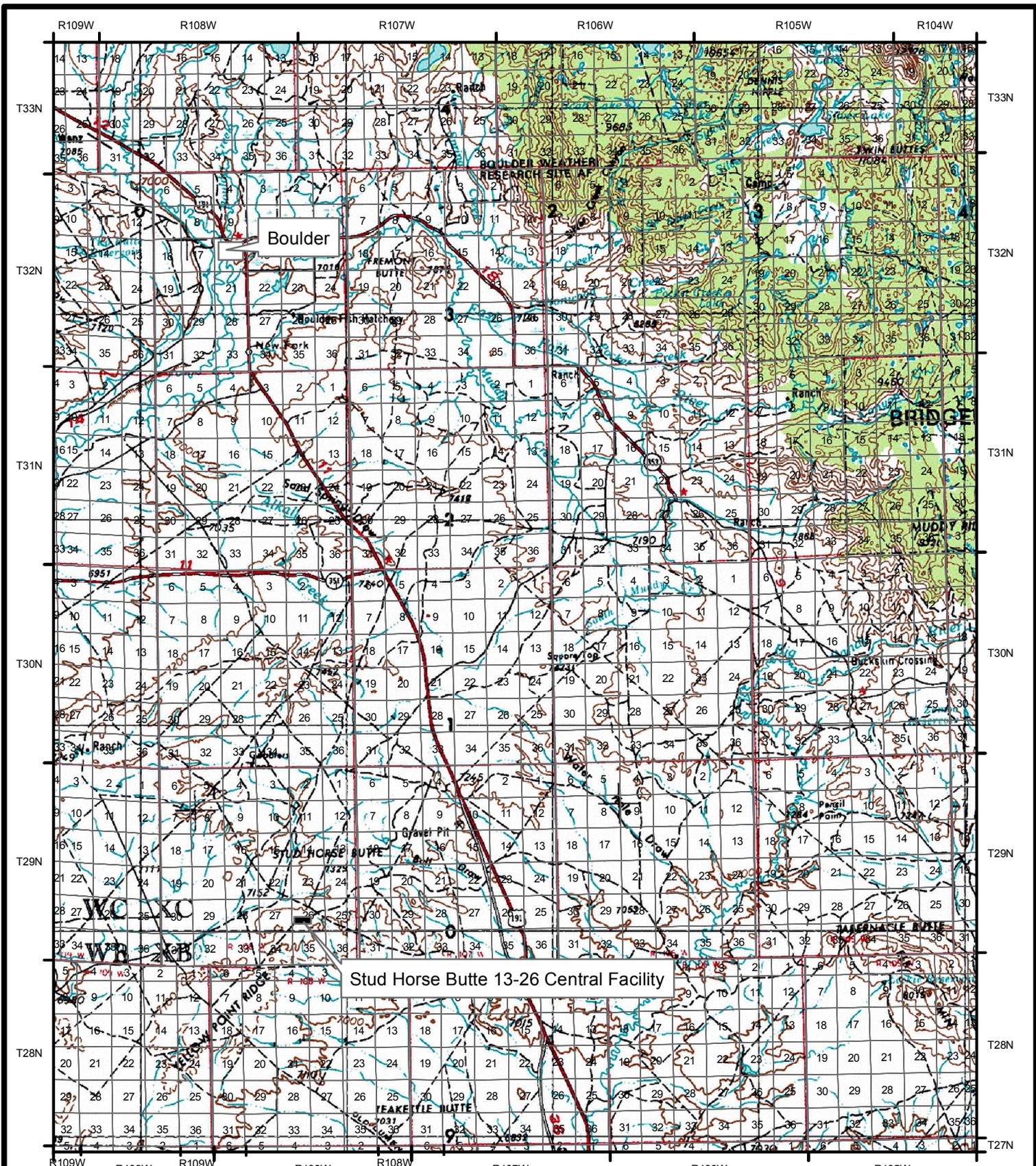
ENG001-ENG002: Caterpillar G3516TA engine equipped with an AFRC and a NSCR catalyst.

13. That Jonah Energy LLC shall follow the testing requirements as follows for engines (ENG001-ENG002):
 - i. That every twelve (12) calendar months, the engines (ENG001-ENG002) shall be tested to verify compliance with the NO_x, CO, and VOC limits set forth in this permit. Periodic testing for the engines are required within twelve (12) calendar months after completion of the initial performance test or the last periodic test. Testing for NO_x, CO and VOCs shall follow 40 CFR part 60, subpart JJJJ §60.4244, except that §60.8 only applies to engines subject to 40 CFR part 60, subpart JJJJ. Notification of the test date shall be provided to the Division fifteen (15) days prior to testing. Results of the tests shall be submitted to the Division within forty-five (45) days of completing the tests.
 - ii. The Air Quality Division shall be notified within twenty-four (24) hours of any engine where the testing/monitoring required by (i) of this condition shows operation outside the permitted emission limits. By no later than seven (7) calendar days of such testing/monitoring event, the owner or operator shall repair and retest/monitor the affected engine to demonstrate that the engine has been returned to operation within the permitted emission limits. Compliance with this permit condition regarding repair and retesting/monitoring shall not be deemed to limit the authority of the Air Quality Division to cite the owner or operator for an exceedance of the permitted emission limits for any testing/monitoring required by (i) of this condition which shows noncompliance.
14. That Jonah Energy LLC shall follow the monitoring and maintenance requirements as follows for the Caterpillar G3516TA engines (ENG001-ENG002) equipped with a NSCR catalyst:
 - i. Operate and maintain the engine, air pollution control equipment, and monitoring equipment according to good air pollution control practices at all times, including startup, shutdown, and malfunction.
 - ii. Install a thermocouple to measure the inlet catalyst temperature.
 - a. The inlet temperature shall be recorded at least monthly. If the temperature is outside of the range listed below, corrective action shall be taken.

NSCR Catalyst: 750 °F to 1250 °F
 - iii. Install a device to measure the pressure drop across the catalyst.
 - a. The pressure drop across the catalyst shall be recorded at least monthly. If the pressure changes by more than two (2) inches of water at one-hundred percent (100%) load, plus or minus ten percent (10%), from the pressure drop as determined below, corrective action shall be taken.
 1. During the initial performance test required by this permit, the reference pressure drop shall be established. When the catalyst is replaced, the reference pressure drop shall be reestablished during the subsequent periodic testing required by this permit.

- iv. Records of catalyst inlet temperature, pressure drop, and any maintenance or corrective actions shall be kept and maintained for a period of five (5) years and shall be made available to the Division upon request.
- 15. Compliance with 40 CFR part 63, subpart ZZZZ §63.6605 and §63.6640 can be used in lieu of the monitoring and maintenance requirements in Condition 14.
- 16. That the stack height for the compressor engines shall be a minimum of 1.5 times the compressor building height.
- 17. Jonah Energy LLC shall comply with all applicable requirements of 40 CFR part 60, subpart JJJJ.
- 18. Jonah Energy LLC shall comply with all applicable requirements of 40 CFR part 63, subpart ZZZZ.
- 19. Jonah Energy LLC shall comply with all applicable requirements of 40 CFR part 60, subpart OOOO.
- 20. Air Quality Permit MD-16599 shall remain in effect for the production equipment at the Stud Horse Butte 13-26 Central Facility.

Appendix A
Facility Location



Stud Horse Butte 13-26 Central Facility

Jonah Energy LLC
Stud Horse Butte 13-26 Central Facility
SW1/4 SW1/4 of Section 26, T29N, R108W
Sublette County, Wyoming



