March 5, 2010

Catherine Penland
Part 71 Permit Contact
Air, Pesticides and Toxics Division, MC 6PD-R
U.S. EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Re: 40 CFR Part 71 Operating Permit Application
Williams Four Corners, LLC Trunk E & H Receiver

Dear Ms. Penland:

Enclosed please find 40 CFR Part 71 operating permit application forms for Williams Four Corners, LLC Trunk E & H Receiver located on the Jicarilla Apache Indian Reservation in New Mexico.

If you have any questions, or require additional information, please contact Aaron Dailey of Williams Four Corners, LLC at (505) 632-4951 or Bobby Myers of Cirrus Consulting, LLC at (801) 484-4412.

Sincerely,

Robert L. Myers II
Principal

c: Aaron Dailey (Williams Four Corners, LLC)

Enclosures

Cirrus Consulting
951 Diestel Road
Salt Lake City, Utah 84105

Tel: (801) 484-4412
Fax: (801) 484-4192
bmyers@cirrusllc.com

U.S.ENVIRONMENTAL PROTECTION AGENCY (REGION 6)
APPLICATION FOR FEDERAL OPERATING PERMIT
(40 CFR PART 71)

TRUNK E & H RECEIVER

Submitted By:

WILLIAMS FOUR CORNERS, LLC
188 County Road 4900
Bloomfield, New Mexico 87413

Prepared By:

CIRRUS CONSULTING, LLC
951 S. Diestel Road
Salt Lake City, UT 84105

March 2010

Table of Contents

Introduction

Williams Four Corners, LLC (WFC) is submitting this permit application to the Region 6 Environmental Protection Agency Air Permits Section to obtain a Part 71 Federal Title V Operating Permit for the Trunk E & H Receiver. The facility is located within the Jicarilla Apache Indian Reservation, and as the Tribe has not developed their own rules and regulations concerning air emission sources, the facility is presently under the jurisdiction of the EPA.

The Trunk E&H Receiver is a natural gas liquids receiver on a natural gas pipeline. This receiver collects liquids (consisting of water and hydrocarbons condensed from the natural gas) removed from the pipeline by pigging operations. Flashing occurs as these liquids are transferred from the receiver to the atmospheric storage tanks, releasing hydrocarbons, including volatile organic compounds (VOCs) to the atmosphere. Due to increasing liquids volumes VOC emissions have reached the 100 tons per year Title V trigger threshold, subjecting the facility to the Federal Operating Permits Program.

A list of equipment included in this permit application is included below.

Equipment List

Unit Number	Unit Description
TK-CAP	Three 300-bbl Condensate Storage Tanks
L-1	Truck Loading
F-1	Piping Component Fugitive Emissions
F-2*	Pig Receiver Venting Emissions
TK-4*	80-bbl Produced Water
TK-5*	90-bbl Produced Water
HTR-1*	12 MBtu/hr Catalytic Heater
HTR-2*	12 MBtu/hr Catalytic Heater
HTR-3*	12 MBtu/hr Catalytic Heater
HTR-4*	12 MBtu/hr Catalytic Heater

*** Insignificant sources**

United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 09/30/2010

Federal Operating Permit Program (40 CFR Part 71)

GENERAL INFORMATION AND SUMMARY (GIS)

A. Mailing Address and Contact Information

Facility name **Trunk E & H Receiver**

Mailing address: Street or P.O. Box **188 County Road 4900**

City **Bloomfield** State **NM** ZIP **87413**

Contact person: **Aaron Dailey** Title **Environmental Specialist**

Telephone **(505) 632 - 4708** Ext. _____

Facsimile **(505) 632 - 4781**

B. Facility Location

Temporary source? ___Yes _**X**_**No** Plant site location **UTM zone 13, 303798 m E, 4041508 m N (lat 36°29'56"N, 107° 11'26" W)**

City **~30 miles S SW of Dulce, NM** State **NM** County **Rio Arriba** EPA Region **6**

Is the facility located within:

Indian lands? _**X**_**YES** ___ NO OCS waters? ___YES _**X**_ **NO**

Non-attainment area? ___ YES _**X**_**NO** If yes, for what air pollutants? _____

Within 50 miles of affected State? _**X**_ **YES** __ NO If yes, What State(s)? **NM, CO**

C. Owner

Name **Williams** Street/P.O. Box **One Williams Center**

City **Tulsa** State **OK** ZIP **74172**

Telephone **(918) 588-2984** Ext_____

D. Operator

Name **Williams Four Corners, LLC** Street/P.O. Box **188 County Road 4900**

City **Bloomfield** State **NM** ZIP **87413**

Telephone **(505) 632 - 4708**

E. Application Type

Mark only one permit application type and answer the supplementary question appropriate for the type marked.

_**X**_ **Initial Permit** ___ Renewal ___ Significant Mod ___ Minor Permit Mod(MPM)

___ Group Processing, MPM ___ Administrative Amendment

For initial permits, when did operations commence? **1974**

For permit renewal, what is the expiration date of current permit? _____/____/_____

F. Applicable Requirement Summary

Mark all types of applicable requirements that apply.

___ SIP _**X**_ **FIP/TIP** ___ PSD ___Non-attainment NSR

___ Minor source NSR ___ Section 111 ___ Phase I acid rain ___Phase II acid rain

___ Stratospheric ozone ___ OCS regulations ___ NESHAP ___ Sec. 112(d) MACT

___ Sec. 112(g) MACT ___ Early reduction of HAP ___ Sec 112(j) MACT ___ RMP [Sec.112(r)]

___ Tank Vessel requirements, sec. 183(f)) ___ Section 129 Standards/Requirement

___ Consumer / comm.. products, ɜ 183(e) ___ NAAQS, increments or visibility (temp. sources)

Has a risk management plan been registered? ___YES **X NO** Regulatory agency _____

Phase II acid rain application submitted? ___YES **X NO** If yes, Permitting authority _____

G. Source-Wide PTE Restrictions and Generic Applicable Requirements

Cite and describe any emissions-limiting requirements and/or facility-wide "generic" applicable requirements.

Facility receives pipeline condensate and transfers to storage tanks pending truck haul. Condensate
throughput volumes have increased sufficiently such that condensate tank flash emissions have
Exceeded the 100 tpy Title V trigger threshold.

H. Process Description

List processes, products, and SIC codes for the facility.

Process	Products	SIC
Condensate pig receiver & storage	**Natural gas condensate**	**1389**

I. Emission Unit Identification

Assign an emissions unit ID and describe each emissions unit at the facility. Control equipment and/or alternative operating scenarios associated with emissions units should by listed on a separate line. Applicants may exclude from this list any insignificant emissions units or activities.

Emissions Unit ID	Description of Unit
TK-CAP	**Three 300-bbl condensate storage tanks**
L-1	**Condensate truck loading emissions**
F-1	**Piping Component Fugitive Emissions**

J. Facility Emissions Summary

Enter potential to emit (PTE) for the facility as a whole for each air pollutant listed below. Enter the name of the single HAP emitted in the greatest amount and its PTE. For all pollutants stipulations to major source status may be indicated by entering "major" in the space for PTE. Indicate the total actual emissions for fee purposes for the facility in the space provided. Applications for permit modifications need not include actual emissions information.

NOx **N/A** tons/yr VOC **216.5** tons/yr SO2 **N/A** tons/yr

PM-10 **N/A** tons/yr CO **N/A** tons/yr Lead **N/A** tons/yr

Total HAP **9.6** tons/yr

Single HAP emitted in the greatest amount **n-Hexane** PTE **6.2** tons/yr

Total of regulated pollutants (for fee calculation), Sec. F, line 5 of form FEE **N/A** tons/yr

K. Existing Federally-Enforceable Permits – N/A

Permit number(s) _ _____ Permit type _____ Permitting authority _____

Permit number(s) _____ Permit type _____ Permitting authority _____

L. Emission Unit(s) Covered by General Permits – N/A

Emission unit(s) subject to general permit _____

Check one: ___ Application made ___ Coverage granted

General permit identifier _____ Expiration Date ____/____/____

M. Cross-referenced Information

Does this application cross-reference information? ___ YES _**X**_ **NO** (If yes, see instructions)

INSTRUCTIONS FOLLOW

INSTRUCTIONS FOR GIS, GENERAL INFORMATION AND SUMMARY

Use this form to provide general and summary information about the part 71 source (facility or plant) and to indicate the permitting action requested. Submit this form once for each part 71 source. Several sections of this form ask for information you may not know until you complete other part 71 forms.

Section A - Enter the facility's official or legal name. The contact person should be a person familiar with the day-to-day operation of the facility, such as a plant site manager or similar individual.

Section B – If different from the mailing address, include the plant site location.

Sections C and D - If more than one owner or operator, list them on an attachment.

Section E - Mark initial permit issuance if you are applying for the first time. For all types of permit revisions, applicants must provide a brief narrative description of the changes.

Section F - Indicate the broad categories of applicable requirements that apply to the facility or any emissions units. Note that acid rain requirements must be included in part 71 permits the same as other requirements. Also see definition of “applicable requirement” in part 71.

Section G – List emission-limiting requirements that apply to the facility as a whole, such as restrictions on potential to emit or applicable requirements that apply identically to all emission units at a facility.

Section H - List, in descending order of priority, the 4-digit standard industrial classification (SIC) code(s) that best describes your facility in terms of its principal products or processes, and provide a brief narrative description for each classification. For a listing of SIC codes, see the Standard Industrial Classification Manual, 1987 edition, prepared by the Executive Office of the President, Office of Management and Budget, from the Government Printing Office, Washington DC.

Section I - Assign a unique identifier (unit ID) under the "emissions unit ID" column and provide a text description for each significant emissions unit at facility. These IDs will be used in other part 71 forms. A "significant emissions unit" is any unit that is not an insignificant emission unit or activities. Note that unit IDs need only be assigned if they will be referenced in subsequent portions of the application. You may choose any numbering system you wish to assign unit IDs. If a unit ID was previously assigned, use the original ID. If the unit is a new unit, assign a unit ID consistent with the existing units’ IDs.

You may group emissions units, activities, or pieces of equipment together and assign a single unique unit ID when they are subject to the same applicable requirement(s) and will have the same monitoring, record keeping, and reporting requirements in the permit.

In addition, assign a unit ID for each alternative operating scenario and each piece of pollution control equipment. When possible, assign these numbers so as to show with which emissions units or processes these scenarios or control devices are associated.

Section J - Show the total emissions for the source in terms of PTE for applicability purposes for each air pollutant listed below and the total actual emissions for fee purposes. Applications for permit revisions should report PTE after the change for the emissions units affected by the change.

Completion of form **PTE** is recommended prior to the entry of PTE information in this section.

"NOx" is an abbreviation for nitrogen oxides,
"VOC" is for volatile organic compounds,
"SO2" is for sulfur dioxide,
"PM10" is for particulate matter with an aerodynamic diameter of 10 micrometers or less,
"CO" is for carbon monoxide, and
“Lead” is for elemental lead regulated by a NAAQS (“compounds of lead” are HAP).

Also note that each individual HAP on the list of HAP in section 112(b) of the Act is a separate regulated air pollutant.

Include fugitive emissions when reporting PTE to the extent that they count toward major source applicability. All fugitive emissions of HAP count toward major source applicability.

Sources may also stipulate to major source status for the pollutants indicated on the form by entering "Major" in the space provided for PTE values.

You may use the value for actual emissions from section F, line 5, of form **FEE**. When totaling actual emissions for fee purposes, include all emissions, including fugitive emissions, regardless of whether they count for applicability purposes.

Section L - If any emissions unit within your facility is applying, has applied, or currently has a general permit, identify the emissions unit ID and name of the unit, consistent with section I of this form.

Section M - Attach copies of any cross-referenced documents that are not publicly available or otherwise available to the permitting authority.

END

United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 09/30/2010

Federal Operating Permit Program (40 CFR Part 71)

EMISSIONS UNIT DESCRIPTION FOR VOC EMITTING SOURCES (EUD-2)

A. General Information

Emissions unit ID **TK- CAP** Description **Three 300-bbl condensate storage tanks**

SIC Code (4-digit) **1389** SCC Code _____

B. Emissions Unit Description

Equipment type **Condensate Storage Tanks** Temporary source: ___Yes _**X**_**No**

Manufacturer: **Unknown** Model No. **N/A**

Serial No. **N/A** Installation date **1974**

Articles being coated or degreased: **N/A**

Application method **N/A**

Overspray (surface coating) (%) **N/A** Drying method **N/A**

No. of dryers **N/A** Tank capacity (degreasers) (gal) **N/A**

C. Associated Air Pollution Control Equipment - N/A

Emissions unit ID _____ Device Type _____

Manufacturer _____ Model No_____

Serial No. _____ Installation date ____/____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled_____ Efficiency estimation method _____

D. Ambient Impact Assessment - N/A

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____.____

Actual stack flow rate (ACFM) _____ Velocity (ft/sec) _____._____

E. VOC-containing Substance Data

List each VOC-containing substance consumed, processed or produced at the emissions unit that is emitted into the air. In the name column, if providing a brand name, include the name of the manufacture; if the substance contains HAP, list the constituent HAP.

Substance Name (Chemical, Brand Name)	CAS No.	Substance Type	Actual Usage (gal/yr)	Max Usage (gal/day)	Max Usage (gal/year)	VOC Content (lb/gal)
Natural Gas Condensate	**N/A**	**Natural Gas Condensate**	**N/A**	**N/A**	**32,400 bbl /yr**	*****

Note: *See emission calculations (Section 5)

United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 09/30/2010

Federal Operating Permit Program (40 CFR Part 71)

EMISSIONS UNIT DESCRIPTION FOR VOC EMITTING SOURCES (EUD-2)

A. General Information

Emissions unit ID **L-1** Description **Truck Loading Loss Emissions**

SIC Code (4-digit) **1389** SCC Code _____

B. Emissions Unit Description

Equipment type **Haul Trucks** Temporary source: ___Yes _**X**_**No**

Manufacturer: **N/A** Model No. **N/A**

Serial No. **N/A** Installation date **N/A**

Articles being coated or degreased: **N/A**

Application method **N/A**

Overspray (surface coating) (%) **N/A** Drying method **N/A**

No. of dryers **N/A** Tank capacity (degreasers) (gal) **N/A**

C. Associated Air Pollution Control Equipment - N/A

Emissions unit ID _____ Device Type _____

Manufacturer _____ Model No_____

Serial No. _____ Installation date ____/____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled_____ Efficiency estimation method _____

D. Ambient Impact Assessment - N/A

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____.____

Actual stack flow rate (ACFM) _____ Velocity (ft/sec) _____._____

E. VOC-containing Substance Data

List each VOC-containing substance consumed, processed or produced at the emissions unit that is emitted into the air. In the name column, if providing a brand name, include the name of the manufacture; if the substance contains HAP, list the constituent HAP.

