XTO Comments on Proposed EPA Synthetic Minor Permits for the XTO Energy, Inc. – Wild Horse Bench Site - #SMNSR-UO-000124-2012.001 and XTO Energy, Inc. – River Bend Unit 11-18F Site - #SMNSR-UO-000123-2012.001 located in Uintah County, Utah:

The following comments are related to the following XTO Synthetic minor NSR permits:

- ***XTO Energy, Inc. – Wild Horse Bench Site - #SMNSR-UO-000124-2012.001***:
  - Section I.B needs to have the following or similar language added to address existing sources that were not referenced in this permit:
    - Add number 5 to Section I.B "Applicability" that states:
      - "Existing emission sources, not specifically identified within this permit, are authorized to continue to operate as demonstrated in the permit application. These emission sources are subject to applicable federal standards."
  - The dehy reboiler heater rating should be 1.0 mmbtu/hr and not 0.5 mmbtu/hr. The effect on the associated emissions is minor and did not affect the VOC or HAP emissions in any significant way. The permit language needs to be changed on Part I.C.1 (a) (ii) to read 1.0 million British Thermal Units instead of 0.5 million British Thermal Units. Attached are updated calculations to address this minor update.
  - Section I.C.4 (b) refers to compliance with 40 CFR 63.771(c) that requires the closed vent system to have "no detectable emissions" as per 63.771(c)(2). XTO proposes that the reference to 40 CFR 63.771(c) be replaced with the verification of "no detectable emissions" that is stated in this permit in the "Monitoring Requirements" section. The requested language is as follows:
    - "The Permittee shall design, install, continuously operate, and maintain a closed vent system such that it is compliant with the closed vent system monitoring requirements in this permit."
  - Regarding the "Testing Requirements" in Section I.C.5 –
    - Request to modify the language in Section I.C.5(a) to address equipment that is installed and currently may not be operating due to current field gas supply or other field-wide operational modifications.
      - The proposed language is, as follows:
        - "The permittee shall demonstrate that the thermal oxidizer achieves the 95.0% VOC and total BTEX emissions destruction efficiency requirement by performing an initial performance test of the thermal oxidizer within 180 days after either the date of startup of the dehydration unit, if the dehydration unit is not in operation on the effective date of this permit, or within 180 days after the effective date of this permit, if the existing dehydration unit is operating on the effective date of this permit.
    - Request to add language in Section I.C.5(c) to address equipment that is installed and currently not operating due to current field gas supply or other field-wide operational modifications. The added language is intended to address the operation of the onsite dehydrator or associated Thermal Oxidizer referenced in the permit. The equipment is installed on location, but may not be planned to be operable at the proposed time of the permit issuance.
      - The proposed language is, as follows:
        - "If an existing dehydrator or thermal oxidizer is installed, but not-operational at the time of issuance of this permit, or if the

existing thermal oxidizer is repaired or replaced, then the Permittee shall either conduct a performance test on the existing, repaired, or replaced units within 180-days of commencing operation of the existing, repaired, or replaced unit, or the unit shall be model tested by the manufacturer under and meeting the criteria of 40 CFR 63.772(h) to demonstrate compliance with the VOC and total BTEX emission reduction requirements in this permit."

- Regarding the "Monitoring Requirements" in section I.C.6 -
  - Regarding Section I.C.6(b) – This monitoring requirement refers to monthly inspections following 40 CFR 63.773(c) which is contrary to the timing of the inspections referenced within the rule. The referenced rule, 40 CFR 773(c) requires an initial Method 21 inspection and follow-up Method 21 inspections whenever a component is repaired or replaced. In addition, 40 CFR 773(c) requires annual visual inspections, not monthly. XTO requests that, because the applicable facilities are not Major-source facilities and are applying for "synthetic-minor" permits, the monitoring procedures required by the permit in Section I.C.6(b) be revised to remove the reference to 40 CFR 63.773(c) and instead utilize the following language to address this issue:
    - The proposed language is, as follows:
      - "The Permittee shall visually inspect the closed-vent system on a monthly basis for evidence of visual defects that could result in air emissions. In addition, the permittee shall perform a one-time initial inspection utilizing an Infrared camera to demonstrate that the closed-vent system operates with no detectable emissions."
  - Regarding Section I.C.6(c) – This monitoring requirement requires the natural gas flowrate meter to be inspected on a monthly basis. XTO requests that EPA clarify that the meter inspections consist of a "monthly visual inspection to verify that the meter is operable and a minimum of annual calibration verification to verify that the meter accuracy is within plus or minus 2% or better."
    - The proposed language is, as follows:
      - "The Permittee shall perform a monthly visual inspection to verify that the meter is operable and a minimum of one (1) annual calibration verification to verify that the meter accuracy is within plus or minus 2% or better."
- Regarding the "Recordkeeping Requirements" in Section I.C.7 –
  - Regarding Section I.C.7(c) – Since the monitoring requirements are requested to be revised, XTO requests that the word "monthly" be revised to the word "applicable".
    - The proposed language is, as follows:
      - "All *applicable* inspections of the thermal oxidizer, closed-vent system, and natural gas flowrate meter;"
  - XTO requests that the EPA remove Section I.C.7(f) as it is essentially a repeat of the language in Section I.C.7(e).

- Regarding the "Reporting Requirements" in Section I.E.1(a) –
  - To clarify the initial annual reporting year, the associated submittal deadline, and the scope of the report, XTO requests that clarifying language be added to Section I.E.1(a), as follows:
    - "The permittee shall submit a written annual report of the actual annual *VOC and BTEX* emissions from all emission units at the facility with emission limits in this permit each year no later than April 1st. The annual report shall cover the period for the previous calendar year. *The first annual report will cover the calendar year in which the permit becomes effective and will be due on April 1 of the following year.*"

- ***XTO Energy, Inc. – River Bend Unit 11-18F Site - #SMNSR-UO-000123-2012.001:***
  - Section I.B needs to have the following or similar language added to address existing sources that were not referenced in this permit:
    - Add number 5 to Section I.B "Applicability" that states:
      - "Existing emission sources, not specifically identified within this permit, are authorized to continue to operate as demonstrated in the permit application. These emission sources are subject to applicable federal standards."
  - The dehy reboiler heater rating should be 1.0 mmbtu/hr and not 0.5 mmbtu/hr. The effect on the associated emissions is minor and did not affect the VOC or HAP emissions in any significant way. The permit language needs to be changed on Part I.C.1 (a) (ii) to read 1.0 million British Thermal Units instead of 0.5 million British Thermal Units. Attached are updated calculations to address this minor update.
  - Section I.C.4 (b) refers to compliance with 40 CFR 63.771(c) that requires the closed vent system to have "no detectable emissions" as per 63.771(c)(2). XTO proposes that the reference to 40 CFR 63.771(c) be replaced with the verification of "no detectable emissions" that is stated in this permit in the "Monitoring Requirements" section. The requested language is as follows:
    - "The Permittee shall design, install, continuously operate, and maintain a closed vent system such that it is compliant with the closed vent system monitoring requirements in this permit."
  - Regarding the "Testing Requirements" in Section I.C.5 for the River Bend Unit 11-18F Site –
    - Request to modify the language in Section I.C.5(a) to address equipment that is installed and currently not operating due to current field gas supply or other field-wide operational modifications.
      - The proposed language is, as follows:
        - "The permittee shall demonstrate that the thermal oxidizer achieves the 95.0% VOC and total BTEX emissions destruction efficiency requirement by performing an initial performance test of the thermal oxidizer(s) within 180 days after either the date of startup of the dehydration unit, if the dehydration unit is not in operation on the effective date of this permit, or within 180 days after the effective date of this permit, if the existing

dehydration unit is operating on the effective date of this permit. In addition, an additional thermal oxidizer (Thermal Oxidizer #2) may be used as a as a backup device or as a supplemental control device to control dehydrator emissions in conjunction with the current Thermal Oxidizer #1. The dehydrator will route all process vents into Thermal Oxidizer #1, Thermal Oxidizer #2, or a combination of both Thermal Oxidizers at any given time of operation."

- Request to add language in Section I.C.5(c) to address equipment that is installed and currently not operating due to current field gas supply or other field-wide operational modifications. The added language is intended to address the operation of the onsite dehydrator and both Thermal Oxidizers (Thermal Oxidizer #1 and #2) referenced in the permit application. Thermal Oxidizer #2 may be installed on location, but may not be installed or operable at the proposed time of the permit issuance. In addition, Thermal Oxidizer #2 would be considered a supplemental control device that may be used as a backup device or to control dehydrator emissions in conjunction with the current Thermal Oxidizer #1 at some point. The dehydrator will route all process vents into Thermal Oxidizer #1, Thermal Oxidizer #2, or a combination of both Thermal Oxidizers at any given time of operation.
  - The proposed language is, as follows:
    - "If an existing dehydrator or thermal oxidizer(s) are installed, but not-operational at the time of issuance of this permit, or if the existing thermal oxidizer(s) are repaired or replaced, then the Permittee shall either conduct a performance test on the existing, repaired, or replaced units within 180-days of commencing operation of the existing, repaired, or replaced unit, or the units shall be model tested by the manufacturer under and meeting the criteria of 40 CFR 63.772(h) to demonstrate compliance with the VOC and total BTEX emission reduction requirements in this permit."

