Air Pollution Control
Title V Permit to Operate
Statement of Basis for 1st Renewal Permit No. V-SU-0031-08.00
July 2009

Samson Resources
South Ignacio Central Delivery Point
Southern Ute Indian Reservation
La Plata County, Colorado

1. Facility Information

a. Location

The South Ignacio Central Delivery Point (S. Ignacio) is a natural gas compression facility owned and operated by Samson Resources (Samson). S. Ignacio is located within the exterior boundaries of the Southern Ute Indian Reservation in the southwestern part of the State of Colorado. The exact location is SE ¼ of Section 32, Township 33N, Range 7W, in La Plata County, Colorado.
The mailing address is:

Samson Resources
Two West Second Street
Tulsa, OK 74103

b. Contacts

(1) The facility contact is:

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918-591-1370

(2) The responsible official is:

Mark Dalton
Attorney-In-Fact
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918-591-1369

(3) The Tribal contact is:

James Temte
Air Program Manager
Southern Ute Indian Tribe
970-563-4705

c. Description of operations

The facility compresses inlet coal-bed methane gas to transmission pipeline pressures. Gas entering the facility from the field is first fed to an inlet separator that removes water gravimetrically that may have condensed during transportation from the gas wells. Separator overhead gas is fed to one of eight compressor engines from a common suction header. The compressors discharge gas to a common discharge header that feeds to scrubbers. Scrubbers separate and collect liquids that may have formed

during compression. The compressed gas is then fed to two dehydration units operating in parallel. Tri-ethylene glycol is circulated counter-currently and absorbs water. Rich glycol is circulated to a reboiler, where moisture is driven to the atmosphere by heating the glycol. Dry gas exits the contactors and is directed to one of two sales lines, where it is metered and exits the facility. The gas processing capacity of the facility is 70 MMscfd.

d. List of all units and emission-generating activities

Samson provided the information shown below for emission units operating at the S. Ignacio facility. Table 1 lists emission units and any air pollution control devices. Emission units identified as "insignificant" emitting units (IEUs) are listed separately in Table 2.

Table 1 - Emission Units
Samson South Ignacio Central Delivery Point

Emission Unit Id.	Description	Control Equipment
E1	1680 hp, Waukesha 7044 GSI Rich Burn Compressor Engine, natural gas fired: Serial No. C-13225/1 Manufactured 5/2005 Installed 1/6/2006	Non-Selective Catalyst
E2	1267 hp, Waukesha 7042 LT Lean Burn Compressor Engine, natural gas fired: Serial No. C-60768/1 Manufactured 11/1997 Installed 1/29/2007	Oxidation Catalyst
E3	Serial No. C-12097/2 Manufactured 2/2008 Installed 3/14/2008 (NSPS JJJJ - engine)	
E4	1336 hp, Waukesha 7042 LT Lean Burn Compressor Engine, natural gas fired: Serial No. C-10990/1 Manufactured 3/2007 Installed 5/7/2007	Oxidation Catalyst
E5	1400 hp, Waukesha 5794 LT Lean Burn Compressor Engine, natural gas fired: Serial No. C-15962/1 Manufactured 2/2006 Installed 8/24/2007	Oxidation Catalyst
E6	Serial No. C-16160/1 Manufactured 11/2005 Installed 4/8/2006	
E7	Serial No. C-15838/1 Manufactured 9/2005 Installed 3/29/2006	
E8	Serial No. C-15836/1 Manufactured 8/2005 Installed 4/5/2006	
D1	30 MMscfd Dehydration Unit glycol regenerator & 1.25 MMBtu/hr natural gas-fired reboiler burner: Serial No. 101727 Installed 2003	PESCO Flare Stack (enclosed flare)
D2	40 MMscfd Dehydration Unit Glycol Regenerator & 0.75 MMBtu/hr natural gas-fired reboiler burner: Serial No. TBD Installed TBD	PESCO Flare Stack (enclosed flare)

Part 71 allows sources to separately list in the permit application units or activities that qualify as "insignificant" based on potential emissions below 2 tons per year (tpy) for all regulated pollutants that are not listed as hazardous air pollutants (HAPs) under section 112(b) and below 1000 lbs per year or the de minimus level established under section 112(g), whichever is lower, for HAPs. However, the application may not omit information needed to determine the applicability of, or to impose, any applicable requirement. Units that qualify as "insignificant" for the purposes of the part 71 application are in no way exempt from applicable requirements or any requirements of the part 71 permit.

Table 2 - Insignificant Emission Units
Samson South Ignacio Central Delivery Point

Unit ID	Description
IEU1	16 - 500 gal. lubricating oil storage tanks (low vapor pressure)
IEU2	11 - 500 gal. used oil storage tanks (low vapor pressure)
IEU3	2 - 500 gal. ethylene glycol storage tanks (low vapor pressure)
IEU4	4 - 1000 gal. produced water storage tanks (low VOC content)
IEU5	1 - 400 bbl. slop tank (mostly water w/some lubricating oil - low vapor pressure)
IEU6	1 - 500 gal. methanol storage tank (low throughput)
IEU7	1 – 0.75 MMBtu/hr natural gas fired reboiler burner
IEU8	1 – 1.25 MMBtu/hr natural gas fired reboiler burner
IEU9	5 - 0.12 MMBtu/hr natural gas fired tank heaters

e. Permitting and/or construction history

S. Ignacio began operations in December of 1991. At that time it was owned and operated by SG Interests, Inc., and there were only two lean burn engines (E2 and E3) and a glycol dehydrator (D1) installed. The facility was a minor source for Prevention of Significant Deterioration (PSD) and did not require any permitting (the federal title V/part 71 program was not promulgated until February of 1999).

A third lean burn engine (E4) was installed in December 1997. All three of the engines were controlled with catalysts, but there were no enforceable restrictions on the use of the controls. None-the-less, the worst-case PTE of the modification to the facility did not trigger PSD permitting, and the facility remained a minor PSD source.

In December of 2000, a rich burn engine (E1) was installed. The PTE of NOx for this one engine was greater than 250 tpy, and the modification triggered the requirement for a PSD permit. Since SG Interest neither applied for nor received a PSD permit before installing the engine, this was a violation of the regulations at 40 CFR 52.21. SG Interests submitted a part 71 permit application on November 26, 2001. In that application, SG Interests had requested that the controls be made federally enforceable through permit action and took credit for emission reduction in the application. However, the PSD permitting requirement was triggered before construction of the engine began, and the company could not receive enforceable credit in the part 71 permit after the fact.

On July 1, 2002, SG Interests entered into a final Consent Agreement with EPA to address the PSD non-compliance. The docket number was CAA-08-2002-09. In the Consent Agreement, a PSD permit was not required for unit E1 if certain injunctive provisions contained in the Agreement were met.

SG Interests was required to submit a revised part 71 application requesting EPA to make the use of non-selective catalyst and corresponding NOx and CO emission limits enforceable permit conditions in the part 71 permit. The revised application was dated June 20, 2002.

On October 7, 2003, SG Interests submitted an addendum to the initial application announcing the installation of a fifth lean burn engine (E5). The engine was installed in August of 2003. While this installation did not trigger the need for PSD pre-construction permitting, it would potentially trigger the Reciprocating Internal Combustion Engine (RICE) MACT for all the engines that commenced construction after December 19, 2002, due to potential formaldehyde emissions exceeding the 10 tpy trigger for any one pollutant. At this time, the RICE MACT had only been proposed (final promulgation was June 15, 2004). However, the dates in the proposal indicated that this engine would be considered a new engine subject to the standard with a final compliance date of August 16, 2004. Therefore, Samson asked that federally enforceable restrictions on facility-wide formaldehyde emissions be placed in the initial part 71 permit to avoid the RICE MACT requirements at 40 CFR 63, subpart ZZZZ.