Substance Name (Chemical, Brand Name)	CAS No.	Substance Type	Actual Usage (gal/yr)	Max Usage (gal/day)	Max Usage (gal/year)	VOC Content (lb/gal)
Natural Gas Condensate	**N/A**	**Natural Gas Condensate**	**N/A**	**N/A**	**32,400 bbl / year**	*

Note: *See emission calculations (Section 5)

United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 09/30/2010

Federal Operating Permit Program (40 CFR Part 71)

EMISSIONS UNIT DESCRIPTION FOR VOC EMITTING SOURCES (EUD-2)

A. General Information

Emissions unit ID **F-1** Description **Piping Component Fugitive Emissions**

SIC Code (4-digit) **1389** SCC Code _____

B. Emissions Unit Description

Equipment type **Valves, Flanges, Seals, etc**. Temporary source: ___Yes **X No**

Manufacturer **Unknown** Model No. **Unknown**

Serial No. **Unknown** Installation date: **Unknown**

Articles being coated or degreased: **NA**

Application method **NA**

Overspray (surface coating) (%)**NA** Drying method **NA**

No. of dryers **NA** Tank capacity (degreasers) (gal) **NA**

C. Associated Air Pollution Control Equipment – N/A

Emissions unit ID _____ Device Type_____

Manufacturer _____ Model No_____

Serial No. _____ Installation date ____/____/_____

Control efficiency (%) _____.___ Capture efficiency (%) _____.___

Air pollutant(s) controlled_____ Efficiency estimation method _____

D. Ambient Impact Assessment – N/A

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Stack height (ft) _____._____ Inside stack diameter (ft) _____._____

Stack temp (F) _____._____ Design stack flow rate (ACFM) _____.____

Actual stack flow rate (ACFM) _____ Velocity (ft/sec) _____._____

E. VOC-containing Substance Data

List each VOC-containing substance consumed, processed or produced at the emissions unit that is emitted into the air. In the name column, if providing a brand name, include the name of the manufacture; if the substance contains HAP, list the constituent HAP.

Substance Name (Chemical, Brand Name)	CAS No.	Substance Type	Actual Usage (gal/yr)	Max Usage (gal/day)	Max Usage (gal/year)	VOC Content (lb/gal)
Natural Gas	**N/A**	**Natural Gas**	**N/A**	**N/A**	**N/A**	*****

Note: *See fugitive emission calculations (Section 5)

INSTRUCTIONS FOR EUD-2
EMISSIONS UNIT DESCRIPTION FOR VOC EMITTING SOURCES

Use this form to describe emissions units that use, process, store or produce substances containing VOC and that primarily emit VOC, such as painting or coating operations and printers.

In addition, this form may also be useful for certain HAP emitting sources. The purpose of this form is to help you collect and organize technical data, including operational characteristics, applicable requirements, compliance terms, and emissions.

Section A - The emissions unit ID should be consistent with the one used in section I of form **GIS**. Enter the four-digit SIC code for the unit, which may be different from that used to describe the facility as a whole. In addition, enter the Source Classification Code (SCC), if known or available, but this is not mandatory.

Section B - There may be other information that the permitting authority will need to know that is not specifically requested on the forms and that should be included on attachments. Such information would include information needed to adequately identify the emissions unit and to determine its applicable requirements.

Section C - Identify and describe any associated air pollution control device for the unit described above. If data (such as control efficiency) provided by the vendor, attach documentation (if available); If other basis, indicate how determined (e.g., AP-42).

Section D - Complete this section only if ambient impact assessment is an applicable requirement or the facility is a temporary source. This is not common.

Section E - VOC content and usage values are typically used to calculate emissions. Actual usage will be multiplied by VOC content to calculate actual emissions, while maximum usage will be multiplied by VOC content to calculate PTE. Explain the basis for the usage and VOC content values on an attachment (e.g., material safety data sheet or MSDS). Also, EPA Reference Method 24 of 40 CFR Part 60, Appendix A, can also be used to determine VOC content but this is not required solely for these application purposes. When VOC Content is determined through testing or calculation by the applicant, the applicant must attach test data and calculations.

Federal Operating Permit Program (40 CFR Part 71)

INSIGNIFICANT EMISSIONS (IE)

List each insignificant activity or emission unit. In the "number" column, indicate the number of units in this category. Descriptions should be brief but unique. Indicate which emissions criterion of part 71 is the basis for the exemption.

Number	Description of Activities or Emissions Units	RAP, except HAP	HAP
1	**80-bbl Produced Water Tank (TK-4)**	**X**	**X**
1	**90-bbl Produced Water Tank (TK-5)**	**X**	**X**
4	**12,000 Btu/hr CATCO Catalytic Heaters (HTR-1, HTR-2, HTR-3, HTR-4)**	**X**	**X**
1	**Fugitives: Pig Receiver Venting (F-2)**	**X**	**X**

INSTRUCTIONS FOR IE
INSIGNIFICANT ACTIVITIES

Use this form only if you have any equipment, emissions units, or emitting activities at your facility that qualify for insignificant treatment due to insignificant emissions levels (defined in the part 71 rule) and you desire such treatment.

Generally identify the source of emissions.

The "number" column is provided to indicate the total number or units or activities grouped together under one description, for example, equipment such as valves and flanges. However, units or activities that are similar should be listed separately in the form when the descriptions differ in a meaningful way, such as when capacities or sizes differ and this information is relevant, for example, to an applicability determination.

Check one of the columns provided to indicate which emission level criteria of part 71 is met for these units or activities that warrant such treatment. The rule provides 2 emission criteria:

- emissions of 2 tons per year or less or any regulated pollutants except HAP (RAP, except HAP) from any emission unit, or
- 1000 pounds per year or less of any HAP from any emission unit.

Note that part 71 does not exempt any insignificant units from major source applicability determinations.

In addition, attach to this form information concerning equipment, activities, or emissions units that are exempted from an otherwise applicable requirement (e.g., grandfathered emissions units. Please cite the basis for the exemption (e.g., State administrative code or Federal regulation).

Federal Operating Permit Program (40 CFR Part 71)

EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form **GIS**. If form **FEE** does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID TK-CAP, Three 300-bbl condensate tanks

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOCs	**NA**	**46.7**	**204.4**	
Benzene	**NA**	**0.2**	**0.8**	**71-43-2**
Toluene	**NA**	**0.2**	**0.8**	**108-88-3**
Xylenes	**NA**	**Negligible**	**0.1**	**1330-20-7**
n-Hexane	**NA**	**1.2**	**5.3**	**110-54-3**
224 Trimethylpentane	**NA**	**0.1**	**0.4**	

Note: Negligible (less than 0.1 ton/year or 0.1 lb/hr)

Note: HAP emission rates rounded up to 0.1 tons/year only if calculated emission rates are 0.05 tons/year or greater. Otherwise, the emissions are considered negligible.
See Section 5 for emission calculations.

Federal Operating Permit Program (40 CFR Part 71)

EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form **GIS**. If form **FEE** does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID **L-1, Condensate Truck Loading Emissions**

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOC	**N/A**	**N/A**	**8.3**	
Benzene	**N/A**	**N/A**	**0.1**	**71-43-2**
Toluene	**N/A**	**N/A**	**0.4**	**108-88-3**
Xylene	**N/A**	**N/A**	**0.2**	**1330-20-7**
N-Hexane	**N/A**	**N/A**	**0.6**	**110-54-3**
2,2,4-Trimethylpentane	**N/A**	**N/A**	**0.2**	

Note: Negligible (less than 0.1 ton/year or 0.1 lb/hr)

Note: HAP emission rates rounded up to 0.1 tons/year only if calculated emission rates are 0.05 tons/year or greater. Otherwise, the emissions are considered negligible.

See Section 5 for emission calculations

Federal Operating Permit Program (40 CFR Part 71)

EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form **GIS**. If form **FEE** does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID **F-1, Piping Component Fugitive Emissions**

B. Identification and Quantification of Emissions

First, list each air pollutant that is either regulated at the unit or present in major amounts, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. You may round to the nearest tenth of a ton for yearly values or tenth of a pound for hourly values.

Air Pollutants	Emission Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lb/hr)	Annual (tons/yr)	
VOCs	**N/A**	**0.9**	**3.8**	
n-Hexane	**N/A**	**0.1**	**0.3**	**110-54-3**
2,2,4 Trimethylpentane	**N/A**	**Negligible**	**0.1**	
Toluene	**N/A**	**Negligible**	**0.2**	**108-88-3**
Xylene	**N/A**	**Negligible**	**0.1**	**1330-20-7**
Benzene	**N/A**	**Negligible**	**0.1**	**71-43-2**

Note: Negligible (less than 0.1 ton/year or 0.1 lb/hr)

Note: HAP emission rates rounded up to 0.1 tons/year only if calculated emission rates are 0.05 tons/year or greater. Otherwise, the emissions are considered negligible.

See Section 5 for emission calculations

INSTRUCTIONS FOR EMISS
EMISSION CALCULATIONS

Use this form to quantify emissions for each significant emissions unit identified in section I of form **GIS**. This form will help you organize emissions data needed on forms **PTE** and **FEE**. Do not complete this form for any units or activities listed as insignificant on form **IE**. Sources applying for permit revisions only need complete this form for each emissions unit affected by the change.

Section A - The emissions unit ID should be the same as that used in section I of form **GIS**.

Section B - First, list each “regulated air pollutant” that is subject to an applicable requirement or that is emitted in major amounts (at the unit or facility). Please list each HAP separately.

Second, list any “regulated pollutant (for fee calculation)” emitted that has not already been listed. If you will not be submitting form FEE with your application, you do not need to perform this or the next step. For fee purposes, fugitive emissions count the same as stack emissions. Any HAP that has not been listed up to this point may be simply listed as "HAP." [There is no need to list carbon monoxide, Class I or II substances under title VI, and pollutants regulated solely by section 112(r) for fee purposes.]

Third, calculate actual emissions of "regulated pollutants (for fee calculation). Actual emissions are calculated based on actual operating hours, productions rates, and in-place control equipment, and the types of materials used during the preceding calendar year. If you already have a permit, you should use the compliance methods required by the permit, such as monitoring or source test data, whenever possible; if not possible, you may use other federally recognized procedures.

Most sources will calculate actual emissions for the preceding calendar year. Sources that commenced operation during the preceding calendar year shall estimate emissions for the current calendar year. Certain sources have the option of estimating their actual emissions for the preceding calendar year, instead of calculating them based on actual emissions data, see the instructions for form **FEE** for more on this topic.

Your emission calculations may be based on generally available information rather than new source testing or studies not already required. If you have listed a pollutant but are unable to calculate its actual emissions without conducting new source testing or extensive studies, you may enter "UN" (for "unknown") in the space provided.

You may round to the nearest ton or use greater precision if you believe it will result in a lower fee.

Fourth, calculate PTE for each “regulated air pollutant.” For pollutants not specifically regulated at this emission unit, do not calculate PTE in pounds/hour. You may stipulate that the unit alone triggers major source status for this pollutant by entering "MU" in the space provided for annual PTE values. You may stipulate that the unit does not trigger major source status, but that the aggregate facility emissions or another unit triggers major source status by entering "MS" in the space provided for annual PTE values.

Do not calculate PTE values for emissions that are not counted for major source applicability purposes or for emissions listed solely for fee purposes, however, enter "NA" for "not applicable" in the space provided for PTE values for these emissions.

If you are unable to calculate PTE values for air pollutants counted for applicability purposes without conducting new source testing or extensive studies, enter "UN" (for "unknown") in the space provided.

Within applications for permit revisions, PTE should be calculated assuming the proposed change has occurred.

“Potential to emit” is defined as "the maximum capacity of a stationary source to emit any pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air 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 is enforceable by the Administrator."

Enter values for PTE by rounding to the nearest ton in the space for tons/year or to the nearest pound in the space for pounds/hour. If greater precision is needed or desired, do not round these values until you calculate the total on form **PTE**.

Provide the chemical abstract service number (CAS No.), if available.

END

Federal Operating Permit Program (40 CFR Part 71)

POTENTIAL TO EMIT (PTE)

For each unit with emissions that count towards applicability, list the emissions unit ID and the PTE for the air pollutants listed below and sum them up to show totals for the facility. You may find it helpful to complete form **EMISS** before completing this form. Show other pollutants not listed that are present in major amounts at the facility on attachment in a similar fashion. You may round values to the nearest tenth of a ton. Also report facility totals in section **J** of form **GIS**.

Emissions Unit ID	Regulated Air Pollutants and Pollutants for which the Source is Major (tons/yr)						
	NOx	VOC	SO2	PM10	CO	Lead	HAP
TK-CAP	**N/A**	**204.4**	**NA**	**NA**	**NA**	**NA**	**7.4**
L-1	**N/A**	**8.3**	**NA**	**NA**	**NA**	**NA**	**1.5**
F-1	**N/A**	**3.8**	**NA**	**NA**	**NA**	**NA**	**0.8**
FACILTY TOTALS	**N/A**	**216.5**	**N/A**	**N/A**	**N/A**	**N/A**	**9.7**

INSTRUCTIONS FOR PTE
POTENTIAL TO EMIT

Calculate the total PTE for each air pollutant at the facility for purposes of determining major source applicability.

On each line (row) in the table provided, enter the emissions unit ID and the quantity of each air pollutant identified on the form. If form **EMISS** was prepared previously, simply copy the emission values (or stipulations to major source status) contained on those forms to this form. You may round to the nearest ton.

Applicants may stipulate to major source status for an air pollutant and, thereby, avoid detailed PTE calculations. If a unit emits in major amounts, enter "MU" in the column for that air pollutant. If the facility is a major source for a pollutant but the emissions unit in question does not trigger major source status, enter "MS" in the space provided. If a listed pollutant is emitted at a unit but PTE cannot be calculated based on readily available information, enter "UN" (for "unknown") in the space provided. If the source is a major source for air pollutants not represented by columns on this form, please provide an attachment stipulating major source status or the calculation of the total for that air pollutant. The column for lead is for elemental lead regulated by a NAAQS, while compounds of lead are HAP.

The total line is provided at the bottom of each column to enter the total facility-wide PTE for applicability purposes (or stipulations to major source status) for each air pollutant reported above. Enter these totals, as well as the total PTE and the name of the HAP emitted in the greatest amount, in section J of form **GIS**.

Only include emissions or emissions units on form **PTE** that count toward major source applicability. Some of the emissions units for which form **EMISS** may have been prepared may not have emissions that count towards major source applicability or may have been included in order to calculate fees. In particular, fugitive emissions are not always included in major source applicability determinations for non-HAP. However, for major source determinations for HAP, all fugitive HAP must be included.