Appendix B

Offset Spreadsheet

Jonah Energy LLC - Offset Spreadsheet

AppNum	Company	Facility	PermitNumber	PermitDate	CurrentVOC	CurrentNOx	BaseVOC	BaseNOx	DeltaVOC	DeltaNOx	OffsetVOC	OffsetNOx	DemoComments	AppStatus	OffsetCompany
6758	EnCana Oil & Gas (USA)	Stud Horse Butte 4-26 Central Facility	MD-6758	5/2/2008	36.1	8.2	22	2.6	14.1	5.6	21.2	6.2	Permit Actions: MD-6758 Notes: short form application	Permit Issued	Jonah Energy
7179	EnCana Oil & Gas (USA)	Stud Horse Butte 2-34 Central Facility	MD-7179	5/2/2008	0	0	0	0	0	0	0	0	public did not comment so permit was issued	Permit Issued	Jonah Energy
7438	EnCana Oil & Gas (USA)	Stud Horse Butte 16-34R Central Facility	MD-7438	5/2/2008	19.4	4	7.7	1.5	11.7	2.5	17.8	2.8	Permit Actions: MD-7438 Notes: short form application	Permit Issued	Jonah Energy
7055	EnCana Oil & Gas (USA)	Stud Horse Butte 7-26 Central Facility	MD-7055	5/20/2008	38.1	8.6	14	3.4	24.1	5.2	36.2	5.7	Permit Actions: MD-7055 Notes: short form application	Permit Issued	Jonah Energy
7164	EnCana Oil & Gas (USA)	Yellow Point 1-13 Central Facility	MD-7164	7/1/2008	22.4	4.5	11.6	2.5	10.8	2	16.2	2.2	Permit Actions: MD-7164 Notes: short form application	Permit Issued	Jonah Energy
7855	EnCana Oil & Gas (USA)	Stud Horse Butte 10-28	MD-7855	9/16/2008	29.1	4.6	77.4	2.5	-48.3	2.1	-48.3	2.1	Permit Actions: MD-7855 Notes: this permit is already issued so no NOx offsets are required	Permit Issued	Jonah Energy
8132	EnCana Oil & Gas (USA)	Section 32 Methanol Tank	wv-8132	9/18/2008	0.3	0	0	0	0.3	0	0.3	0	Permit Actions: wv-8132 Notes:	Waiver Issued	Jonah Energy
8095	EnCana Oil & Gas (USA)	Yellow Point 4-12 Central Facility	MD-8095	9/30/2008	31.9	4.4	219	15.7	-187.1	-11.3	-187.1	-11.3	Permit Actions: MD-8095 Notes: consolidation of 29 wells which decreases the number of dehydration units / tanks now controlled at 2 of the existing wells / pneumatic pumps now controlled	Permit Issued	Jonah Energy
7905	EnCana Oil & Gas (USA)	Jonah Workforce Facility	MD-7905	10/9/2008	14.3	11.5	9.2	13	5.1	-1.5	5.1	-1.5	Permit Actions: MD-7905 Notes: Annual emissions reduction due to employee vehicle traffic of 13.0 tpy NOx, 60.0 tpy CO, 9.2 tpy VOC, and 196.1 tpy PM.	Permit Issued	Jonah Energy
7561	EnCana Oil & Gas (USA)	Jonah Field Office	wv-7561	10/27/2008	1.5	1	0	0	1.5	1	1.1	-0.1	Permit Actions: wv-7561 Notes: new facility, relinquishing authority to operate engines authorized under waivers AP-4396 and AP-4397	Waiver Issued	Jonah Energy
8785	EnCana Oil & Gas (USA)	Stud Horse Butte 53-16 Central Facility	wv-8785	12/30/2008									Temporary waiver - no offsets required.	Waiver Issued	Jonah Energy
8198	EnCana Oil & Gas (USA)	Yellow Point 1-13 Central Facility	MD-7164	1/5/2009									offset information under AP-7164 tracking log	Permit Issued	Jonah Energy
8201	EnCana Oil & Gas (USA)	Stud Horse Butte 16-34R	MD-7438	1/5/2009									offset information is under AP-7438 tracking log	Permit Issued	Jonah Energy
8203	EnCana Oil & Gas (USA)	Stud Horse Butte 4-26 CF	MD-6758	1/5/2009									offset information under AP-6758 tracking log	Permit Issued	Jonah Energy
8410	EnCana Oil & Gas (USA)	Stud Horse Butte 7-26 Central Facility	MD-7055	1/5/2009									offset information under AP-7055 tracking log	Permit Issued	Jonah Energy
9128	EnCana Oil & Gas (USA) Inc.	Section 36 Water Disposal Facility	CT-4633A	3/30/2009	1.1	2.7	1.1	2.7	0	0	0	0	Permit Actions: CT-4633A Notes: engine swap	Permit Issued	Jonah Energy
7056	EnCana Oil & Gas (USA)	Stud Horse Butte 16-26	MD-7056	4/1/2009	16.7	1.6	15.7	1.5	1	0.1	1	0.1	Permit Actions: MD-7056 Notes: would have a decrease in VOC if pneumatic pumps were controlled (modified prior to 9/1/07 so control is not required)	Permit Issued	Jonah Energy
7083	EnCana Oil & Gas (USA)	Stud Horse Butte 71-32	MD-7083	4/1/2009	13	3.4	12.3	3.3	0.7	0.1	0.7	0.1	Permit Actions: MD-7083 Notes:	Permit Issued	Jonah Energy
7162	EnCana Oil & Gas (USA)	Stud Horse Butte 48-16	CT-7162	4/1/2009	11	0.6	11	0.6	0	0	0	0	Permit Actions: CT-7162 Notes: would have a decrease in VOC if pneumatic pumps were controlled (modified prior to 9/1/07 so control is not required)	Permit Issued	Jonah Energy
7358	EnCana Oil & Gas (USA)	Stud Horse Butte 13-26 Central Facility	MD-8200	4/1/2009									Included in AP-8200	Permit Issued	Jonah Energy
7519	EnCana Oil & Gas (USA)	SAG 34-19	CT-7519	4/1/2009	12.8	0.9	10.6	0.6	2.2	0.3	2.2	0.3	Permit Actions: CT-7519 Notes:	Permit Issued	Jonah Energy
7692	EnCana Oil & Gas (USA)	Stud Horse Butte 7-15 Central Facility	MD-7692	4/1/2009	18.3	3.8	8.5	2.3	9.8	1.5	9.8	1.5	Permit Actions: MD-7692 Notes:	Permit Issued	Jonah Energy
7761	EnCana Oil & Gas (USA)	Stud Horse Butte 6-28 Central Facility	MD-7761	4/1/2009	14.2	2.2	6.4	1.3	7.8	0.9	7.8	0.9	Permit Actions: MD-7761 Notes:	Permit Issued	Jonah Energy
7807	EnCana Oil & Gas (USA)	Stud Horse Butte 32-10	CT-7807	4/1/2009	5.1	1	4.9	1	0.2	0	0.2	0	Permit Actions: CT-7807 Notes:	Permit Issued	Jonah Energy
7823	EnCana Oil & Gas (USA)	Jonah Federal 11-18	CT-8176	4/1/2009									Include in AP-8176	Permit Issued	Jonah Energy
7924	EnCana Oil & Gas (USA)	Jonah Federal 1-5 Central Facility	MD-7924	4/1/2009	13.8	3.9	25.4	2.8	-11.6	1.1	-11.6	1.1	Permit Actions: MD-7924 Notes: controlling pneumatic pumps	Permit Issued	Jonah Energy
7972	EnCana Oil & Gas (USA)	Jonah Federal 5-4 Central Facility	MD-7972	4/1/2009	28.2	6.3	19.5	2.5	8.7	3.8	8.7	3.8	Permit Actions: MD-7972 Notes:	Permit Issued	Jonah Energy
7973	EnCana Oil & Gas (USA)	SOL 9-36 Central Facility	CT-7973	4/1/2009	4.7	1.2	0	0	4.7	1.2	4.7	1.2	Permit Actions: CT-7973 Notes:	Permit Issued	Jonah Energy
7974	EnCana Oil & Gas (USA)	Stud Horse Butte 12-36 Central Facility	MD-7974	4/1/2009	28.1	6.1	90.4	3.7	-62.3	2.4	-62.3	2.5	Permit Actions: MD-7974 Notes: consolidating wells and controlling previously uncontrolled tanks and dehydration units	Permit Issued	Jonah Energy
7975	EnCana Oil & Gas (USA)	Corona-Stud Horse Butte 15-19 Central Facility	MD-7975	4/1/2009	29.3	6.5	81.7	1.7	-52.4	4.8	-52.4	4.8	Permit Actions: MD-7975 Notes: addition of 3 existing wells that had no dehy/tank controls and 1 well with no dehy controls	Permit Issued	Jonah Energy
8035	EnCana Oil & Gas (USA)	Corona-Stud Horse Butte 10-31 Central Facility	MD-8035	4/1/2009	29.3	6.8	89.8	4.2	-60.5	2.6	-60.5	2.6	Permit Actions: MD-8035 Notes: addition of 3 existing wells that had no dehy or tank controls	Permit Issued	Jonah Energy
8104	EnCana Oil & Gas (USA)	Stud Horse Butte 4-27 Central Facility	MD-8104	4/1/2009	22.6	4.5	34.7	1.5	-12.1	3	-12.1	3	Permit Actions: MD-8104 Notes: adding well to CF that has no dehy controls	Permit Issued	Jonah Energy
8109	EnCana Oil & Gas (USA)	Corona 3-31 Central Facility	MD-8109	4/1/2009	20.1	3.6	20.9	1	-0.8	2.6	-0.8	2.6	Permit Actions: MD-8109 Notes:	Permit Issued	Jonah Energy
8110	EnCana Oil & Gas (USA)	Stud Horse Butte 11-26 Central Facility	MD-8110	4/1/2009	35.1	8.8	18.2	2.1	16.9	6.7	16.9	6.7	Permit Actions: MD-8110 Notes:	Permit Issued	Jonah Energy
8176	EnCana Oil & Gas (USA)	Jonah Federal 11-18 Central Facility	CT-8176	4/1/2009	11.3	2.3	5.3	1.5	6	0.8	9	0.9	Permit Actions: CT-8176 Notes:	Permit Issued	Jonah Energy
8199	EnCana Oil & Gas (USA)	Yellow Point 8-13	MD-8199	4/1/2009	18.4	3.4	9.2	1.4	9.2	2	13.8	2.2	Permit Actions: MD-8199 Notes:	Permit Issued	Jonah Energy
8200	EnCana Oil & Gas (USA)	Stud Horse Butte 13-26 CF	MD-8200	4/1/2009	31.8	7.6	16.3	4.1	15.5	3.5	23.3	3.9	Permit Actions: MD-8200 Notes:	Permit Issued	Jonah Energy
8202	EnCana Oil & Gas (USA)	Stud Horse Butte 11-17 CF	MD-8202	4/1/2009	30.5	6.1	57.1	1.7	-26.6	4.4	-26.6	4.8	Permit Actions: MD-8202 Notes: decrease due to consolidation of previously uncontrolled equipment	Permit Issued	Jonah Energy
8326	EnCana Oil & Gas (USA)	Jonah Federal 1-6 Central Facility	MD-8326	4/1/2009	22.7	5.2	45.6	3.4	-22.9	1.8	-22.9	2	Permit Actions: MD-8326 Notes: decrease due to consolidation of previously uncontrolled equipment	Permit Issued	Jonah Energy
8357	EnCana Oil & Gas (USA)	Yellow Point 2-1 Central Facility	MD-8357	4/1/2009	23	4.9	25	2.5	-2	2.4	-2	2.6	Permit Actions: MD-8357 Notes: controlling pneumatic pumps	Permit Issued	Jonah Energy
8358	EnCana Oil & Gas (USA)	Stud Horse Butte 10-33	MD-8358	4/1/2009	18.1	4.4	22.3	5.4	-4.2	-1	-4.2	-1	Permit Actions: MD-8358 Notes: controlling pneumatic pumps / less heaters	Permit Issued	Jonah Energy
8440	EnCana Oil & Gas (USA)	Corona Stud Horse Butte 10-30 Central Facility	MD-8440	4/1/2009	27.3	8.3	77.5	2.6	-50.2	5.7	-50.2	6.3	Permit Actions: MD-8440 Notes: consolidating wells and controlling previously uncontrolled tanks and dehydration units	Permit Issued	Jonah Energy
8441	EnCana Oil & Gas (USA)	Stud Horse Butte 11-36 Central Facility	MD-8441	4/1/2009	18.5	4.1	62.5	1.6	-44	2.5	-44	2.8	Permit Actions: MD-8441 Notes: consolidating wells and controlling previously uncontrolled tanks and dehydration units	Permit Issued	Jonah Energy

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8458	EnCana Oil & Gas (USA)	Jonah 1-8 Central Facility	MD-8458	4/1/2009	14.4	2.9	23.9	0.3	-9.5	2.6	-9.5	2.9	Permit Actions: MD-8458 Notes: controlling previously uncontrolled well	Permit Issued	Jonah Energy
8467	EnCana Oil & Gas (USA)	Stud Horse Butte 7-36 Central Facility	MD-8467	4/1/2009	15.7	2.9	43.8	0.9	-28.1	2	-28.1	2.2	Permit Actions: MD-8467 Notes: consolidating wells and controlling previously uncontrolled tanks and dehydration units	Permit Issued	Jonah Energy
8489	EnCana Oil & Gas (USA)	SOL 2-2	CT-8489	4/1/2009	4.3	0.9	0	0	4.3	0.9	6.5	1	Permit Actions: CT-8489 Notes:	Permit Issued	Jonah Energy
8490	EnCana Oil & Gas (USA)	Stud Horse Butte 11-20 Central Facility	MD-8490	4/1/2009	35.6	8.9	144.4	7.1	-108.8	1.8	-108.8	2	Permit Actions: MD-8490 Notes: consolidating wells and controlling previously uncontrolled tanks and dehydration units	Permit Issued	Jonah Energy
8498	EnCana Oil & Gas (USA)	Stud Horse Butte 16-18 Central Facility	MD-8498	4/1/2009	9.4	2.6	20	0.4	-10.6	2.2	-10.6	2.4	Permit Actions: MD-8498 Notes: controlling previously uncontrolled dehy/tank emissions	Permit Issued	Jonah Energy
8566	EnCana Oil & Gas (USA)	Stud Horse Butte 122-10	MD-8566	4/1/2009	18.2	3.7	16.4	0.4	1.8	3.3	2.7	3.6	Permit Actions: MD-8566 Notes:	Permit Issued	Jonah Energy
8620	EnCana Oil & Gas (USA)	Yellow Point 16-13 Central Facility	CT-8620	4/1/2009	11.6	2.8	0	0	11.6	2.8	17.4	3.1	Permit Actions: CT-8620 Notes:	Permit Issued	Jonah Energy
OFF51	EnCana Oil & Gas (USA)			4/1/2009								76.9	recognize offset trade VOC for Nox, one time trade addressed in the analyses (see AP-8440) and in the decision document (Encana_JPAD_2_9_09decision).		Jonah Energy
9165	EnCana Oil & Gas (USA)	Jonah Workforce Facility	MD-7905A	4/22/2009								0	No change in NOx or VOC emissions; no offset required	Permit Issued	Jonah Energy
9215	EnCana Oil & Gas (USA)	Yellow Point 1-12 Pad	wv-9215	4/28/2009								0	Temporary waiver - no offsets required.	Waiver Issued	Jonah Energy
9058	EnCana Oil & Gas (USA)	Stud Horse Butte 13-26 Central Facility	MD-8200	4/29/2009	31.8	7.6	31.8	7.6	0	0	0	0	Permit Actions: MD-8200 Notes: short form application - letter sent	Waiver Issued	Jonah Energy
9181	EnCana Oil & Gas (USA)	Corona Stud Horse Butte 10-30 Central Facility	MD-8440	4/30/2009	27.3	8.3	27.3	8.3	0	0	0	0	Permit Actions: MD-8440 Notes: short form application - letter sent permitting at current production instead of maximum design capacity	Waiver Issued	Jonah Energy
9730	EnCana Oil & Gas (USA)	Corona-Stud Horse Butte 15-19 Central Facility	MD-7975	8/24/2009	11	2.6	29.3	6.5	-18.3	-3.9	-18.3	-3.9	permitted at current production instead of maximum design capacity	Waiver Issued	Jonah Energy
9772	EnCana Oil & Gas (USA)	Yellow Point 1-13 Central Facility	MD-7164	8/24/2009	8.4	2.2	22.4	4.5	-14	-2.3	-14	-2.3		Waiver Issued	Jonah Energy
9674	EnCana Oil & Gas (USA)	Jonah Workforce Facility	MD-7905A2	9/9/2009	0	0	0	0	0	0	0	0	No change in emissions	Permit Issued	Jonah Energy
8673	EnCana Oil & Gas (USA)	Stud Horse Butte 16-26 Central Facility	MD-7056	10/26/2009	14.8	2.9	16.7	1.6	-1.9	1.3	-1.9	1.4	Permit Actions: AP-8673 / MD-7056 Notes: decrease in operating pressure, decreased flashing emissions	Waiver Issued	Jonah Energy
9094	EnCana Oil & Gas (USA)	Corona-Stud Horse Butte 10-31 Central Facility	MD-8035	10/26/2009	33.5	7.1	29.3	6.8	4.2	0.3	6.3	0.3	Permit Actions: AP-9094 Notes: short form application	Waiver Issued	Jonah Energy
9254	EnCana Oil & Gas (USA)	SOL 9-36 Central Facility	CT-7973	10/26/2009	7.8	2	4.7	1.2	3.1	0.8	4.7	0.9	Permit Actions: MD-8440 Notes: short form application	Waiver Issued	Jonah Energy
9386	EnCana Oil & Gas (USA)	Stud Horse Butte 12-15 Central Facility	MD-7782	10/26/2009	27.4	6.9	22.7	2.5	4.7	4.4	7.1	4.8	Permit Actions: AP-9386 Notes: consolidating wells that previously did not require controls and reducing equipment	Waiver Issued	Jonah Energy
9450	EnCana Oil & Gas (USA)	Stud Horse Butte 3-27 Central Facility	MD-7696	10/26/2009	24.9	4.8	104.5	2	-79.6	2.8	-79.6	3.1	permitted at current production instead of maximum design capacity	Waiver Issued	Jonah Energy
9655	EnCana Oil & Gas (USA)	Stud Horse Butte 11-17 Central Facility	MD-8202	10/26/2009	30.5	6	30.5	6.1	0	-0.1	0	-0.1		Waiver Issued	Jonah Energy
9800	EnCana Oil & Gas (USA)	Stud Horse Butte 4-26 Central Facility	MD-6758	10/26/2009	27.5	8.9	36.1	8.2	-8.6	0.7	-8.6	0.8		Permit Issued	Jonah Energy
10006	EnCana Oil & Gas (USA)	Jonah Office Building Removal	wv-10006	11/17/2009	0.1	0.2	1.5	1	-1.4	-0.8	-1.4	-0.8	Note: removal of one (1) 217 hp Generac SG140 generator engine (E2) and hour reduction of 217 hp Generac SG140 generator engine (E2) to 500 hours per year emissions were calculated using current actual production instead of equipment design production.	Waiver Issued	Jonah Energy
10009	EnCana Oil & Gas (USA)	Yellow Point 8-13 Central Facility	MD-8199	11/25/2009	9	2.6	18.4	3.4	-9.4	-0.8	-9.4	-0.8		Waiver Issued	Jonah Energy
10027	EnCana Oil & Gas (USA)	Stud Horse Butte 2-34	MD-7179	11/25/2009	9.6	3.4	9.4	3	0.2	0.4	0.3	0.4		Waiver Issued	Jonah Energy
10105	EnCana Oil & Gas (USA)	Stud Horse Butte 11-17 Central Facility	MD-8202	11/30/2009	28.1	7.3	30.5	6.2	-2.4	1.1	-2.4	1.2	reduction in dehydration units	Waiver Issued	Jonah Energy
8553	EnCana Oil & Gas (USA) Inc.	Jonah Storage Yard	MD-8553	12/10/2009	0.2	0.5	0	0	0.2	0.5	0.3	0.6	install engine	Permit Issued	Jonah Energy
10159	EnCana Oil & Gas (USA)	Jonah Federal 5-4 Central Facility	MD-7972	12/11/2009	7.6	1.5	28.2	6.3	-20.6	-4.8	-20.6	-4.8	modified facility - emissions calculated using current actual production instead of equipment design production.	Waiver Issued	Jonah Energy
10179	EnCana Oil & Gas (USA)	Stud Horse Butte 12-36 Central Facility	MD-7974	12/11/2009	10.8	3.2	28.1	6.1	-17.3	-2.9	-17.3	-2.9	modified facility - emissions calculated using current actual production instead of equipment design production	Waiver Issued	Jonah Energy
10251	EnCana Oil & Gas (USA)	Stud Horse Butte 11-36 Central Facility	MD-8441	1/4/2010	11.6	3.5	18.5	4.1	-6.9	-0.6	-6.9	-0.6	calculated emissions using current actual production instead of equipment design production	Waiver Issued	Jonah Energy
8122	EnCana Oil & Gas (USA) Inc.	Drill Rig Fleet	CT-8122	1/4/2010	79	282	97.1	457.1	-18.1	-175.1	-18.1	-175.1	drill rig fleet	Permit Issued	Jonah Energy
9725	EnCana Oil & Gas (USA) Inc.	Section 36 Water Management Facility	MD-9725	1/7/2010	11.9	15.2	11.9	3	0	12.2	0	13.4	modify water handling facility	Permit Issued	Jonah Energy
7348	EnCana Oil & Gas (USA)	Stud Horse Butte 11-22 Central Facility	MD-7348	1/13/2010	31.9	6.8	12.6	3.4	19.3	3.4	19.3	3.4	Permit Actions: AP-7348 Notes:	Permit Issued	Jonah Energy
8758	EnCana Oil & Gas (USA)	Hacienda 6-17A	CT-8758	1/13/2010	4.4	0.7	0	0	4.4	0.7	6.6	0.8	Permit Actions: AP-8758 Notes:	Permit Issued	Jonah Energy
8759	EnCana Oil & Gas (USA)	Stud Horse Butte 2-36 Central Facility	MD-8759	1/13/2010	22.7	4.1	20.3	2.2	2.4	1.9	3.6	2.1	Permit Actions: AP-8759 Notes:	Permit Issued	Jonah Energy
8760	EnCana Oil & Gas (USA)	Stud Horse Butte3-36 Central Facility	MD-8760	1/13/2010	20.6	4.1	64.1	3.2	-43.5	0.9	-43.5	1	Permit Actions: AP-8760 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy
8766	EnCana Oil & Gas (USA)	Stud Horse Butte 11-34 Central Facility	MD-8766	1/13/2010	17.8	3.7	60.5	2.3	-42.7	1.4	-42.7	1.5	Permit Actions: AP-8766 Notes: consolidating wells that previously required no controls	Permit Issued	Jonah Energy
8767	EnCana Oil & Gas (USA)	Stud Horse Butte 1-36 CF	MD-8767	1/13/2010	24.7	4.5	43.2	1.9	-18.5	2.6	-18.5	2.9	Permit Actions: AP-8767 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy
8776	EnCana Oil & Gas (USA)	Stud Horse Butte 12-29 Central Facility	MD-8776	1/13/2010	23.1	4.4	92.3	1.6	-69.2	2.8	-69.2	3.1	Permit Actions: AP-8776 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy
8820	EnCana Oil & Gas (USA)	Stud Horse Butte 8-14 Central Facility	MD-8820	1/13/2010	19.3	3.7	16.7	0.4	2.6	3.3	3.9	3.6	Permit Actions: AP-8820 Notes:	Permit Issued	Jonah Energy
8881	EnCana Oil & Gas (USA)	Stud Horse Butte 84-9 Central Facility	CT-8881	1/13/2010	20.1	4	34.8	0.8	-14.7	3.2	-14.7	3.5	Permit Actions: AP-8881 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy

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8912	EnCana Oil & Gas (USA)	Stud Horse Butte 1-29 Central Facility	MD-8912	1/13/2010	23	4.3	213	4.8	-190	-0.5	-190	-0.5	Permit Actions: AP-8912 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy
8919	EnCana Oil & Gas (USA)	Hacienda 6-19 Central Facility	MD-8919	1/13/2010	5.7	1.1	17.3	0.4	-11.6	0.7	-11.6	0.8	Permit Actions: AP-8919 Notes: controlling tanks, dehyds and pumps that didn't previously require controls	Permit Issued	Jonah Energy
8922	EnCana Oil & Gas (USA)	Yellow Point 10-13 Central Facility	MD-8922	1/13/2010	20.4	3.5	87.6	3.4	-67.2	0.1	-67.2	0.1	Permit Actions: AP-8922 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy
8923	EnCana Oil & Gas (USA)	Crimson Federal 15-24	CT-8923	1/13/2010	4.6	0.6	0	0	4.6	0.6	6.9	0.7	Permit Actions: AP-8923 Notes:	Permit Issued	Jonah Energy
9059	EnCana Oil & Gas (USA)	Stud Horse Butte 48-22 Central Facility	CT-9059	1/13/2010	20.7	4.2	0	0	20.7	4.2	31.1	4.6	Permit Actions: AP-9059 Notes:	Permit Issued	Jonah Energy
9065	EnCana Oil & Gas (USA)	Crimson State 10-36	CT-9065	1/13/2010	3.9	0.6	0	0	3.9	0.6	5.9	0.7	Permit Actions: AP-9065 Notes:	Permit Issued	Jonah Energy
9070	EnCana Oil & Gas (USA)	Crimson Unit 2-18	CT-9070	1/13/2010	4.4	0.6	0	0	4.4	0.6	6.6	0.7	Permit Actions: AP-9070 Notes:	Permit Issued	Jonah Energy
9149	EnCana Oil & Gas (USA)	Stud Horse Butte 124-11 Central Facility	MD-9149	1/13/2010	16.1	3.8	17.9	0.1	-1.8	3.7	-1.8	4.1	Permit Actions: AP-9149 Notes:	Permit Issued	Jonah Energy
9208	EnCana Oil & Gas (USA)	Crimson Federal 7-35	CT-9208	1/13/2010	0.8	0.5	0	0	0.8	0.5	1.2	0.6	Permit Actions: AP-9208 Notes:	Permit Issued	Jonah Energy
9253	EnCana Oil & Gas (USA)	Stud Horse Butte 1-27	MD-9253	1/13/2010	19.1	5	61.5	9.6	-42.4	-4.6	-42.4	-4.6	Permit Actions: AP-9253 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy
9282	EnCana Oil & Gas (USA)	Cabrillo 2-31 Central Facility	MD-9282	1/14/2010	8.6	1.9	10.7	1	-2.1	0.9	-2.1	1	Permit Actions: AP-9282 Notes: controlling pneumatic pumps	Permit Issued	Jonah Energy
9283	EnCana Oil & Gas (USA)	Crimson Unit 8-31	CT-9283	1/14/2010	0.8	0.5	0	0	0.8	0.5	1.2	0.6	Permit Actions: AP-9283 Notes:	Permit Issued	Jonah Energy
9351	EnCana Oil & Gas (USA)	Stud Horse Butte 16-28/9-28 Central Facility	MD-9351	1/14/2010	7.3	2.2	36.4	1.8	-29.1	0.4	-29.1	0.4	Permit Actions: AP-9351 Notes: consolidating wells and controlling previously uncontrolled equipment	Permit Issued	Jonah Energy
9354	EnCana Oil & Gas (USA)	Hacienda 5-20	CT-9354	1/14/2010	2.6	0.8	0	0	2.6	0.8	3.9	0.9	Permit Actions: AP-9354 Notes:	Permit Issued	Jonah Energy
9451	EnCana Oil & Gas (USA)	Hacienda 12-21	CT-9451	1/14/2010	1.7	0.7	0	0	1.7	0.7	2.6	0.8	Permit Actions: AP-9451 Notes:	Permit Issued	Jonah Energy
9455	EnCana Oil & Gas (USA)	Stud Horse Butte 2-28 Central Facility	MD-9455	1/14/2010	18.9	4.6	14	2.6	4.9	2	7.4	2.2	Permit Actions: AP-9455 Notes:	Permit Issued	Jonah Energy
9456	EnCana Oil & Gas (USA)	Stud Horse Butte 15-28 Central Facility	MD-9456	1/14/2010	18.7	4.7	5.8	3.3	12.9	1.4	19.4	1.5	Permit Actions: AP-9456 Notes:	Permit Issued	Jonah Energy
9476	EnCana Oil & Gas (USA)	Yellow Point 10-14 Central Facility	MD-9476	1/14/2010	12.6	3.3	7.5	3.1	5.1	0.2	7.7	0.2	Permit Actions: AP-9476 Notes:	Permit Issued	Jonah Energy
9500	EnCana Oil & Gas (USA)	Crimson Federal 2-13	CT-9500	1/14/2010	1.4	0.6	0	0	1.4	0.6	2.1	0.7	Permit Actions: AP-9500 Notes:	Permit Issued	Jonah Energy
9592	EnCana Oil & Gas (USA)	Jonah Federal 2-8X Central Facility	MD-9592	1/14/2010	8.3	2.8	8.5	3.6	-0.2	-0.8	-0.2	-0.8	Permit Actions: AP-9592 Notes: production decline	Permit Issued	Jonah Energy
9654	EnCana Oil & Gas (USA)	Cabrillo 8-25 Central Facility	MD-9654	1/14/2010	13.9	3.7	16.5	4.8	-2.6	-1.1	-2.6	-1.1	Permit Actions: AP-9654 Notes: production decline	Permit Issued	Jonah Energy
9903	EnCana Oil & Gas (USA)	Stud Horse Butte 53-16 Central Facility	MD-9903	1/14/2010	9.4	2.4	10.9	0.9	-1.5	1.5	-1.5	1.7	Permit Actions: AP-9903 Notes: controlled pneumatic pumps	Permit Issued	Jonah Energy
8649	EnCana Oil & Gas (USA)	Holmes State 1-36	CT-8649	1/19/2010	2.2	0.5	0	0	2.2	0.5	3.3	0.6	Permit Actions: AP-8649 Notes:	Permit Issued	Jonah Energy
8672	EnCana Oil & Gas (USA)	Crimson State 12-36	CT-8672	1/19/2010	2.6	0.5	0	0	2.6	0.5	3.9	0.6	Permit Actions: AP-8672 Notes:	Permit Issued	Jonah Energy
8691	EnCana Oil & Gas (USA)	Cabrillo 7-30 Central Facility	MD-8691	1/19/2010	18.3	3.9	19	1.5	-0.7	2.4	-0.7	2.6	Permit Actions: AP-8691 Notes: controlling pneumatic pumps that did not require controls as of April 1, 2008	Permit Issued	Jonah Energy
8692	EnCana Oil & Gas (USA)	Yellow Point 1-12 Central Facility	MD-8692	1/19/2010	14.8	3.9	50.4	4.9	-35.6	-1	-35.6	-1	Permit Actions: AP-8692 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy
8704	EnCana Oil & Gas (USA)	Jonah Federal 5-6 Central Facility	MD-8704	1/19/2010	14.2	2.9	14.2	1.5	0	1.4	0	1.5	Permit Actions: AP-8704 Notes:	Permit Issued	Jonah Energy
8709	EnCana Oil & Gas (USA)	Stud Horse Butte 3-34 Central Facility	MD-8709	1/19/2010	14.3	4.2	43.5	1.4	-29.2	2.8	-29.2	3.1	Permit Actions: AP-8709 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy
8744	EnCana Oil & Gas (USA)	Cabrillo 13-30 Central Facility	MD-8744	1/19/2010	43.2	8.6	77.5	2	-34.3	6.6	-34.3	7.3	Permit Actions: AP-8744 Notes: consolidating wells that previously required no controls and decrease in pneumatic pumps	Permit Issued	Jonah Energy
8748	EnCana Oil & Gas (USA)	Crimson Federal 16-14	CT-8748	1/19/2010	5.3	0.8	0	0	5.3	0.8	8	0.9	Permit Actions: AP-8748 Notes:	Permit Issued	Jonah Energy
8749	EnCana Oil & Gas (USA)	Crimson Fedreal 16-2	CT-8749	1/19/2010	3	0.5	0	0	3	0.5	4.5	0.6	Permit Actions: AP-8749 Notes:	Permit Issued	Jonah Energy
8750	EnCana Oil & Gas (USA)	Yellow Point 1-34	CT-8750	1/19/2010	2.9	0.5	0	0	2.9	0.5	4.4	0.6	Permit Actions: AP-8750 Notes:	Permit Issued	Jonah Energy
9216	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 1-34 Central Facility	MD-9216	1/20/2010	9.9	2.3	11.4	1.6	-1.5	0.7	-1.5	0.8	Permit Actions: AP-9216 Notes: reduction in dehydration units and controlling pneumatic pumps	Permit Issued	Jonah Energy
10149	EnCana Oil & Gas (USA)	Cabrillo 61-13	CT-10149	2/5/2010	4.9	1.4	0	0	4.9	1.4	7.4	1.5	Permit Actions: AP-10149 Notes: new facility	Permit Issued	Jonah Energy
10180	EnCana Oil & Gas (USA)	Stud Horse Butte 3-36 Central Facility	MD-8760	2/19/2010	6.7	1.8	20.6	4.1	-13.9	-2.3	-13.9	-2.3	Permit Actions: AP-10180 Notes: modified facility - emissions are calculated using current actual production instead of equipment design production as in the previous permit.	Waiver Issued	Jonah Energy
10195	EnCana Oil & Gas (USA)	Stud Horse Butte 2-36 Central Facility	MD-8759	2/19/2010	11.9	3.1	22.7	4.1	-10.8	-1	-10.8	-1	Permit Actions: AP-10195 Notes: modified facility - emissions are calculated using current actual production instead of equipment design production as in the previous permit.	Waiver Issued	Jonah Energy
10216	EnCana Oil & Gas (USA)	Stud Horse Butte 4-33 Central Facility	MD-10216	2/23/2010	3.3	1.4	9.1	0.7	-5.8	0.7	-5.8	0.8	Permit Actions: AP-10216 Notes: controlling pneumatic pumps that previously didn't require controls	Permit Issued	Jonah Energy
10261	EnCana Oil & Gas (USA)	Jonah Federal 3-5 CF	MD-10261	2/23/2010	3.3	1.2	9.1	0.8	-5.8	0.4	-5.8	0.4	Permit Actions: AP-10261 Notes: controlling pneumatic pumps that didn't previously require controls	Permit Issued	Jonah Energy
10324	EnCana Oil & Gas (USA)	Section 4 Drilling Crude Oil Storage Tank Facility	wv-10324	2/23/2010	4.8		0		4.8		7.2		Permit Actions: AP-10324 Notes: installation of eight (8) 400 bbl drilling oil storage tanks	Waiver Issued	Jonah Energy
10349	EnCana Oil & Gas (USA)	Stud Horse Butte 4-27 Central Facility	MD-8104	2/25/2010	5.6	1.8	22.6	4.5	-17	-2.7	-17	-2.7	Permit Actions: AP-10349 Notes: removed dehydration unit and permitting using current actual production rates calculations used current actual production instead of equipment design	Waiver Issued	Jonah Energy
10384	EnCana Oil & Gas (USA)	Stude Horse Butte 11-22 Central Facility	MD-7348	2/25/2010	12.3	3.2	31.9	6.8	-19.6	-3.6	-19.6	-3.6	Permit Actions: AP-10384 Notes: production	Waiver Issued	Jonah Energy
10431	EnCana Oil & Gas (USA)	Jonah Federal 2-8X Central Facility	MD-9592	3/15/2010	19.3	3	8.3	2.8	11	0.2	16.5	0.2	Permit Actions: AP-10431 Notes:	Waiver Issued	Jonah Energy
10430	EnCana Oil & Gas (USA)	Section 32 Methanol Tank	wv-10430	3/17/2010	0.5	0	0.3	0	0.2	0	0.2	0	Permit Actions: AP-10430 Notes:	Waiver Issued	Jonah Energy
10482	EnCana Oil & Gas (USA)	Stud Horse Butte 122-10W	wv-10482	3/18/2010	0.3	0.3	0	0	0.3	0.3	0.5	0.3	Permit Actions: AP-10482 Notes: one (1) 105 hp Kohler 60RZG natural gas fired generator engine	Waiver Issued	Jonah Energy
10501	EnCana Oil & Gas (USA)	Stud Horse Butte 07-36 Central Facility	MD-8467	3/23/2010	9.9	1.7	15.7	2.9	-5.8	-1.2	-5.8	-1.2	Permit Actions: AP-10501 Notes:	Waiver Issued	Jonah Energy
9983	EnCana Oil & Gas (USA) Inc.	SOL 95-18 Water Management Facility	CT-9983	3/23/2010	18.2	6.6	0	0	18.2	6.6	27.3	7.3	Permit Actions: AP-9983 Notes: construct the SOL 95-18 Water Management Facility	Permit Issued	Jonah Energy
10552	EnCana Oil & Gas (USA)	Stud Horse Butte 3-27 Central Facility	MD-7696	4/16/2010	25.2	2.9	24.9	4.8	0.3	-1.9	0.5	-1.9	Permit Actions: AP-10552 Notes: permitted using current production rates	Waiver Issued	Jonah Energy
10589	Encana Corporation	Stud Horse Butte 84-09 Central Facility	CT-8881	4/22/2010	24.5	4.7	20.1	4	4.4	0.7	6.6	0.8	Permit Actions: AP-10589 Notes:	Waiver Issued	Jonah Energy