The initial permit with the enforceable restrictions on facility-wide formaldehyde emissions was issued on April 2, 2004, and became effective on April 2, 2004. It should be noted here that while oxidation catalysts on the engines are capable of reducing VOC and CO emissions in addition to the formaldehyde emissions, the permit did not contain enforceable conditions limiting VOC or CO.

Due to the continuation of the federally enforceable requirements to control formaldehyde emissions established in the permit prior to engine installation, the S. Ignacio facility did not trigger the major source requirements of the RICE MACT at 40 CFR part 63, subpart ZZZZ. In addition, the modification to the facility did not trigger PSD permitting requirements and the facility continues to operate as a minor PSD source with PTE of criteria pollutants below the 250 tpy threshold.

Samson Resources acquired the facility from SG Interests in January of 2005.

On November 30, 2005, Samson was issued a significant modification to the S. Ignacio title V permit to add three new lean burn compressor engines with oxidation catalyst under the existing formaldehyde cap (#V-SU-0031-01.01).

The permit was administratively amended in January of 2006 (#V-SU-0031-01.02) and in February of 2008 (#V-SU-0031-01.03) to change the responsible official and to streamline the permit language and the permitting process.

On January 3, 2007, EPA promulgated amendments to the National Emission Standards for Hazardous Air Pollutants for Source Categories: Oil and Natural Gas Production Facilities (MACT HH). This regulatory action promulgated standards for area source oil and gas production facilities and specifically affects glycol dehydration units. Dehydration units with a potential to emit of benzene greater than 1 tpy operating outside of dense population areas would be required to optimize the glycol recirculation pump rate. This is a requirement that Samson wished to avoid as impractical for its operating situation since the incoming characteristics of the gas fluctuate and the quantity could fluctuate on a daily basis, making optimization of the glycol pump at the station cumbersome.

On March 4, 2008, Samson requested a significant modification to the S. Ignacio facility's part 71 permit to replace an existing 30 MMscfd glycol dehydration unit with a larger 40 MMscfd unit in a plan to increase throughput capacity at the facility. While modeled emissions indicated that the two existing

dehydrators did not emit benzene emissions greater than or equal to 1 tpy, the increased throughput could potentially trigger new area source requirements for oil and gas production facilities in MACT HH should modeled input parameters, via inlet gas sampling, vary.

Samson proposed to install emission controls on the new 40 MMBtu/hr dehydration unit (D2) and the existing 30 MMscfd unit (D1). Samson requested enforceable benzene emission limits be established in the permit for the two dehydration units prior to constructing the proposed modifications and increasing throughput capacity at the facility to provide assurances of not triggering the requirement to optimize the glycol recirculation pump rate pursuant to 40 CFR 63, subpart HH for area sources. In addition, Samson requested that EPA include a facility-wide HAP emission cap of less than 25 tpy to ensure that the facility remains a minor source of aggregated HAP emissions.

Samson provided modeled emissions for each dehydrator operating at the facility, at that time, to verify that the emission standard in MACT HH had not yet been triggered. Based on average annual gas throughputs and operating conditions, the model indicates that the dehydrators' potential to emit were below 1 tpy for benzene emission for the existing operating scenario. Calculation of the PTE using average annual parameters is allowed pursuant to 40 CFR 63, subpart HH. In addition, Samson's application showed that the facility was a minor HAP facility and had not triggered any MACT emission standard.

Therefore, on July 14, 2008, EPA issued a significant modification to the part 71 permit (#V-SU-0031-01.04). This permit created an enforceable benzene emission limit of 0.9 tpy for each dehydration unit (D1 and D2), and a facility-wide HAP emission limit of 23 tpy so that the S. Ignacio facility would not be subject to the area source MACT HH requirements for glycol dehydrators emitting more than 1 tpy of benzene nor any major source MACT standard requirements for the engines or the dehydrators. In addition, the permitting action incorporated CO emission limits requested by the applicant for 7 of the 8 engines and additional monitoring of emissions to establish enforceability of the CO reductions that the existing oxidation catalysts provided.

<u>Due to the federally enforceable requirements to control benzene emissions, established prior to the modification to D1 and D2, the S. Ignacio facility did not trigger the area source requirements of 40 CFR 63, subpart HH for dehydration units that emit greater than or equal to 1 tpy of benzene.</u>

It should be noted, however, that on January 18, 2008, EPA promulgated area source MACT standards for RICE (amendment to 40 CFR 63, Subpart ZZZZ). The HAP and formaldehyde emission caps, the benzene emission limits on the dehydrators, and the NOx and CO emission limits on the engines will not protect this facility from potentially triggering this new area source standard. EPA reviewed the engines currently operating at this facility and found that none of these engines had yet triggered the new standard.

The current permitted facility is a minor PSD source. However, the source is a major part 71 source of nitrogen oxides (NOx). The facility is operating under an enforceable facility-wide formaldehyde (CH_2O) emission cap of 9.5 tpy, an enforceable facility-wide HAP emission cap of 23 tpy, and enforceable NOx, CO, and Benzene emission limits. In addition, engine #E3 is subject to
40 CFR part 60 subpart JJJJ.

Table 3 – Summary of Permitting and Construction History
Samson South Ignacio Central Delivery Point

The following table illustrates the changes in emissions due to modifications that have occurred at this facility. (Where controls are not enforceable, the uncontrolled emission rate is listed)

1991 Initial Construction

Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E2	1267 hp Waukesha 7044 GL (controlled, but not enforceable)	18.3	32.4	12.2	2.4	-	2.4
E3	1267 hp Waukesha 7044 GL (controlled, but not enforceable)	18.3	32.4	12.2	2.4	-	2.4
D1	30 MMscfd Glycol Dehydrator & 0.6 MMbtu/hr re-boiler	0.6	0.5	10.0	-	0.63	2.2
IEUs	Insignificant units	0.1	0.3	0.0	-	-	-
	1991 PTE Cumulative Totals	37.3	65.6	34.4	4.8	0.63	7.0
Non-PSD source. Non-title V source. Minor HAP source.							

December 1997 – Add 1 Lean-burn Engine

Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E4	1336 Waukesha 7044 GL (controlled, but not enforceable)	19.3	34.2	12.9	2.6	-	2.6
	Total Emissions Increase for the Project	19.3	34.2	12.9	2.6	-	2.6
	1997 PTE Cumulative Total	56.6	99.8	47.3	7.4	0.63	9.6
Non-PSD source. Non-title V source. Minor HAP source.							

December 2000 Modification – Add 1 Rich-burn Engine

Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E1	1680 hp Waukesha 7044 GSI (controlled, but not enforceable)	361.4	21.9	4.0	1.6	-	1.6
	Total Emissions Increase for Project	361.4	21.9	4.0	1.6	-	1.6
	2000 PTE Cumulative Totals	421.6	121.7	51.3	9.0	0.63	11.2
PSD Major Modification at a minor source (CD issued). Major PSD & title V source. Minor HAP source.							

August 2003 – Add 1 Lean-burn Engine

Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E5	1400 hp Waukesha L5794LT (controlled, but not enforceable)	33.7	24.3	13.5	2.70	-	2.70
	Total Emissions Increase for Project	33.7	24.3	13.5	2.70	-	2.70
	August 2003 PTE Cumulative Totals	455.3	146.0	64.8	11.7	0.63	13.9
PSD minor modification. Major PSD and title V source. Major HAP source (minor for MACT HH). RICE MACT final compliance date is August 16, 2004.							