END

United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 09/30/2010

Federal Operating Permit Program (40 CFR Part 71)

INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-COMP)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN – N/A

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s):

Applicable Requirement (Describe and Cite)

Compliance Methods for the Above (Description and Citation):

Compliance Status:

___ In Compliance: Will you continue to comply up to permit issuance? ___ YES ____No

___ Not In Compliance: Will you be in compliance at permit issuance? ___Yes ___No

___ Future-Effective Requirement: Do you expect to meet this on a timely basis? ____Yes ____No

Emission Unit ID(s):

Applicable Requirement (Description and Citation):

Compliance Methods for the Above (Description and Citation):

Compliance Status:

___ In Compliance: Will you continue to comply up to permit issuance? ____Yes ____No

___ Not In Compliance: Will you be in compliance at permit issuance? ___Yes ___No

___ Future-Effective Requirement: Do you expect to meet this on a timely basis? ____Yes _____No

B. SCHEDULE OF COMPLIANCE – N/A

Complete this section if you answered "NO" to any of the questions in section A. Also complete this section if required to submit a schedule of compliance by an applicable requirement. Please attach copies of any judicial consent decrees or administrative orders for this requirement.

Unit(s)_____ Requirement_____

Reason for Noncompliance. Briefly explain reason for noncompliance at time of permit issuance or that future-effective requirement will not be met on a timely basis:

Narrative Description of how Source Compliance Will be Achieved. Briefly explain your plan for achieving compliance:

Schedule of Compliance. Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved

C. SCHEDULE FOR SUBMISSION OF PROGRESS REPORTS – N/A

Only complete this section if you are required to submit one or more schedules of compliance in section B or if an applicable requirement requires submittal of a progress report. If a schedule of compliance is required, your progress report should start within 6 months of application submittal and subsequently, no less than every six months. One progress report may include information on multiple schedules of compliance.

Contents of Progress Report (describe):

First Report____/____/___ Frequency of Submittal_____

Contents of Progress Report (describe):

First Report____/____/___ Frequency of Submittal_____

D. SCHEDULE FOR SUBMISSION OF COMPLIANCE CERTIFICATIONS

This section must be completed once by every source. Indicate when you would prefer to submit compliance certifications during the term of your permit (at least once per year).

Frequency of submittal **Annual** Beginning **Within 30 days after permit issuance anniversary**

E. COMPLIANCE WITH ENHANCED MONITORING & COMPLIANCE CERTIFICATION REQUIREMENTS – N/A

This section must be completed once by every source. To certify compliance with these, you must be able to certify compliance for every applicable requirement related to monitoring and compliance certification at every unit.

Enhanced Monitoring Requirements: __ In Compliance ____ Not In Compliance

Compliance Certification Requirements: __ In Compliance ____ Not In Compliance

INSTRUCTIONS FOR I-COMP
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION

Section A (Compliance Status and Compliance Plan)

Description of Applicable Requirement: Complete Section A for each unique combination of applicable requirements (emission limitations, standards or other similar requirements of federal rules, SIP, TIP, FIP, or federally-enforceable permits) that apply to particular emissions units. You will likely have to complete this section numerous times to include all requirements at all emission units.

The emissions unit ID(s) should be the ones defined in section I of form GIS. If the requirement, including compliance method, applies in the same way to multiple emission units, you may list multiple units for a particular requirement.

The descriptions here should be detailed to the individual requirement level, rather than the standard level (if a MACT applies to you, describe each requirement of the MACT, rather than just a citation to the MACT as a whole). If the requirement imposes a particular numerical limit or range, include that in your description.

Citations to the requirements should unambiguously identify the requirement to the lowest level necessary.

Compliance Methods: List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Such methods may be required by the applicable requirements or performed for other reasons. List all compliance methods required by applicable requirements, whether you used them to determine compliance or not.

To describe monitoring, indicate the monitoring device, the equipment, process, or pollutant monitored, averaging time, frequency, and a citation or cross-reference to the requirement. To describe recordkeeping, describe the records kept, the frequency of collection, and include a citation or cross-reference to the requirement. Please indicate whether monitoring data, results, or other records kept for compliance purposes may be kept on-site rather than reported. To describe reporting requirements, describe what is reported, when it is reported, and cite or cross-reference the requirement.

The citation or cross-reference here must unambiguously identify the requirement to the lowest level necessary.

Note that Compliance Assurance Monitoring (CAM) under part 64 is also an applicable requirement that may impose compliance methods for title V sources and require the submittal of a CAM plan with this application. Also note that periodic monitoring (which may be monitoring or recordkeeping designed to serve as monitoring) under part 71 may be required in certain limited circumstances: when there is no monitoring required, monitoring is required but there is no frequency specified, or only a one-time test is required. You may propose periodic monitoring in your application, but the permitting authority will make the final decision. If you wish to propose periodic monitoring, please do so in an attachment that clearly identifies the requirements, the units they apply to, and what you propose for periodic monitoring.

Compliance Status: For each requirement and associated compliance methods described above, indicate whether you are in compliance, not in compliance, or it is a future-effective requirement (only check one). This is with respect to your compliance status at the time of application submittal. You should consider all available information or knowledge that you have when evaluating your compliance status, including reference test methods and other compliance requirements that are required directly by a statute, regulation, or permit and Acredible evidence≅ (e.g., non-reference test methods and other information Areadily available≅ to you and already being utilized by you). For each compliance status indication, you must answer “YES” or “NO” as to your expectations for continuing (or future) compliance. If you answer “NO” to any of these questions, you will have to complete the schedule of compliance section (section B).

Section B (Schedule of Compliance)

Complete this section if you answered ANO≅ to any of the questions in section A. Regardless of how you answered the questions in section A, complete this section if required to have a schedule of compliance by an applicable requirement, or if a judicial consent decree or administrative order includes a schedule of compliance.

Identify the applicable requirement using the same information you used in section A. Provide a brief explanation of the reason for noncompliance (either now or in the future). [e.g., "do not have control device required as BACT."] Next, provide a brief description of what the schedule of compliance is trying to achieve. Then in the table provided, include a detailed schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the applicable requirement. This schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance must be supplemental to, and not sanction noncompliance with, the applicable requirements on which it is based. For each remedial measure, provide the date by which the action will be completed. This schedule or one approved by the permitting authority will be included in the permit.

Lastly, attach a copy of any judicial consent decrees or administrative orders for which you are providing a schedule of compliance.

Section C (Schedule for Submission of Progress Reports)

If you must submit one or more schedules of compliance (specified in section B), or if an applicable requirement requires submittal of a progress report, complete this section. Progress reports describe your progress in meeting the milestone dates for the remedial measures required by the schedule of compliance. Progress reports must be submitted at least every 6 months, but specific applicable requirements may require them more frequently. One progress report may include information on one or more schedules of compliance. Describe the contents of the progress report, including the date that your facility will begin submitting them and the frequency they will be submitted.

Section D (Schedule for Submission of Compliance Certifications)

All applicants must complete this section. Compliance certifications must be submitted at least every year unless the applicable requirement or EPA requires them more frequently. Provide the date when the first compliance certification will be sent.

Section E (Compliance Status for Enhanced Monitoring and Compliance Certification)

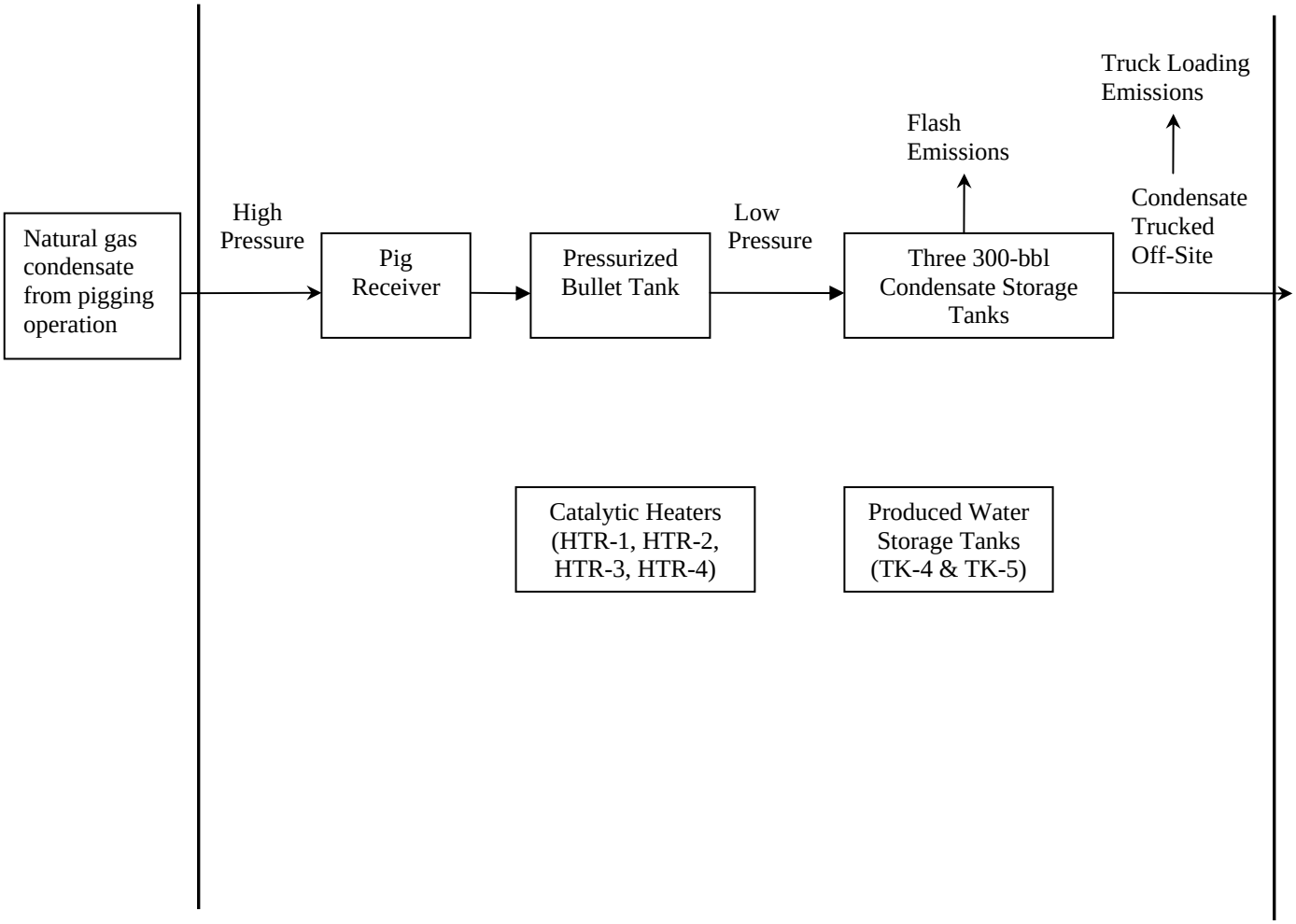
All applicants must complete this section. The completion of this section does not satisfy the requirement for the responsible official to submit a certification of truth, accuracy, and completeness (instead this is met by completing form CTAC and submitting it with the other forms you send to EPA).

To certify compliance with "Enhanced Monitoring," you must be in compliance at all emission units with CAM and "Periodic Monitoring" [required by ∋71.6(a)(3)(i)(B)], if they apply. "Compliance Certification Requirements" include requirements for compliance certification in title V applications and permits, and possibly through applicable requirements (e.g., certain MACT standards). If you have fully completed sections A - E of this form, you will be in compliance with the compliance certification requirement for applications. If you do not have a title V permit at this time, you can assume you are in compliance with the compliance certification requirements for permits and with periodic monitoring requirements. If you indicate you are "not in compliance" with either of these requirements, attach an explanation.