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10423	Encana Corporation	Jonah Federal 4-18 Central Facility	MD-10423	5/12/2010	10.8	1.3	19.5	0.5	-8.7	0.8	-8.7	0.9	controlling/eliminating equipment that did not previously require controls	Permit Issued	Jonah Energy
10632	EnCana Oil & Gas (USA)	Stud Horse Butte 4-36 Water Well	wv-10632	5/12/2010	0.4	0.3	0	0	0.4	0.3	0.6	0.3	Note: one (1) 105 hp Kohler field gas fired generator engine	Waiver Issued	Jonah Energy
10699	EnCana Oil & Gas (USA)	SAG 34-19 Central Facility	CT-7519	5/27/2010	11.3	2.2	12.8	0.9	-1.5	1.3	-1.5	1.4		Waiver Issued	Jonah Energy
10723	EnCana Oil & Gas (USA)	Stud Horse Butte 07-15 Central Facility	MD-7692	5/27/2010	18.5	4.1	18.3	3.8	0.2	0.3	0.3	0.3		Waiver Issued	Jonah Energy
10192	EnCana Oil & Gas (USA)	Stud Horse Butte 7-22 Central Facility	MD-10192	5/28/2010	8.9	2.8	4.5	1.5	4.4	1.3	6.6	1.4		Permit Issued	Jonah Energy
10517	EnCana Oil & Gas (USA)	Jonah Federal 1-4X Central Facility	MD-10517	6/2/2010	9.6	1.6	41.8	1.9	-32.2	-0.3	-32.2	-0.3	consolidating wells that previously didn't require controls	Permit Issued	Jonah Energy
10637	EnCana Oil & Gas (USA)	Jonah Storage Yard	wv-10637	6/21/2010	2.9	3.6	2.9	3.6	0	0	0.1	0	increase VOC emission rate to 1.0 g/hp-hr for 72 hp Ford LRG425 engine -offsets adjusted to nearest 10th, 1/23/2013, CAA controlling tank, dehydration unit and pneumatic pump emissions that previously	Waiver Issued	Jonah Energy
10700	EnCana Oil & Gas (USA)	Tot Federal #1	MD-10700	7/16/2010	6.3	0.8	29.4	0.6	-23.1	0.2	-23.1	0.2	did not require controls	Permit Issued	Jonah Energy
10806	EnCana Oil & Gas (USA)	Stud Horse Butte 1-32 Central Facility	MD-10806	7/29/2010	12.2	1.9	29.4	2.3	-17.2	-0.4	-17.2	-0.4	controlling/eliminating pneumatic pumps	Permit Issued	Jonah Energy
10972	EnCana Oil & Gas (USA)	Stud Horse Butte 53-16 Central Facility	MD-9903	8/9/2010	23.9	4.4	9.4	2.4	14.5	2	21.8	2.2		Waiver Issued	Jonah Energy
11014	EnCana Oil & Gas (USA)	Stud Horse Butte 13-26 Central Facility	MD-8200	8/11/2010	27.3	3.8	31.8	7.6	-4.5	-3.8	-4.5	-3.8	using current actual emissions instead of equipment design emissions	Waiver Issued	Jonah Energy
11016	EnCana Oil & Gas (USA)	Stud Horse Butte 1-29 Central Facility	MD-8912	8/16/2010	22.6	5.1	23	4.3	-0.4	0.8	-0.4	0.9		Waiver Issued	Jonah Energy
11048	EnCana Oil & Gas (USA)	Stud Horse Butte 11-26 Central Facility	MD-8110	8/20/2010	18.9	3	35.1	8.8	-16.2	-5.8	-16.2	-5.8	emissions calculated based on current actual production rather than equipment design production	Waiver Issued	Jonah Energy
10991	EnCana Oil & Gas (USA)	Cabrillo 14-25	wv-10991	9/1/2010									no offset required because engine is temporary (less than 12 months)	Waiver Issued	Jonah Energy
10925	EnCana Oil & Gas (USA)	Cabrillo 13-19 Central Facility	MD-10925	9/3/2010	24	3.6	52.5	2.5	-28.5	1.1	-28.5	1.2	consolidating wells and controlling tank, dehydration unit and pneumatic pump emissions that previously did not require controls	Permit Issued	Jonah Energy
10992	EnCana Oil & Gas (USA)	Stud Horse Butte 48-17	wv-10992-1&2	9/28/2010									offsets are not required for this permitting action as the separator is a temporary source and emission increases are temporary	Waiver Issued	Jonah Energy
11015	EnCana Oil & Gas (USA)	Stud Horse Butte 4-28	MD-11015	9/28/2010	13.6	4	21.8	0.5	-8.2	3.5	-8.2	3.9	controlling dehydration unit that did not require controls under previous permit	Permit Issued	Jonah Energy
11018	EnCana Oil & Gas (USA)	Stud Horse Butte 84-9	wv-11018-1&2	9/29/2010									offsets are not required for this permitting action as the combustion device is a temporary source and there are no emission increases	Waiver Issued	Jonah Energy
11082	EnCana Oil & Gas (USA)	Stud Horse Butte 48-16 Central Facility	CT-7162	9/29/2010	6.5	0.8	11	0.6	-4.5	0.2	-4.5	0.2	permitting at current actual production instead of equipment design	Waiver Issued	Jonah Energy
11149	EnCana Oil & Gas (USA)	Stud Horse Butte 1-34 Central Facility	MD-9216	10/27/2010	9.4	1.5	9.9	2.3	-0.5	-0.8	-0.5	-0.8		Waiver Issued	Jonah Energy
11161	EnCana Oil & Gas (USA)	Stud Horse Butte 11-20 Central Facility	MD-8490	10/28/2010	28.5	5.1	51.3	8.9	-22.8	-3.5	-22.8	-3.5	permitting at current actual production instead of equipment design	Waiver Issued	Jonah Energy
11252	EnCana Oil & Gas (USA)	Stud Horse Butte 2-36 Central Facility	wv-11252	11/2/2010									Note: temporary waiver limited to one (1) year. No offsets required.	Waiver Issued	Jonah Energy
11205	EnCana Oil & Gas (USA)	Stud Horse Butte 12-29 Central Facility	MD-8776	11/5/2010	19.4	3.4	23.1	4.4	-3.7	-1	-3.7	-1	emissions calculated using current actual production instead of equipment design production	Waiver Issued	Jonah Energy
11253	EnCana Oil & Gas (USA)	Stud Horse Butte 15-27 Central Facility	wv-11253	12/1/2010									offsets are not required for this permitting action as the equipment is a temporary source and there are no emission increases	Waiver Issued	Jonah Energy
10789	EnCana Oil & Gas (USA) Inc.	Section 36 Water Management Facility	MD-10789	12/2/2010	15.4	24.8	11.9	15.2	3.5	9.6	5.3	10.6	permit for engine replacement, installation of several heaters, updating truck loadout and fugitive equipment leaks, and installation of eight storage tanks	Permit Issued	Jonah Energy
11034	EnCana Oil & Gas (USA) Inc.	Section 32 Storage Yard	wv-11034	12/3/2010	1.2	0.5	0	0	1.2	0.5	1.8	0.6	installation of one (1) 105 hp Kohler 60RZG generator engine	Waiver Issued	Jonah Energy
11017	EnCana Oil & Gas (USA)	SOL 95-18 Water Management Facility	CT-9983A	12/10/2010	16.9	5.3	18.2	6.6	-1.3	-1.3	-2	-1.4	permit amendment to remove the authorization to install either three (3) 276 hp Caterpillar 3406TA engines or one (1) 791 hp Caterpillar G3512TA engine and install one (1) 539 hp Caterpillar G3412 TA engine	Permit Issued	Jonah Energy
11150	EnCana Oil & Gas (USA)	Stud Horse Butte 15-27 Central Facility	MD-11150	12/22/2010	18	2.6	16.7	2.4	1.3	0.2	2	0.2		Permit Issued	Jonah Energy
11248	EnCana Oil & Gas (USA)	Stud Horse Butte 2-33 Central Facility	MD-11248	12/28/2010	8.5	1.4	14.7	2	-6.2	-0.6	-6.2	-0.6	removal of dehydration unit	Permit Issued	Jonah Energy
11249	EnCana Oil & Gas (USA)	Stud Horse Butte 10-33 Central Facility	MD-11249	12/29/2010	8	1.4	32	5	-24	-3.6	-24	-3.6	consolidating well and removal of production equipment	Permit Issued	Jonah Energy
11250	EnCana Oil & Gas (USA)	Stud Horse Butte 11-17 Central Facility	MD-11250	2/8/2011	17.6	5.8	30.5	6.2	-12.9	-0.4	-12.9	-0.4	emissions calculated at current actual production instead of equipment design production	Permit Issued	Jonah Energy
11276	EnCana Oil & Gas (USA)	Cabrillo 8-25 Central Facility	MD-11276	2/8/2011	16.9	5.1	13.9	3.7	3	1.4	4.5	1.5		Permit Issued	Jonah Energy
11289	EnCana Oil & Gas (USA)	Stud horse Butte 16-18 Central Facility	MD-11289	2/8/2011	3.8	1.4	9.4	2.6	-5.6	-1.2	-5.6	-1.2	emissions calculated using current actual production instead of equipment design production and reduction of production equipment.	Permit Issued	Jonah Energy
11399	EnCana Oil & Gas (USA)	Stud Horse Butte 10-35 CF	MD-11399	2/8/2011	20.5	2.9	97.8	9.1	-77.3	-6.2	-77.3	-6.2	consolidating facilities which reduces equipment and emissions	Permit Issued	Jonah Energy
11467	EnCana Oil & Gas (USA)	SAG 17-30 Central Facility	CT-11467	2/25/2011	7.2	2.1	0	0	7.2	2.1	10.8	2.3	new facility	Permit Issued	Jonah Energy
11469	EnCana Oil & Gas (USA)	SAG 73-20 Central Facility	CT-11469	2/25/2011	4.1	1.2	0	0	4.1	1.2	6.2	1.3	new facility	Permit Issued	Jonah Energy
11488	EnCana Oil & Gas (USA)	Stud Horse Butte 16-34R Central Facility	MD-11488	3/1/2011	9	2.4	19.4	4	-10.4	-1.6	-10.4	-1.6	production decline and replacing high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
11400	EnCana Oil & Gas (USA)	Cabrillo 14-25 Central Facility	MD-11400	3/4/2011	14.3	3.6	115.3	10.4	-101	-6.8	-101	-6.8	consolidating facilities which reduces equipment and emissions	Permit Issued	Jonah Energy
11428	EnCana Oil & Gas (USA)	Stud Horse Butte 01-35 Central Facility	MD-11428	3/4/2011	16.6	3.1	82.7	7	-66.1	-3.9	-66.1	-3.9	consolidating facilities which reduces equipment and emissions	Permit Issued	Jonah Energy
11424	EnCana Oil & Gas (USA)	Stud Horse Butte 8-14 Central Facility	MD-11424	3/9/2011	9	3	19.3	3.7	-10.3	-0.7	-10.3	-0.7	reduction in equipment and permitting at current actual production	Permit Issued	Jonah Energy
11426	EnCana Oil & Gas (USA)	Stud Horse Butte 122-10 Central Facility	MD-11426	3/9/2011	12.9	4.1	18.2	4.1	-5.3	0	-5.3	0	emissions calculated using current actual production instead of equipment design	Permit Issued	Jonah Energy
11516	EnCana Oil & Gas (USA)	Stud Horse Butte 2-34 Central Facility	MD-11516	3/9/2011	15	4.2	9.6	3.4	5.4	0.8	8.1	0.9		Permit Issued	Jonah Energy
11435	EnCana Oil & Gas (USA)	Cabrillo 13-30 Central Facility	MD-11435	3/22/2011	23.6	4.1	43.2	8.6	-19.6	-4.5	-19.6	-4.5	emissions calculated at current actual production instead of equipment design	Permit Issued	Jonah Energy
11598	EnCana Oil & Gas, (USA)	Stud Horse Butte 7-16 Central Facility	MD-11598	5/3/2011									Modification occurred prior to baseline period. Offsets not required.	Permit Issued	Jonah Energy