Table 3 – Summary of Permitting and Construction History (continued)
Samson South Ignacio Central Delivery Point

April 2, 2004 – Initial Part 71 Permit issued with facility-wide enforceable formaldehyde cap and NOx & CO emission limits on E1

Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy) (allowable)	Benzene (tpy)	Total HAPs (tpy)
E1	1680 hp Waukesha 7044 GSI (controlled, NOx, CO, CH_20)	40.5	56.7	8.1	1.14	-	1.14
E2	1267 hp Waukesha 7044 GL(controlled, unenforceable)	18.3	32.4	12.2	3.06	-	3.06
E3	1267 hp Waukesha 7044 GL (controlled, unenforceable)	18.3	32.4	12.2	3.06	-	3.06
E4	1336 Waukesha 7044 GL (controlled, CH_20 enforceable)	19.3	34.2	12.9	1.03	-	1.03
E5	1400 hp Waukesha L5794LT (controlled, CH_20 enforceable)	33.7	24.3	13.5	1.08	-	1.08
D1	30 MMscfd Glycol Dehydrator & 0.6 MMbtu/hr re-boiler	0.6	0.5	10.0	-	0.63	2.2
IEUs	Insignificant units	0.1	0.3	0.0	-	-	-
	April 2, 2004 PTE Cumulative Totals	130.8	180.8	61.0	9.4 (9.5)	0.63	11.6

Synthetic Minor PSD source. Synthetic Minor HAP source. Major title V source.

April 2005 Significant Mod Application/April 2006 Permit Issuance: Add 3 engines with controls; Add controls to E2 & E3. Manufacturer adjustment to formaldehyde emission factors. Engines permitted with Federally Enforceable Restrictions to limit formaldehyde emissions and a continuation of the formaldehyde cap of 9.5 tpy. Add a 2nd Dehydrator (D2) and additional insignificant emission units. Enforceable restrictions in place before construction of E6, E7, & E8. *indicates changes to emissions for this project.)

Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E1	1680 hp Waukesha 7044 GSI (controlled, NOx, CO, CH_20)	40.5	56.7	8.1	0.32 (-0.82*)	-	0.32 (-0.82*)
E2	1267 hp Waukesha 7044 GL(controlled, CH_20 enforceable)	18.3	32.4	12.2	1.22 (-1.84*)	-	1.22 (-1.84*)
E3	1267 hp Waukesha 7044 GL (controlled, CH_20 enforceable)	18.3	32.4	12.2	1.22 (-1.84*)	-	1.22 (-1.84*)
E4	1336 Waukesha 7044 GL (controlled, CH_20 enforceable)	19.3	34.2	12.9	1.03 (+0.26*)	-	1.03 (+0.26*)
E5	1400 hp Waukesha L5794LT (controlled, CH_20 enforceable)	33.7	24.3	13.5	1.08 (+0.27*)	-	1.08 (+0.27*)
E6-add	1400 hp Waukesha L5794LT (controlled, CH_20 enforceable)	33.7*	24.3*	13.5*	1.35*	-	1.35*
E7-add	1400 hp Waukesha L5794LT (controlled, CH_20 enforceable)	33.7*	24.3*	13.5*	1.35*	-	1.35*
E8-add	1400 hp Waukesha L5794LT (controlled, CH_20 enforceable)	33.7*	24.3*	13.5*	1.35*	-	1.35*
D1	30 MMscfd Glycol Dehydrator & 0.60 MMbtu/hr re-boiler	0.6	0.5	10.0	-	0.63	2.2
D2-add	30 MMscfd Glycol Dehydrator & 0.60 MMbtu/hr re-boiler	0.6*	0.5*	23.5*	-	1.1*	3.8*
IEUs	Insignificant units	0.1	0.3	0.0	-	-	-
	Total Emissions Increase for Project	101.7	73.4	64.0	0.08	1.1	3.88
	2007 PTE Totals (includes dehydrators)	232.5	254.2	125.0	9.48 (9.5) allowable	1.7	15.4

Minor modification of a minor PSD source. Now a Major PSD source. Synthetic Minor HAP Source. Major title V source.

Table 3 – Summary of Permitting and Construction History (continued)
Samson South Ignacio Central Delivery Point

2008 – Add Controls to dehydrator D1; Replace dehydrator D2 with a 40 MMscfd unit and add controls; Establish enforceable benzene emission limit for D1 & D2 and a facility-wide HAP emission limit before construction to avoid area source MACT HH requirements for the dehydrators and major source MACT requirements in general. *indicates the change in emissions for this project.							
Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E1	1680 hp Waukesha 7044 GSI (controlled, NOx (consent decree), CO, CH_20 enforceable)	40.5	56.7	8.1	0.32	-	0.32
E2	1267 hp Waukesha 7044 GL (controlled, CO, CH_20 enforceable)	18.3	12.2 (-20.2*)	12.2	1.22	-	1.22
E3	1267 hp Waukesha 7044 GL (controlled, CO, CH_20 enforceable)	18.3	12.2 (-20.2*)	12.2	1.22	-	1.22
E4	1336 Waukesha 7044 GL (controlled, CO, CH_20 enforceable)	19.3	12.9 (-21.3*)	12.9	1.03	-	1.03
E5	1400 hp Waukesha L5794LT (controlled, CO, CH_20 enforceable)	33.7	13.5 (-10.8*)	13.5	1.08	-	1.08
E6	1400 hp Waukesha L5794LT (controlled, CO, CH_20 enforceable)	33.7	13.5 (-10.8*)	13.5	1.35	-	1.35
E7	1400 hp Waukesha L5794LT (controlled, CO, CH_20 enforceable)	33.7	13.5 (-10.8*)	13.5	1.35	-	1.35
E8	1400 hp Waukesha L5794LT (controlled, CO, CH_20 enforceable)	33.7	13.5 (-10.8*)	13.5	1.35	-	1.35
D1	30 MMscfd Glycol Dehydrator Still Vent (emissions 95% controlled with 0.9 tpy benzene limit enforceable)	0.5	0.4	56.6 (+46.6*)	0.0	0.9 (allowable)	0.5 (-1.7*)
D2	40 MMscfd Glycol Dehydrator Still Vent (emissions 95% controlled with 0.9 tpy benzene limit enforceable)	0.3	0.3	65.7 (+21.7*)	0.0	0.9 (allowable)	0.6 (-3.2*)
	Total Emissions Increase for Project	-	-104.9	68.3	-	-	-4.9
	2008 Cumulative PTE Totals	232.5	149.3	193.3	9.48 (9.5) allowable	1.8	10.5 (23) allowable
Modification minor for PSD. Synthetic minor for PSD. Major title V source. Synthetic minor HAP source.							

Table 3 – Summary of Permitting and Construction History (continued)
Samson South Ignacio Central Delivery Point

Summary of Samson's S. Ignacio Potential Emissions for Permit Renewal Action V-SU-0031-08.00							
Unit	Description	NOx (tpy)	CO (tpy)	VOC (tpy)	CH_2O (tpy)	Benzene (tpy)	Total HAPs (tpy)
E1	1680 hp Waukesha 7044 GSI (controlled, NOx (consent decree), CO, CH_20 enforceable)	40.5	56.7	8.1	0.32	-	0.32
E2	1267 hp Waukesha 7044 GL (controlled, CO, CH_20 enforceable)	18.3	12.2	12.2	1.22	-	1.22
E3	1267 hp Waukesha 7044 GL (controlled, CO, CH_20 enforceable)	18.3	12.2	12.2	1.22	-	1.22
E4	1336 Waukesha 7044 GL (controlled, CO, CH_20 enforceable)	19.3	12.9	12.9	1.03	-	1.03
E5	1400 hp Waukesha L5794LT (controlled, CO, CH_20 enforceable)	33.7	13.5	13.5	1.08	-	1.08
E6	1400 hp Waukesha L5794LT (controlled, CO, CH_20 enforceable)	33.7	13.5	13.5	1.35	-	1.35
E7	1400 hp Waukesha L5794LT (controlled, CO, CH_20 enforceable)	33.7	13.5	13.5	1.35	-	1.35
E8	1400 hp Waukesha L5794LT (controlled, CO, CH_20 enforceable)	33.7	13.5	13.5	1.35	-	1.35
D1	30 MMscfd Glycol Dehydrator Still Vent (emissions 95% controlled with 0.9 tpy benzene limit enforceable)	0.5	0.4	56.6	0.0	0.9 (allowable)	0.5
D2	40 MMscfd Glycol Dehydrator Still Vent (emissions 95% controlled with 0.9 tpy benzene limit enforceable)	0.3	0.3	65.7	0.0	0.9 (allowable)	0.6
	2009 PTE Totals	232.5	149.3	193.3	9.48 (9.5) allowable	1.8	10.5 (23) allowable
Synthetic minor PSD source. Synthetic minor HAP source. Major title V source. E3 subject to JJJJ.							