END

Section 3

Process Flow Sheet

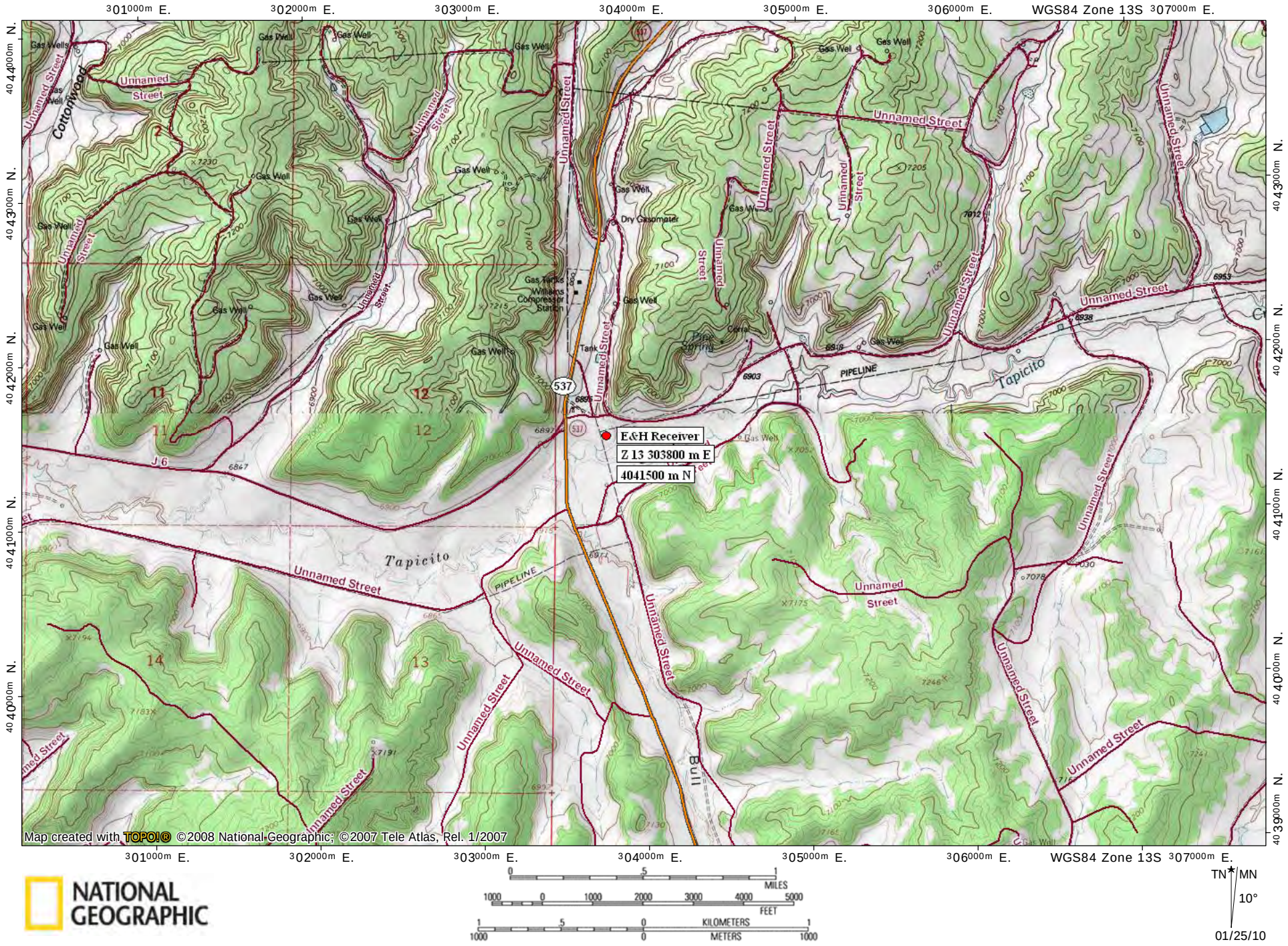


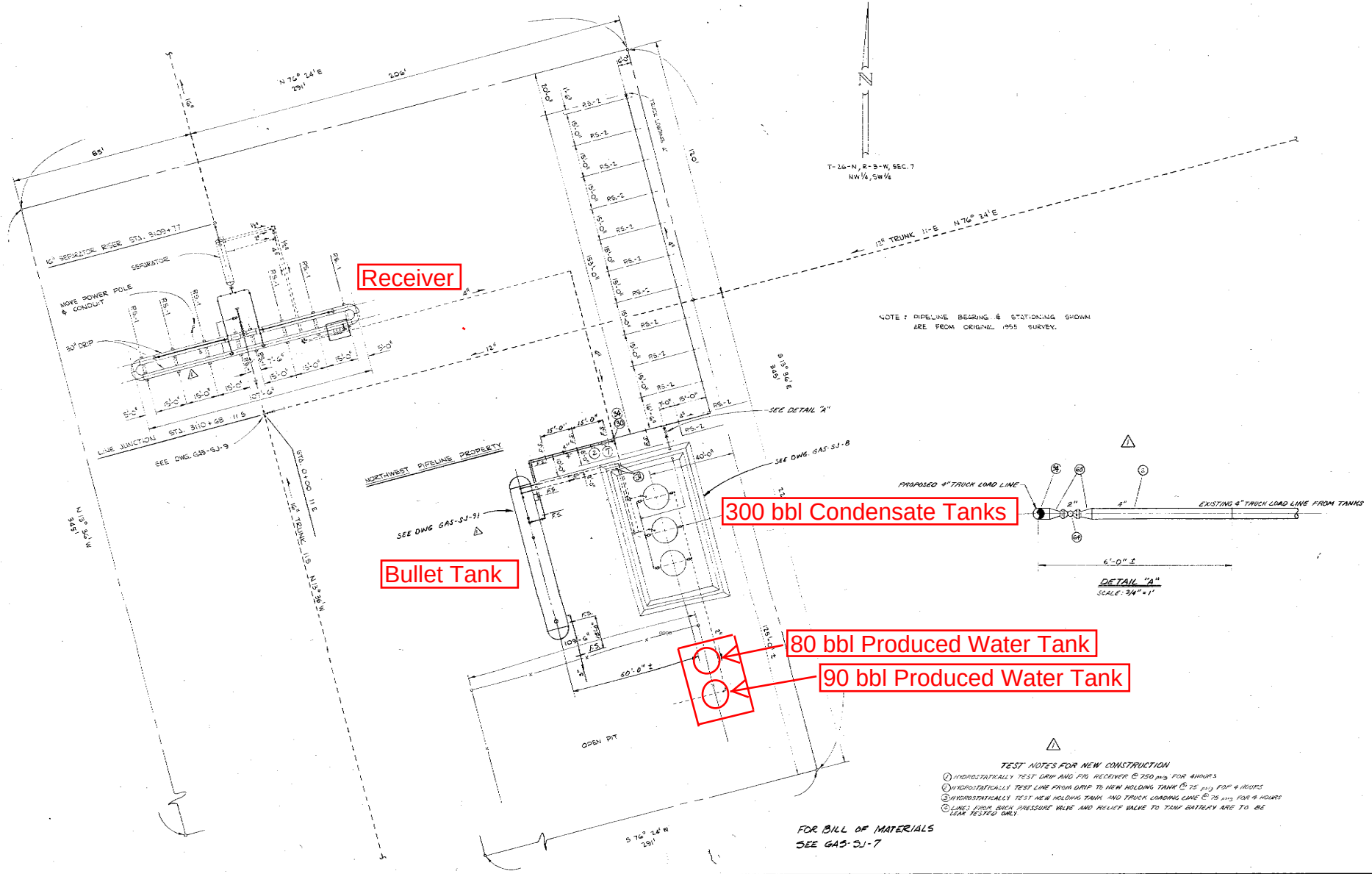
Section 4

Plot Plan and Topo Map

See next page.

TOPO! map printed on 01/25/10 from "E&H Receiver.tpo"





LEGEND

REFERENCE DRAWINGS	
DWG. Nº	TITLE
41-4-11	ALIGNMENT SHEET
GAS-SJ-9	PIPING PLAN & SECTION
GAS-SJ-7	INSTRUMENT PIPING DETAILS
GAS-SJ-8	PIPE SUPPORT & TANK BATTERY DETAIL
935-SJ-9	TRK. 11-S & 11-N, TRK. 11-E & 11-S
935-SJ-10	PIG RECEIVER, JUNC. GAL-1 TO 11-N

REVISIONS					
NO.	DATE	BY	DESCRIPTION	W.O. Nº	APP.
1	4-55	GDJ	PROPOSED MODIFICATION		

PRINT RECORD							
NO.	DATE	TO	W.O. Nº	NO.	DATE	TO	W.O. Nº

ENG. RECORD		DATE
DRAWN	SJD	9-13-74
CHECKED	CRC	9-20-74
CHECKED	RLB	9-24-74
PROJ. APP.		9-24-74
DESIGN APP.		9-24-74

NORTHWEST PIPELINE CORPORATION

PROPOSED MODIFICATION
OJITO DRIP FACILITY
PLOT PLAN
RIO ARRIBA CO., NEW MEXICO

SCALE: 1" = 20'-0" | W.O. Nº A3007 | DWG. NO. GAS-SJ-5 | REV. 1

Section 5

Emission Calculations

Condensate Storage Tanks (Unit TK-CAP) and Produced Water Storage Tanks (TK-4 & TK-5)

Flash emissions from the condensate tanks (Unit TK-CAP) are calculated using E&P Tanks. The flash emissions calculations provided in this section are calculated using actual condensate throughput plus a safety factor. This margin of safety is used to account for future variations in condensate composition and throughput.

There are no flash emissions associated with the produced water tanks (TK-4 and TK-5). The produced water tanks are included in this application as insignificant sources.

Working and breathing losses from the condensate tanks are calculated using the post-flash condensate analysis in TANKS 4.09.d plus a safety factor. Working and breathing losses from the produced water tanks are calculated using TANKS 4.09 assuming a liquid composition of 99% water and 1% post-flash condensate, and assuming the tanks contents are hauled bi-weekly.

Copies of the E&P Tanks, TANKS 4.09.d output files, and pre-flash condensate analysis are provided for the condensate storage tank calculations. A copy of the post-flash condensate analysis used for both the condensate and produced water TANKS 4.09.d calculations and the TANKS 4.09.d output files for the produced water tank calculations are included in this section separately.

Truck Loading Losses (L-1)

Fugitive emissions due to liquid loading of condensate to trucks have been calculated for the condensate storage tanks (TK-CAP) using emission factors from AP-42, Section 5.2, *Transportation and Marketing of Petroleum Liquids* and the annual condensate throughput volume plus safety factor. The calculations, post-flash condensate analysis, and AP-42 reference are provided in this section.

Fugitives (F-1 and F-2)

Fugitive emissions (F-1) from leaking piping components (valves, flanges, seals, etc.) were calculated using emission factors from the *1993 Protocol for Equipment Leak Emission Estimates* published by the Environmental Protection Agency (EPA) and a current post-flash condensate analysis. Component counts were based on review of engineering drawings as well as a physical survey conducted at the facility in January 2010. A safety factor was applied to the emission calculations.

Fugitive emissions from pig receiver venting (F-2) occur as gas vapors are released when the pig receiver is opened to remove the pigging device. Emissions were calculated based on the volume released and a current pre-flash condensate analysis. The volume released was calculated based on receiver dimensions

and assuming venting occurs once per week. Emissions from venting the receiver are included in this as an insignificant source.

A copy of the emission calculations, 11/20/2009 condensate analyses, and EPA reference used are included in this section.

Heaters (HTR-1, HTR-2, HTR-3, HTR-4)

Each of the four 12,000 btu/hr catalytic heaters will have lower NOx, CO, and VOC emissions than a similarly-sized natural gas-fired unit. Therefore, it is conservative to estimate emissions from the catalytic heaters using emission factors from Chapter 1 of AP-42, External Combustion Sources. A copy of the emission calculations and emission factor reference from AP-42 are included in this section. Emission calculations indicate that NOx, CO, and VOC emissions from the four catalytic heaters are insignificant.

Emission Calculations

Condensate Storage Tanks

(TK-CAP)

****
* Project Setup Information *
****

Project File : C:\backup\aaWilliams Four Corners\NewMexico\permitting\E&H receiver\2009 Dec tank fl
Flowsheet Selection : Oil Tank with Separator
Calculation Method : RVP Distillation
Control Efficiency : 0.0%
Known Separator Stream : High Pressure Oil
Entering Air Composition : No

Filed Name : E&H Receiver E&P Tank run for Part 71 application
Well Name : 11/17/09 hi-pressure condensate analysis
Well ID : actual throughput + safety factor
Date : 2010.01.15

****
* Data Input *
****

Separator Pressure : 150.00[psig]
Separator Temperature : 70.00[F]
Ambient Pressure : 13.00[psia]
Ambient Temperature : 70.00[F]
C10+ SG : 0.7564
C10+ MW : 180.97

-- High Pressure Oil ----------

No.	Component	mol %
1	H2S	0.0000
2	O2	0.0000
3	CO2	0.0862
4	N2	0.0072
5	C1	3.8667
6	C2	3.6883
7	C3	6.2204
8	i-C4	2.7196
9	n-C4	6.5096
10	i-C5	5.7996
11	n-C5	6.0596
12	C6	7.8620
13	C7	26.7146
14	C8	7.7809
15	C9	2.9126
16	C10+	5.6227
17	Benzene	1.0679
18	Toluene	3.7880
19	E-Benzene	0.2467
20	Xylenes	2.2180
21	n-C6	5.7549
22	224Trimethylp	1.0745

-- Sales Oil ----------
Production Rate : 89[bbl/day]
Days of Annual Operation : 365 [days/year]
API Gravity : 69.9
Reid Vapor Pressure : 14.769[psia]

****
* Calculation Results *
****

-- Emission Summary ----------

Item	Uncontrolled [ton/yr]	Uncontrolled [lb/hr]	Controlled [ton/yr]	Controlled [lb/hr]

Total HAPs	6.750	1.541	6.750	1.541
Total HC	274.790	62.737	274.790	62.737
VOCs, C2+	244.516	55.826	244.516	55.826
VOCs, C3+	198.177	45.246	198.177	45.246

Uncontrolled Recovery Info.

Vapor	14.5500	[MSCFD]
HC Vapor	14.4600	[MSCFD]
GOR	163.67	[SCF/bbl]

-- Emission Composition ----------

No	Component	Uncontrolled [ton/yr]	Uncontrolled [lb/hr]	Controlled [ton/yr]	Controlled [lb/hr]
1	H2S	0.000	0.000	0.000	0.000
2	O2	0.000	0.000	0.000	0.000
3	CO2	1.785	0.408	1.785	0.408
4	N2	0.098	0.022	0.098	0.022
5	C1	30.274	6.912	30.274	6.912
6	C2	46.339	10.580	46.339	10.580
7	C3	73.437	16.766	73.437	16.766
8	i-C4	23.119	5.278	23.119	5.278
9	n-C4	41.322	9.434	41.322	9.434
10	i-C5	19.375	4.424	19.375	4.424
11	n-C5	14.893	3.400	14.893	3.400
12	C6	8.128	1.856	8.128	1.856
13	C7	10.033	2.291	10.033	2.291
14	C8	0.984	0.225	0.984	0.225
15	C9	0.132	0.030	0.132	0.030
16	C10+	0.009	0.002	0.009	0.002
17	Benzene	0.728	0.166	0.728	0.166
18	Toluene	0.797	0.182	0.797	0.182
19	E-Benzene	0.018	0.004	0.018	0.004
20	Xylenes	0.142	0.032	0.142	0.032
21	n-C6	4.682	1.069	4.682	1.069
22	224Trimethylp	0.378	0.086	0.378	0.086
	Total	276.673	63.167	276.673	63.167

-- Stream Data ----------

No.	Component	MW	LP Oil mol %	Flash Oil mol %	Sale Oil mol %	Flash Gas mol %	W&S Gas mol %	Total Emissions mol %
1	H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	CO2	44.01	0.0862	0.0094	0.0037	0.5680	0.8238	0.5786
4	N2	28.01	0.0072	0.0001	0.0000	0.0519	0.0110	0.0502
5	C1	16.04	3.8667	0.1508	0.0031	27.1640	21.4165	26.9257
6	C2	30.07	3.6883	0.7983	0.6221	21.8079	26.1536	21.9881
7	C3	44.10	6.2204	3.4279	3.2812	23.7284	24.5408	23.7621
8	i-C4	58.12	2.7196	2.2488	2.2244	5.6714	5.7634	5.6753
9	n-C4	58.12	6.5096	5.9309	5.9007	10.1379	10.2799	10.1438
10	i-C5	72.15	5.7996	6.1138	6.1294	3.8296	3.8749	3.8315
11	n-C5	72.15	6.0596	6.5566	6.5814	2.9438	2.9795	2.9453
12	C6	86.16	7.8620	8.8959	8.9480	1.3799	1.3980	1.3806
13	C7	100.20	26.7146	30.7403	30.9435	1.4750	1.4973	1.4759
14	C8	114.23	7.7809	9.0018	9.0634	0.1264	0.1286	0.1265
15	C9	128.28	2.9126	3.3747	3.3981	0.0152	0.0166	0.0153
16	C10+	180.97	5.6227	6.5194	6.5647	0.0007	0.0007	0.0007
17	Benzene	78.11	1.0679	1.2170	1.2245	0.1330	0.1349	0.1330
18	Toluene	92.13	3.7880	4.3725	4.4020	0.1234	0.1255	0.1235
19	E-Benzene	106.17	0.2467	0.2857	0.2876	0.0025	0.0025	0.0025
20	Xylenes	106.17	2.2180	2.5687	2.5864	0.0191	0.0195	0.0191
21	n-C6	86.18	5.7549	6.5492	6.5893	0.7747	0.7853	0.7752
22	224Trimethylp	114.24	1.0745	1.2384	1.2466	0.0471	0.0479	0.0472
	MW		86.47	93.98	94.35	39.43	40.52	39.48
	Stream Mole Ratio		1.0000	0.8624	0.8565	0.1376	0.0060	0.1435
	Heating Value	[BTU/SCF]				2245.58	2298.73	2247.78
	Gas Gravity	[Gas/Air]				1.36	1.40	1.36
	Bubble Pt. @ 100F	[psia]	154.75	23.35	17.82			