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  - Regarding Section I.C.6(b) – This monitoring requirement refers to monthly inspections following 40 CFR 63.773(c) which is contrary to the timing of the inspections referenced within the rule. The referenced rule, 40 CFR 773(c) requires an initial Method 21 inspection and follow-up Method 21 inspections whenever a component is repaired or replaced. In addition, 40 CFR 773(c) requires annual visual inspections, not monthly. XTO requests that, because the applicable facilities are not Major-source facilities and are applying for "synthetic-minor" permits, the monitoring procedures required by the permit in Section I.C.6(b) be revised to remove the reference to 40 CFR 63.773(c) and instead utilize the following language to address this issue:
    - The proposed language is, as follows:
      - "The Permittee shall visually inspect the closed-vent system on a monthly basis for evidence of visual defects that could result in air emissions. In addition, the permittee shall perform a one-

time initial inspection utilizing an Infrared camera to demonstrate that the closed-vent system operates with no detectable emissions."

- Regarding Section I.C.6(c) – This monitoring requirement requires the natural gas flowrate meter to be inspected on a monthly basis. XTO requests that EPA clarify that the meter inspections consist of a "monthly visual inspection to verify that the meter is operable and a minimum of annual calibration verification to verify that the meter accuracy is within plus or minus 2% or better."
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    - "The permittee shall submit a written annual report of the actual annual *VOC and BTEX* emissions from all emission units at the facility with emission limits in this permit each year no later than April 1st. The annual report shall cover the period for the previous calendar year. *The first annual report will cover the calendar year in which the permit becomes effective and will be due on April 1 of the following year.*"

Siffring, Stuart

From: Siffring, Stuart
Sent: Wednesday, December 02, 2015 7:50 AM
To: 'Allison, Craig'
Cc: OConnor, Mike
Subject: RE: Proposed Synthetic Minor NSR Permit for Wild Horse Bench and RBU 11-18F Compressor Stations

Hi Craig,

Since the purpose of the permit action was to transfer expiring Consent Decree control requirements into a federally enforceable permit, the only pieces of equipment addressed were the engines and dehys (as they were the only pieces affected by the CD). The engines already have federally enforceable emission limits (JJJJ, ZZZZ) so the dehys are the only equipment needing to be addressed in this permit. The other equipment is installed before the Tribal MNSR rule is effective for oil and gas sources, so it does not need to be addressed in a permit.

Let me know if any of that is contrary to your wishes, or needs additional clarification, I sure appreciate the feedback!

-Stuart

From: Allison, Craig [mailto:Craig_Allison@xtoenergy.com]
Sent: Wednesday, December 02, 2015 7:14 AM
To: Siffring, Stuart
Cc: OConnor, Mike
Subject: RE: Proposed Synthetic Minor NSR Permit for Wild Horse Bench and RBU 11-18F Compressor Stations

Stuart:

Regarding the XTO NSR Syn Minor permits –
I noticed that the proposed construction permit only referenced the dehydration system and not the engines, tanks and other sources. Is there a reason why the permit does not refer or list any sitewide equipment?
Do these sources need to be listed in the permit? If not, why not?

Please reply back to me at your earliest convenience. Thanks.

Regards,

Craig Allison
EH&S Advisor
Environmental Health & Safety
Office: 817-885-2672 **|** Cell: 817-201-2379 **|** Fax: 817-885-1847
XTO ENERGY INC., an ExxonMobil subsidiary
810 Houston Street, Fort Worth, Texas 76102

From: Siffring, Stuart [mailto:Siffring.Stuart@epa.gov]
Sent: Wednesday, November 25, 2015 4:14 PM
To: Allison, Craig
Cc: brucep@utetribe.com; minnieg@utetribe.com; Rothery, Deirdre; Smith, Claudia
Subject: Proposed Synthetic Minor NSR Permit for Wild Horse Bench and RBU 11-18F Compressor Stations

Mr. Allison,

I have attached the requested proposed permit, the accompanying technical support document, and the bulletin board notice for the Wild Horse Bench and RBU 11-18F Compressor Stations. We will also be posting the application, proposed permit, technical support document, and other supporting information in PDF format on our website at http://www2.epa.gov/caa-permitting/caa-permit-public-comment-opportunities-region-8 by the start of the public comment period.

In accordance with the regulations at 40 CFR 49.157, we are providing a 30-day period from November 27, 2015 to December 28, 2015 for public comment on this proposed permit. Comments must be received by 5:00pm MST December 28, 2015, to be considered in the issuance of the final permit.

Please submit any written comments you may have concerning the terms and conditions of this permit. You can send them directly to me at Siffring.Stuart@epa.gov, or to r8airpermitting@epa.gov. Should the EPA not accept any or all of these comments, you will be notified in writing and will be provided with the reasons for not accepting them.

Thank you,

Stuart Siffring
Environmental Engineer
US EPA Region 8 Air Program
Phone: (303) 312-6478
Fax: (303) 312-6064
http://www2.epa.gov/region8/air-permitting

Public Notice: Request For Comments

Proposed Air Quality Permit to Construct
XTO Energy, Inc.
RBU 11-18F Facility and Wild Horse Bench Facility

Notice issued: November 27, 2015

Written comments due:
5 p.m., December 28, 2015

Where are the facilities located?
Uintah and Ouray Indian Reservation

RBU 11-18F: Near the town of Ouray in Uintah County, Utah
Latitude 39.94625 N
Longitude -109.71063 W

Wild Horse Bench: Near the town of Ouray in Uintah County, Utah
Latitude 39.88899 N
Longitude -109.734554 W

What is being proposed?
These permit actions will apply to two existing facilities operating on the Uintah and Ouray Indian Reservation in Utah.

The facilities are designed to compress and dehydrate natural gas received from nearby production wells. The facilities are currently subject to enforceable emission limitations for two (2) existing tri-ethylene glycol dehydration units (one at each facility), which were established through a November 17, 2009 federal combined complaint and Consent Agreement Final Order (CAFO) between the EPA and XTO Energy (Docket No. 2:09-CV-00331-SA). 40 CFR 49.153(a)(3)(iv) and 49.158 of the Tribal Minor New Source Review (MNSR) Permit Program provide the EPA with the authority to transfer CAFO emission limits to a MNSR permit so that they may apply permanently after expiration or termination of a CD and to issue permits with enforceable requirements that a source has requested to voluntarily accept. XTO Energy has requested to continue the enforceable limits on the dehydrators that are present in the CAFO. The permits the EPA is proposing to issue reflect the incorporation of the requirements established in the CAFO.

Proposed Permit Requirements:
The permits propose requirements to route emissions from the still vents of the existing dehydrators (one at each facility) and limit their emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAP).

What are the effects on air quality?
These actions will have no adverse air quality impacts. The emissions at these existing facilities will not be increasing due to these permit actions. In addition, these actions do not authorize the construction of any new emission sources, or emission increases from existing sources, nor do the otherwise authorize any other physical modifications to the facilities or their operations.

Where can I send comments?
EPA accepts comments by mail, fax and e-mail.

US EPA Region 8 Air Program, 8P-AR
Attn: Federal Minor NSR Coordinator
1595 Wynkoop Street,
Denver, CO 80202
R8AirPermitting@epa.gov
Fax: 303-312-6064

How can I review documents?
You can review a paper or electronic copy of the proposed permits and related documents at the following locations:

Ute Indian Tribe Energy and Minerals Department Office
988 South 7500 East
Fort Duchesne, Utah 84026
Attn: Bruce Pargeets, Acting Energy, Mineral, and Air Director
or brucep@utetribe.com

US EPA Region 8 Office:
1595 Wynkoop Street, Denver, CO 80202
Hours: Mon-Fri 8:00 a.m. – 5:00 p.m.
Contact: Stuart Siffring at 303-312-6478
or siffring.stuart@epa.gov

US EPA Region 8 Website:
http://www2.epa.gov/caa-permitting/caa-permit-public-comment-opportunities-region-8

Permit numbers:
RBU 11-18F Facility
SMNSR-UO-000123-2012.001
Wild Horse Bench Facility
SMNSR-UO-000124-2012.001

What happens next?
The EPA will review and consider all comments received during the comment period. Following this review, the EPA may issue the permits as proposed, issue modified permits based on comments, or deny the permits.

Tribal Minor New Source Review in Indian Country

United States Environmental Protection Agency

Region 8
Air Program
1595 Wynkoop Street
Denver, CO 80202
Phone 800-227-8917

www.epa.gov/region8

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region08

Ref: 8P-AR

Craig Allison
Environmental Engineer
XTO Energy, Inc.
810 W. Houston Street, Petro-4
Fort Worth, Texas 76102

Re: XTO Energy, Inc.
Wild Horse Bench Site
Permit # SMNSR-UO-000124-2012.001
Proposed Synthetic Minor NSR Permit

Dear Mr. Allison:

The U.S. Environmental Protection Agency Region 8 (EPA) has completed its review of the XTO Energy, Inc., (XTO) application requesting a synthetic minor New Source Review (NSR) permit pursuant to 40 CFR Part 49 for the Wild Horse Bench Site.