2. Establishment of Synthetic Minor Limits

a. Applicable PTE guidance

Pursuant to 40 CFR 52.21, "potential to emit" is defined as the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation, or the effect it would have on emissions, is federally enforceable.

National EPA guidance on PTE states that air pollution control equipment (in this case, the oxidation catalysts for the engines and the condenser/combustors for the dehydrators) can be credited as restricting PTE only if federally enforceable requirements are in place requiring the use of such air pollution control equipment. The primary applicable guidance is a memo titled, "Guidance on Limiting Potential to Emit in New Source Permitting," dated June 13, 1989, to EPA Regional Offices, from the Office of Enforcement and Compliance Monitoring (OECA), and the Office of Air Quality Planning & Standards (OAQPS). A later memo to the EPA Regional Offices, dated January 25, 1995, titled "Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and §112 Rules and General Permits," also provides guidance on this topic.

In consultation with Office of General Counsel at EPA Headquarters, as well as with EPA Regions 9 and 10, the EPA Region 8 office determined that authority exists under the Clean Air Act (CAA) and 40 CFR 71 to create a restriction on potential to emit through issuance of a part 71 permit. The specific citations of authority are:

CAA Section 304(f)(4): provides that the term "emission limitation, standard of performance or emission standard" includes any other standard, limitation, or schedule established under any permit issued pursuant to title V ... , any permit term or condition, and any requirement to obtain a permit as a condition of operations.

40 CFR 71.6(b): provides that all terms and conditions in a part 71 permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act.

40 CFR 71.7(e)(1)(i)(A)(4)(*i*): provides that a permit modification that seeks to establish a federally enforceable emissions cap assumed to avoid classification as a modification under any provision of title I of the CAA (which includes PSD), and for which there is no underlying applicable requirement, does not qualify as a minor permit modification. Under 40 CFR 71.7(e)(3)(i), it is therefore a significant permit modification, which, according to 40 CFR 71.7(e)(3)(ii), must meet all the requirements that would apply to initial permit issuance or permit renewal.

The use of the part 71 permit as a means to create these limits, however, is limited to those instances where an operating source is already required to obtain a part 71 permit by virtue of its PTE or due to other triggers as outlined in §71.3; or where the operating source already holds a part 71 permit. EPA Region 8 does not have the authority to issue part 71 permits to minor sources, unless it is a minor operating source that is required to obtain a permit pursuant to §71.3.

The part 71 program is not a preconstruction permitting program to be used in place of NSR permitting. The part 71 permit is an operating permit and an application is due within twelve months of starting up a title V facility.

EPA Region 8 does not knowingly issue synthetic minor limits (i.e. limits on potential to emit to avoid major source status) to sources who wish to avoid applicable requirements that have already been triggered (such as NSR or the Once-In-Always-In MACT standards). EPA Region 8 also will not knowingly issue synthetic minor limits to sources who wish to avoid applicable requirements for which there are non-compliance concerns.

Creation of synthetic minor limits in part 71 permits is a temporary, gap-filling measure for those sources operating in Indian country that do not have the ability to obtain these synthetic minor limits through other programs, such as exists in state jurisdictions. Upon promulgation of a Minor NSR rule for sources operating in Indian country, it is expected that this gap-filling measure will no longer be needed.

b. Components of the PTE restrictions

Formaldehyde Emissions CAP and Restrictions on Engine Emissions: The permit contains a facility-wide formaldehyde emissions cap of 9.5 tpy for any consecutive 12 month period. In addition, engine #E1 has limits on NOx and CO emissions.

Carbon Monoxide Emissions Limits on 7 of the 8 Engines: The permit contains CO emissions limits on engines E2 through E8.

Benzene Emissions Limits on Dehydrators & a HAP Emissions Cap: The permit contains a 0.9 tpy benzene emission limit on each of the dehydrator units (D1 & D2), and a facility-wide HAP emissions cap of 23 tpy, both on a 12-month rolling basis. In addition, the facility-wide HAP emission rate must be calculated by summing the HAP emissions from each emission unit at the site on a monthly basis and adding this total to the previous 11 months. For insignificant emission units that will not be tested for HAP emissions, the use of emission factors used in the initial part 71 application will be required in calculating emissions.

The PTE for the S. Ignacio Central Delivery Point, enforceable emission controls taken into consideration, are as follows:

Nitrogen Oxides (NO_x) – 232.5 tpy
Carbon Monoxide (CO) – 149.3 tpy
Volatile Organic Compounds (VOC) – 193.3 tpy
Small Particulates (PM_{10}) - neg.
Lead - neg.
Sulfur Dioxide (SO_2) - neg.
Total Allowable Hazardous Air Pollutants (HAPs) – 23 tpy
[largest single HAP (Formaldehyde, CH_2O) – 9.5 tpy]

Work Practice Requirements: Samson is required to use a non-selective catalyst on engine E1, oxidation catalysts on engines E2 through E8, as well as, abide by work practice and operational requirements to ensure that the emission cap for CH_2O will be met. In addition, EPA is requiring Samson to use the PESCO Flare Stack, as proposed, and operate the dehydrators and flare according to manufacturer specifications to ensure that the 0.9 tpy benzene restriction for each of the dehydrators is met and the necessary HAP reductions are made to ensure that the facility-wide HAP emission cap is being met.

System Operation of the PESCO Flare Stack: Samson provided the following description of the dehydrator control equipment in their April 18, 2008 supplemental application as the manufacturer's guarantee of 98% destruction efficiency. The description was provided by PESCO: "The Flare Stack consists of two, vertical concentric cylinders. The outer cylinder is made from mild carbon steel while the inner cylinder is made from high-temperature stainless steel. Fuel gas is supplied to constant-burn main burner and pilot light, which are located at the bottom of the inner cylinder. Generally, this is gas that has been dissolved in the glycol during the dehydration process and leaves the glycol when a pressure cut is taken in the glycol/gas flash separator on the dehydrator. This is considered "waste gas" and is also generally used to fire the reboiler. This waste gas may be supplemented by clean, dehydrated gas.

The pilot light may be lit using a manual (push button) igniter, an automatic igniter, or a torch.
The main burner fires continuously, heating the steam cup (description below). Combustion air is furnished through flame arrestors near the bottom of the outer shell. These flame arrestors also provide cooling air for the annular space between the outer shell and the inner liner (the outer shell must be kept cool enough to prevent ignition of external air-born hydrocarbons).

Additional annular area cooling air is provided through the annular area flame arrestors. The gaseous pollutants from the still column, via the condenser, enter the flare stack through a vacuum/vent relief valve, inline flame arrestor, and optional emergency shutdown (ESD) valve. The vacuum/vent valve prevents the flare from creating negative pressure (vacuum) in the reboiler. It also permits the reboiler to vent to the atmosphere when the ESD valve is closed. The inline flame arrestor is a safety device that acts as a flame boundary to prevent flame propagation from the flare stack back to the reboiler or dehydrator. The optional ESD valve can be configured to shut down the flare stack utilizing a variety of customer defined signals.

Upon entering the flare stack, the gaseous pollutants are introduced into a steam cup, or reservoir. The current design of this steam cup is a circular torus (doughnut shaped) and is made from stainless steel. It has numerous pipes that conduct the gaseous pollutants from the inside of the torus to the combustion zone, which is located beneath the torus. This design allows any free liquids that are introduced into the flare stack to be re-vaporized and thus forced into the combustion zone. All exhaust gasses are released up the inner cylinder of the flare stack."