RVP @ 100F	[psia]	52.89	16.43	14.87
Spec. Gravity @ 100F		0.650	0.664	0.664

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	300 bbl Condensate Tank1
City:	Bloomfield
State:	New Mexico
Company:	Williams
Type of Tank:	Vertical Fixed Roof Tank
Description:	Trunk E&H Receiver

Tank Dimensions

Shell Height (ft):	15.00
Diameter (ft):	13.00
Liquid Height (ft) :	14.00
Avg. Liquid Height (ft):	7.00
Volume (gallons):	12,600.00
Turnovers:	108.00
Net Throughput(gal/yr):	1,360,800.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Medium
Shell Condition	Good
Roof Color/Shade:	Gray/Medium
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

300 bbl Condensate Tank1 - Vertical Fixed Roof Tank
Bloomfield, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Condensate	All	67.36	53.93	80.79	59.23	5.4792	4.1752	7.0814	65.2873			92.21	
2,2,4-Trimethylpentane						0.7338	0.4989	1.0546	114.2300	0.0187	0.0035	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.4274	0.9846	2.0237	78.1100	0.0168	0.0062	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Butane						29.9323	23.3587	37.8099	58.1300	0.0395	0.3047	58.13	Option 1: VP60 = 26.098 VP70 = 31.306
Decane (-n)						0.0395	0.0291	0.0536	142.2900	0.0722	0.0007	142.29	Option 1: VP60 = .033211 VP70 = .041762
Ethane						544.1363	461.6503	637.0970	30.0700	0.0002	0.0276	30.07	Option 1: VP60 = 497.04 VP70 = 561.01
Ethylbenzene						0.1396	0.0876	0.2162	106.1700	0.0026	0.0001	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Heptane (-n)						0.7600	0.5088	1.1128	100.2000	0.3471	0.0680	100.20	Option 3: A=37358, B=8.2585
Hexane (-n)						2.3100	1.6303	3.2059	86.1700	0.1794	0.1068	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Iso-Butane						43.3101	34.4054	53.8156	58.1300	0.0128	0.1432	58.13	Option 1: VP60 = 38.144 VP70 = 45.161
Isopentane						11.8640	8.7212	15.5743	72.1500	0.0590	0.1804	72.15	Option 1: VP60 = 10.005 VP70 = 12.53
Nonane (-n)						0.0784	0.0568	0.1080	128.2600	0.0245	0.0005	128.26	Option 1: VP60 = .065278 VP70 = .08309
Octane (-n)						0.1769	0.1254	0.2493	114.2300	0.0854	0.0039	114.23	Option 1: VP60 = .145444 VP70 = .188224
Pentane (-n)						8.0308	5.9649	10.6537	72.1500	0.0645	0.1336	72.15	Option 3: A=27691, B=7.558
Propane						8.0096	5.9944	10.6440	72.1500	0.0072	0.0148	72.15	Option 1: VP60 = 6.828 VP70 = 8.433
Toluene						0.4136	0.2726	0.6120	92.1300	0.0496	0.0053	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Xylene (-m)						0.1165	0.0728	0.1813	106.1700	0.0204	0.0006	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

300 bbl Condensate Tank1 - Vertical Fixed Roof Tank
Bloomfield, New Mexico

Annual Emission Calcaulations

Standing Losses (lb):	3,898.9098
Vapor Space Volume (cu ft):	1,061.8583
Vapor Density (lb/cu ft):	0.0633
Vapor Space Expansion Factor:	0.5285
Vented Vapor Saturation Factor:	0.3009
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	1,061.8583
Tank Diameter (ft):	13.0000
Vapor Space Outage (ft):	8.0000
Tank Shell Height (ft):	15.0000
Average Liquid Height (ft):	7.0000
Roof Outage (ft):	0.0000
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.0000
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0000
Shell Radius (ft):	6.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0633
Vapor Molecular Weight (lb/lb-mole):	65.2873
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.4792
Daily Avg. Liquid Surface Temp. (deg. R):	527.0322
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	518.9042
Tank Paint Solar Absorptance (Shell):	0.6800
Tank Paint Solar Absorptance (Roof):	0.6800
Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.5285
Daily Vapor Temperature Range (deg. R):	53.7176
Daily Vapor Pressure Range (psia):	2.9062
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.4792
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	4.1752
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	7.0814
Daily Avg. Liquid Surface Temp. (deg R):	527.0322
Daily Min. Liquid Surface Temp. (deg R):	513.6028
Daily Max. Liquid Surface Temp. (deg R):	540.4617
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.3009
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	5.4792

Vapor Space Outage (ft):	8.0000
Working Losses (lb):	5,151.1602
Vapor Molecular Weight (lb/lb-mole):	65.2873
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	5.4792
Annual Net Throughput (gal/yr.):	1,360,800.0000
Annual Turnovers:	108.0000
Turnover Factor:	0.4444
Maximum Liquid Volume (gal):	12,600.0000
Maximum Liquid Height (ft):	14.0000
Tank Diameter (ft):	13.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	9,050.0701

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

300 bbl Condensate Tank1 - Vertical Fixed Roof Tank
Bloomfield, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Condensate	5,151.16	3,898.91	9,050.07
Ethane	142.35	107.75	250.10
Propane	76.39	57.82	134.21
Butane	1,569.44	1,187.91	2,757.34
Iso-Butane	737.63	558.31	1,295.95
Pentane (-n)	688.26	520.94	1,209.20
Isopentane	929.16	703.28	1,632.45
Hexane (-n)	550.25	416.48	966.73
Heptane (-n)	350.28	265.13	615.40
Octane (-n)	20.07	15.19	35.26
Nonane (-n)	2.55	1.93	4.48
Decane (-n)	3.79	2.87	6.66
Benzene	31.91	24.16	56.07
Toluene	27.24	20.62	47.86
Ethylbenzene	0.48	0.36	0.84
Xylene (-m)	3.16	2.39	5.56
2,2,4-Trimethylpentane	18.19	13.77	31.96

Including Safety Factor

lb/year

tpy

Condensate: 12398.60

6.20

n-Hex: 1324.42

0.66

Benzene: 76.82
Toluene: 65.57
E-benzene: 1.15
Xylene: 7.62
224-TMP: 43.79

0.04
0.03
0.0006
0.004
0.02

QUESTAR APPLIED TECHNOLOGY

1210 D. Street, Rock Springs, Wyoming 82901

(307) 352-7292

LIMS ID:	N/A	Description:	Trunk E&H Reciever
Analysis Date/Time:	11/20/2009	Field:	G.A.S.
Analyst Initials:	PRP	ML#:	Williams
Sample Temperature:	N/A	GC Method:	Quesliq1.M
Sample Pressure:	150	Data File:	QPC31.D
Date Sampled:	11/17/2009	Instrument ID:	1

Component	Mol%	Wt%	LV%
Methane	3.8667	0.7149	1.6278
Ethane	3.6883	1.2782	2.4565
Propane	6.2204	3.1612	4.2596
Isobutane	2.7196	1.8217	2.2109
n-Butane	6.5096	4.3604	5.1002
Neopentane	0.0907	0.0754	0.0863
Isopentane	5.7089	4.7469	5.1929
n-Pentane	6.0596	5.0385	5.4539
2,2-Dimethylbutane	0.2707	0.2689	0.2808
2,3-Dimethylbutane	1.3120	1.3030	1.3358
2-Methylpentane	3.8505	3.8241	3.9706
3-Methylpentane	2.4288	2.4122	2.4626
n-Hexane	5.7549	5.7155	5.8794
Heptanes	27.7825	30.6217	28.4720
Octanes	12.6434	15.6660	14.2490
Nonanes	5.3773	7.3207	6.4410
Decanes plus	5.6227	11.6249	10.4824
Nitrogen	0.0072	0.0023	0.0020
Carbon Dioxide	0.0862	0.0437	0.0365
Total	100.0000	100.0000	100.0000

Global Properties		**Units**
Avg Molecular Weight	86.7779	gm/mole
Pseudocritical Pressure	486.88	psia
Pseudocritical Temperatu	436.88	degF
Specific Gravity	0.68311	gm/ml
Liquid Density	5.6950	lb/gal
Liquid Density	239.19	lb/bbl
Specific Gravity	2.7420	air=1
SCF/bbl	1049.13	SCF/bbl

Component	Mol%	Wt%	LV%
Benzene	1.0679	0.9613	0.7423
Toluene	3.788	4.0227	3.1515
Ethylbenzene	0.2467	0.3018	0.2365
M&P Xylene	1.8580	2.2733	1.7873
O-Xylene	0.3600	0.4405	0.3401
2,2,4-Trimethylpentane	1.0745	1.4145	1.3415

Data File: Trunk E&H Reciever

GRI E&P TANK INFORMATION

Component	Mol%	Wt%	LV%
H2S			
O2			
CO2	0.0862	0.0437	0.0365
N2	0.0072	0.0023	0.0020
C1	3.8667	0.7149	1.6278
C2	3.6883	1.2782	2.4565
C3	6.2204	3.1612	4.2596
IC4	2.7196	1.8217	2.2109
NC4	6.5096	4.3604	5.1002
IC5	5.7996	4.8223	5.2792
NC5	6.0596	5.0385	5.4539
Hexanes	7.8620	7.8082	8.0498
Heptanes	26.7146	29.6604	27.7297
Octanes	7.7809	10.2288	9.7560
Nonanes	2.9126	4.3051	4.0771
Benzene	1.0679	0.9613	0.7423
Toluene	3.788	4.0227	3.1515
E-Benzene	0.2467	0.3018	0.2365
Xylene	2.2180	2.7138	2.1274
n-C6	5.7549	5.7155	5.8794
2,2,4-Trimethylpentane	1.0745	1.4145	1.3415
C10 Plus			
C10 Mole %	5.6227	11.6249	10.4824
Molecular Wt.	180.9689		
Specific Gravity	0.7564		
Total	100.0000	100.000	100.000

Emission Calculations

Produced Water Storage Tanks

(TK-4 & TK-5)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	3780 gal Produced Water Tank (90 bbl)
City:	Bloomfield
State:	New Mexico
Company:	Williams
Type of Tank:	Vertical Fixed Roof Tank
Description:	Trunk E&H Receiver

Tank Dimensions

Shell Height (ft):	8.00
Diameter (ft):	9.00
Liquid Height (ft) :	8.00
Avg. Liquid Height (ft):	4.00
Volume (gallons):	3,760.00
Turnovers:	26.00
Net Throughput(gal/yr):	97,760.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Medium
Shell Condition	Good
Roof Color/Shade:	Gray/Medium
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

3780 gal Produced Water Tank (90 bbl) - Vertical Fixed Roof Tank
Bloomfield, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Produced Water	All	67.36	53.93	80.79	59.23	0.3445	0.2162	0.5347	19.4760			18.15	
2,2,4-Trimethylpentane						0.7338	0.4989	1.0546	114.2300	0.0002	0.0004	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.4274	0.9846	2.0237	78.1100	0.0002	0.0006	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Butane						29.9323	23.3587	37.8099	58.1300	0.0004	0.0320	58.13	Option 1: VP60 = 26.098 VP70 = 31.306
Decane (-n)						0.0395	0.0291	0.0536	142.2900	0.0007	0.0001	142.29	Option 1: VP60 = .033211 VP70 = .041762
Ethane						544.1363	461.6503	637.0970	30.0700	0.0000	0.0029	30.07	Option 1: VP60 = 497.04 VP70 = 561.01
Ethylbenzene						0.1396	0.0876	0.2162	106.1700	0.0000	0.0000	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Heptane (-n)						0.7600	0.5088	1.1128	100.2000	0.0035	0.0071	100.20	Option 3: A=37358, B=8.2585
Hexane (-n)						2.3100	1.6303	3.2059	86.1700	0.0018	0.0110	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Iso-Butane						43.3101	34.4054	53.8156	58.1300	0.0001	0.0150	58.13	Option 1: VP60 = 38.144 VP70 = 45.161
Isopentane						11.8640	8.7212	15.5743	72.1500	0.0006	0.0189	72.15	Option 1: VP60 = 10.005 VP70 = 12.53
Nonane (-n)						0.0784	0.0568	0.1080	128.2600	0.0002	0.0001	128.26	Option 1: VP60 = .065278 VP70 = .08309
Octane (-n)						0.1769	0.1254	0.2493	114.2300	0.0009	0.0004	114.23	Option 1: VP60 = .145444 VP70 = .188224
Pentane (-n)						8.0308	5.9649	10.6537	72.1500	0.0006	0.0140	72.15	Option 3: A=27691, B=7.558
Propane						8.0096	5.9944	10.6440	72.1500	0.0001	0.0016	72.15	Option 1: VP60 = 6.828 VP70 = 8.433
Toluene						0.4136	0.2726	0.6120	92.1300	0.0005	0.0006	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Water						0.3344	0.2084	0.5218	18.0000	0.9900	0.8953	18.00	Option 1: VP60 = .255246 VP70 = .362758
Xylene (-m)						0.1165	0.0728	0.1813	106.1700	0.0002	0.0001	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

3780 gal Produced Water Tank (90 bbl) - Vertical Fixed Roof Tank
Bloomfield, New Mexico

Annual Emission Calcaulations

Standing Losses (lb):	12.7147
Vapor Space Volume (cu ft):	254.4690
Vapor Density (lb/cu ft):	0.0012
Vapor Space Expansion Factor:	0.1238
Vented Vapor Saturation Factor:	0.9319
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	254.4690
Tank Diameter (ft):	9.0000
Vapor Space Outage (ft):	4.0000
Tank Shell Height (ft):	8.0000
Average Liquid Height (ft):	4.0000
Roof Outage (ft):	0.0000
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.0000
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0000
Shell Radius (ft):	4.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0012
Vapor Molecular Weight (lb/lb-mole):	19.4760
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3445
Daily Avg. Liquid Surface Temp. (deg. R):	527.0322
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	518.9042
Tank Paint Solar Absorptance (Shell):	0.6800
Tank Paint Solar Absorptance (Roof):	0.6800
Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.1238
Daily Vapor Temperature Range (deg. R):	53.7176
Daily Vapor Pressure Range (psia):	0.3184
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3445
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.2162
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.5347
Daily Avg. Liquid Surface Temp. (deg R):	527.0322
Daily Min. Liquid Surface Temp. (deg R):	513.6028
Daily Max. Liquid Surface Temp. (deg R):	540.4617
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9319
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.3445