Enclosed are the proposed permit and the corresponding technical support document. The regulations at 40 CFR 49.157 require that the affected community and the general public have the opportunity to submit written comments on any proposed NSR permit. All written comments submitted within thirty (30) calendar days after the public notice is published will be considered by the EPA in making its final permit decision. Enclosed is a copy of the public notice which will be published on the EPA's website located at: http://www2.epa.gov/region8/air-permit-public-comment-opportunities, on November 27, 2015. The public comment period will end at 5:00 pm on December 28, 2015.

The conditions contained in the proposed permit will become effective and enforceable by the EPA if the permit is issued final. If you are unable to accept any term or condition of the draft permit, please submit your written comments, along with the reason(s) for non-acceptance to:

Tribal NSR Permit Contact
c/o Air Program (8P-AR)
U.S. EPA, Region 8
1595 Wynkoop Street
Denver, Colorado 80202

or

R8AirPermitting@epa.gov

If you have any questions concerning the enclosed proposed permit or technical support document, please contact Stuart Siffring of my staff at (303) 312-6478.

Sincerely,

Darcy O'Connor
Acting Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Enclosures

Cc:

Honorable Shaun Chapoose, Chairman, Ute Indian Business Committee (w/o enclosures)
Edred Secakuku, Vice Chairman, Ute Indian Business Committee
Reannin Tapoof, Executive Assistant, Ute Indian Business Committee
Bruce Pargeets, Acting Director, Energy, Minerals and Air, Ute Indian Tribe
Minnie Grant, Air Coordinator, Energy, Minerals and Air, Ute Indian Tribe

United States Environmental Protection Agency
Region 8 Air Program
Air Pollution Control Synthetic Minor Source Permit to Construct
Technical Support Document for
Proposed Permit #SMNSR-UO-000124-2012.001

XTO Energy, Inc.
Wild Horse Bench Site
Uintah and Ouray Indian Reservation
Uintah County, Utah

In accordance with the requirements of the Tribal Minor New Source Review (MNSR) Permit Program at 40 CFR Part 49, this Federal permit to construct is being issued under authority of the Clean Air Act (CAA). The EPA has prepared this technical support document describing the conditions of this permit and presents information that is germane to this permit action.

Table of Contents

I. Introduction

On August 24, 2012, we received an application from XTO Energy, Inc. (XTO), requesting a synthetic minor permit for the Wild Horse Bench Site in accordance with the requirements of MNSR Permit Program. On May 5, 2014 we received a revised application that replaced the original application.

This proposed permit action applies to an existing facility operating on the Uintah and Ouray Indian Reservation in Utah.

This permit would not authorize the construction of any new emission sources, or emission increases from existing units, nor would it otherwise authorize any other physical modifications to the facility or its operations.

This permit was requested to establish permit limits to allow the facility to continue operating as a synthetic minor hazardous air pollutant (HAP) source after the April 2014 expiration of Consent Decree (No. 2:09-CV-00331-SA) ((see 40 CFR 49.151(c)(1)(ii)(d) and 49.158(a)(c)(4)(ii) and (iii)). XTO requested volatile organic compound (VOC) and HAP emission limits on the glycol dehydration system.

Upon compliance with the permit, XTO will have legally and practically enforceable restrictions on emissions that can be used when determining the applicability of other CAA permitting requirements, such as under the Prevention of Significant Deterioration (PSD) Permit Program at 40 CFR Part 52 and the Title V Operating Permit Program at 40 CFR Part 71 (Part 71).

II. Facility Description

The Wild Horse Bench Site consists of equipment associated with producing, storing, and transporting produced natural gas and condensate. The facility is situated on an approximately 2 ½-acre site, at an elevation of about 5,000 feet above mean sea level, in Uintah County, Utah. The condensate/gas emulsion being produced from an associated well is transported up the wellbore in a closed system to a separator and then to a glycol dehydration unit that is designed to remove condensate and water from the produced natural gas. The condensate is routed to onsite aboveground storage tanks that are periodically emptied by tanker trucks. The producing reservoir inherently contains produced water and the natural gas is typically saturated. The glycol dehydration unit feeds lean glycol to the top of an absorber where it is contacted with the incoming wet natural gas stream entering from the bottom of the absorber. The glycol removes the water from the natural gas by physical absorption and is then carried out the bottom of the column. The now dry natural gas exits the top of the absorption column and is routed to a natural gas gathering pipeline.

The rich (wet) glycol stream is routed to a low-pressure flash separator where the hydrocarbon vapors are removed and any liquid hydrocarbons are skimmed off of the glycol. After leaving the flash vessel, the rich glycol is heated in a cross-exchanger and fed to the glycol regenerator. The glycol regenerator consists of a column, an overhead condenser, and a reboiler. The wet glycol flows down the reboiler while contacting hot gases rising up from the reboiler. The hydrocarbon vapors from the flash vessel and glycol reboiler still vent are being controlled by a thermal oxidizer. The glycol is thermally heated to remove enough water vapor to regain the high glycol purity. Finally, the glycol is pumped back to the top of the absorber column to continually repeat the process while routing the dry natural gas to the gathering pipeline for sale.

There is currently one natural gas-fired, 4-stroke lean-burn (4SLB) reciprocating internal combustion

engines (RICE) used to compress the processed dry natural gas into the sales pipeline. This compressor is necessary to overcome the pipeline pressure to ensure transportation of the natural gas in the gathering pipeline system until it is further processed. There are also two (2) natural gas-fired, 4-stroke rich-burn (4SRB) RICE that supply the site with electricity.

The emissions units identified in Table 1 are currently installed and/or operating at the facility. The information provided in this table is for informational purposes only and is not intended to be viewed as enforceable restrictions or open for public comment. The units and control requirements identified here either existed prior to any pre-construction permitting requirements or were approved/required through the mechanism identified. Table 2, Facility-Wide Emissions, provides an accounting of uncontrolled and controlled (proposed allowable) emissions in tons per year (tpy).

Table 1. Existing Emissions Units

Unit Description	Controls	Original Preconstruction Approval Date &/or Details on Control Requirements
One 4SLB, natural gas-fired RICE for gas compression with a maximum site rating of 860 hp.	None	No pre-construction approval required for the installation of the engine. Installed prior to the promulgation of the MNSR Permit Program.
Two 4SRB, natural gas-fired RICE for electric power generation, each with a maximum site rating of 380 hp.	Non-Selective Catalytic Reduction (NSCR) & Air-to-Fuel Ratio (AFR) Controller	No pre-construction approval required for the installation of the engines. Installed prior to the promulgation of the MNSR Permit Program. Emissions controlled through enforceable requirements in NSPS JJJJ.
Three 400 bbl* atmospheric condensate production storage tanks.	None	No pre-construction approval required for the installation of the storage tanks. Installed prior to the promulgation of the MNSR Permit Progam.
Four 0.25 MMBtu/hr* heaters.	None	No pre-construction approval required for the installation of the heaters. Installed prior to the promulgation of the MNSR Permit Program.
One 10 MMscfd* tri-ethylene glycol (TEG) dehydration unit with: One 0.5 MMBtu/hr TEG glycol Reboiler; One glycol/gas separation unit; and One 9 gallon per minute glycol pump.	1.0 MMBtu/hr Thermal Oxidizer	No pre-construction approval required for the installation of the dehydration unit. Installed prior to the promulgation of the MNSR Permit Program. Original control requirements established in a Consent Decree (No. 2:09-CV-00331-SA) that expired in April 2014. Synthetic minor permit application submitted in September 2012 allowed facility to continue operating as synthetic minor HAP source after expiration (see 40 CFR 49.151(c)(1)(ii)(d) and 49.158(a)(c)(4)(ii) and (iii)).
One (1) condensate and natural gas production well.	None	No pre-construction approval required for the installation of the well. Installed prior to the promulgation of the MNSR Permit Program.
One (1) condensate truck-loading station.	None	No pre-construction approval required for the installation of the truck loading rack. Installed prior to the promulgation of the MNSR Permit Program.

* bbl = barrel; MMBtu/hr = million British thermal units per hour; MMscfd = million standard cubic feet per day.

Table 2. Facility-wide Emissions

Pollutant	Uncontrolled Potential Emissions (tpy)	Controlled Potential (Proposed Allowable) Emissions (tpy)
PM	1.6	1.6
PM_{10}	1.6	1.6
$PM_{2.5}$	1.6	1.6
SO_2	0	0
NO_X	62.1	62.1
CO	85.6	85.6
VOC	185.8	47.6
Greenhouse Gases		
CO_2 (mass basis)	15893.2	15893.2
CH_4 (mass basis)	228.2	228.2
N_2O (mass basis)	0.6	0.6
HFCs (mass basis)	NA	NA
PFCs (mass basis)	NA	NA
SF_6 (mass basis)	NA	NA
GHG_{total} (mass basis)	16122.0	16122.0
CO_2e (Total)	**25351.5**	**25351.5**
Hazardous Air Pollutants (HAP)		
Acetaldehyde	0.85	0.85
Acrolein	0.55	0.55
Benzene	27.5	1.48
Ethyl-Benzene	0.7	0.4
Toluene	32.05	1.66
n-Hexane	4.05	0.2
Xylene	6.44	0.342
Formaldehyde	5.9	5.9
2,2,4-Trimethylpentane	0.22	0.011
Cyclohexane	10.56	0.53
Total BTEX*	**46.73**	**4.82**
Total HAP*	**80.9**	**13.6**

PM – Particulate Matter
PM_{10} – Particulate Matter less than 10 microns in size
$PM_{2.5}$ – Particulate Matter less than 2.5 microns in size
SO_2 – Sulfur Dioxide
NO_X – Nitrogen Oxides
CO – Carbon Monoxide
VOC – Volatile Organic Compounds
CO_2 – Carbon dioxide
CH_4 – Methane
N_2O – Nitrous oxide
HFCs – Hydrofluorocarbons
PFCs – Perfluorocarbons
SF_6 – Sulfur hexafluoride
CO_2e – Equivalent CO_2. A measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP)

HFCs, PFCs, and SF_6 emissions are not created during oil and natural gas production operations.