"The PESCO Flare Stack (enclosed flare) is guaranteed to achieve total destruction of 98% or greater of all hydrocarbons present in the overhead stream from the still column of a glycol dehydrator. This assumes that the operating parameters do not exceed those to which the flare stack was initially designed. The PESCO Flare stack is also guaranteed to meet the environmental requirements as set for in 40 CFR 60.18."

Monitoring – Formaldehyde Cap: Monitoring is currently accomplished by reference method performance testing for CH_2O emissions on an annual basis for the uncontrolled engines and quarterly (conditionally extended to semi-annually) for the controlled engines. Reference method performance testing is also required each time any of the engines are swapped out in accordance with the Alternative Operating Scenario condition in the permit, and each time the catalyst is changed out. Samson committed to a 60 % CH_2O reduction efficiency for the catalyst on each engine. Compliance with the 9.5 tpy emission limit for CH_2O at the engines is predicated on effective oxidation catalyst controls. Therefore, the conditional quarterly/semi-annual testing frequency is based on attaining this efficiency on a consistent basis. Samson is also required to monitor inlet temperature to the catalyst for each controlled engine with a requirement that the temperature remain within the manufacturer's specified parameters. Samson is also required to monitor pressure drop across the catalyst to ensure that the catalyst is neither plugged nor blown out. Finally, Samson is also required to follow the oxidation catalyst control system manufacturer's recommended maintenance schedule and procedures to ensure optimum catalyst performance.

Monitoring – Dehydrator Benzene Emissions and Facility-wide HAP Emission Cap: Samson is required to monitor the inlet gas characteristics on a monthly basis. The inlet gas characteristics include the dehydrator inlet wet gas temperature, the inlet wet gas pressure, and the extended inlet wet gas concentration of HAP constituents; most notably BTEX (benzene, toluene, ethyl benzene, and xylene). A GRI-GLYCalc run is required on a monthly basis, using the maximum glycol pump rate, the maximum gas throughput rate, and the monthly inlet wet gas analysis to determine the benzene and total HAP emissions from each dehydrator.

The worst possible gas sample that could conceivably be received at this time at the station and processed by the dehydrators was modeled using GRI-GLYCalc Version 4.0. The model run demonstrated that with the 98% claims given by the control equipment manufacturer, the benzene emissions would be 0.3 tpy and

0.4 tpy for D1 and D2, respectively. In addition, the total HAP emissions from the dehydrators was calculated to be 0.5 tpy and 0.6 tpy. The margin of compliance for these units is so large, EPA concluded that requiring periodic reference method stack testing would be excessive.

3. Tribe Information

a. Indian country

Samson's S. Ignacio facility is located within the exterior boundaries of the Southern Ute Indian Reservation and is thus within Indian country as defined at 18 U.S.C. §1151. The Southern Ute Tribe does not have a federally-approved CAA title V operating permits program nor does EPA's approval of the State of Colorado's title V program extend to Indian country. Thus, EPA is the appropriate governmental entity to issue the title V permit to this facility.

b. The reservation

The Southern Ute Indian Reservation is located in southwestern Colorado adjacent to the New Mexico boundary. Ignacio is the headquarters of the Southern Ute Tribe, and Durango is the closest major city, just 5 miles outside of the north boundary of the Reservation. Current information indicates that the population of the Tribe is about 1,450 people with approximately 410 tribal members living off the Reservation. In addition to Tribal members, there are over 30,000 non-Indians living within the exterior boundaries of the Southern Ute Reservation.

c. Tribal government

The Southern Ute Indian Tribe is governed by the Constitution of the Southern Ute Indian Tribe of the Southern Ute Indian Reservation, Colorado adopted on November 4, 1936 and subsequently amended and approved on October 1, 1975. The Southern Ute Indian Tribe is a federally recognized Tribe pursuant to Section 16 of the Indian Reorganization Act of June 18, 1934 (48 Stat.984), as amended by the Act of June 15, 1935 (49 Stat. 378). The governing body of the Southern Ute Indian Tribe is a seven member Tribal Council, with its members elected from the general membership of the Tribe through a yearly election process. Terms of the Tribal Council are three years and are staggered so in any given year 2 members are up for reelection. The Tribal Council officers consist of a Chairman, Vice-Chairman, and Treasurer.

d. Local air quality

The Tribe maintains an air monitoring network consisting of two stations equipped to measure ambient concentrations of oxides of nitrogen (NO, NO_2, and NO_x), ozone (O_3), and carbon monoxide (CO), and to collect meteorological data. The Tribe has collected NO_2 and O_3 data at the Ignacio, Colorado station (also known as the Ute 1 station, with AQS identification number 08-067-7001) and the Bondad, Colorado station (also known as Ute 3, with AQS identification number 08-067-7003) since June 1, 1982, and April 1, 1997, respectively. The CO channel at the Ignacio station has been reporting to AQS since January 1, 2000, and both stations began reporting NO and NO_x data to AQS on the same day. Also in 2000, both stations initiated meteorological monitors measuring wind speed, wind direction, vertical wind speed, outdoor temperature, relative humidity, solar radiation, and rain/snowmelt precipitation. Reporting of vertical wind speed data from both stations terminated on July 1, 2007. Particulate data (PM_{10}) was collected from December 1, 1981 to September 30, 2006 at the Ignacio station and from April 1, 1997 to

September 30, 2006 at the Bondad station. The Tribe reports hourly data to AQS for the criteria pollutants being monitored (NO_2, O_3, and CO), allowing AQS users to retrieve data that can be compared to any of the National Ambient Air Quality Standards for these pollutants.

4. Analysis of Federal Regulations

a. Applicable requirement review

The following discussions address applicable requirements, and requirements that may appear to be applicable but are not. All applicable and non-applicable requirements addressed here are included in the Code of Federal Regulations at title 40.

Chemical Accident Prevention Program

Based on Samson's previous applications, the S. Ignacio facility currently has no regulated substances above the threshold quantities in this rule and therefore is not subject to the requirement to develop and submit a risk management plan. However, Samson has an ongoing responsibility to submit this plan IF a substance is listed that the total source has in quantities over the threshold amount or IF the total source ever increases the amount of any regulated substance above the threshold quantity.

Stratospheric Ozone and Climate Protection – Subpart F

Based on information supplied by Samson, air conditioning units that may contain Class I or Class II refrigerants are located at the S. Ignacio facility, so 40 CFR part 82, subpart F does apply. However, the S. Ignacio facility personnel do not service the air conditioning units. If Samson ever decides to use its personnel to service any air conditioning units for the facility, then it must comply with the standards of 40 CFR part 82, subpart F, specifically, §82.156, §82.158, §82.161, and §82.166(i), and request a significant modification to this part 71 permit.

Stratospheric Ozone and Climate Protection – Subpart H

The S. Ignacio facility does have fire extinguishers on site that use halon, so 40 CFR part 82, subpart H for halon emissions reduction does apply. However, S. Ignacio facility personnel do not service the fire extinguishers. If Samson Resources ever decides to use its personnel to service, maintain, test, repair, or dispose of equipment that contains halons or use such equipment during technician training, then it must comply with the standards of 40 CFR part 82, subpart H for halon emissions reduction and request a significant modification to this part 71 permit.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart A: General Provisions. This subpart applies to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication of any standard in part 60. The general provisions under subpart A apply to sources that are subject to the specific subparts of part 60.

As explained below, the S. Ignacio facility operates an engine subject to NSPS JJJJ. Therefore, the General Provisions of part 60 do apply.

40 CFR Part 60, Subpart K: Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. This rule applies to storage vessels for petroleum liquids with a storage capacity greater than 40,000 gallons. 40 CFR part 60, subpart K does not apply to storage vessels for petroleum or condensate stored, processed, and/or treated at a drilling and production facility prior to custody transfer.

The subpart does not apply to the storage vessels at the S. Ignacio facility because there are no tanks at this site that were constructed, reconstructed, or modified after June 11, 1973, and prior to May 19, 1978.