Vapor Space Outage (ft):	4.0000
Working Losses (lb):	15.6174
Vapor Molecular Weight (lb/lb-mole):	19.4760
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3445
Annual Net Throughput (gal/yr.):	97,760.0000
Annual Turnovers:	26.0000
Turnover Factor:	1.0000
Maximum Liquid Volume (gal):	3,760.0000
Maximum Liquid Height (ft):	8.0000
Tank Diameter (ft):	9.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	28.3320

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

3780 gal Produced Water Tank (90 bbl) - Vertical Fixed Roof Tank
Bloomfield, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Produced Water	15.62	12.71	28.33
Water	13.98	11.38	25.37
Iso-Butane	0.23	0.19	0.43
Isopentane	0.30	0.24	0.54
Pentane (-n)	0.22	0.18	0.40
Benzene	0.01	0.01	0.02
Toluene	0.01	0.01	0.02
Ethylbenzene	0.00	0.00	0.00
Xylene (-m)	0.00	0.00	0.00
2,2,4-Trimethylpentane	0.01	0.00	0.01
Ethane	0.05	0.04	0.08
Propane	0.02	0.02	0.04
Hexane (-n)	0.17	0.14	0.31
Heptane (-n)	0.11	0.09	0.20
Octane (-n)	0.01	0.01	0.01
Nonane (-n)	0.00	0.00	0.00
Decane (-n)	0.00	0.00	0.00
Butane	0.50	0.41	0.91

QUESTAR APPLIED TECHNOLOGY

1210 D. Street, Rock Springs, Wyoming 82901

(307) 352-7292

LIMS ID:	N/A	Description:	Condensate@ E&H Reciever
Analysis Date/Time:	11/20/2009	Field:	G.A.S.
Analyst Initials:	PRP	ML#:	Williams
Sample Temperature:	N/A	GC Method:	Quesliq1.M
Sample Pressure:	ATMOS	Data File:	QPC30.D
Date Sampled:	11/17/2009	Instrument ID:	1

Component	Mol%	Wt%	LV%
Methane	0.0000	0.0000	0.0000
Ethane	0.0598	0.0197	0.0389
Propane	1.4885	0.7182	0.9954
Isobutane	2.0168	1.2825	1.6010
n-Butane	6.2088	3.9483	4.7502
Neopentane	0.0451	0.0356	0.0419
Isopentane	7.4259	5.8619	6.5961
n-Pentane	8.1753	6.4535	7.1854
2,2-Dimethylbutane	0.3991	0.3763	0.4042
2,3-Dimethylbutane	1.8105	1.7071	1.8001
2-Methylpentane	5.5243	5.2086	5.5628
3-Methylpentane	3.3098	3.1207	3.2770
n-Hexane	7.9807	7.5247	7.9618
Heptanes	35.0968	36.3888	34.7021
Octanes	13.2601	15.3684	14.1857
Nonanes	3.7266	4.7511	4.2424
Decanes plus	3.4359	7.2231	6.6454
Nitrogen	0.0358	0.0110	0.0095
Carbon Dioxide	0.0000	0.0000	0.0000
Total	100.0000	100.0000	100.0000

Global Properties		**Units**
Avg Molecular Weight	91.4028	gm/mole
Pseudocritical Pressure	472.92	psia
Pseudocritical Temperatu	480.34	degF
Specific Gravity	0.70263	gm/ml
Liquid Density	5.8577	lb/gal
Liquid Density	246.02	lb/bbl
Specific Gravity	3.0038	air=1
SCF/bbl	1024.31	SCF/bbl

Component	Mol%	Wt%	LV%
Benzene	1.9699	1.6836	1.3373
Toluene	4.921	4.960	3.9975
Ethylbenzene	0.2211	0.2569	0.2070
M&P Xylene	1.4828	1.7224	1.3929
O-Xylene	0.2759	0.3205	0.2545
2,2,4-Trimethylpentane	1.4936	1.8667	1.8210

Data File: Condensate@ E&H Reciever Page #2

GRI E&P TANK INFORMATION

Component	Mol%	Wt%	LV%
H2S			
O2			
CO2	0.0000	0.0000	0.0000
N2	0.0358	0.0110	0.0095
C1	0.0000	0.0000	0.0000
C2	0.0598	0.0197	0.0389
C3	1.4885	0.7182	0.9954
IC4	2.0168	1.2825	1.6010
NC4	6.2088	3.9483	4.7502
IC5	7.4710	5.8975	6.6380
NC5	8.1753	6.4535	7.1854
Hexanes	11.0437	10.4127	11.0441
Heptanes	33.1269	34.7052	33.3648
Octanes	6.8455	8.5417	8.3672
Nonanes	1.7468	2.4513	2.3880
Benzene	1.9699	1.6836	1.3373
Toluene	4.921	4.960	3.9975
E-Benzene	0.2211	0.2569	0.2070
Xylene	1.7587	2.0429	1.6474
n-C6	7.9807	7.5247	7.9618
2,2,4-Trimethylpentane	1.4936	1.8667	1.8210
C10 Plus			
C10 Mole %	3.4359	7.2231	6.6454
Molecular Wt.	193.4965		
Specific Gravity	0.7627		
Total	100.00	100.00	100.00

Emission Calculations

Truck Loading

(L-1)

E&H Receiver VOC Emissions from Truck Loading of Condensate
Proposed Emissions

truck loading losses - natural gas condensate	loading loss (lb/Mgal)	product throughput (Mgal/yr)	loading loss (lb/yr)	loading loss (tpy)
	12.2	1,361	16,597	**8.30**

Product throughput = 23,700 as of September, 2009
32,400 bbl/yr, (includes safety factor)

Loading Loss, L_L = 12.46 (S)(TVP)(MW)/T (AP-42, section 5.2)

L_L = loading loss, lb/Mgal of liquid loaded
S = saturation factor for submerged loading, dedicated normal service = 0.6
TVP = true vapor pressure, psia @ 70 ^oF = 9.46
(based on 11/17/09 E&H RVP of 14.77 & Conway conversion table)
MW = molecular weight (= MW of 11/17/09 E&H condensate analysis) = 91.4
T = temperature, Rankin (= ^oF+460) (annual mean average temp = 70 ^oF) = 530

vapor collection efficiency 98.7 % trucks pass NSPS-level annual leak tests (AP-42, section 5.2)

From Trunk E&H Condensate Analysis, 11/20/2009

GRI E&P TANK INFORMATION		**HAP estimate**
Component	Wt%	**tpy**
H2S		**(HAP estimate = loading loss tpy * HAP Wt%)**
O2		
CO2	0.0000	
N2	0.0110	
C1	0.0000	
C2	0.0197	
C3	0.7182	
IC4	1.2825	
NC4	3.9483	
IC5	5.8975	
NC5	6.4535	
Hexanes	10.4127	
Heptanes	34.7052	
Octanes	8.5417	
Nonanes	2.4513	
Benzene	1.6836	**0.14**
Toluene	4.960	**0.41**
E-Benzene	0.2569	**0.02**
Xylene	2.0429	**0.17**
n-C6	7.5247	**0.62**
2,2,4-Trimethylpentane	1.8667	**0.15**
C10 Plus		
C10 Mole %	7.2231	

QUESTAR APPLIED TECHNOLOGY

1210 D. Street, Rock Springs, Wyoming 82901

(307) 352-7292

LIMS ID:	N/A	Description:	Condensate@ E&H Reciever
Analysis Date/Time:	11/20/2009	Field:	G.A.S.
Analyst Initials:	PRP	ML#:	Williams
Sample Temperature:	N/A	GC Method:	Quesliq1.M
Sample Pressure:	ATMOS	Data File:	QPC30.D
Date Sampled:	11/17/2009	Instrument ID:	1

Component	Mol%	Wt%	LV%
Methane	0.0000	0.0000	0.0000
Ethane	0.0598	0.0197	0.0389
Propane	1.4885	0.7182	0.9954
Isobutane	2.0168	1.2825	1.6010
n-Butane	6.2088	3.9483	4.7502
Neopentane	0.0451	0.0356	0.0419
Isopentane	7.4259	5.8619	6.5961
n-Pentane	8.1753	6.4535	7.1854
2,2-Dimethylbutane	0.3991	0.3763	0.4042
2,3-Dimethylbutane	1.8105	1.7071	1.8001
2-Methylpentane	5.5243	5.2086	5.5628
3-Methylpentane	3.3098	3.1207	3.2770
n-Hexane	7.9807	7.5247	7.9618
Heptanes	35.0968	36.3888	34.7021
Octanes	13.2601	15.3684	14.1857
Nonanes	3.7266	4.7511	4.2424
Decanes plus	3.4359	7.2231	6.6454
Nitrogen	0.0358	0.0110	0.0095
Carbon Dioxide	0.0000	0.0000	0.0000
Total	100.0000	100.0000	100.0000

Global Properties		**Units**
Avg Molecular Weight	91.4028	gm/mole
Pseudocritical Pressure	472.92	psia
Pseudocritical Temperatu	480.34	degF
Specific Gravity	0.70263	gm/ml
Liquid Density	5.8577	lb/gal
Liquid Density	246.02	lb/bbl
Specific Gravity	3.0038	air=1
SCF/bbl	1024.31	SCF/bbl

Component	Mol%	Wt%	LV%
Benzene	1.9699	1.6836	1.3373
Toluene	4.921	4.960	3.9975
Ethylbenzene	0.2211	0.2569	0.2070
M&P Xylene	1.4828	1.7224	1.3929
O-Xylene	0.2759	0.3205	0.2545
2,2,4-Trimethylpentane	1.4936	1.8667	1.8210

Data File: Condensate@ E&H Reciever Page #2

GRI E&P TANK INFORMATION

Component	Mol%	Wt%	LV%
H2S			
O2			
CO2	0.0000	0.0000	0.0000
N2	0.0358	0.0110	0.0095
C1	0.0000	0.0000	0.0000
C2	0.0598	0.0197	0.0389
C3	1.4885	0.7182	0.9954
IC4	2.0168	1.2825	1.6010
NC4	6.2088	3.9483	4.7502
IC5	7.4710	5.8975	6.6380
NC5	8.1753	6.4535	7.1854
Hexanes	11.0437	10.4127	11.0441
Heptanes	33.1269	34.7052	33.3648
Octanes	6.8455	8.5417	8.3672
Nonanes	1.7468	2.4513	2.3880
Benzene	1.9699	1.6836	1.3373
Toluene	4.921	4.960	3.9975
E-Benzene	0.2211	0.2569	0.2070
Xylene	1.7587	2.0429	1.6474
n-C6	7.9807	7.5247	7.9618
2,2,4-Trimethylpentane	1.4936	1.8667	1.8210
C10 Plus			
C10 Mole %	3.4359	7.2231	6.6454
Molecular Wt.	193.4965		
Specific Gravity	0.7627		
Total	100.00	100.00	100.00

loading operation, resulting in high levels of vapor generation and loss. If the turbulence is great enough, liquid droplets will be entrained in the vented vapors.

A second method of loading is submerged loading. Two types are the submerged fill pipe method and the bottom loading method. In the submerged fill pipe method, the fill pipe extends almost to the bottom of the cargo tank. In the bottom loading method, a permanent fill pipe is attached to the cargo tank bottom. During most of submerged loading by both methods, the fill pipe opening is below the liquid surface level. Liquid turbulence is controlled significantly during submerged loading, resulting in much lower vapor generation than encountered during splash loading.

The recent loading history of a cargo carrier is just as important a factor in loading losses as the method of loading. If the carrier has carried a nonvolatile liquid such as fuel oil, or has just been cleaned, it will contain vapor-free air. If it has just carried gasoline and has not been vented, the air in the carrier tank will contain volatile organic vapors, which will be expelled during the loading operation along with newly generated vapors.

Cargo carriers are sometimes designated to transport only one product, and in such cases are practicing "dedicated service". Dedicated gasoline cargo tanks return to a loading terminal containing air fully or partially saturated with vapor from the previous load. Cargo tanks may also be "switch loaded" with various products, so that a nonvolatile product being loaded may expel the vapors remaining from a previous load of a volatile product such as gasoline. These circumstances vary with the type of cargo tank and with the ownership of the carrier, the petroleum liquids being transported, geographic location, and season of the year.

One control measure for vapors displaced during liquid loading is called "vapor balance service", in which the cargo tank retrieves the vapors displaced during product unloading at bulk plants or service stations and transports the vapors back to the loading terminal. Figure 5.2-5 shows a tank truck in vapor balance service filling a service station underground tank and taking on displaced gasoline vapors for return to the terminal. A cargo tank returning to a bulk terminal in vapor balance service normally is saturated with organic vapors, and the presence of these vapors at the start of submerged loading of the tanker truck results in greater loading losses than encountered during nonvapor balance, or "normal", service. Vapor balance service is usually not practiced with marine vessels, although some vessels practice emission control by means of vapor transfer within their own cargo tanks during ballasting operations, discussed below.

Emissions from loading petroleum liquid can be estimated (with a probable error of ±30 percent)[4] using the following expression:

$$L_L = 12.46 \frac{SPM}{T} \quad (1)$$

where:

L_L = loading loss, pounds per 1000 gallons ($lb/10^3$ gal) of liquid loaded

S = a saturation factor (see Table 5.2-1)
P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia) (see Figure 7.1-5, Figure 7.1-6, and Table 7.1-2)
M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) (see Table 7.1-2)
T = temperature of bulk liquid loaded, °R (°F + 460)

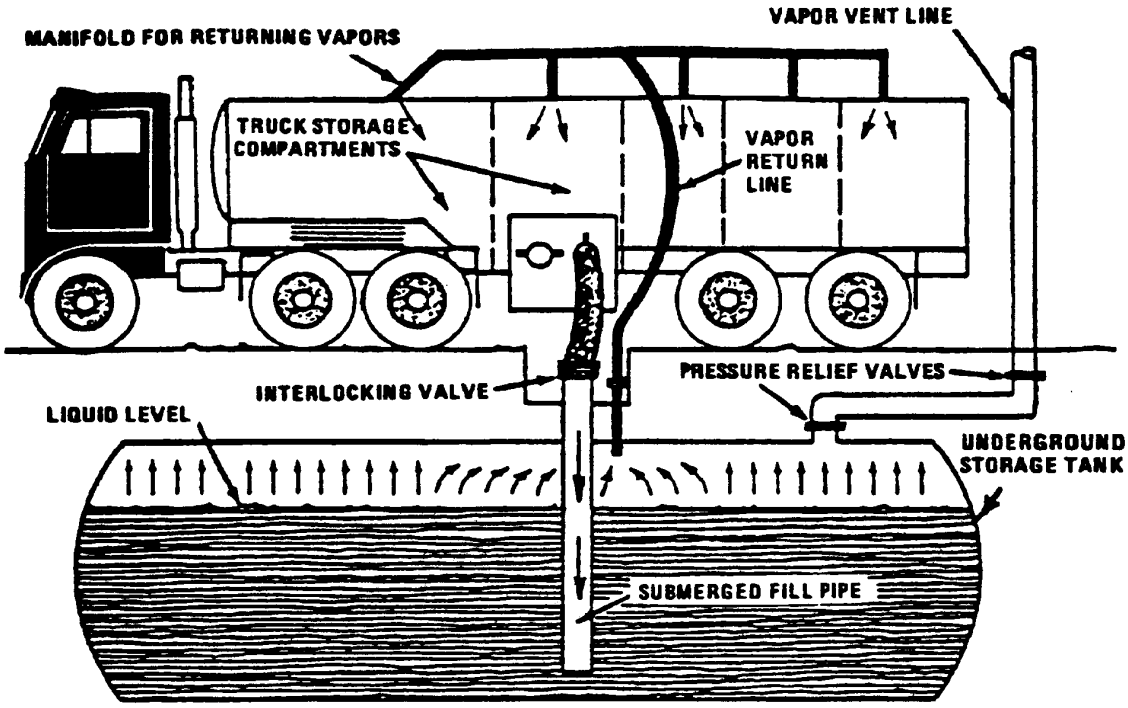


Figure 5.2-5. Tank truck unloading into a service station underground storage tank and practicing "vapor balance" form of emission control.