NA – Not Available

*BTEX = benzene, toluene, ethylbenzene, and xylenes

*Total HAP is inclusive of, but not limited to the individual HAPs listed above.

III. Proposed Synthetic Minor Permit Action

A. Existing Dehydration Unit and Controls

The natural gas industry commonly uses the glycol absorption process to remove naturally occurring water from raw natural gas. Most commonly, the glycol absorbent used is triethylene glycol (TEG). The TEG dehydration process produces VOC and HAP emissions from pressure reduction of rich glycol (immediately post absorption and prior to stripping and regeneration) and from the stripping of the rich glycol to regenerate lean glycol to be reused in the process. The HAP emissions consist primarily of BTEX.

The primary form of emission control is to capture and route the emissions through a closed-vent system to an enclosed combustor, flare, or other combustion device to destroy the hydrocarbon content of the vapors.

XTO uses a thermal oxidizer, a type of enclosed combustion device, designed to destroy 95.0% of the VOC and total HAP emissions. XTO has requested an enforceable requirement to use the thermal oxidizer along with associated VOC and total HAP emission limits for the TEG dehydrator. We are proposing the unit specific VOC emission limit requested in the permit application. Since the majority of HAP emissions from the TEG dehydrator are BTEX, we are proposing an emission limit on BTEX only, rather than the requested total HAP emission limit.

We are also proposing testing, monitoring, and recordkeeping requirements consistent with the National Emissions Standards for Hazardous Air Pollutants, also referred to as the Maximum Achievable Control Technology (MACT), for oil and natural gas production facilities at 40 CFR Part 63, Subpart HH (MACT HH), to demonstrate compliance with the VOC and BTEX emission limits and enhancing testing, monitoring, and recordkeeping requirements, as necessary, pursuant to 40 CFR 49.151(ii)(C), to ensure that the requested emission limits are legally and practically enforceable.

These proposed requirements will result in a total of 7.3 tpy of VOCs and 3.6 tpy of BTEX from the dehydration system. These potential controlled emissions are based on the dehydration system operating a maximum of 8,760 hours in a year, at a maximum capacity of 10 MMscfd, and maximum glycol pump rate of 9 gallons per minute (gpm).

IV. Air Quality Review

The MNSR regulations at 40 CFR 49.154(d) require that an Air Quality Impact Assessment (AQIA) modeling analysis be performed if there is reason to be concerned that new construction would cause or contribute to a National Ambient Air Quality Standards (NAAQS) or PSD increment violation. If an AQIA reveals that the proposed construction could cause or contribute to a NAAQS or PSD increment violation, such impacts must be addressed before a pre-construction permit can be issued.

The emissions at this existing facility would not increase due to this permit action and the emissions will continue to be well controlled at all times. This proposed permit action would not authorize the construction of any new emission sources, or emission increases from existing units, nor would it otherwise authorize any other physical modifications to the facility or its operation. In short, this action will have no adverse air quality impacts; therefore, we have determined that an AQIA modeling analysis is not required for the proposed permit.

V. Tribal Consultations and Communications

We offer Tribal government leaders an opportunity to consult on each proposed MNSR permit action. The Tribal government leaders are asked to respond to the EPA's offer to consult within 30 days. The Chairman of the Ute Indian Tribe (Tribe) was offered an opportunity to consult on this permit action via letter dated September 25, 2012. To date, we have not received a response to our offer to consult on this permit action.

All minor source applications (synthetic minor, modification to an existing facility, new true minor or general permit) are submitted to both the EPA and the Tribe per the application instructions (see http://www2.epa.gov/region8/tribal-minor-new-source-review-permitting). The Tribe has 10 business days from the receipt of the application to respond to us with questions and comments on the application. In the event an AQIA is triggered, a copy of that document is emailed to the Tribe within 5 business days from the date we receive it.

Additionally, the Tribe is notified of the public comment period for the proposed MNSR permit and provided copies of the notice of public comment opportunity to post in various locations of their choosing on the Reservation. The Tribe is also notified of the issuance of the final MNSR permit.

VI. Environmental Justice

On February 11, 1994, the President issued Executive Order 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The Executive Order calls on each federal agency to make Environmental Justice a part of its mission by "identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations."

The EPA defines "Environmental Justice" as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and polices. The EPA's goal with respect to Environmental Justice in permitting is to enable overburdened communities to have full and meaningful access to the permitting process and to develop permits that address environmental justice issues to the greatest extent practicable under existing environmental laws. *Overburdened* is used to describe the minority, low-income, tribal and indigenous populations or communities in the United States that potentially experience disproportionate environmental harms and risks as a result of greater vulnerability to environmental hazards.

This discussion describes our efforts to identify Environmental Justice communities and assess potential effects in connection with issuing this permit in Uintah County, Utah, within the exterior boundaries of the Uintah and Ouray Indian Reservation.

A. Environmental Impacts to Potentially Overburdened Communities

This permit action would not authorize the construction of any new air emission sources, or air emission increases from existing units, nor would it otherwise authorize any other physical modifications to the associated facility or its operations. The air emissions at the existing facility will not increase due to the permit action and the emissions will continue to be well controlled at all times. This permit action will have no adverse air quality impacts.

Furthermore, the permit contains a provision stating, "*The permitted source shall not cause or contribute to a National Ambient Air Quality Standard violation or a PSD increment violation.*" Noncompliance with this permit provision is a violation of the permit and is grounds for enforcement action and for permit termination or revocation. As a result, we conclude that issuance of the aforementioned permit will not have disproportionately high or adverse human health effects on communities in the vicinity of the Uintah and Ouray Indian Reservation.

B. Enhanced Public Participation

Given the presence of potentially overburdened communities in the vicinity of the facility, we are providing an enhanced public participation process for this permit.

1. Interested parties can subscribe to an EPA listserve that notifies them of public comment opportunities on the Uintah and Ouray Indian Reservation for proposed air pollution

control permits via email at http://www2.epa.gov/region8/air-permit-public-comment-opportunities.

2. All minor source applications (synthetic minor, modification to an existing facility, new true minor or general permit) are submitted to both the EPA and the Tribe per the application instructions (see http://www2.epa.gov/region8/tribal-minor-new-source-review-permitting).

3. The Tribe has 10 business days to respond to us with questions and comments on the application.

4. In the event an AQIA is triggered, we email a copy of that document to the Tribe within 5 business days from the date we receive it.

5. We notify the Tribe of the public comment period for the proposed permit and provide copies of the notice of public comment opportunity to post in various locations of their choosing on the Reservation. We also notify the Tribe of the issuance of the final permit.

6. We offer the Tribal government leaders an opportunity to consult on each proposed permit action. The Tribal government leaders are asked to respond to the EPA's offer to consult within 30 days.

VII. Authority

Requirements under 40 CFR 49.151 to obtain a MNSR permit apply to new and modified minor stationary sources, and minor modifications at existing major stationary sources ("major" as defined in 40 CFR 52.21). In addition, the MNSR Permit Program provides a mechanism for a minor source or an otherwise major stationary source to voluntarily accept restrictions on its potential to emit to recognize the effect of emissions controls or to become a synthetic minor source. The EPA is charged with direct implementation of these provisions where there is no approved Tribal implementation plan for implementation of the MNSR regulations. Pursuant to Section 301(d)(4) of the CAA (42 U.S.C. Section 7601(d)), the EPA is authorized to implement the MNSR regulations at 40 CFR 49.151 in Indian country. The XTO Wild Horse Bench Facility is located within the exterior boundaries of the Uintah and Ouray Indian Reservation in the eastern part of the State of Utah. The exact location is Latitude 39.88899N, Longitude -109.734554W, in Uintah County, Utah.

VIII. Public Notice

A. Public Comment Period

In accordance with 40 CFR 49.157, we must provide public notice and a 30-day public comment period to ensure that the affected community and the general public have reasonable access to the application and proposed permit information. The application, the proposed permit, this technical support document, and all supporting materials for the proposed permit are available at:

Ute Indian Tribe
Environmental Programs Office
988 South 7500 East
Fort Duchesne, Utah 84026

and

U.S. EPA
Region 8 Air Program Office
1595 Wynkoop Street (8P-AR)
Denver, Colorado 80202-1129

All documents are available for review at our office Monday through Friday from 8:00 a.m. to 4:00 p.m. (excluding Federal holidays). Additionally, the proposed permit and technical support document can be reviewed on our website at: http://www2.epa.gov/region8/air-permit-public-comment-opportunities.