40 CFR Part 60, Subpart Ka: Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to June 23, 1984. This rule applies to storage vessels for petroleum liquids with a storage capacity greater than 40,000 gallons. Subpart Ka does not apply to petroleum storage vessels with a capacity of less than 420,000 gallons used for petroleum or condensate stored, processed, or treated prior to custody transfer.

This subpart does not apply to the storage vessels at the S. Ignacio facility because there are no tanks at this site that were constructed, reconstructed, or modified after May 18, 1978, and prior to June 23, 1984.

40 CFR Part 60, Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984. This rule applies to storage vessels with a capacity greater than or equal to 75 cubic meters.

All used oil, lube oil and chemical storage (used for maintenance and operation) tanks on site at the South Ignacio Central Delivery Point facility are less than 75 cubic meters, except for the 400-barrel slop tank. The maximum vapor pressure calculated for the slop tank using TANKS 4.0 and reported in a previous application was 0.0006 psia. The slop tank meets the size cutoff for applicability, but its maximum vapor pressure is less than the applicability cutoff of 15.0 kilopascals. Therefore, this rule does not apply.

40 CFR Part 60, Subpart GG: Standards of Performance for Stationary Gas Turbines. This rule applies to stationary gas turbines, with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hr), that commenced construction, modification, or reconstruction after October 3, 1977.

There are no stationary gas turbines located at the S. Ignacio facility. Therefore, this rule does not apply.

40 CFR Part 60, Subpart KKK: Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. This rule applies to compressors and other equipment at onshore natural gas processing facilities. As defined in this subpart, a natural gas processing plant is any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids (NGLs) to natural gas products, or both. Natural gas liquids are defined as the hydrocarbons, such as ethane, propane, butane, and pentane that are extracted from field gas.

The S. Ignacio facility does not extract natural gas liquids from field gas, nor does it fractionate mixed NGLs to natural gas products, and thus does not meet the definition of a natural gas processing plant under this subpart. Therefore, this rule does not apply.

40 CFR Part 60, Subpart LLL: Standards of Performance for Onshore Natural Gas Processing; SO_2 Emissions. This rule applies to sweetening units and sulfur recovery units at onshore natural gas processing facilities. As defined in this subpart, sweetening units are process devices that separate hydrogen sulfide (H_2S) and carbon dioxide (CO_2) from a sour natural gas stream. Sulfur recovery units are defined as process devices that recover sulfur from the acid gas (consisting of H_2S and CO_2) removed by a sweetening unit.

The S. Ignacio facility does not perform sweetening or sulfur recovery at the facility. Therefore, this rule does not apply.

40 CFR Part 60, Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. This subpart establishes emission standards and compliance requirements for the control of emissions from stationary spark ignition (SI) internal combustion engines (ICE) that commenced construction, modification or reconstruction after June 12, 2006, where the SI ICE are manufactured on or after specified manufacture trigger dates. The manufacture trigger dates are based on the engine type, fuel used, and maximum engine horsepower.

For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator (See 40 CFR 60.4230(a)).

Samson provided the following information:

Table 4 – Summary of Engine Information
Samson South Ignacio Central Delivery Point

Unit	Serial Number	Unit Description	Fuel	HP	Manufacture Date	Start-up Date	Subpart JJJJ Trigger Date – Manufactured on or after
E1	C-13225/1	Waukesha 7044 GSI, Rich Burn	Natural gas	1680	5/2005	1/6/2006	7/1/2007
E2	C-60768/1	Waukesha 7042 LT, Lean Burn	Natural gas	1267	11/1997	1/29/2007	1/1/2008
E3	C-12097/2	Waukesha 7042 LT, Lean Burn	Natural gas	1267	2/2008	3/14/2008	1/1/2008
E4	C-10990/1	Waukesha 7042 LT, Lean Burn	Natural gas	1336	3/2007	5/7/2007	1/1/2008
E5	C-15962/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	2/2006	8/24/2007	7/1/2007
E6	C-16160/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	11/2005	4/8/2006	7/1/2007
E7	C-15838/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	9/2005	3/29/2006	7/1/2007
E8	C-15836/1	Waukesha 5794 LT, Lean Burn	Natural gas	1400	8/2005	4/5/2006	7/1/2007

According to the information provided by Samson in the April 18, 2008, supplemental application, engine E3 is a reconstructed unit manufactured after the trigger date of 1/1/2008. Therefore, E3 is an NSPS JJJJ engine subject to these standards.

40 CFR Part 60, Subpart KKKK: Standards of Performance for Stationary Combustion Turbines. This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005. The rule applies to stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour.

Samson does not operate stationary combustion turbines at the S. Ignacio facility. Therefore, this rule does not apply.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart A: General Provisions. This subpart contains national emissions standards for HAP that regulate specific categories of sources that emit one or more HAP regulated pollutants under the CAA. The general provisions under subpart A apply to sources that are subject the specific subparts of part 63.

The S. Ignacio facility is not subject to any specific subparts of part 63, therefore the General Provisions of part 63 do not apply. The determination of non-applicability for the facility is dependent on the facility's status as a synthetic minor source of HAPs. This permit establishes enforceable permit conditions limiting facility-wide HAP and formaldehyde emissions, and benzene emissions from each dehydrator. Absent such conditions the facility could be subject to 40 CFR part 63, subparts ZZZZ and HH for major HAP sources and subpart HH for minor HAP sources. Potential applicability to subpart ZZZZ is not affected by these limits.

40 CFR Part 63, Subpart HH: National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities. This subpart applies to the owners and operators of affected units located at natural gas production facilities that are major sources of HAPs, and that process, upgrade, or store natural gas prior to the point of custody transfer, or that process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. The affected units are glycol dehydration units, storage vessels with the potential for flash emissions, and the group of ancillary equipment, and compressors intended to operate in volatile hazardous air pollutant service, which are located at natural gas processing plants.

Throughput Exemption:

Those sources whose maximum natural gas throughput, as appropriately calculated in §63.760(a)(1)(i) through (a)(1)(iii), is less than 18,400 standard cubic meters per day are exempt from the requirements of this subpart.

Source Aggregation:

Major source, as used in this subpart, has the same meaning as in §63.2, except that:

1) Emissions from any oil and gas production well with its associated equipment and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units.

2) Emissions from processes, operations, or equipment that are not part of the same facility shall not be aggregated.

3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage tanks with flash emission potential shall be aggregated for a major source determination.

Facility:

For the purpose of a major source determination, facility means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in subpart HH. Examples of facilities in the oil and natural gas production category include, but are not limited to: well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Production Field Facility:

Production field facilities are those located prior to the point of custody transfer. The definition of custody transfer (40 CFR 63.761) means the point of transfer after the processing/treating in the producing operation, except for the case of a natural gas processing plant, in which case the point of custody transfer is the inlet to the plant.

Natural Gas Processing Plant:

A natural gas processing plant is defined in 40 CFR 63.761 as any processing site engaged in the extraction of NGLs from field gas, or the fractionation of mixed NGLs to natural gas products, or a combination of both. A treating plant or gas plant that does not engage in these activities is considered to be a production field facility.

Major Source Determination for Production Field Facilities:

The definition of major source in this subpart (at 40 CFR 63.761) states, in part, that only emissions from the dehydration units and storage vessels with a potential for flash emissions at production field facilities are to be aggregated when comparing to the major source thresholds. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated.

Area Source Applicability:

40 CFR part 63, subpart HH also applies to area sources of HAPs. An area source is a HAP source whose total HAP emissions are less than 10 tpy of any single HAP or 25 tpy for all HAPs in aggregate. This subpart requires different emission reduction requirements for glycol dehydration units found at oil and gas production facilities based on their geographical location. Units located in densely populated areas (determined by the Bureau of Census) and known as urbanized areas with an added 2-mile offset and urban clusters of 10,000 people or more, are required to have emission controls. Units located outside these areas will be required to have the glycol recirculation pump rate optimized or operators can document that PTE of benzene is less than 1 tpy.