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11614	EnCana Oil & Gas (USA) Inc.	Corona-Stud Horse Butte 10-30 CF	MD-11614	5/3/2011	12.3	3.2	27.3	8.3	-15	-5.1	-15	-5.1	install low-bleed controllers and emissions calculated using current actual production instead of equipment design	Permit Issued	Jonah Energy
11622	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 7-26 Central Facility	MD-11622	5/10/2011	15.3	4.6	38.1	8.6	-22.8	-4	-22.8	-4	install low-bleed controllers and permit using current actual production instead of equipment design	Permit Issued	Jonah Energy
11623	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 15-19 CF	MD-11623	5/10/2011	9.3	2.1	11	2.6	-1.7	-0.5	-1.7	-0.5	permitting at current actual production instead of equipment design	Permit Issued	Jonah Energy
11659	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 4-28 Central Facility	MD-11659	5/18/2011	8.4	2.9	43.2	4.5	-34.8	-1.6	-34.8	-1.6	consolidating well site with previously uncontrolled equipment	Permit Issued	Jonah Energy
11660	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 4-35 CF	MD-11660	5/18/2011	10	2.1	22.3	1.8	-12.3	0.3	-12.3	0.3	controlling pneumatic pumps and installing low-bleed controllers	Permit Issued	Jonah Energy
11658	EnCana Oil & Gas (USA), Inc.	Corona-Stud Horse Butte 10-31 CF	MD-11658	5/24/2011	11.7	3.5	33.5	7.1	-21.8	-3.6	-21.8	-3.6	permitting at current actual production instead of equipment design	Permit Issued	Jonah Energy
11801	EnCana Oil & Gas (USA), Inc.	Jonah Federal 05-06 Central Facility	MD-11801	5/24/2011	8	2	14.2	2.9	-6.2	-0.9	-6.2	-0.9	permitting at current actual production instead of equipment design	Permit Issued	Jonah Energy
11825	EnCana Oil & Gas (USA), Inc.	Jonah Federal 45-08H	CT-11825	6/14/2011	5.1	1.5	0	0	5.1	1.5	7.7	1.7	new facility	Permit Issued	Jonah Energy
11845	EnCana Oil & Gas (USA), Inc.	Jonah Federal 13-7	MD-11845	6/14/2011	5.6	1.2	5.9	1.2	-0.3	0	-0.3	0	production decline	Permit Issued	Jonah Energy
11896	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 32-10	MD-11896	6/21/2011	4.6	1.2	5.1	1	-0.5	0.2	-0.5	0.2		Permit Issued	Jonah Energy
11934	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 15-28 Central Facility	MD-11934	6/21/2011	9.5	2.8	18.7	4.7	-9.2	-1.9	-9.2	-1.9	permitting at current actual production instead of equipment design.	Permit Issued	Jonah Energy
11950	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 12-15 Central Facility	MD-11950	6/21/2011	16.4	4.2	27.4	6.9	-11	-2.7	-11	-2.7	permitting at current actual production instead of equipment design.	Permit Issued	Jonah Energy
12268	EnCana Oil & Gas (USA), Inc.	Hacienda 14-30 Site	MD-6395A	8/12/2011	3	19.8	3	19.8	0	0	0	0	no offsets, Caterpillar G3408 was removed removed from service before baseline date, other production equipment at facility is addressed in AP-12221.	Permit Issued	Jonah Energy
12065	EnCana Oil & Gas (USA), Inc.	SAG 34-19 Central Facility	MD-12065	8/24/2011	9.9	3.4	11.3	2.2	-1.4	1.2	-1.4	1.3	permitting at current actual production	Permit Issued	Jonah Energy
12080	EnCana Oil & Gas (USA), Inc.	Yellow Point 04-12 Central Facility	MD-12080	8/24/2011	8.9	2.3	31.9	4.4	-23	-2.1	-23	-2.1	permitting using current actual production instead of equipment design	Permit Issued	Jonah Energy
12102	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 03-34 Central Facility	MD-12102	8/24/2011	9.8	2.6	14.3	4.2	-4.5	-1.6	-4.5	-1.6	removal of dehydration unit	Permit Issued	Jonah Energy
12234	EnCana Oil & Gas (USA), Inc.	Great Divide 10	wv-12234	8/26/2011	2.6	0.2	0	0	2.6	0.2	3.9	0.2		Waiver Issued	Jonah Energy
12379	EnCana Oil & Gas (USA), Inc.	Jonah Field Downhole Pilot Testing	wv-12379	8/26/2011									Temporary pilot tests limited to 90 days, no offsets required.	Waiver Issued	Jonah Energy
12103	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 01-27 Central Facility	MD-12103	8/30/2011	10.5	2.9	19.1	5	-8.6	-2.1	-8.6	-2.1	permitted at current actual production instead of equipment design	Permit Issued	Jonah Energy
12143	EnCana Oil & Gas (USA), Inc.	SAG 59-29	CT-12143	9/20/2011	5.6	1.5	0	0	5.6	1.5	8.4	1.7	new facility	Permit Issued	Jonah Energy
12147	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 04-26 Central Facility	MD-12147	9/20/2011	12.5	3.7	27.5	8.9	-15	-5.2	-15	-5.2	dehydration unit removed, heaters removed and heat trace pump removed	Permit Issued	Jonah Energy
12148	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 07-22 Central Facility	MD-12148	9/20/2011	16.6	4.8	8.9	2.8	7.7	2	11.6	2.2		Permit Issued	Jonah Energy
12166	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 04-33 Central Facility	MD-12166	9/20/2011	7.8	2.4	3.3	1.4	4.5	1	6.8	1.1		Permit Issued	Jonah Energy
12216	EnCana Oil & Gas (USA), Inc.	Cabrito 14-25 Central Facility	MD-12216	9/20/2011	12.8	3.1	14.3	3.6	-1.5	-0.5	-1.5	-0.5		Permit Issued	Jonah Energy
12217	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 53-16 Central Facility	MD-12217	9/20/2011	14.5	4.6	23.9	4.4	-9.4	0.2	-9.4	0.2	production decline	Permit Issued	Jonah Energy
12087	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 84-09 Central Facility	MD-12087	9/28/2011	18.6	5.9	24.5	4.7	-5.9	1.2	-5.9	1.3	-reassigned offset company to EnCana instead of EOG, 1/23/2013, CAA	Permit Issued	Jonah Energy
12233	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 11-26 CF	MD-12233	10/4/2011	7.4	2.8	18.9	3	-11.5	-0.2	-11.5	-0.2	production decline	Permit Issued	Jonah Energy
OFFS2	EnCana Oil & Gas (USA)			10/6/2011								3.5	decline in production and low-bleed controllers	Permit Issued	Jonah Energy
12241	EnCana Oil & Gas (USA), Inc.	Yellow Point 07-02 Central Facility	MD-12241	10/11/2011	4.4	1.3	8.2	1.4	-3.8	-0.1	-3.8	-0.1	VOC credits given to Lower Valley Energy, AP-12310	Permit Issued	Jonah Energy
12221	EnCana Oil & Gas (USA), Inc.	Hacienda 14-30	MD-12221	11/1/2011	6.2	2.1	10.5	0.6	-4.3	1.5	-4.3	1.7	production decline and installing low-bleed controllers	Permit Issued	Jonah Energy
12305	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 16-28/9-28 Central Facility	MD-12305	11/1/2011	7.6	2.5	7.3	2.2	0.3	0.3	0.5	0.3	control pneumatic pumps	Permit Issued	Jonah Energy
12339	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 1-35 Central Facility	MD-12339	11/8/2011	11.6	3.5	16.6	3.1	-5	0.4	-5	0.4	install low-bleed controllers	Permit Issued	Jonah Energy
12298	EnCana Oil & Gas (USA), Inc.	Stud Horse Butte 03-27 Central Facility	MD-12298	11/29/2011	14	3.3	25.2	2.9	-11.2	0.4	-11.2	0.4	declining production and low bleed controllers	Permit Issued	Jonah Energy
12432	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 09-33 Central Facility	MD-12432	12/6/2011	8.7	2.1	18.4	2.4	-9.7	-0.3	-9.7	-0.3	install low bleed controllers and control pneumatic pumps	Permit Issued	Jonah Energy
12449	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 11-34 Central Facility	MD-12449	12/6/2011	9.7	2.8	17.8	3.7	-8.1	-0.9	-8.1	-0.9	declining production and low bleed controllers	Permit Issued	Jonah Energy
11772	EnCana Oil & Gas (USA), Inc.	Section 36 Water Management Facility	MD-11772	12/15/2011	21.2	4.7	0	0	21.2	4.7	31.8	5.2	revise VOC on existing Cat engines, install 1 Cat engine, 3 75,000 bbl frac water storage tanks, 1 combustor, 1 DAF and 2 DAEWOO emergency engines	Permit Issued	Jonah Energy
12486	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 02-28/18-28 Central Facility	MD-12486	12/20/2011	12.3	4.2	18.9	4.6	-6.6	-0.4	-6.6	-0.4	declining production and low bleed controllers	Permit Issued	Jonah Energy
12536	EnCana Oil & Gas (USA) Inc.	Jonah Federal 24-09 Single Well Facility	CT-12536	12/20/2011	5	1.4	0	0	5	1.4	7.5	1.5	new facility	Permit Issued	Jonah Energy
12604	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 01-36/19-36 Central Facility	MD-12604	12/28/2011	11.3	3.4	24.7	4.5	-13.4	-1.1	-13.4	-1.1	declining production and low bleed controllers	Permit Issued	Jonah Energy
12614	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 01-34 Central Facility	MD-12614	12/28/2011	6.3	1.8	9.4	1.5	-3.1	0.3	-3.1	0.3	install low bleed controllers	Permit Issued	Jonah Energy
12697	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 12-36 Central Facility	MD-12697	1/10/2012	11.6	3.5	10.8	3.2	0.8	0.3	1.2	0.3		Permit Issued	Jonah Energy
12623	EnCana Oil & Gas (USA) Inc.	Section 18 Water Management Facility	MD-12623	1/13/2012	5.2	5.2	0	0	5.2	5.2	7.8	5.7	installation of two (2) 539 hp Caterpillar G3412TA generator engines.	Permit Issued	Jonah Energy
12705	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 6-35 Central Facility	MD-12705	1/31/2012	10	2.8	25.7	2.5	-15.7	0.3	-15.7	0.3	control pneumatic pumps and install low-bleed controllers	Permit Issued	Jonah Energy
12859	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 67-11 Central Facility	CT-12859	2/14/2012	7.3	1.9	0	0	7.3	1.9	11	2.1	new facility	Permit Issued	Jonah Energy
12876	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 72-09 Central Facility	CT-12876	2/28/2012	16.7	5.7	0	0	16.7	5.7	25.1	6.3	new facility	Permit Issued	Jonah Energy
12911	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 16-32 Central Facility	MD-12911	3/6/2012	4.9	1.6	17.1	2.1	-12.2	-0.5	-12.2	-0.5	control pneumatic pumps and install low-bleed controllers	Permit Issued	Jonah Energy
12919	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 4-27 Central Facility	MD-12919	3/6/2012	5	1.5	5.6	1.8	-0.6	-0.3	-0.6	-0.3	production decline	Permit Issued	Jonah Energy
12948	EnCana Oil & Gas (USA) Inc.	Jonah Federal 8-7 Central Facility	MD-12948	3/19/2012	7.4	2.5	24.3	2.7	-16.9	-0.2	-16.9	-0.2	control pneumatic pumps and install low-bleed controllers	Permit Issued	Jonah Energy
13312	EnCana Oil & Gas (USA), Inc.	Portable Gas Lift Engine	wv-13312	4/27/2012	0	0	0	0	0	0	0	0	waiver for temporary portable engine operating for twelve (12) months. No offsets required.	Waiver Issued	Jonah Energy
13210	EnCana Oil & Gas (USA) Inc.	Portable Water Well Pump Generator	CT-13210	5/22/2012	0.5	0.5	0	0	0.5	0.5	0.8	0.6	one (1) 105 hp Kohler 60RZG natural gas fired generator engine to be operated as a portable generator in the JPAD	Permit Issued	Jonah Energy