Any person may submit written comments on the proposed permit and may request a public hearing during the public comment period. These comments must raise any reasonably ascertainable issues with supporting arguments by the close of the public comment period (including any public hearing). Comment may be sent to the EPA address above, or sent via an email to r8airpermitting@epa.gov, with the topic "Comment on MNSR Permit for the XTO Wild Horse Bench Site".

B. Public Hearing

A request for a public hearing must be in writing and must state the nature of the issues proposed to be raised at the hearing. We will hold a hearing whenever there is, on the basis of requests, a significant degree of public interest in a proposed permit. We may also hold a public hearing at its discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision.

C. Final Permit Action

In accordance with 40 CFR 49.159, a final permit becomes effective 30 days after permit issuance, unless: (1) a later effective date is specified in the permit; (2) appeal of the final permit is made as detailed in the next section; or (3) we may make the permit effective immediately upon issuance if no comments resulted in a change or denial of the proposed permit. We will send notice of the final permit action to any individual who commented on the proposed permit during the public comment period. In addition, the source will be added to a list of final permit actions which is posted on our website at: http://www2.epa.gov/region8/nsr-and-psd-permits-issued-region-8. Anyone may request a copy of the final permit at any time by contacting the Tribal Air Permit Program at (800) 227–8917 or sending an email to r8airpermitting@epa.gov.

D. Appeals to the Environmental Appeals Board

In accordance with 40 CFR 49.159, within 30 days after a final permit decision has been issued, any person who filed comments on the proposed permit or participated in the public hearing may petition the Environmental Appeals Board (EAB) to review any condition of the permit decision. The 30-day period within which a person may request review under this section begins when we have fulfilled the notice requirements for the final permit decision. Motions to reconsider a final order by the EAB must be filed within 10 days after service of the final order. A petition to the EAB is under Section 307(b) of the CAA, a prerequisite to seeking judicial review of the final

agency action. For purposes of judicial review, final agency action occurs when we issue or deny a final permit and agency review procedures are exhausted.

United States Environmental Protection Agency
Region 8, Air Program
1595 Wynkoop Street
Denver, CO 80202

Air Pollution Control
Synthetic Minor Source Permit to Construct

40 CFR 49.151

 # SMNSR-UO-000124-2012.001

Permit to Construct to establish legally and practically enforceable limitations and requirements on sources at an existing facility.

Permittee:

XTO Energy, Inc.

Permitted Facility:

Wild Horse Bench Site
Uintah and Ouray Indian Reservation
Uintah County, Utah

Summary

On August 24, 2012, we received an application from XTO Energy, Inc. (XTO), requesting a synthetic minor permit for the Wild Horse Bench Site in accordance with the requirements of the Tribal Minor New Source Review (MNSR) Permit Program. On May 5, 2014 we received a revised application that replaced the original application.

This proposed permit action applies to an existing facility operating on the Uintah and Ouray Indian Reservation in Utah.

This permit would not authorize the construction of any new emission sources, or emission increases from existing units, nor would it otherwise authorize any other physical modifications to the facility or its operations.

This permit was requested to establish permit limits to allow the facility to continue operating as a synthetic minor hazardous air pollutant (HAP) source after the April 2014 expiration of a Consent Decree (No. 2:09-CV-00331-SA) ((see 40 CFR 49.151(c)(1)(ii)(d) and 49.158(a)(c)(4)(ii) and (iii)). XTO requested volatile organic compound (VOC) and HAP emission limits on the glycol dehydration system.

Upon compliance with the permit, XTO will have legally and practically enforceable restrictions on emissions that can be used when determining the applicability of other Clean Air Act (CAA) permitting requirements, such as under the Prevention of Significant Deterioration (PSD) Permit Program at 40 CFR Part 52 and the Title V Operating Permit Program at 40 CFR Part 71 (Part 71).

The EPA has determined that issuance of this MNSR permit will not contribute to National Ambient Air Quality Standards (NAAQS) violations, or have potentially adverse effects on ambient air quality.

Table of Contents

I. Conditional Permit to Construct

A. General Information

Facility:	XTO Energy, Inc. – Wild Horse Bench
Permit number:	SMNSR-UO-000124-2012.001
SIC Code and SIC Description:	1311- Crude Petroleum and Natural Gas

Site Location:
Wild Horse Bench
NE ¼, SW ¼ Sec 18 T10S R20E
Uintah and Ouray Indian Reservation
Uintah County, Utah
Latitude 39.88899N, Longitude -109.734224W

Corporate Office Location
XTO Energy, Inc.
810 Houston Street
Fort Worth, Texas 76102

The equipment listed in this permit shall be operated by XTO at the location described above:

B. Applicability

1. This federal Permit to Construct is being issued under authority of the MNSR Permit Program.

2. The requirements in this permit have been created, at the Permittee's request to establish legally and practically enforceable restrictions for limiting VOC and total benzene, toluene, ethylbenzene, and xylene (BTEX) triethylene glycol (TEG) dehydration system emissions.

3. Any conditions established for this facility or any specific units at this facility pursuant to any Conditional Permit to Construct issued under the authority of the PSD Permit Program or the MNSR Permit Program shall continue to apply.

4. By issuing this permit, EPA does not assume any risk of loss which may occur as a result of the operation of the permitted facility by the Permittee, Owner, and/or Operator, if the conditions of this permit are not met by the Permittee, Owner, and/or Operator.

C. Dehydration System Requirements

1. Construction and Operational Limits

   (a) The Permittee shall install, operate and maintain emission controls as specified in this permit on the TEG natural gas dehydration system meeting the following specifications:

      (i) Limited to a maximum throughput of 10 million standard cubic feet per day (MMscfd) of natural gas;
      (ii) Equipped with no more than one (1) natural gas-fired TEG reboiler with a maximum rated heat input of 0.5 million British thermal units per hour (MMBtu/hr); and
      (iii) Equipped with no more than one (1) glycol/gas separation unit.

   (b) Only the dehydration unit that is operated and controlled as specified in this permit is approved for installation under this permit.

2. Emission Limits:

(a) Emissions from the TEG dehydration system shall not exceed the following:

(i) VOC: 7.3 tons in any consecutive 12-month period; and
(ii) Total BTEX: 3.6 tons in any consecutive 12-month period.

(b) Emission limits shall apply at all times, unless otherwise specified in this permit.

3. Emissions Calculation Requirements

(a) VOC and total BTEX emissions must be calculated, in tons, and recorded at the end of each month, beginning with the first calendar month that permitted operations commence.

(b) Prior to 12 full months of VOC and total BTEX emissions calculations, the Permittee must, within seven (7) calendars days of the end of each month, add the emissions for that month to the calculated emissions for all previous months since production commenced and record the total. Thereafter, the Permittee must, within seven (7) calendars days of the end of each month, add the emissions for that month to the calculated emissions for the preceding 11 months and record a new 12-month total.

(c) VOC and total BTEX emissions shall be calculated, in tons, using GRI-GLYCalc™ Version 4.0 or higher. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1).

4. Control and Operational Requirements

(a) The Permittee shall route all the TEG dehydration system process vents through a closed-vent system to a thermal oxidizer.

(b) The Permittee shall design, install, continuously operate, and maintain a closed-vent system such that it is compliant with the closed-vent system requirements at 40 CFR 63.771(c).

(c) The Permittee shall design, install, continuously operate, and maintain a thermal oxidizer such that the uncontrolled emissions of VOC and total BTEX from the TEG dehydration system process vents are reduced by at least 95.0% by weight.

(d) The Permittee shall follow the manufacturer's recommended maintenance schedule and operational procedures to ensure optimum performance of the TEG dehydration system, closed-vent system, and thermal oxidizer.

5. Testing Requirements

(a) The Permittee shall demonstrate that the thermal oxidizer achieves the 95.0% VOC and

total BTEX emissions destruction efficiency requirement by performing an initial performance test of the thermal oxidizer within 180 days after the effective date of this permit. Subsequent performance tests of the thermal oxidizer shall be conducted once every consecutive 36 months thereafter.

(b) Subsequent performance tests are not required for thermal oxidizers that are model tested under and meet the criteria of 40 CFR 63.772(h).

(c) If the thermal oxidizer is repaired or replaced, the Permittee shall either conduct a performance test on the repaired or replaced unit within 180 days of commencing operation of the repaired or replaced unit, or the unit shall be model tested by the manufacturer under and meeting the criteria of 40 CFR 63.772(h) to demonstrate compliance with the VOC and total BTEX emission reduction requirements in this permit.

(d) The Permittee shall conduct each performance test using the following test methods and procedures:

(i) Method 1 or 1A, as appropriate for the selection of the sampling sites, as specified in 40 CFR 63.772(e)(3)(i);
(ii) Method 2, 2A, 2C, or 2D, of 40 CFR part 60, Appendix A to determine gas volumetric flowrate, as specified in 40 CFR 63.772(e)(3)(ii); and
(iii) Method 18 at 40 CFR Part 60, Appendix A, Method 25A at 40 CFR Part 60, Appendix A, ASTM D6420-99 (2004), or any other method or data that have been validated according to the applicable procedures in Method 301 at 40 CFR Part 63, Appendix A, to determine compliance with the 95.0% VOC and total BTEX emissions destruction efficiency requirement.