Applicability of subpart HH to the S. Ignacio facility:

The S. Ignacio facility does not engage in the extraction of NGLs and therefore is not considered a natural gas processing plant. Hence, the point of custody transfer, as defined in subpart HH, occurs downstream of the station and the facility would therefore be considered a production field facility. For production field facilities, only emissions from the dehydration units and storage vessels with a potential for flash emissions are to be aggregated to determine major source status. The facility does not have flash tanks and the HAP emissions from the dehydration units alone at the facility are below the major source thresholds of 10 tpy of a single HAP and 25 tpy of aggregated HAPs.

With respect to the area source requirements of this subpart, the facility is located outside both an urban area and an urban cluster. Furthermore, uncontrolled benzene emissions from the two TEG glycol dehydrator units at the facility have been determined to be less than 1 tpy using GRI-GLYCalc Version 4.0, as presented in the supporting documentation in the application. However, Samson has opted to establish a benzene emission limit of 0.9 tpy for each dehydration unit to assure that processing variables do not result in triggering this requirement at a future date. **As a result, the dehydration units at the facility will be exempt from the §63.764(d) general requirements for area sources. However, the following general recordkeeping requirement will continue to apply to this facility:**

- §63.774(d)(1) – retain the GRI-GLYCalc determinations used to demonstrate that actual average benzene emissions are below 1 tpy.

The monitoring and record keeping requirements for the benzene emission limits on each of the dehydrators serves to meet this requirement.

40 CFR Part 63, Subpart HHH: National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities. This rule applies to natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user, and that are a major source of hazardous air pollutant (HAP) emissions. Natural gas transmission means the pipelines used for long distance transport and storage vessel is a tank or other vessel designed to contain an accumulation of crude oil, condensate, intermediate hydrocarbon, liquids, produced water or other liquid and is constructed of wood, concrete, steel or plastic structural support.

This subpart does not apply to the S. Ignacio facility as the facility is a natural gas production facility and not a natural gas transmission or storage facility.

40 CFR Part 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This rule establishes national emission limitations and operating limitations for HAPs emitted from stationary reciprocating internal combustion engines (RICE).

This rule applies to owners or operators of new and reconstructed stationary RICE of any horsepower rating which are located at a major or area source of HAP. While all stationary RICE located at major or area sources are subject to the final rule (promulgated January 18, 2008, amending the final rule promulgated June 15, 2004), there are distinct requirements for regulated stationary RICE depending on their design, use, horsepower rating, fuel, and major or area HAP emission status.

Major HAP Sources

The standard now applies to engines with a horsepower rating of less than or equal to 500 hp in addition to those engines with a horsepower rating greater than 500 hp. The standard continues to have specific requirements for new or reconstructed RICE and for existing SI 4 stroke rich burn (4SRB) stationary RICE located at a major HAP facility.

With the exception of the existing SI 4 stroke rich burn (4SRB) stationary RICE, other types of existing stationary RICE (i.e., SI 2 stroke lean burn (2SLB), SI 4 stroke lean burn (4SLB), compression ignition (CI), stationary RICE that combust landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, emergency, and limited use units) located at a major source of HAP emissions are not subject to any specific requirement under the final rule.

Existing RICE: A stationary RICE with a site rating of greater than 500 brake horsepower (bhp) is existing at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced before December 19, 2002. A stationary RICE with a site rating of less than or equal to 500 bhp is existing at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced before June 12, 2006.

New RICE: A stationary RICE with a site rating of greater than 500 hp is new at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced on or after December 19, 2002. A stationary RICE with a site rating of less than or equal to 500 bhp is new at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced on or after June 12, 2006.

Area (minor) HAP Sources

The standard now has specific requirements for new and reconstructed stationary RICE located at minor sources of HAPs, for engines with bhp ratings less than, equal to, or greater than 500 bhp. The area source standards for new stationary RICE reference the requirements of NSPS JJJJ for Spark Ignition Internal Combustion Engines and/or NSPS IIII for Compression Ignition Internal Combustion Engines. Existing RICE located at an area HAP source are not subject to any specific requirement under the final rule.

Existing RICE: A stationary RICE is existing at an area source of HAP emissions if construction or reconstruction of the unit commenced before June 12, 2006. The area source standards do not apply to existing stationary RICE.

New RICE: A stationary RICE is new at an area source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced on or after June 12, 2006.

Applicability of 40 CFR 63, subpart ZZZZ to the S. Ignacio facility:

None of the engines at this facility are subject to the major source MACT standards at subpart ZZZZ since the PTE is below the major source threshold of 25 tpy for the aggregate of HAP emissions and below 10 tpy for any single HAP.

Engines E1, E6, E7, and E8 were constructed, reconstructed or modified before June 12, 2006 and thus not subject to the new area source standards.

Engines E2, E4, and E5 were constructed, reconstructed or modified after June 12, 2006, and have triggered the area source MACT standards for RICE. However, the standard defers to NSPS JJJJ for Spark Ignition Internal Combustion Engines for the requirements on these engines. In addition, as mentioned in the discussion for NSPS JJJJ applicability, above, the NSPS JJJJ standards do not apply to the engines as they were manufactured before the manufacture trigger date in the rule. Therefore, engines E2, E4, and E5, while subject to 40 CFR 63, subpart ZZZZ, do not have any requirements.

Engine E3 was constructed, reconstructed or modified after June 12, 2006, and has triggered the area source MACT standards for RICE. The standard defers to NSPS JJJJ for Spark Ignition Internal Combustion Engines for the requirements on these engines. As discussed above, E3 is subject to the NSPS JJJJ requirements.

Prevention of Significant Deterioration (PSD)

New major stationary sources of air pollution are required by the CAA to obtain PSD permit before commencing construction. A major stationary source is any source type belonging to a list of 28 source categories which emits or has the potential to emit 100 tpy or more of any "regulated New Source Review" pollutant or any other source type which emits or has the potential to emit such pollutants in amounts equal to or greater than 250 tpy.

The S. Ignacio facility does not belong to any of the 28 source categories. Therefore, the potential to emit threshold for determining PSD applicability for this source is 250 tpy. The potential to emit of regulated NSR pollutants at this facility are currently below the major source threshold of 250 tpy. The S. Ignacio facility is a synthetically minor PSD source for CO emissions.

Compliance Assurance Monitoring (CAM) Rule

The CAM rule applies to each Pollutant Specific Emission Unit (PSEU) that meets a three-part test. The PSEU must be 1) subject to an emission limitation or standard, and 2) use an add-on control device to achieve compliance with that limit, and 3) have potential pre-control emissions that exceed or are equivalent to the title V, 100 tpy major source threshold.

Samson Resources operates several engines and two dehydrators subject to emission limits. These emission limits have been established in this permit either by order of a consent decree or by request from Samson to limit emissions to below major source thresholds for MACT and PSD applicability. Of all the controlled units at the facility, only engine E1 has pre-controlled emissions of NOx that are greater than 100 tpy. The engine has been fitted with controls to meet the emission limit requirements as set forth in a consent decree. However, according to 40 CFR 64.2(b)(1)(vi), CAM requirements do not apply to any emission unit that is subject to an emission limit or standard for which an applicable requirement specifies a continuous compliance determination method. According to the CAM rule, a continuous compliance determination method needs to have a direct correlation to the emissions of the unit. EPA believes there is a direct correlation determination in this permit. EPA believes that if Samson stays within the temperature and pressure ranges as stated in the permit, then they would be in compliance with the NOx emission limit.

b. Conclusion

Based on the information provided in Samson's application for the S. Ignacio facility, this source is subject to those existing applicable Federal CAA programs discussed above. The S. Ignacio facility is not subject to any implementation plan such as exists within state jurisdictions.