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13204	EnCana Oil & Gas (USA) Inc.	Cabrito 14-25	MD-13204	5/30/2012	13.1	3.3	12.8	3.1	0.3	0.2	0.5	0.2	installation of one (1) Arrow VR260 generator engine to power a VRU to capture all the waste gas at the facility, recompress it and route it to the sales gas line.	Permit Issued	Jonah Energy
13205	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 2-36 Central Facility	MD-13205	5/30/2012	12.2	3.3	11.9	3.1	0.3	0.2	0.5	0.2	permanent installation of one (1) Condensate Stabilization Unit, consisting of one (1) 0.075 MMBtu/hr condensate stabilization heater and one (1) Arrow VR260 generator engine	Permit Issued	Jonah Energy
13222	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 15-27 Central Facility	MD-13222	6/13/2012	18.3	2.8	18	2.6	0.3	0.2	0.5	0.2	addition of one 40 hp Capstone 30 microturbine generator and one 0.1 MMBtu/hr stabilization reboiler heater	Permit Issued	Jonah Energy
13194	EnCana Oil & Gas (USA) Inc.	Jonah Federal 5-4 Central Facility	MD-13194	7/24/2012	8.3	2.7	7.6	1.5	0.7	1.2	1.1	1.3		Permit Issued	Jonah Energy
13195	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 12-36/29-35 Central Facility	MD-13195	7/24/2012	11.1	2.9	11.6	3.5	-0.5	-0.6	-0.5	-0.6	declining production	Permit Issued	Jonah Energy
13400	EnCana Oil & Gas (USA) Inc.	Cabrito 2-31 Central Facility	MD-13400	7/24/2012	7.1	2.1	8.6	1.9	-1.5	0.2	-1.5	0.2	declining production	Permit Issued	Jonah Energy
13455	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 12-15 Central Facility	MD-13455	7/24/2012	9.7	3.3	16.4	4.2	-6.7	-0.9	-6.7	-0.9	removal of dehydration units	Permit Issued	Jonah Energy
13564	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 14-33 Central Facility	MD-13564	9/5/2012	4.5	1.6	23.9	2.4	-19.4	-0.8	-19.4	-0.8	removal of dehydration units, control heat trace pumps, install low-bleed controllers	Permit Issued	Jonah Energy
13565	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 6-32 Central Facility	MD-13565	9/17/2012	9.7	3.3	60.2	6.9	-50.5	-3.6	-50.5	-3.6		Permit Issued	Jonah Energy
13776	EnCana Oil & Gas (USA) Inc.	Cabrito 61-13 Central Facility	MD-13776	10/23/2012	10.7	2.4	4.9	1.4	5.8	1	8.7	1.1		Permit Issued	Jonah Energy
13795	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 13-26 Central Facility	MD-13795	11/14/2012	15.8	4.4	27.3	3.8	-11.5	0.6	-11.5	0.7	eliminate dehydration units and install low-bleed controllers	Permit Issued	Jonah Energy
13961	EnCana Oil & Gas (USA) Inc.	Portable Rod Pump Engines	CT-13961	12/28/2012	1	3	0	0	1	3	1.5	3.3	one (1) 75 hp General Motors GM 6.2L engine and one (1) 78 hp General Motors GM 5.7L engine to be operated as portable engines	Permit Issued	Jonah Energy
13923	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 10-33 Central Facility	MD-13923	1/8/2013	8.1	2.4	8	1.4	0.1	1	0.2	1.1		Permit Issued	Jonah Energy
14051	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 122-10 Central Facility	MD-14051	2/4/2013	9.5	4.6	13.1	4.1	-3.6	0.5	-3.6	0.6	decline in production	Permit Issued	Jonah Energy
14115	EnCana Oil & Gas (USA) Inc.	Jonah Ridge Tower	CT-14115	2/15/2013	0	0.2	0	0	0	0.2	0	0.2	install one (1) Detroit Diesel 20GS emergency genset equipped with one (1) 72 hp Ford LRG425 liquefied petroleum gas (LPG) fired engine and one (1) 6.5 MBtu/hr engine block heater	Permit Issued	Jonah Energy
14133	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 53-16 Central Facility	MD-14133	2/26/2013	13.7	4.3	14.5	4.6	-0.8	-0.3	-0.8	-0.3	declining production	Permit Issued	Jonah Energy
13619	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 07-15 Central Facility	MD-13619	2/28/2013	13.1	5.1	18.5	4.1	-5.4	1	-5.4	1.1	declining production	Permit Issued	Jonah Energy
13635	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 02-34 Central Facility	MD-13635	2/28/2013	8.2	2.9	15	4.2	-6.8	-1.3	-6.8	-1.3	decrease in dehydration units and declining production	Permit Issued	Jonah Energy
13639	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 11-34 Central Facility	MD-13639	2/28/2013	9.6	2.9	9.7	2.8	-0.1	0.1	-0.1	0.1	declining production	Permit Issued	Jonah Energy
14305	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 02-36 Central Facility	MD-14305	4/30/2013	11.7	3.4	12.2	3.3	-0.5	0.1	-0.5	0.1	production decline	Permit Issued	Jonah Energy
14485	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 11-17 Central Facility	MD-14485	6/4/2013	14.9	5.5	17.6	5.8	-2.7	-0.3	-2.7	-0.3	production decline	Permit Issued	Jonah Energy
14659	EnCana Oil & Gas (USA) Inc.	Jonah and NPL Portable Engine	CT-14659	6/21/2013	1.4	1	0	0	1.4	1	2.1	1.1	Authorize one (1) 203 hp Caterpillar G3306TA engine to be operated as a portable engine in the Jonah and NPL Fields.	Permit Issued	Jonah Energy
14673	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 7-26 Central Facility	MD-14673	7/23/2013	11.4	3.7	15.3	4.6	-3.9	-0.9	-3.9	-0.9	dehydration unit and process heater removal	Permit Issued	Jonah Energy
14815	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 04-26 Central Facility	MD-14815	8/20/2013	13.2	4	12.5	3.7	0.7	0.3	1.1	0.3		Permit Issued	Jonah Energy
14911	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 16-33 Central Facility	MD-14911	8/20/2013	6.2	1.9	9.4	2.3	-3.2	-0.4	-3.2	-0.4	dehydration unit removal	Permit Issued	Jonah Energy
14920	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 67-11 Central Facility	MD-14920	8/27/2013	13.1	5.1	7.3	1.9	5.8	3.2	8.7	3.5		Permit Issued	Jonah Energy
14921	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 11-26 Central Facility	MD-14921	8/27/2013	10.6	3.1	7.4	2.8	3.2	0.3	4.7	0.3		Permit Issued	Jonah Energy
15345	EnCana Oil & Gas (USA) Inc.	Jonah and NPL Portable Rod Pump Engines Pilot Test	wv-15345	9/9/2013									offsets not required as emission sources are temporary	Waiver Issued	Jonah Energy
15085	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 1-35 Central Facility	MD-15085	9/10/2013	11	3.3	11.6	3.5	-0.6	-0.2	-0.6	-0.2	heater removal and production decline	Permit Issued	Jonah Energy
15086	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 10-35 Central Facility	MD-15086	9/10/2013	9.9	2.6	20.5	2.9	-10.6	-0.3	-10.6	-0.3	install low bleed controllers	Permit Issued	Jonah Energy
13171	Jonah Energy LLC	Jonah Field EDI&M Program	MD-13171	10/1/2013	134.8	0	535.8	0	-401	0	-401	0	implementation of the EDIM program which reduced fugitive emissions	Permit Issued	Jonah Energy
15177	EnCana Oil & Gas (USA) Inc.	Jonah and NPL Portable Cooler Engines	CT-15177	10/9/2013	4	2.4	0	0	4	2.4	6	2.6	authorize a fleet of eight (8) 68 hp Arrow A54 portable cooler engines	Permit Issued	Jonah Energy
15215	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 10-33 Central Facility	MD-15215	11/13/2013	16.4	4.8	8.1	2.4	8.3	2.4	12.5	2.6		Permit Issued	Jonah Energy
15229	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 6-32 Central Facility	MD-15229	11/13/2013	19.7	5.3	41.7	11.7	-22	-6.4	-22	-6.4	consolidating three central facilities into one facility resulting in a decrease in production equipment	Permit Issued	Jonah Energy
15280	EnCana Oil & Gas (USA) Inc.	SAG 5-28 Central Facility	MD-15280	12/10/2013	4.2	2.1	12	0.4	-7.8	1.7	-7.8	1.9	control dehydration unit and install low-bleed controllers	Permit Issued	Jonah Energy
15281	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 4-33 Central Facility	MD-15281	12/10/2013	7	3	8.2	3.8	-1.2	-0.8	-1.2	-0.8	consolidating two central facilities into one facility resulting in a decrease in production equipment	Permit Issued	Jonah Energy
15282	EnCana Oil & Gas (USA) Inc.	Cabrito 13-30 Central Facility	MD-15282	12/10/2013	18.1	6.5	32.8	8	-14.7	-1.5	-14.7	-1.5	consolidating two central facilities into one facility resulting in a decrease in production equipment	Permit Issued	Jonah Energy
15335	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 3-36 Central Facility	MD-15335	12/10/2013	6.3	2.1	4.2	1.8	2.1	0.3	3.2	0.3		Permit Issued	Jonah Energy
15369	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 6-35 Central Facility	MD-15369	12/10/2013	10.9	4.1	6.6	2.8	4.3	1.3	6.5	1.4		Permit Issued	Jonah Energy
15393	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 2-33 Central Facility	MD-15393	12/11/2013	3.4	1.7	6.8	1.4	-3.4	0.3	-3.4	0.3	install low-bleed controllers	Permit Issued	Jonah Energy
15411	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 15-27 Central Facility	MD-15411	12/11/2013	16.9	4.8	15.7	2.8	1.2	2	1.8	2.2		Permit Issued	Jonah Energy
15415	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 7-16 Central Facility	MD-15415	12/11/2013	8	3.6	12.7	5.5	-4.7	-1.9	-4.7	-1.9	consolidating two central facilities which eliminates production equipment	Permit Issued	Jonah Energy