6. Monitoring Requirements

(a) The Permittee shall inspect the thermal oxidizer on a monthly basis to ensure proper operation per the manufacturer's specifications.

(b) The Permittee shall inspect the closed-vent system on a monthly basis using the procedures specified in 40 CFR 63.773(c).

(c) The Permittee shall install operate, and maintain a meter that continuously measures the natural gas flowrate to the TEG dehydration system with an accuracy of plus or minus 2% or better. The meter shall be inspected on a monthly basis to ensure proper operation per the manufacturer's specifications.

(d) The Permittee shall convert monthly natural gas flowrate to a daily average by dividing the monthly flowrate by the number of days in the month that the TEG dehydration system processed natural gas. The Permittee shall document the actual monthly average natural gas flowrate.

(e) The Permittee shall determine the monthly and rolling 12-month VOC and total BTEX emissions using the model GRI-GLYCalc™ , Version 4.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual.

7. Recordkeeping Requirements

The Permittee shall document compliance with the VOC and total BTEX emission limits and emission reduction requirements in this permit by keeping the following records:

(a) All manufacturer and/or vendor specifications for the TEG dehydration system, closed-vent system, thermal oxidizer, and any monitoring equipment;
(b) The results of all required performance tests of the thermal oxidizer;
(c) All monthly inspections of the thermal oxidizer, closed-vent system, and natural gas flowrate meter;
(d) All calculations of the actual monthly average natural gas flowrate;
(e) Actual monthly and consecutive 12-month VOC, and total BTEX emissions for the TEG dehydration system; and
(f) Actual monthly and consecutive 12-month VOC and total BTEX emissions calculations for the TEG dehydration unit.

D. Records Retention Requirements

1. The Permittee shall retain all records required by this permit for a period of at least five (5) years from the date the record was created.

2. Records shall be kept in the vicinity of the facility, such as at the facility, the location that has day-to-day operational control over the facility, or the location that has day-to-day responsibility for compliance of the facility.

E. Reporting Requirements

1. Annual Emission Reports

(a) The Permittee shall submit a written annual report of the actual annual emissions from all emission units at the facility with emission limits in this permit each year no later than April 1st. The annual report shall cover the period for the previous calendar year. All reports shall be certified to truth and accuracy by the person primarily responsible for CAA compliance for the Permittee.

(b) The report shall include VOC and total BTEX emissions.

(c) The report shall be submitted to:

U.S. Environmental Protection Agency, Region 8
Office of Partnerships and Regulatory Assistance
Tribal Air Permitting Program, 8P-AR
1595 Wynkoop Street
Denver, Colorado 80202

The report may be submitted via electronic mail to R8AirPermitting@epa.gov.

2. All other documents required to be submitted under this permit, with the exception of the Annual

Emission Reports, shall be submitted to:

U.S. Environmental Protection Agency, Region 8
Office of Enforcement, Compliance & Environmental Justice
Air Toxics and Technical Enforcement Program, 8ENF-AT
1595 Wynkoop Street
Denver, Colorado 80202

Documents may be submitted via electronic mail to R8AirReportEnforcement@epa.gov.

3. The Permittee shall promptly submit to the EPA a written report of any deviations of permit requirements specified in this permit and a description of any corrective actions or preventative measures taken. A "prompt" deviation report is one that is post marked or submitted via electronic mail to R8AirreportEnforcement@epa.gov as follows:

   (a) Within 30 days from the discovery of a deviation of the emission limits or operational limist that is left un-corrected for more than 5 days after discovering the deviation; and
   (b) By April 1st for the discovery of a deviation of recordkeeping or other permit conditions during the preceding calendar year that do not affect the Permittee's ability to meet the emission limits.

4. The Permittee shall submit a written report for any required performance tests to the EPA within 60 days after completing the tests.

5. The Permittee shall submit any record or report required by this permit upon EPA request.

II. General Provisions

A. Conditional Approval:

Pursuant to the authority of 40 CFR 49.151, the EPA hereby conditionally grants this permit. This authorization is expressly conditioned as follows:

1. *Document Retention and Availability:* This permit and any required attachments shall be retained and made available for inspection upon request at the location set forth herein.

2. *Permit Application:* The Permittee shall abide by all representations, statements of intent and agreements contained in the application submitted by the Permittee. The EPA shall be notified 10 days in advance of any significant deviation from this permit application as well as any plans, specifications or supporting data furnished.

3. *Permit Deviations:* The issuance of this permit may be suspended or revoked if the EPA determines that a significant deviation from the permit application, specifications, and supporting data furnished has been or is to be made. If the proposed source is constructed, operated, or modified not in accordance with the terms of this permit, the Permittee will be subject to appropriate enforcement action.

4. *Compliance with Permit:* The Permittee shall comply with all conditions of this permit, including emission limitations that apply to the affected emissions units at the permitted

facility/source. Noncompliance with any permit term or condition is a violation of this permit and may constitute a violation of the CAA and is grounds for enforcement action and for a permit termination or revocation.

5. *Fugitive Emissions:* The Permittee shall take all reasonable precautions to prevent and/or minimize fugitive emissions during the construction period.

6. *NAAQS and PSD Increment:* The permitted source shall not cause or contribute to a NAAQS violation or a PSD increment violation.

7. *Compliance with Federal and Tribal Rules, Regulations, and Orders:* Issuance of this permit does not relieve the Permittee of the responsibility to comply fully with all other applicable federal and tribal rules, regulations, and orders now or hereafter in effect.

8. *Enforcement:* It is not a defense, for the Permittee, in an enforcement action, to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

9. *Modifications to Existing Permitted Emissions Units/Limits:* For proposed modifications, as defined at 40 CFR 49.152(d), that would increase an emissions unit allowable emissions of pollutants above its existing permitted annual allowable emissions limit, the Permittee shall first obtain a permit modification pursuant to the MNSR regulations approving the increase. For a proposed modification that is not otherwise subject to review under the PSD or MNSR regulations, such proposed increase in the annual allowable emissions limit shall be approved through an administrative permit revision as provided at 40 CFR 49.159(f).

10. *Relaxation of Legally and Practically Enforceable Limits:* At such time that a new or modified source within this permitted facility/source or modification of this permitted facility/source becomes a major stationary source or major modification solely by virtue of a relaxation in any legally and practically enforceable limitation which was established after August 7, 1980, on the capacity of the permitted facility/source to otherwise emit a pollutant, such as a restriction on hours of operation, then the requirements of the PSD regulations shall apply to the source or modification as though construction had not yet commenced on the source or modification.

11. *Revise, Reopen, Revoke and Reissue, or Terminate for Cause:* This permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee, for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. The EPA may reopen this permit for a cause on its own initiative, e.g., if this permit contains a material mistake or the Permittee fails to assure compliance with the applicable requirements.

12. *Severability Clause:* The provisions of this permit are severable, and in the event of any challenge to any portion of this permit, or if any portion is held invalid, the remaining permit conditions shall remain valid and in force.

13. *Property Rights:* This permit does not convey any property rights of any sort or any exclusive privilege.

14. *Information Requests:* The Permittee shall furnish to the EPA, within a reasonable time, any

information that the EPA may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating this permit or to determine compliance with this permit. For any such information claimed to be confidential, you shall also submit a claim of confidentiality in accordance with 40 CFR Part 2, Subpart B.

15. *Inspection and Entry:* The EPA or its authorized representatives may inspect this permitted facility/source during normal business hours for the purpose of ascertaining compliance with all conditions of this permit. Upon presentation of proper credentials, the Permittee shall allow the EPA or its authorized representative to:

    (a) Enter upon the premises where this permitted facility/source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of this permit;
    (b) Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of this permit;
    (c) Inspect, during normal business hours or while this permitted facility/source is in operation, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
    (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements; and
    (e) Record any inspection by use of written, electronic, magnetic and photographic media.

16. *Permit Effective Date:* This permit is effective immediately upon issuance unless comments resulted in a change in the proposed permit, in which case the permit is effective 30 days after issuance. The Permittee may notify the EPA, in writing, that this permit or a term or condition of it is rejected. Such notice should be made within 30 days of receipt of this permit and should include the reason or reasons for rejection.

17. *Permit Transfers:* Permit transfers shall be made in accordance with 40 CFR 49.159(f). The Air Program Director shall be notified in writing at the address shown below if the company is sold or changes its name.

    U.S. Environmental Protection Agency, Region 8
    Office of Partnerships and Regulatory Assistance
    Tribal Air Permitting Program, 8P-AR
    1595 Wynkoop Street
    Denver, Colorado 80202

18. *Invalidation of Permit:* This permit becomes invalid if construction is not commenced within 18 months after the effective date of this permit, construction is discontinued for 18 months or more, or construction is not completed within a reasonable time. The EPA may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between the construction of the approved phases of a phased construction project. The Permittee shall commence construction of each such phase within 18 months of the projected and approved commencement date.

19. *Notification of Start-Up:* The Permittee shall submit a notification of the anticipated date of initial start-up of this permitted source to the EPA within 60 days of such date, unless this permitted source is an existing source.