Table 5.2-1. SATURATION (S) FACTORS FOR CALCULATING PETROLEUM LIQUID LOADING LOSSES

Cargo Carrier	Mode Of Operation	S Factor
Tank trucks and rail tank cars	Submerged loading of a clean cargo tank	0.50
	Submerged loading: dedicated normal service	0.60
	Submerged loading: dedicated vapor balance service	1.00
	Splash loading of a clean cargo tank	1.45
	Splash loading: dedicated normal service	1.45
	Splash loading: dedicated vapor balance service	1.00
Marine vessels[a]	Submerged loading: ships	0.2
	Submerged loading: barges	0.5

[a] For products other than gasoline and crude oil. For marine loading of gasoline, use factors from Table 5.2-2. For marine loading of crude oil, use Equations 2 and 3 and Table 5.2-3.

Emission Calculations

Fugitives

(F-1)

Fugitive Emissions Components

Unit Number: Trunk E + H Receiver

Description: Valves, Connectors, Seals, Flanges, & Open-Ended Lines

Number of Compression Units at the Facility: 0

Number of Dehydrators at the Facility: 0

PROCESS EQUIPMENT DESCRIPTION	EQUIPMENT COUNT									
	Valves	Connectors	Pump Seals	Flanges	Other	Pressure Relief Valves	Open-end	Flow	Level	Pressure
Blow off head assembly	6	0	0	0	0	1	0	0	0	0
Trunk S and Trunk H Junction	4	8	0	2	0	0	0	0	0	0
Pig receiver dump valves	5	4	0	7	0	0	0	0	0	0
Trunk S separator assembly	7	1	0	3	0	0	0	0	0	0
Pig receiver junction to Trunk H	4	0	0	2	0	0	0	0	0	0
Bullet Tank	14	0	0	4	2	0	0	0	0	0
Condensate tanks (3)	10	0	0	0	3	0	0	0	0	0
TOTAL	50	13	0	18	5	1	0	0	0	0
ADJUSTED TOTAL	50	13	0	18	5	1	0			

Fugitive Emissions Speciation

Unit Number: F-1, Trunk E&H Receiver
Description: Valves, Connectors, Seals, Flanges, & Open-Ended Lines

Equipment	Number of Components (#)	Emission Factor (kg/hr/source)	Emission Factor (lb/hr/source)	TOC Emission Rate (lb/hr)	TOC Emission Rate (tpy)
Valves	50	4.50E-03	9.90E-03	0.495	2.168
Connectors	13	2.00E-04	4.40E-04	0.006	0.025
Pump Seals	0	2.40E-03	5.28E-03	0.000	0.000
Flanges	18	3.90E-04	8.58E-04	0.015	0.068
Other	5	8.80E-03	1.94E-02	0.097	0.424
Pressure Relief Valves	1	8.80E-03	1.94E-02	0.019	0.085
Open-Ended Lines	0	2.00E-03	4.40E-03	0.000	0.000
TOTAL				**0.632**	**2.770**

Emission factors are from the EPA "1995 Protocol for Equipment Leak Emission Estimates"
Annual emissions are calculated assuming 8,760 hours per year of operation

Pollutant	Mole Percent (%)	Molecular Weight (MW)	Weighted Sum (Mole%*MW)	Weight Percent (%)	VOC Emission Rate (lb/hr)	VOC Emission Rate (tpy)	Include Safety Factor 37% (lb/hr)	Include Safety Factor 37% (tpy)
Carbon Dioxide	0	44.010	--	0	--	--		
Nitrogen	0.0358	28.013	--	0.011	--	--		
Methane	0	16.043	--	0	--	--		
Ethane	0.0598	30.070	--	0.0197	--	--		
Propane	1.4885	44.097	--	0.7182	0.005	0.020	0.01	0.03
IsoButane	2.0168	58.123	--	1.2825	0.008	0.036	0.01	0.05
Normal Butane	6.2088	58.123	--	3.9483	0.025	0.109	0.03	0.15
IsoPentane	7.471	72.150	--	5.8975	0.037	0.163	0.05	0.22
Normal Pentane	8.1753	72.150	--	6.4535	0.041	0.179	0.06	0.24
Cyclopentane	0	70.134	--	0	0.000	0.000	0.00	0.00
n-Hexane	7.9807	86.177	--	7.5247	0.048	0.208	0.07	0.29
Cyclohexane	0	84.161	--	0	0.000	0.000	0.00	0.00
Other Hexanes	11.0437	86.177	--	10.4127	0.066	0.288	0.09	0.40
Heptanes	33.1269	100.204	--	34.7052	0.219	0.961	0.30	1.32
Methylcyclohexane	0	98.188	--	0	0.000	0.000	0.00	0.00
2,2,4 Trimethylpentane	1.4936	114.231	--	1.8667	0.012	0.052	0.02	0.07
Benzene	1.9699	78.114	--	1.6836	0.011	0.047	0.01	0.06
Toluene	4.921	92.141	--	4.96	0.031	0.137	0.04	0.19
Ethylbenzene	0.2211	106.167	--	0.2569	0.002	0.007	0.00	0.01
Xylenes	1.7587	106.167	--	2.0429	0.013	0.057	0.02	0.08
C8+ heavies	12.0282	114.231	--	18.2161	0.115	0.505	0.16	0.69
TOTAL	100.000		--	100.000	**0.632**	**2.769**	**0.87**	**3.79**

Mole percents determined from Trunk E&H Receiver extended gas analysis dated 11/20/2009.
The VOC emissions are calculated as percentages of the TOC emissions

QUESTAR APPLIED TECHNOLOGY

1210 D. Street, Rock Springs, Wyoming 82901

(307) 352-7292

LIMS ID:	N/A	Description:	Condensate@ E&H Reciever
Analysis Date/Time:	11/20/2009	Field:	G.A.S.
Analyst Initials:	PRP	ML#:	Williams
Sample Temperature:	N/A	GC Method:	Quesliq1.M
Sample Pressure:	ATMOS	Data File:	QPC30.D
Date Sampled:	11/17/2009	Instrument ID:	1

Component	Mol%	Wt%	LV%
Methane	0.0000	0.0000	0.0000
Ethane	0.0598	0.0197	0.0389
Propane	1.4885	0.7182	0.9954
Isobutane	2.0168	1.2825	1.6010
n-Butane	6.2088	3.9483	4.7502
Neopentane	0.0451	0.0356	0.0419
Isopentane	7.4259	5.8619	6.5961
n-Pentane	8.1753	6.4535	7.1854
2,2-Dimethylbutane	0.3991	0.3763	0.4042
2,3-Dimethylbutane	1.8105	1.7071	1.8001
2-Methylpentane	5.5243	5.2086	5.5628
3-Methylpentane	3.3098	3.1207	3.2770
n-Hexane	7.9807	7.5247	7.9618
Heptanes	35.0968	36.3888	34.7021
Octanes	13.2601	15.3684	14.1857
Nonanes	3.7266	4.7511	4.2424
Decanes plus	3.4359	7.2231	6.6454
Nitrogen	0.0358	0.0110	0.0095
Carbon Dioxide	0.0000	0.0000	0.0000
Total	100.0000	100.0000	100.0000

Global Properties		**Units**
Avg Molecular Weight	91.4028	gm/mole
Pseudocritical Pressure	472.92	psia
Pseudocritical Temperatu	480.34	degF
Specific Gravity	0.70263	gm/ml
Liquid Density	5.8577	lb/gal
Liquid Density	246.02	lb/bbl
Specific Gravity	3.0038	air=1
SCF/bbl	1024.31	SCF/bbl

Component	Mol%	Wt%	LV%
Benzene	1.9699	1.6836	1.3373
Toluene	4.921	4.960	3.9975
Ethylbenzene	0.2211	0.2569	0.2070
M&P Xylene	1.4828	1.7224	1.3929
O-Xylene	0.2759	0.3205	0.2545
2,2,4-Trimethylpentane	1.4936	1.8667	1.8210

Data File: Condensate@ E&H Reciever Page #2

GRI E&P TANK INFORMATION

Component	Mol%	Wt%	LV%
H2S			
O2			
CO2	0.0000	0.0000	0.0000
N2	0.0358	0.0110	0.0095
C1	0.0000	0.0000	0.0000
C2	0.0598	0.0197	0.0389
C3	1.4885	0.7182	0.9954
IC4	2.0168	1.2825	1.6010
NC4	6.2088	3.9483	4.7502
IC5	7.4710	5.8975	6.6380
NC5	8.1753	6.4535	7.1854
Hexanes	11.0437	10.4127	11.0441
Heptanes	33.1269	34.7052	33.3648
Octanes	6.8455	8.5417	8.3672
Nonanes	1.7468	2.4513	2.3880
Benzene	1.9699	1.6836	1.3373
Toluene	4.921	4.960	3.9975
E-Benzene	0.2211	0.2569	0.2070
Xylene	1.7587	2.0429	1.6474
n-C6	7.9807	7.5247	7.9618
2,2,4-Trimethylpentane	1.4936	1.8667	1.8210
C10 Plus			
C10 Mole %	3.4359	7.2231	6.6454
Molecular Wt.	193.4965		
Specific Gravity	0.7627		
Total	100.00	100.00	100.00

TABLE 2-4. OIL AND GAS PRODUCTION OPERATIONS AVERAGE EMISSION FACTORS (kg/hr/source)

Equipment Type	Service[a]	Emission Factor (kg/hr/source)[b]
Valves	Gas	4.5E-03
	Heavy Oil	8.4E-06
	Light Oil	2.5E-03
	Water/Oil	9.8E-05
Pump seals	Gas	2.4E-03
	Heavy Oil	NA
	Light Oil	1.3E-02
	Water/Oil	2.4E-05
Others[c]	Gas	8.8E-03
	Heavy Oil	3.2E-05
	Light Oil	7.5E-03
	Water/Oil	1.4E-02
Connectors	Gas	2.0E-04
	Heavy Oil	7.5E-06
	Light Oil	2.1E-04
	Water/Oil	1.1E-04
Flanges	Gas	3.9E-04
	Heavy Oil	3.9E-07
	Light Oil	1.1E-04
	Water/Oil	2.9E-06
Open-ended lines	Gas	2.0E-03
	Heavy Oil	1.4E-04
	Light Oil	1.4E-03
	Water/Oil	2.5E-04

[a]Water/Oil emission factors apply to water streams in oil service with a water content greater than 50%, from the point of origin to the point where the water content reaches 99%. For water streams with a water content greater than 99%, the emission rate is considered negligible.

[b]These factors are for total organic compound emission rates (including non-VOC's such as methane and ethane) and apply to light crude, heavy crude, gas plant, gas production, and off shore facilities. "NA" indicates that not enough data were available to develop the indicated emission factor.

[c]The "other" equipment type was derived from compressors, diaphrams, drains, dump arms, hatches, instruments, meters, pressure relief valves, polished rods, relief valves, and vents. This "other" equipment type should be applied for any equipment type other than connectors, flanges, open-ended lines, pumps, or valves.

Emission Calculations

Fugitives – Pig Receiver Venting

(F-2)

Trunk E&H Receiver Venting

pipeline pressure	130	psig	
pipeline diameter	16	in =	1.33 ft
pipeline length	7	ft	
pipeline volume	9.77	cu ft	
atmospheric pressure	12	psia	
blowdown volume	106	cu ft	
Total blowdown volume =	106	cu ft	

Venting occurs once a week, 52 times per year: 106 cu ft x 52 5512 scf/yr

Component	mol%	MW	mol%*MW	wt%	specific gravity	wt%/SG	vol%	mass flowrate lb
gas flowrate =	5512	scf/yr						
H_2S	0	34.08	--	0.0000	1.1765	0.0000	0.00000	0.00
N_2	0.007	28.02	--	0.0023	0.9672	0.0024	0.00828	0.03
CO_2	0.0862	44.01	--	0.0437	1.5195	0.0288	0.10017	0.55
O_2	0	31.999	--	0.0000	1.1048	0.0000	0.00000	0.00
C1	3.867	16.04	--	0.7149	0.5539	1.2907	4.49555	9.02
C2	3.688	30.07	--	1.2782	1.0382	1.2312	4.28832	16.13
C3	6.220	44.09	--	3.1612	1.5225	2.0763	7.23209	39.89
i-C4	2.720	58.12	--	1.8217	2.0068	0.9078	3.16185	22.99
n-C4	6.510	58.12	--	4.3604	2.0068	2.1728	7.56818	55.02
i-C5	5.800	72.15	--	4.8223	2.4911	1.9358	6.74267	60.86
n-C5	6.060	72.15	--	5.0385	2.4911	2.0226	7.04497	63.58
C6:	7.862	86.178	--	7.8082	2.9753	2.6243	9.14090	98.54
C7:	26.715	100.205	--	29.6604	3.4956	8.4851	29.55454	389.32
C8:	7.781	114.232	--	10.2288	3.9439	2.5936	9.03374	129.27
C9:	2.913	128.59	--	4.3051	4.4282	0.9722	3.38630	54.47
C10:	5.623	142.286	--	11.6249	4.9125	2.3664	8.24244	116.35
N-Hexane:	5.7549	86.178	--	5.7155	2.9753	1.9210	6.69102	72.13
Benzene:	1.0679	86.178	--	0.9613	2.9753	0.3231	1.12537	13.38
Toluene:	3.7880	100.205	--	4.0227	3.4956	1.1508	4.00834	55.20
Ethylbenzene:	0.2467	114.232	--	0.3018	3.9439	0.0765	0.26654	4.10
Xylenes:	2.2180	114.232	--	2.7138	3.9439	0.6881	2.39674	36.85
2,2,4 Trimethylpentane	1.0745	114.231	--	1.4145	--	--	--	17.85
Sum	100.0000	0	0.0000	100.0002		28.7099	100.00000	1255.53

mass flowrate (lb/hr) = gas flowrate (cfd) / 379 (scf/mol) * mol% * MW(lb/lb-mol) / (24 hr/day)