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15487	EnCana Oil & Gas (USA) Inc.	Section 32 Inventory Yard Engine	CT-15487	12/20/2013	1.9	1.3	0	0	1.9	1.3	2.9	1.4	authorize one (1) 276 hp Caterpillar G3406 engine to be used to provide electricity to an office trailer and automation trailers that are located at the Section 32 Inventory Yard	Permit Issued	Jonah Energy
15548	EnCana Oil & Gas (USA) Inc.	Yellow Point 117-12V	CT-15548	1/7/2014	6.5	2.3	0	0	6.5	2.3	9.8	2.5	new facility	Permit Issued	Jonah Energy
15689	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 4-27 Central Facility	MD-15689	2/19/2014	15.7	6.3	21.9	7.7	-6.2	-1.4	-6.2	-1.4	consolidating three central facilities which eliminates production equipment	Permit Issued	Jonah Energy
15708	EnCana Oil & Gas (USA) Inc.	Stud Horse Butte 13-26 Central Facility	MD-15708	2/19/2014	8.6	3.4	14.1	4.4	-5.5	-1	-5.5	-1	production decline	Permit Issued	Jonah Energy
13716	EnCana Oil & Gas (USA) Inc.	Cabrillo 72-29 Central Facility	CT-13716	3/18/2014	41.6	14.2	5.6	1.5	36	12.7	54	14		Permit Issued	Jonah Energy
14002	EnCana Oil & Gas (USA) Inc.	Cabrillo 61-13 Central Facility	MD-14002	3/18/2014	11.2	2.7	10.7	2.4	0.5	0.3	0.8	0.3	installation of one (1) Flow Back Cooler . This unit consists of one (1) auxillary cooler and one (1) 68 hp Arrow A54 engine	Permit Issued	Jonah Energy
15862	EnCana Oil & Gas (USA) Inc.	SAG 34-19 Central Facility	MD-15862	3/25/2014	7.4	3.5	7.3	3.4	0.1	0.1	0.2	0.1		Permit Issued	Jonah Energy
15863	EnCana Oil & Gas (USA) Inc.	Cabrillo 8-25 Central Facility	MD-15863	3/25/2014	12.3	3.7	14.3	5.1	-2	-1.4	-2	-1.4	remove dehydration unit and heaters	Permit Issued	Jonah Energy
15987	EnCana Oil & Gas (USA) Inc.	Cabrillo 61-13 Central Facility	MD-15987	4/29/2014	13.6	4.4	8.7	2.7	4.9	1.7	7.4	1.9		Permit Issued	Jonah Energy
16085	Jonah Energy LLC	Stud Horse Butte 10-28 Central Facility	MD-16085	5/20/2014	10.9	4.1	37.6	9.9	-26.7	-5.8	-26.7	-5.8	consolidating three central facilities into one facility resulting in a decrease in production equipment	Permit Issued	Jonah Energy
16093	Jonah Energy LLC	Stud Horse Butte 8-14 Central Facility	MD-16093	5/20/2014	8.8	3.6	7.4	3	1.4	0.6	2.1	0.7		Permit Issued	Jonah Energy
15410	Jonah Energy LLC	Cabrillo 72-29 Central Facility	MD-15410	6/3/2014	21.4	8.9	41.6	14.2	-20.2	-5.3	-20.2	-5.3	implement EDIM plan and production decline	Permit Issued	Jonah Energy
16161	Jonah Energy LLC	Stud Horse Butte 7-26 Central Facility	MD-16161	6/3/2014	11	4.4	10.5	3.7	0.5	0.7	0.8	0.8		Permit Issued	Jonah Energy
16227	Jonah Energy LLC	Antelope 91-29H	CT-16227	6/17/2014	7.9	3.3	0	0	7.9	3.3	11.9	3.6	new facility	Permit Issued	Jonah Energy
16228	Jonah Energy LLC	Stud Horse Butte 4-28 Central Facility	MD-16228	6/26/2014	7	3.2	6.8	2.9	0.2	0.3	0.3	0.3		Permit Issued	Jonah Energy
16361	Jonah Energy LLC	Cabrillo 13-19 Central Facility	MD-16361	7/15/2014	13.9	3.7	21.5	3.6	-7.6	0.1	-7.6	0.1	dehydration unit removal and install low-bleed controllers	Permit Issued	Jonah Energy
16363	Jonah Energy LLC	Stud Horse Butte 16-26 Central Facility	MD-16363	7/15/2014	6.3	2.3	11.5	2.9	-5.2	-0.6	-5.2	-0.6	install low-bleed controllers	Permit Issued	Jonah Energy
16435	Jonah Energy LLC	Stud Horse Butte 8-14 Central Facility	MD-16435	8/26/2014	9.2	3.6	8.8	3.6	0.4	0	0.6	0		Permit Issued	Jonah Energy
16502	Jonah Energy LLC	Jonah Office Building	MD-16502	9/5/2014	0	1.5	0.1	0.2	-0.1	1.3	-0.1	1.4	removal of one (1) 217 hp Generac SG140 generator engine (E1) and the installation of one (1) 645 hp Caterpillar C15 generator engine (SN: P1Z00102)	Permit Issued	Jonah Energy
16510	Jonah Energy LLC	Cabrillo 72-29 Central Facility	MD-16510	9/12/2014	22.1	9.4	21.4	8.9	0.7	0.5	1.1	0.6	installation of one (1) 99 hp Cummins G5.9L natural gas fired VRU engine.	Permit Issued	Jonah Energy
16563	Jonah Energy LLC	Stud Horse Butte 122-10 Central Facility	MD-16563	10/21/2014	5.6	3	6.7	4.6	-1.1	-1.6	-1.1	-1.6	remove dehydration unit	Permit Issued	Jonah Energy
16599	Jonah Energy LLC	Stud Horse Butte 13-26 Central Facility	MD-16599	10/21/2014	8.1	3.4	8.6	3.4	-0.5	0	-0.5	0	production decline	Permit Issued	Jonah Energy
16602	Jonah Energy LLC	Cabrillo 72-29 Central Facility	MD-16602	10/21/2014	21.2	8.4	21.4	8.9	-0.2	-0.5	-0.2	-0.5	production decline	Permit Issued	Jonah Energy
16612	Jonah Energy LLC	Stud Horse Butte 32-10 Central Facility	MD-16612	10/21/2014	5.1	1.6	4.5	1.2	0.6	0.4	0.9	0.4		Permit Issued	Jonah Energy
16632	Jonah Energy LLC	Stud Horse Butte 11-17 Central Facility	MD-16632	10/28/2014	12.1	5.7	10.7	5.5	1.4	0.2	2.1	0.2		Permit Issued	Jonah Energy
16633	Jonah Energy LLC	Stud Horse Butte 7-16 Central Facility	MD-16633	10/28/2014	11	4.4	8	3.6	3	0.8	4.5	0.9		Permit Issued	Jonah Energy
16719	Jonah Energy LLC	Yellow Point 4-12 Central Facility	MD-16719	11/12/2014	6.1	2.3	13	4.6	-6.9	-2.3	-6.9	-2.3	consolidating two central facilities resulting in decreased equipment	Permit Issued	Jonah Energy
16730	Jonah Energy LLC	Stud Horse Butte 13-35 Central Facility	MD-16730	11/12/2014	7.3	3	24.9	2.8	-17.6	0.2	-17.6	0.2	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
16731	Jonah Energy LLC	Stud Horse Butte 4-35 Central Facility	MD-16731	11/12/2014	6.6	2.6	7.7	2.1	-1.1	0.5	-1.1	0.6	production decline	Permit Issued	Jonah Energy
16760	Jonah Energy LLC	Stud Horse Butte 16-32 Central Facility	MD-16760	11/25/2014	2.8	1.4	1.8	1.6	1	-0.2	1.5	-0.2		Permit Issued	Jonah Energy
A0000045	Jonah Energy LLC	Cabrillo 14-25 Central Facility	P0000013	12/5/2014	0.3	0.2	0.3	0.2	0	0	0	0	removing the one (1) existing 47 hp Arrow VR260 generator engine and replacing it with one (1) 40 hp Capstone C30 MicroTurbine generator being removed from the Stud Horse Butte 15-27 PAD. No change in emissions.	Permit Issued	Jonah Energy
16868	Jonah Energy LLC	Yellow Point 8-13 Central Facility	MD-16868	12/9/2014	6.5	2.6	23.4	2.6	-16.9	0	-16.9	0	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
16870	Jonah Energy LLC	Stud Horse Butte 11-34 Central Facility	MD-16870	12/9/2014	5.6	2.8	7.1	2.9	-1.5	-0.1	-1.5	-0.1	production decline	Permit Issued	Jonah Energy
16871	Jonah Energy LLC	Stud Horse Butte 1-34 Central Facility	MD-16871	12/9/2014	6.6	3.4	4.8	1.8	1.8	1.6	2.7	1.8		Permit Issued	Jonah Energy
16882	Jonah Energy LLC	Jonah Federal 45-8H	MD-16882	12/16/2014	3.4	1.6	3.8	1.5	-0.4	0.1	-0.4	0.1	production decline	Permit Issued	Jonah Energy
16883	Jonah Energy LLC	Cabrillo 61-13 Central Facility	MD-16883	12/16/2014	12.8	4	13.1	4.1	-0.3	-0.1	-0.3	-0.1	production decline	Permit Issued	Jonah Energy
16884	Jonah Energy LLC	Jonah Federal 1-8 Central Facility	MD-16884	12/16/2014	3.1	1.9	17.8	2.9	-14.7	-1	-14.7	-1	replace high-bleed controllers with low-bleed controllers and change in dehy operation	Permit Issued	Jonah Energy
16885	Jonah Energy LLC	Stud Horse Butte 10-30 Central Facility	MD-16885	12/16/2014	7.1	3.2	12.3	3.2	-5.2	0	-5.2	0	implement EDIM plan and production decline	Permit Issued	Jonah Energy
16887	Jonah Energy LLC	Stud Horse Butte 1-29 Central Facility	MD-16887	12/16/2014	16.7	6.1	17.9	5.1	-1.2	1	-1.2	1.1	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
16895	Jonah Energy LLC	Stud Horse Butte 124-11 Central Facility	MD-16895	12/16/2014	5.3	2.9	25.9	3.8	-20.6	-0.9	-20.6	-0.9	replace high-bleed controllers with low-bleed controllers and production decline	Permit Issued	Jonah Energy
16896	Jonah Energy LLC	Stud Horse Butte 2-34 Central Facility	MD-16896	12/16/2014	7.6	3.4	5.7	2.9	1.9	0.5	2.9	0.6		Permit Issued	Jonah Energy
16897	Jonah Energy LLC	Stud Horse Butte 7-15 Central Facility	MD-16897	12/16/2014	6.2	3	13.1	5.1	-6.9	-2.1	-6.9	-2.1	smaller dehy glycol pumps and smaller heaters	Permit Issued	Jonah Energy
16644	Jonah Energy LLC	Stud Horse Butte 6-32 Central Facility	MD-16644	12/30/2014	9.3	3.6	173.4	14.9	-164.1	-11.3	-164.1	-11.3	consolidating six central facilities which eliminates emissions from several tanks, dehydration units, controllers, pumps, combustion devices and heaters	Permit Issued	Jonah Energy
A0000135	Jonah Energy LLC	Stud Horse Butte 15-27 PAD	P0000014	1/9/2015	16.6	4.6	16.9	4.8	-0.3	-0.2	-0.3	-0.2	removing one (1) 40 hp Capstone C30 MicroTurbine generator	Permit Issued	Jonah Energy