B. Authorization:

Authorized by the United States Environmental Protection Agency, Region 8

Darcy O'Connor — Date
Acting Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

May 5, 2014

Synthetic Minor Source Application
Wild Horse Bench Site
Uintah Tribal Airshed
Uintah County, UT

Via USPS Certified Mail: 7013 2630 0001 2576 9266

Ms. Claudia Smith
US EPA, Region 8
1595 Wynkoop Avenue, 8P-AR
Denver, CO 80202-1129

Dear Ms. Smith:

XTO Energy, Inc. (XTO) respectfully submits a revised Synthetic Minor Source Application for the existing Wild Horse Bench site located in Uintah County, Utah. XTO has determined that the site is synthetic minor for Title V. The site and its associated air emissions qualify for a Synthetic Minor Limit under 40 Code of Federal Register (CFR) Part 49 Review of New Sources and Modifications in Indian Country.

Should you have any questions, please feel free to contact me at 817-885-1249 or via e-mail at Rykki_Tepe@xtoenergy.com.

Sincerely,

Rykki Tepe

Rykki Tepe
Environmental Engineer
XTO Energy Inc.

Cc: Via USPS Certified Mail: 7013 2630 0001 2576 9273
Mr. Manuel Myore
Director of Energy, Minerals, and Air
Ute Indian Tribe
910 South 7500 East

Fort Duchesne, UT 84026

Bc:

File Room - Utah\Roosevelt\2012\RBU 11-18F Site\Tribal Synthetic Minor Permit

File Name: W:\EHS\Environmental\Air\Utah\Uintah County\Permits and Applications\Applications\Syn Minor Apps\Wild Horse Bench\RT20131016 WHB Syn Minor Application\Forms\RT20140505 WHB Syn Minor App Cover Letter.doc

APPLICATION FOR AN NSR/ TITLE V SYNTHETIC MINOR AIR QUALITY PERMIT

WILD HORSE BENCH COMPRESSOR STATION

Prepared by:

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ATTACHMENTS

1.0 INTRODUCTION

1.1. Summary

XTO Energy, Inc. (XTO) is submitting a revised application for a Part 71 Title V (Title V) synthetic minor permit to the Environmental Protection Agency (EPA) in accordance with the requirements of Tribal NSR Rule that was implemented on August 30, 2011. The initial application was submitted on August 24, 2014. The site was previously owned and operated under a Consent Decree by Dominion E&P. On June 31, 2007, XTO acquired the sites in the Consent Decree from Dominion E&P. Under the existing consent decree, XTO operated the Wild Horse Bench (WHB) Compressor Station as a synthetic minor source. The Consent Decree expired on April 17, 2014. The NRS regulations provide a permit application shield under §49.158(c) until permits are issued.

Included in this revised synthetic minor permit application are requested federally enforceable permit requests that limit the emissions from the facility. These limit conditions will allow XTO to take credit for the emissions reductions and associated required controls that will allow the site to operate below the Title V major source thresholds for volatile organic carbon (VOC) and hazardous air pollutant (HAP) emissions. These limits can be found in Section 4.0 of the application.

1.2. Site Location

The Wild Horse Bench site is located in the northeast ¼ of the southwest ¼ Section 18 Township 10 South, Range 20 East, Uintah County, Utah.

1.3. Site Description

At the WHB Compressor Station consists of equipment associated with producing, storing, and transporting produced gas and condensate. The facility is situated on an approximately two and a half acre site, with an elevation of approximately 5,000 feet (mean sea level), in Uintah County, Utah.

2.0 NARRATIVE DESCRIPTION

This section of the application provides a detailed description of the operations at the WHB Compressor Station. The entire facility consists of the following primary production equipment and capabilities.

- 3- Condensate Production Tanks
- 1- Dehydrator Reboiler (0.500 MMBtu/hr)
- 2- Natural Gas Fired Genset Engines
- 1- Natural Gas Fired Compressor Engines (860 HP)
- 1- Natural Gas Fired Compressor Engines (1340 HP)
- 4- Heaters
- 1- Thermal Oxizider Burner
- 1- Truckloading

The WHB Compressor Station is a natural gas compressor station that dehydrates and compresses natural gas prior to custody transfer into a pipeline system. Natural gas produced from area wells is sent to the Wild Horse Bench Compressor Station through natural gas gathering lines. The low pressure natural gas stream enters a low pressure inlet separator in order to reduce the water and condensable liquids content in the gas stream prior to entry into the compressors and the dehydration system. The liquids produced from the on-site separators are sent to the condensate storage tanks for storage prior to being trucked offsite. The natural gas is sent to the natural gas fired compressor engines to compressor the natural gas to a higher pressure, and further onto the tri-ethylene glycol (TEG) natural gas dehydrator. The TEG natural gas dehydrator, which is utilized for water removal, consists of a 10 MMSCFD natural gas TEG dehydrator with one (1) 0.50 MMBTU/HR reboiler, with emissions controlled by a thermal oxidizer. The associated dehydration flash tank emissions are routed to the inlet separator therefore is a closed loop system which produces no emissions. The WHB Compressor Station has electrical power supplied by two (2) natural gas fired generator engines. Other emission units include auxiliary heaters, truck loading of condensate, pigging emissions, and equipment blow downs.

3.0 POTENTIAL TO EMIT ESTIMATE

In order to estimate the potential to emit (PTE), conservative estimates of the condensate production as well as wet gas production rates were used. These were derived from review past production records from the site and maximum facility design.

Potential emissions from this facility originate primarily from the heater emissions, the production storage tank uncontrolled emissions, truck loading emissions, natural gas fired engine emissions, dehydrator emissions, and fugitive emissions (e.g., truck loading, equipment leaks and road dust). The maximum design capacity of the engines and natural gas-fired external combustion units, in conjunction with maximum annual anticipated condensate and gas production rates of this facility, were used in determining the facility's potential to emit (PTE). The production rates were estimated by using historical maximum production data from this facility.

The two (2) natural gas fired Cummins generator engines were manufactured after July 1, 2008 therefore utilize the NSPS JJJJ emission limitations of 2.0 g/bhp-hr NO_X, 4.0 g/bhp-hr CO, and 1.0 g/bhp-hr VOC to limit the PTE of the genset engines.

The potential emissions are stated in the Application for New Construction (Form NEW), Table E(i) – Proposed New Facility. The emissions from the facility fall into the following categories (i.e., emitting units).

1. Production Storage Tanks (Condensate);
2. Glycol Dehydrator (Produced Gas);
3. Natural Gas Fired Reciprocating Internal Combustion Engines (Generators and Compressor Engines)
4. Natural Gas External Combustion Units (Heaters, Dehydrator Reboiler, and Thermal Oxidizer Burner);
5. Truck Loading;
6. Fugitive Emissions;
7. Equipment Blowdown Emissions.

3.1 Production Storage Tank

To estimate the uncontrolled PTE of the condensate production tank's vapors (working, breathing, standing, and flashing), XTO used a representative pressurized oil analysis from a similar compressor station in Uintah County, Utah. The analysis was used in the E&P Tanks program to estimate the emissions.

The production storage tanks are not subject to the requirements 40 CFR 60 Subpart OOOO because the tanks have been in existence since the facility began operation in for decades. If the tanks or the facility are modified in the future, XTO will review the regulatory applicability of the site and comply with the necessary requirements.

3.2 TEG Natural Gas Dehydrator

The gas treated at this facility is compressed and processed at the existing glycol dehydrator and sent to the gas sales pipeline. The glycol regenerator waste gas stream is controlled by a thermal oxidizer, and the associated flash tank emissions are recycled to the inlet separator. The uncontrolled emissions associated with the processing of the gas have been calculated using the EPA recommended GRI-GLYCalc VERSION 4.0 program. A site specific wet gas analysis was used in the program.

The glycol dehydrator is subject to 40 CFR 63 Subpart HH (MACT HH). The uncontrolled emissions from the glycol are major source for VOC and HAP emissions. Federal enforceability established by this synthetic minor permit application is intended to reduce the PTE from the dehydrator VOC and HAP emissions.

3.3 Reciprocating Internal Combustion or Compression Ignition Engines

Currently, at WHB Compressor Station there is one (1) natural gas fired RICE compressor engine rated at 860 horsepower. The PTE from this engine is estimated by using manufacture's emission data and AP-42 emission factors. Additionally, there are two (2) 380 hp natural gas fired generators for supplying the site with electricity. The two (2) generators were manufactured after July 1, 2008, therefore are subject to the NSPS JJJJ emission limits. The NSPS JJJJ emission limits provide a mechanism to lower the PTE of the engines; therefore the emissions are estimated using NSPS JJJJ emission factors and AP-42 emission factors.

Additionally, XTO has included one (1) natural gas fired RICE compressor engine rated at 1340 hp. This engine has not been constructed, but XTO would like to incorporate the emissions into the application for future potential projects. The PTE from this engine is estimated by using manufacture's emission data and AP-42 emission factors.

3.4 Natural Gas External Combustion Unit (Heaters)

The natural gas external combustion units at the facility are the heaters for the condensate tanks. All three heaters are rated to a maximum capacity of 250,000 Btu/hr each. The separator heater is rated to a maximum capacity of 250,000 Btu/hr. The thermal oxidizer burner is rated to 2,000,000 Btu/hr and the dehydrator Reboiler heater to 500,000, respectfully. The emissions are based on AP-42 factors and assume the heater is running 8,760 hours per year.