VOC release emissions, lb/yr: 1,229.8

ton/yr: 0.6149

Trunk E&H gas analysis = 11/20/09 extended analysis

QUESTAR APPLIED TECHNOLOGY

1210 D. Street, Rock Springs, Wyoming 82901

(307) 352-7292

LIMS ID:	N/A	Description:	Trunk E&H Reciever
Analysis Date/Time:	11/20/2009	Field:	G.A.S.
Analyst Initials:	PRP	ML#:	Williams
Sample Temperature:	N/A	GC Method:	Quesliq1.M
Sample Pressure:	150	Data File:	QPC31.D
Date Sampled:	11/17/2009	Instrument ID:	1

Component	Mol%	Wt%	LV%
Methane	3.8667	0.7149	1.6278
Ethane	3.6883	1.2782	2.4565
Propane	6.2204	3.1612	4.2596
Isobutane	2.7196	1.8217	2.2109
n-Butane	6.5096	4.3604	5.1002
Neopentane	0.0907	0.0754	0.0863
Isopentane	5.7089	4.7469	5.1929
n-Pentane	6.0596	5.0385	5.4539
2,2-Dimethylbutane	0.2707	0.2689	0.2808
2,3-Dimethylbutane	1.3120	1.3030	1.3358
2-Methylpentane	3.8505	3.8241	3.9706
3-Methylpentane	2.4288	2.4122	2.4626
n-Hexane	5.7549	5.7155	5.8794
Heptanes	27.7825	30.6217	28.4720
Octanes	12.6434	15.6660	14.2490
Nonanes	5.3773	7.3207	6.4410
Decanes plus	5.6227	11.6249	10.4824
Nitrogen	0.0072	0.0023	0.0020
Carbon Dioxide	0.0862	0.0437	0.0365
Total	100.0000	100.0000	100.0000

Global Properties		**Units**
Avg Molecular Weight	86.7779	gm/mole
Pseudocritical Pressure	486.88	psia
Pseudocritical Temperatu	436.88	degF
Specific Gravity	0.68311	gm/ml
Liquid Density	5.6950	lb/gal
Liquid Density	239.19	lb/bbl
Specific Gravity	2.7420	air=1
SCF/bbl	1049.13	SCF/bbl

Component	Mol%	Wt%	LV%
Benzene	1.0679	0.9613	0.7423
Toluene	3.788	4.0227	3.1515
Ethylbenzene	0.2467	0.3018	0.2365
M&P Xylene	1.8580	2.2733	1.7873
O-Xylene	0.3600	0.4405	0.3401
2,2,4-Trimethylpentane	1.0745	1.4145	1.3415

Data File: Trunk E&H Reciever

GRI E&P TANK INFORMATION

Component	Mol%	Wt%	LV%
H2S			
O2			
CO2	0.0862	0.0437	0.0365
N2	0.0072	0.0023	0.0020
C1	3.8667	0.7149	1.6278
C2	3.6883	1.2782	2.4565
C3	6.2204	3.1612	4.2596
IC4	2.7196	1.8217	2.2109
NC4	6.5096	4.3604	5.1002
IC5	5.7996	4.8223	5.2792
NC5	6.0596	5.0385	5.4539
Hexanes	7.8620	7.8082	8.0498
Heptanes	26.7146	29.6604	27.7297
Octanes	7.7809	10.2288	9.7560
Nonanes	2.9126	4.3051	4.0771
Benzene	1.0679	0.9613	0.7423
Toluene	3.788	4.0227	3.1515
E-Benzene	0.2467	0.3018	0.2365
Xylene	2.2180	2.7138	2.1274
n-C6	5.7549	5.7155	5.8794
2,2,4-Trimethylpentane	1.0745	1.4145	1.3415
C10 Plus			
C10 Mole %	5.6227	11.6249	10.4824
Molecular Wt.	180.9689		
Specific Gravity	0.7564		
Total	100.0000	100.000	100.000

Emission Calculations

Catalytic Heaters

(HTR-1, HTR-2, HTR-3, HTR-4)

Heater Exhaust Emissions Data and Calculations

Unit Number: HTR-1, HTR-2, HTR-3, HTR-4
Description: Heater

Note: Where more than one emissions unit is identified above, this worksheet provides the emission rates and operating parameters for each individual emissions unit.

Fuel Consumption

0.01	MMBtu/hr	Capacity	Mfg. data
13	scf/hr	Hourly fuel consumption	MMBtu/hr x 1,000,000 / Btu/scf
105	MMBtu/yr	Annual fuel consumption	MMBtu/hr x 8,760 hr/yr
0.12	MMscf/yr	Annual fuel consumption	scf/hr x 8,760 hr/yr / 1,000,000
900	Btu/scf	Field gas heating value	Laboratory analysis

Steady-State Emission Rates

Pollutant	Uncontrolled		
	lb/MMscf	lb/hr	tpy
NOX	100	0.001	5.84E-03
CO	84	0.001	4.91E-03
VOC	5.5	0.000	3.21E-04
SO2	0.6	0.000	3.50E-05
TSP	7.60	0.000	4.44E-04
PM10	7.60	0.000	4.44E-04
PM2.5	7.60	0.000	4.44E-04
Lead	5.00E-04	6.67E-09	2.92E-08

Emission factors taken from AP-42, Tables 1.4-1 & 1.4-2

Annual emissions based on 8,760 hr/yr operation

Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION[a]

Combustor Type (MMBtu/hr Heat Input) [SCC]	NO_x[b]		CO	
	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]				
Uncontrolled (Pre-NSPS)[c]	280	A	84	B
Uncontrolled (Post-NSPS)[c]	190	A	84	B
Controlled - Low NO_x burners	140	A	84	B
Controlled - Flue gas recirculation	100	D	84	B
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]				
Uncontrolled	100	B	84	B
Controlled - Low NO_x burners	50	D	84	B
Controlled - Low NO_x burners/Flue gas recirculation	32	C	84	B
Tangential-Fired Boilers (All Sizes) [1-01-006-04]				
Uncontrolled	170	A	24	C
Controlled - Flue gas recirculation	76	D	98	D
Residential Furnaces (<0.3) [No SCC]				
Uncontrolled	94	B	40	B

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from $1b/10^6$ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

[b] Expressed as NO_2. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO_X emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO_X emission factor.

[c] NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat input that commenced construction modification, or reconstruction after August 17, 1971, and units with heat input capacities between 100 and 250 MMBtu/hr that commenced construction modification, or reconstruction after June 19, 1984.

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION[a]

Pollutant	Emission Factor ($lb/10^6$ scf)	Emission Factor Rating
CO_2[b]	120,000	A
Lead	0.0005	D
N_2O (Uncontrolled)	2.2	E
N_2O (Controlled-low-NO_X burner)	0.64	E
PM (Total)[c]	7.6	D
PM (Condensable)[c]	5.7	D
PM (Filterable)[c]	1.9	B
SO_2[d]	0.6	A
TOC	11	B
Methane	2.3	B
VOC	5.5	C

[a] Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from $lb/10^6$ scf to $kg/10^6$ m^3, multiply by 16. To convert from $lb/10^6$ scf to 1b/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds. VOC = Volatile Organic Compounds.

[b] Based on approximately 100% conversion of fuel carbon to CO_2. $CO_2[lb/10^6 \text{ scf}] = (3.67)(CON)(C)(D)$, where CON = fractional conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2×10^4 $lb/10^6$ scf.

[c] All PM (total, condensible, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM_{10}, $PM_{2.5}$ or PM_1 emissions. Total PM is the sum of the filterable PM and condensible PM. Condensible PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

[d] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content is natural gas of 2,000 grains/10^6 scf. The SO_2 emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO_2 emission factor by the ratio of the site-specific sulfur content (grains/10^6 scf) to 2,000 grains/10^6 scf.

Section 6

Description of the Routine Operations of the Facility

Liquids from the pigging of a natural gas gathering line are intermittently received at WFC's Trunk E & H Receiver facility. Liquids are automatically transferred from the receiver to a pressurized bullet tank. With the manual opening of a valve on the pressurized bullet tank, liquids are transferred by pressure into the condensate tank(s). Tank flash occurs as the liquids are transferred from the pressurized bullet tank to the atmospheric storage tanks, releasing volatile organic compounds (VOCs) to the atmosphere. There are three 300-bbl condensate tanks plumbed together in series. As needed, the contents of the condensate tanks are loaded onto truck(s) for sale or appropriate disposal. The water phase that separates from the condensate is drawn off the condensate tank by gravity feed into one of two produced water tanks. As needed, the contents of the produced water tanks are hauled for appropriate disposal. Four catalytic heaters located at the site are used to prevent liquids from freezing in the system.

Section 7

Federal Rules, Regulations, and Standards Applicability Checklist

FEDERAL REGULATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION:
40 CFR 50	NAAQS	✓		✓		This regulation is applicable because it applies to all sources operating within the United States, including those located on Indian lands.
40 CFR 51	Requirements for Preparation, Adoption, and Submittal of Implementation Plans				✓	This regulation is not applicable because it applies only to local and state/tribal governmental agencies.
40 CFR 52	Approval and Promulgation of Implementation Plans				✓	This regulation is not applicable because the facility is not a major PSD source (40 CFR 52.21 Prevention of Significant Deterioration of Air Quality). The remainder of 40 CFR 52 is not applicable because it addresses approval and promulgation of implementation plans.
NSPS 40 CFR 60, Subpart A	General Provisions				✓	This regulation is not applicable since no other NSPS subpart applies.
NSPS 40 CFR 60, Subpart K	Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978				✓	This regulation is not applicable because all petroleum liquids storage tanks at the facility have capacities less than the minimum applicability threshold capacity of 40,000 gallons (see 40 CFR 60.110(a)).
NSPS 40 CFR 60, Subpart Ka	Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984				✓	The regulation is not applicable because all storage tanks at the facility have capacities less than the minimum applicability threshold capacity of 40,000 gallons (see 40 CFR 60.110a(a)).
NSPS 40 CFR 60, Subpart Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After 7/23/84				✓	The regulation is not applicable to any storage tank at the facility. Storage tanks at the facility have a capacity less than the minimum applicability threshold capacity of 75 cubic meters (19,813 gallons) or store condensate prior to custody transfer (40 CFR 60.110b(a)).

FEDERAL REGU-LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce-able	Does Not Apply	JUSTIFICATION:
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from Onshore Gas Plants				✓	The regulation is not applicable because the facility is not a natural gas processing plant as defined by the subpart.
NESHAP 40 CFR 61 Subpart A	General Provisions				✓	The regulation is not applicable as the facility is not subject to any of the standards listed.
MACT 40 CFR 63, Subpart A	General Provisions				✓	Applies if any other subpart applies.
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities				✓	This regulation is not applicable as the facility is an area source for HAPs and does not contain any affected sources ("storage vessels with the potential for flash emissions", as defined in 40 CFR 63.761).
NESHAP 40 CFR 64	Compliance Assurance Monitoring				✓	This regulation is not applicable because no sources at the facility use a control device to achieve compliance with an emission limit or standard where pre control emissions equal or exceed the major source threshold (100 tons per year).
NESHAP 40 CFR 68	Chemical Accident Prevention				✓	The regulation is not applicable because the station does not store any of the identified toxic and flammable substances in quantities exceeding the applicability thresholds.
40 CFR 70	State Operating Permit Programs				✓	This regulation is not applicable, because the facility is located within the boundaries of the Jicarilla Apache Indian Reservation. As such, the EPA has jurisdiction over this facility until the Jicarilla Apache Indian Tribe develops their own rules and regulations.
40 CFR 71	Federal Operating Permit Programs	✓				This regulation is applicable because the facility is located within the Jicarilla Apache Indian Reservation, and as the Tribe has not developed their own rules and regulations concerning air emission sources, the facility is presently under the jurisdiction of the EPA. As VOC emissions exceed 100 tons per year, the station is subject to the Federal Operating Permits Program.
Title IV – Acid Rain 40 CFR 72	Acid Rain				✓	This regulation is not applicable because the facility does not operate a source subject to Title IV of the CAA.
Title VI – 40 CFR 82	Protection of Stratospheric Ozone				✓	This regulation is not applicable to the station because the facility does not produce, manufacture, transform, destroy, import, or export ozone-depleting substances; does not maintain or service motor vehicle air conditioning units or refrigeration equipment; and does not sell, distribute, or offer for sale or distribution any product that contains ozone-depleting substances.
40 CFR 93	Determining Conformity of Federal Actions to State and Federal SIPS				✓	This regulation is not applicable because the station is not associated with any highway or transit projects.

Section 8

Alternative Operating Scenarios

No alternative operating scenarios are proposed by Williams for the Trunk E & H Receiver facility.

Section 9

Certification of Truth, Accuracy, and Completeness

See next page.

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Approval Expires 09/30/2010

Federal Operating Permit Program (40 CFR Part 71)

CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS (CTAC)

This form must be completed, signed by the "Responsible Official" designated for the facility or emission unit, and sent with each submission of documents (i.e., application forms, updates to applications, reports, or any information required by a part 71 permit).

A. Responsible Official – Trunk E&H Receiver

Name: (Last) **Wicburg** (First) **Don** (MI) ____

Title **General Manager, Four Corners Area**

Street or P.O. Box **188 County Road 4900**

City **Bloomfield** State **NM** ZIP **87413** - _____

Telephone **(505) 632 - 4628** Ext. _____ Facsimile **(505) 632- 4781**

B. Certification of Truth, Accuracy and Completeness (to be signed by the responsible official)

I certify under penalty of law, based on information and belief formed after reasonable inquiry, the statements and information contained in these documents are true, accurate and complete.

Name (signed) Don Wicburg

Name (typed) Don Wicburg Date: 3 / 4 / 2010

INSTRUCTIONS FOR CTAC
CERTIFICATION OF TRUTH, ACURACY, and COMPLETENESS

This form is for the responsible official to certify that submitted documents (i.e., permit applications, updates to application, reports, and any other information required to be submitted as a condition of a permit) are true, accurate, and complete.

This form should be completed and submitted with each set of documents sent to the permitting authority. It may be used at time of initial application, at each step of a phased application submittal, for application updates, as well as to accompany routine submittals required as a term or condition of a permit.

Section A - Title V permit applications must be signed by a responsible official. The definition of responsible official can be found at ə 70.2.

Section B - The responsible official must sign and date the certification of truth, accuracy and completeness. This should be done after all application forms are complete and the responsible official has reviewed the information. Normally this would be the last form completed before the package of forms is mailed to the permitting authority.