Jonah Energy LLC - Offset Spreadsheet

A0000023	Jonah Energy LLC	Hacienda 5-20	P0004096	1/21/2015	1.9	2.1	6.9	0.8	-5	1.3	-5	1.4	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000024	Jonah Energy LLC	Stud Horse Butte 1-32 Central Facility	P0004218	1/21/2015	4	2	10.5	1.9	-6.5	0.1	-6.5	0.1	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000025	Jonah Energy LLC	Crimson Unit 2-18	P0004498	1/21/2015	5.4	2.7	4.6	3	0.8	-0.3	1.2	-0.3	decrease in dehydration unit glycol pumps	Permit Issued	Jonah Energy
A0000026	Jonah Energy LLC	Stud Horse Butte 4-33 Central Facility	P0004528	1/21/2015	5.4	2.7	4.6	3	0.8	-0.3	1.2	-0.3	decrease in dehydration unit glycol pumps	Permit Issued	Jonah Energy
A0000027	Jonah Energy LLC	Crimson State 10-36	P0004728	1/21/2015	1.8	1.8	7.2	0.6	-5.4	1.2	-5.4	1.3	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000052	Jonah Energy LLC	Crimson Federal 7-35	P0005969	2/3/2015	1.8	1.1	6.3	0.5	-4.5	0.6	-4.5	0.7	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000053	Jonah Energy LLC	Cabrillo 14-25 Central Facility	P0006018	2/3/2015	8.1	4.4	9.8	3.3	-1.7	1.1	-1.7	1.3	production decline	Permit Issued	Jonah Energy
A0000083	Jonah Energy LLC	Corona 3-31 Central Facility	P0006057	2/3/2015	10.1	2.6	37.7	3.6	-27.6	-1	-27.6	-1	replace high-bleed controllers with low-bleed controllers and production decline	Permit Issued	Jonah Energy
A0000142	Jonah Energy LLC	Portable Rod Pump Engines	P0002551	2/24/2015	10	7	0	0	10	7	15	7.7	installation of 10 portable rod pump engines	Permit Issued	Jonah Energy
A0000264	Jonah Energy LLC	Cabrillo 2-31 Central Facility	P0010210	3/10/2015	3.9	1.7	6.1	2.1	-2.2	-0.4	-2.2	-0.4	production decline and decreased dehy pumps	Permit Issued	Jonah Energy
A0000261	Jonah Energy LLC	Stud Horse Butte 12-36 Central Facility	P0010206	3/11/2015	7	2.7	7.8	2.9	-0.8	-0.2	-0.8	-0.2	production decline and reduced dehy pumps	Permit Issued	Jonah Energy
A0000262	Jonah Energy LLC	SAG 17-30	P0009849	3/11/2015	2.3	1.5	4.9	2.1	-2.6	-0.6	-2.6	-0.6	dehydration unit removal	Permit Issued	Jonah Energy
A0000263	Jonah Energy LLC	SAG 73-20	P0009874	3/11/2015	3.9	1.8	2.8	1.2	1.1	0.6	1.7	0.7		Permit Issued	Jonah Energy
A0000363	Jonah Energy LLC	Stud Horse Butte 3-34 Central Facility	P0013699	4/22/2015	6.7	3.3	7.2	2.6	-0.5	0.7	-0.5	0.8		Permit Issued	Jonah Energy
A0000415	Jonah Energy LLC	Jonah Federal 1-6 Central Facility	P0014216	4/30/2015	7.8	2.9	32.3	5.2	-24.5	-2.3	-24.5	-2.3	replace high-bleed controllers with low-bleed controllers and decrease in dehy pumps	Permit Issued	Jonah Energy
A0000421	Jonah Energy LLC	Stud Horse Butte 4-27 Central Facility	P0014282	4/30/2015	14.1	6.1	11.5	6.3	2.6	-0.2	3.9	-0.2		Permit Issued	Jonah Energy
A0000422	Jonah Energy LLC	JF 1-4X Central Facility	P0014233	4/30/2015	9.3	3.3	12.2	1.6	-2.9	1.7	-2.9	1.9	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000423	Jonah Energy LLC	Jonah Federal 3-5 Central Facility	P0014346	5/5/2015	3	1.4	9.1	1.2	-6.1	0.2	-6.1	0.2	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000424	Jonah Energy LLC	Stud Horse Butte 11-22 Central Facility	P0014362	5/5/2015	7.7	3.5	17.1	3.2	-9.4	0.3	-9.4	0.3	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000425	Jonah Energy LLC	Stud Horse Butte 10-33 Central Facility	P0014383	5/5/2015	5.6	2.5	16.4	4.8	-10.8	-2.3	-10.8	-2.3	change in operating conditions and decrease in dehy pumps	Permit Issued	Jonah Energy
A0000426	Jonah Energy LLC	Jonah Federal 5-4 Central Facility	P0014384	5/5/2015	7.9	4.1	6.4	2.7	1.5	1.4	2.3	1.5		Permit Issued	Jonah Energy
A0000427	Jonah Energy LLC	Stud Horse Butte 12-29 Central Facility	P0014423	5/6/2015	6.7	3.2	28.6	3.4	-21.9	-0.2	-21.9	-0.2	replace high-bleed controllers with low-bleed controllers and decrease in dehy pumps	Permit Issued	Jonah Energy
A0000429	Jonah Energy LLC	Stud Horse Butte 2-36 Central Facility	P0014434	5/6/2015	7.5	3	7.4	3.4	0.1	-0.4	0.1	-0.4		Permit Issued	Jonah Energy
A0000458	Jonah Energy LLC	Stud Horse Butte 1-35 Central Facility	P0015111	5/21/2015	10.7	4.2	8.5	3.3	2.2	0.9	3.3	1		Permit Issued	Jonah Energy
A0000463	Jonah Energy LLC	Jonah Federal 13-7 Central Facility	P0015090	5/21/2015	2.5	1.4	3.2	1.2	-0.7	0.2	-0.7	0.2	decrease in dehy pumps	Permit Issued	Jonah Energy
A0000464	Jonah Energy LLC	Jonah Federal 24-9	P0015091	5/21/2015	2.3	1.1	3.7	1.4	-1.4	-0.3	-1.4	-0.3	decrease in dehy pumps	Permit Issued	Jonah Energy
A0000465	Jonah Energy LLC	Jonah Federal 2-8X Central Facility	P0015092	5/21/2015	5.4	2.7	30.6	3	-25.2	-0.3	-25.2	-0.3	dehydration unit removal and install low-bleed controllers	Permit Issued	Jonah Energy
A0000487	Jonah Energy LLC	Jonah Federal 5-6 Central Facility	P0015417	5/28/2015	4.5	2.4	5.6	2	-1.1	0.4	-1.1	0.4	decrease in dehy pumps	Permit Issued	Jonah Energy
A0000491	Jonah Energy LLC	Jonah Federal 1-5 Central Facility	P0015490	5/28/2015	6.6	3	24.6	4	-18	-1	-18	-1	dehydration unit removal and install low-bleed controllers	Permit Issued	Jonah Energy
A0000515	Jonah Energy LLC	Yellow Point 1-13 Central Facility	P0015637	5/28/2015	5	2.4	18.2	2.2	-13.2	0.2	-13.2	0.2	install low-bleed controllers	Permit Issued	Jonah Energy
A0000379	Jonah Energy LLC	Hacienda 14-30	P0014448	5/29/2015	8.1	5.8	0.5	8.1	7.6	-2.3	11.4	-2.3	Replace existing Cat G3516LE engine with a <1,200 hp rich or lean burn engine	Permit Issued	Jonah Energy
A0000532	Jonah Energy LLC	Yellow Point 10-13 Central Facility	P0015936	6/4/2015	4.6	2.3	27.8	3.5	-23.2	-1.2	-23.2	-1.2	replace high-bleed controllers with low-bleed controllers and decrease in dehy pumps	Permit Issued	Jonah Energy
A0000533	Jonah Energy LLC	Yellow Point 7-2 Central Facility	P0015939	6/4/2015	2.8	1.4	2.9	1.3	-0.1	0.1	-0.1	0.1		Permit Issued	Jonah Energy
A0000534	Jonah Energy LLC	Yellow Point 10-14 Central Facility	P0015941	6/4/2015	4.6	2.5	23.4	3.3	-18.8	-0.8	-18.8	-0.8	replace high-bleed controllers with low-bleed controllers and decrease in dehy pumps	Permit Issued	Jonah Energy
A0000535	Jonah Energy LLC	Yellow Point 16-13 Central Facility	P0016218	6/9/2015	5	2.6	24.5	2.8	-19.5	-0.2	-19.5	-0.2	replace high-bleed controllers with low-bleed controllers and decrease in dehy pumps	Permit Issued	Jonah Energy
16606	Jonah Energy LLC	Cabrillo 13-30 Central Facility	MD-16606	6/18/2015	16.6	7.6	18.1	6.5	-1.5	1.1	-1.5	1.2	control truck loading emissions	Permit Issued	Jonah Energy
16726	Jonah Energy LLC	Stud Horse Butte 4-26 Central Facility	MD-16726	6/18/2015	20.9	8.3	32.2	11.5	-11.3	-3.2	-11.3	-3.2	consolidating three central facilities resulting in decreased equipment	Permit Issued	Jonah Energy
A0000051	Jonah Energy LLC	Crimson Federal 16-2	P0016306	6/18/2015	1.8	2.1	6.9	0.5	-5.1	1.6	-5.1	1.8	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000056	Jonah Energy LLC	Crimson Federal 15-24	P0016322	6/18/2015	1.8	2.1	7.5	0.6	-5.7	1.5	-5.7	1.7	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000061	Jonah Energy LLC	Stud Horse Butte 9-33 Central Facility	P0016330	6/18/2015	3.2	2	7.9	2.1	-4.7	-0.1	-4.7	-0.1	decrease in dehy pumps and production decline	Permit Issued	Jonah Energy
A0000082	Jonah Energy LLC	Crimson Federal 16-14	P0016411	6/18/2015	1.8	2.1	7.9	0.8	-6.1	1.3	-6.1	1.4	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000602	Jonah Energy LLC	Jonah Federal 8-7 Central Facility	P0016557	6/25/2015	5.4	2.5	4.6	2.5	0.8	0	1.2	0		Permit Issued	Jonah Energy
A0000603	Jonah Energy LLC	Stud Horse Butte 1-34 Central Facility	P0016608	6/25/2015	6.9	3.2	6.6	3.4	0.3	-0.2	0.5	-0.2		Permit Issued	Jonah Energy
A0000604	Jonah Energy LLC	Jonah Federal 12-7 Central Facility	P0016617	6/25/2015	4.6	1.8	15.2	3.5	-10.6	-1.7	-10.6	-1.7	dehydration unit removal and install low-bleed controllers	On Notice	Jonah Energy
A0000728	Jonah Energy LLC	Stud Horse Butte 8-14 Central Facility	P0017750	7/16/2015	14.4	5.8	9.2	3.6	5.2	2.2	7.8	2.4		Permit Issued	Jonah Energy
A0000763	Jonah Energy LLC	Stud Horse Butte 6-35 Central Facility	P0018216	7/30/2015	9.8	3.6	10.9	4.1	-1.1	-0.5	-1.1	-0.5	production decline and operational changes	Permit Issued	Jonah Energy
A0000765	Jonah Energy LLC	Jonah Federal 1-5X Central Facility	P0018222	7/30/2015	7.8	3.3	45	3.1	-37.2	0.2	-37.2	0.2	install low-bleed controllers and control pneumatic pumps	Permit Issued	Jonah Energy
A0000853	Jonah Energy LLC	Stud Horse Butte 67-11 Central Facility	P0018600	8/12/2015	16.5	7.3	11.6	5.1	4.9	2.2	7.4	2.4		Permit Issued	Jonah Energy

Jonah Energy LLC - Offset Spreadsheet

A0000081	Jonah Energy LLC	Crimson State 12-36	P0018712	8/13/2015	1.4	1.7	6.6	0.5	-5.2	1.2	-5.2	1.3	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000103	Jonah Energy LLC	Stud Horse Butte 48-16 Central Facility	P0019015	8/13/2015	2.1	1.1	9.4	0.8	-7.3	0.3	-7.3	0.3	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
A0000104	Jonah Energy LLC	Stud Horse Butte 48-22 Central Facility	P0019027	8/13/2015	2.6	1.6	23.5	4.2	-20.9	-2.6	-20.9	-2.6	dehydration unit removal and install low-bleed controllers	Permit Issued	Jonah Energy
A0000108	Jonah Energy LLC	Stud Horse Butte 14-33 Central Facility	P0018722	8/13/2015	2.6	1.6	1.9	1.6	0.7	0	1.1	0		Permit Issued	Jonah Energy
A0000109	Jonah Energy LLC	Stud Horse Butte 41-11	P0019021	8/13/2015	3.5	1.3	3.8	1.3	-0.3	0	-0.3	0	install smaller dehydration unit	Permit Issued	Jonah Energy
A0000846	Jonah Energy LLC	Cabrito 13-19 Central Facility	P0018607	8/13/2015	12.4	3.9	13.9	3.7	-1.5	0.2	-1.5	0.2	decrease in dehydration unit glycol pumps	Permit Issued	Jonah Energy
A0000897	Jonah Energy LLC	Stud Horse Butte 12-15 Central Facility	P0018615	8/13/2015	10.5	4	5.2	3.3	5.3	0.7	8	0.8		Permit Issued	Jonah Energy
A0000150	Jonah Energy LLC	Stud Horse Butte 11-20 Central Facility	P0019363	8/21/2015	8.2	3.7	25.4	5.1	-17.2	-1.4	-17.2	-1.4	replace high-bleed controllers with low-bleed controllers	Permit Issued	Jonah Energy
7081	EnCana Oil & Gas (USA)	Yellow Point 8-13	MD-8199										Included in AP-8199	Permit Issued	Jonah Energy
A0000778	Jonah Energy LLC	Stud Horse Butte 10-35 PAD	P0016619		14	7.1	9.9	2.6	4.1	4.5	6.2	5	Installation of an 845 hp Waukesha L5790G engine for the line pressure reduction project.	On Notice	Jonah Energy
A0001018	Jonah Energy LLC	SOL 9-36 Central Facility	P0019730		4.9	2.8	15	2	-10.1	0.8	-10.1	0.9	replace high-bleed controllers with low-bleed controllers	On Notice	Jonah Energy
A0001019	Jonah Energy LLC	Stud Horse Butte 48-22 Central Facility			3.3	1.5	9.5	1.6	-6.2	-0.1	-6.2	-0.1	install additional low-bleed controllers	On Notice	Jonah Energy
A0001026	Jonah Energy LLC	Cabrito 72-29 Central Facility			18	7.5	21.2	8.4	-3.2	-0.9	-3.2	-0.9	production decline	On Notice	Jonah Energy
A0001156	Jonah Energy LLC	Stud Horse Butte 6-32 Central Facility			7.9	3.4	52	5.6	-44.1	-2.2	-44.1	-2.2	consolidating a central facility into this facility resulting in equipment removal	On Notice	Jonah Energy
A0000942	Jonah Energy LLC	Stud Horse Butte 13-26 Central Facility	P0019935		18.1	14.2	8.1	3.4	10	10.8	15	11.9	installation of two (2) 1,029 hp (site rated) Caterpillar G3516TA compressor engines and two (2) 1.0 MMBtu/hr indirect heaters.	Active Application	Jonah Energy
A0000944	Jonah Energy LLC	Stud Horse Butte 1-29 Central Facility	P0019936		30.8	18.4	16.7	6.1	14.1	12.3	21.2	13.5	installation of one (1) 1,340 hp (site rated) Caterpillar G3516 TALE compressor engine, one (1) 1,029 hp (site rated) Caterpillar G3516TA compressor engine, and two (2) 1.0 MMBtu/hr indirect heaters.	Active Application	Jonah Energy

SUM	-3222.6	-37.4	-2858.1	-83.5
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