EPA recognizes that, in some cases, sources of air pollution located in Indian country are subject to fewer requirements than similar sources located on land under the jurisdiction of a state or local air pollution control agency. To address this regulatory gap, EPA is in the process of developing national regulatory programs for preconstruction review of major sources in non-attainment areas and of minor sources in both attainment and non-attainment areas. These programs will establish, where appropriate, control requirements for sources that would be incorporated into part 71 permits. To establish additional applicable, federally-enforceable emission limits, EPA Regional Offices will, as necessary and appropriate, promulgate Federal Implementation Plans (FIPs) that will establish Federal requirements for sources in specific areas. EPA will establish priorities for its direct Federal implementation activities by addressing as its highest priority the most serious threats to public health and the environment in Indian country that are not otherwise being adequately addressed.

Further, EPA encourages and will work closely with all tribes wishing to develop Tribal Implementation Plans (TIPs) for approval under the Tribal Authority Rule. EPA intends that its Federal regulations created through a FIP will apply only in those situations in which a tribe does not have an approved TIP.

5. EPA Authority

a. General authority to issue part 71 permits

Title V of the CAA requires that EPA promulgate, administer, and enforce a Federal operating permits program when a state does not submit an approvable program within the time frame set by title V or does not adequately administer and enforce its EPA-approved program. On July 1, 1996 (61 FR 34202), EPA adopted regulations codified at 40 CFR part 71 setting forth the procedures and terms under which the Agency would administer a Federal operating permits program. These regulations were updated on February 19, 1999 (64 FR 8247) to incorporate EPA's approach for issuing Federal operating permits to stationary sources in Indian country.

As described in 40 CFR 71.4(a), EPA will implement a part 71 program in areas where a state, local, or tribal agency has not developed an approved part 70 program. Unlike states, Indian tribes are not required to develop operating permits programs, though EPA encourages tribes to do so. See, e.g., Indian Tribes: Air Quality Planning and Management (63 FR 7253, February 12, 1998) (also known as the "Tribal Authority Rule"). Therefore, within Indian country, EPA will administer and enforce a part 71 Federal operating permits program for stationary sources until a tribe receives approval to administer their own operating permits program.

6. Use of All Credible Evidence

Determinations of deviations, continuous or intermittent compliance status, or violations of the permit are not limited to the testing or monitoring methods required by the underlying regulations or this permit; other credible evidence (including any evidence admissible under the Federal Rules of Evidence) must be

considered by the source and EPA in such determinations.

7. Public Participation

a. Public notice

As described in 40 CFR 71.11(a)(5), all part 71 draft operating permits shall be publicly noticed and made available for public comment. The Public Notice of permit actions and public comment period is described in 40 CFR 71(d).

There was a 30 day public comment period for actions pertaining to a draft permit. Public notice was given for the draft permit by mailing a copy of the notice to the permit applicant, the affected state, tribal and local air pollution control agencies, the city and county executives, the state and federal land managers and the local emergency planning authorities which have jurisdiction over the area where the source is located. A copy of the notice was provided to all persons who submitted a written request to be included on the mailing list. If you would like to be added to our mailing list to be informed of future actions on these or other Clean Air Act permits issued in Indian country, please send your name and address to the contact listed below:

Part 71 Permit Contact
Air Program, 8P-AR
US EPA Region 8
1595 Wynkoop Street
Denver, Colorado 80202

Public notice was published in the Durango Herald on June 16, 2009, giving opportunity for public comment on the draft permit and the opportunity to request a public hearing.

b. Opportunity for comment

Members of the public were given an opportunity to review a copy of the draft permit prepared by EPA, the application, this statement of basis for the draft permit, and all supporting materials for the draft permit. Copies of these documents were available at:

La Plata County Clerk's Office
1060 East 2nd Avenue
Durango, Colorado 81302

and

Southern Ute Indian Tribe
Environmental Programs Office
116 Mouache Drive
Ignacio, Colorado 81137

and

US EPA Region 8
Air Program Office
1595 Wynkoop Street (8P-AR)
Denver, Colorado 80202

All documents were available for review at the U.S. EPA Region 8 office Monday through Friday from 8:00 a.m. to 4:00 p.m. (excluding federal holidays).

Any interested person could submit written comments on the draft part 71 operating permit during the public comment period to the Part 71 Permit Contact at the address listed above. All comments have been to be considered and answered by EPA in making the final decision on the permit. EPA keeps a record of the commenters and of the issues raised during the public participation process.

Anyone, including the applicant, who believed any condition of the draft permit was inappropriate should raise all reasonable ascertainable issues and submitted all arguments supporting their position by the close of the public comment period. Any supporting materials submitted must have been included in full and must not be incorporated by reference, unless the material had been already submitted as part of the administrative record in the same proceeding or consisted of state or federal statutes and regulations, EPA documents of general applicability, or other generally available reference material.

No comments were received during the public comment period.

c. Opportunity to request a hearing

A person could submit a written request for a public hearing to the Part 71 Permit Contact, at the address listed above, by stating the nature of the issues to be raised at the public hearing. EPA did not receive any requests for a public hearing during the comment period.

d. Appeal of permits

Within 30 days after the issuance of a final permit decision, any person who filed comments on the draft permit or participated in the public hearing may petition to the Environmental Appeals Board to review any condition of the permit decision. Any person who failed to file comments or participate in the public hearing may petition for administrative review, only if the changes from the draft to the final permit decision or other new grounds were not reasonably foreseeable during the public comment period. The 30 day period to appeal a permit begins with EPA's service of the notice of the final permit decision.

The petition to appeal a permit must include a statement of the reasons supporting the review, a demonstration that any issues were raised during the public comment period, a demonstration that it was impracticable to raise the objections within the public comment period, or that the grounds for such objections arose after such a period. When appropriate, the petition may include a showing that the condition in question is based on a finding of fact or conclusion of law which is clearly erroneous; or, an exercise of discretion, or an important policy consideration which the Environmental Appeals Board should review.

The Environmental Appeals Board will issue an order either granting or denying the petition for review, within a reasonable time following the filing of the petition. Public notice of the grant of review will establish a briefing schedule for the appeal and state that any interested person may file an amicus brief. Notice of denial of review will be sent only to the permit applicant and to the person requesting the review. To the extent review is denied, the conditions of the final permit decision become final agency action.

A motion to reconsider a final order shall be filed within 10 days after the service of the final order. Every motion must set forth the matters claimed to have been erroneously decided and the nature of the alleged errors. Motions for reconsideration shall be directed to the Administrator rather than the Environmental Appeals Board. A motion for reconsideration shall not stay the effective date of the final order unless it is specifically ordered by the Board.

e. Petition to reopen a permit for cause

Any interested person may petition EPA to reopen a permit for cause, and EPA may commence a permit reopening on its own initiative. EPA will only revise, revoke and reissue, or terminate a permit for the reasons specified in 40 CFR 71.7(f) or 71.6(a)(6)(i). All requests must be in writing and must contain facts or reasons supporting the request. If EPA decides the request is not justified, it will send the requester a brief written response giving a reason for the decision. Denial of these requests is not subject to public notice, comment, or hearings. Denials can be informally appealed to the Environmental Appeals Board by a letter briefly setting forth the relevant facts.

f. Notice to affected states/tribes

As described in 40 CFR 71.11(d)(3)(i), public notice was given by mailing a copy of the notice to the air pollution control agencies of affected states, tribal and local air pollution control agencies which have jurisdiction over the area in which the source is located, the chief executives of the city and county where the source is located, any comprehensive regional land use planning agency and any state or federal land manager whose lands may be affected by emissions from the source. The following entities were notified:

- State of Colorado, Department of Public Health and Environment
- State of New Mexico, Environment Department
- Southern Ute Indian Tribe, Environmental Programs Office
- Ute Mountain Ute Tribe, Environmental Programs
- Navajo Tribe, Navajo Nation EPA
- Jicarilla Tribe, Environmental Protection Office
- La Plata County, County Clerk
- Town of Ignacio, Mayor
- National Park Service, Air, Denver, CO
- U.S. Department of Agriculture, Forest Service, Rocky Mountain Region
- San Juan Citizen Alliance
- Carl Weston
- Wild Earth Guardians (formerly Rocky Mountain Clean Air Action)