3.5 Truck Loading Emissions

The truck loading emissions were estimated by using data from AP-42 Section 7, Table 7.1-2.

3.6 Fugitive Emissions: Equipment Leaks

Fugitive emissions from equipment leaks are not required to be estimated for purposes of potential to emit within the NSR permitting program; however, they are used to determine compliance with emission specific facility-wide emission limits. The fugitive leak emissions primarily consist of leaks from connectors, open-ended lines, valves, pumps, etc. A conservative component count was applied to the emission factors referenced in EPA Protocol for Equipment Leak Emission Estimates, Table 2-4: Oil and Gas Production Operations Average Emission Factors. Although the emission estimates are very small compared to the major emitting units at the facility, an estimate will be included to demonstrate compliance with the requested facility-wide emission limits.

4.0 EMISSIONS AND OPERATIONAL LIMITS REQUESTS

XTO is requesting emissions and operational limits at the WHB Compressor Station in order to obtain a synthetic minor status with regard to the NSR permitting programs. The federally enforceable permit conditions will allow XTO to operate the facility while emitting less than the Title V major source thresholds of 100 tons per year of a regulated criteria pollutant, 10 tons per year of an individual HAP, and 25 tons per year of all emitted HAPs.

4.1 Condensate Storage Tank Emissions

XTO is not requesting any limits on emissions from the condensate storage tanks due the very minimal emission rates.

4.2 TEG Natural Gas Dehydrator

Using GRI-GLYCalc with a gas throughput rate of 10 MMSCFD and a maximum glycol recirculation rate of 9.6 gallons per minute to estimate the emissions, XTO is requesting a limiting to reduce the VOC and associated HAP emissions by 95%.

4.3 Reciprocating Internal Combustion Engines

XTO is not requesting any limits on emissions from the 4-stroke lean burn natural gas fired compressor engines. These engines will operate as area source remote designated engines in accordance with NESHAP ZZZZ required practices.

XTO is not requesting any limits on the two (2) 380 hp natural gas fired generators engines. These engines are equipped with NSCR catalyst controls as required by NSPS JJJJ. There is an existing mechanism for federal enforceability through NSPS JJJJ.

Additionally, XTO is requesting 100 hours of uncontrolled emissions per engine for the two (2) natural gas fired generators in order to allow for catalyst break-in periods should replacement engines be necessary.

5.0 ALLOWABLE EMISSIONS

The allowable emissions are the new estimated controlled potential to emit based on the federally enforceable controls and limits requested in Section 4. The allowable emissions are also presented in the Application for New Construction (Form NEW), Table E(i) – Proposed New Facility.

5.1 Condensate Storage Tank Emissions

No limits have been requested for the condensate storage tank emissions at the facility; therefore, the allowable / proposed emissions estimate is equal to the potential to emit.

5.2 TEG Natural Gas Dehydrator

XTO is requesting to limit the TEG natural gas dehydrator regenerator's VOC and HAP emissions by 95%.

5.3 Reciprocating Internal Combustion Engines

No limits have been requested for the 4-stroke lean burn natural gas fired compressor engines at the WHB Compressor Station; therefore, the allowable / proposed emissions estimate is equal to the potential to emit.

No limits have been requested for the 4-stroke rich burn natural gas fired generator engines at the WHB Compressor Station; therefore, the allowable / proposed emissions estimate is equal to the potential to emit. The allowable emissions estimate for the natural gas fired genset engines are calculated using NSPS JJJJ emissions factors for engines greater than 100 HP and less than 500 HP, and manufactured after July 1, 2008, and before January 1, 2011.

5.4 Natural Gas External Combustion Unit Emissions

No limits have been requested for the natural gas external combustion units at the facility (tank heaters, separator heaters, thermal oxidizer burner, and dehydrator reboiler); therefore, the emissions estimate is equal to the potential to emit.

5.5 Truck Loading Emissions

No limits have been requested for the truck loading of condensate at the facility; therefore, the emissions estimate is equal to the potential to emit.

5.6 Fugitive Emissions: Equipment Leaks

Fugitive emissions from equipment leaks are not required to be estimated for purposes of potential to emit within the NSR permitting program. The fugitive leak emissions

primarily consist of leaks from connectors, open-ended lines, valves, pumps, etc. These emissions are estimated using EPA's average emissions factors for total hydrocarbon emissions from O&G production operations.

6.0 PROPOSED MONITORING AND RECORDKEEPING

According to the Application for Synthetic Minor Limit Request (Form SYNMIN), Page 1 (B), ATTACHMENTS, Item, 2, XTO is proposing the following monitoring, recordkeeping, and reporting requirements that will be used to demonstrate and assure compliance with the proposed allowable emissions.

6.1 Condensate Storage Tanks

The emissions rates associated with the condensate are very minimal due to the low production rates. XTO is not proposing to perform any other monitoring and recordkeeping other than tracking the monthly production rates.

6.2 TEG Natural Gas Dehydrator

Construction and Operational Limits

XTO proposes to limit the TEG natural gas dehydrator regenerator waste gas VOC and HAP emissions by 95.0%.

Control and Operational Requirements

XTO proposes to operate automatic shutdowns on the glycol pumps should the waste gate vent valve *"waste gate valve"* on the thermal oxidizer move to a close position. The waste gate valve operates in a normally open position, therefore, as long as the temperature of the thermal oxidizer is greater than or equal to 1300°F and less than or equal to 1800°F (1300°F ≤ TO temperature ≤ 1800°F), and there is power to the facility, the flow of the regenerator waste gas stream will be sent to the thermal oxidizer for combustion. The closing of the waste gate valve occurs with temperatures less than 1300°F and temperature exceeding 1800°F (1300°F > TO temperature > 1800°F), and loss of power. The automatic shutdown of the glycol pump would cease the flow of glycol to the dehydration unit, and consequently eliminate the regenerator waste gas stream. The non-dehydrated natural gas would continue to sales and glycol regeneration will not begin until the thermal oxidizer temperature is within the temperature requirements (1300°F≤ TO temperature ≤ 1800°F), the waste gate vent valve is operating in the normally open position, and the glycol pump is operating. Overall, if the temperature of the thermal oxidizer is outside the temperature range (1300°F ≤ TO temperature ≤ 1800°F) the glycol pump will shut down and this will eliminate the regenerator waste gas stream.

Recordkeeping:

- XTO proposes to document the thermal oxidizer temperature and the position of the waste gate valve daily.

6.3 Reciprocating Internal Combustion Engines

XTO proposes to comply with NESHAP ZZZZ remote, area source, requirements for the 4-stoke lean burn compressor engines.

XTO proposes to comply with the NSPS JJJJ requirements for the 4-stroke rich burn generator engines.

6.4 Natural Gas-Fired External Combustion Units

Due to the insignificant emissions associated with the natural gas fired heaters / burners, no monitoring or recordkeeping requirements are being proposed by XTO. Furthermore, XTO would like to point out that the emissions associated with the heaters were estimated based on 8,760 hours of operation per year.

6.5 Truck Loading

All produced liquids (condensate/water) are trucked from site using the truck loading rack. During loading the tank trucks will be loaded using submerged fill.

6.6 Fugitive Equipment Leaks

XTO will minimize leaks of volatile organics from each piece of equipment in hydrocarbon service at this facility. XTO is not proposing any fugitive monitoring.

7.0 QUALITATIVE AIR QUALITY ASSESSMENT

The climatology and air quality of the area of interest is dominated by continental air masses. The area, as a rule, has good ventilation since large air mass movement is not severely limited. Terrain in the area varies as much as several hundred feet, but is not as limited as other areas in Region 8 that may have limited atmospheric mixing due to mountain valleys or large mountain ranges that can minimize the effect of air mass movement.

Ambient air quality data has been gathered in this portion of Utah for a number of years. The ambient monitoring network has traditionally consisted of the measurement of ozone and nitrogen dioxide in both Duchesne and Uintah Counties. XTO recognizes that there has been recent ozone related issues associated with this geographical region. However, due to the facility being in operation for decades prior to any air quality issues, and the facility's actual emissions are modest in nature (i.e., below typical permitting thresholds); therefore, additional ambient impact analysis is not warranted.

8.0 ENDANGERED SPECIES ACT

The Endangered Species Act (ESA) requires EPA, in consultation with the U.S. Fish and Wildlife Service (USFWS) and/or the NOAA Fisheries Service, to ensure that actions EPA authorizes are not likely to jeopardize the continued existence of any listed threatened or endangered species (TES) or result in the destruction or adverse modification of designated critical habitat of such species.

TES are considered to be those species recognized by the USFWS as listed or proposed species, and those designated as candidate TES under the ESA. Once the potential presence of a species is assessed, a look at whether any critical habitat exists in the vicinity of the facility will help determine the possibility of any impacts from the facility on TES. EPA conducts an evaluation of the potential for TES impacts from the facility and consult, as appropriate, with USFWS regarding identification and mitigation of any impacts.

Because this site is an existing site that has been operating for many years, no information is being provided as there are no "new" impacts from the facility that could jeopardize the continued existence of any TES. XTO will provide ESA information, if requested from the EPA.

9.0 NATIONAL HISTORIC PRESERVATION ACT

The National Historic Preservation Act requires EPA, in consultation with State and/or Tribal Historic Preservation Officers, to ensure that actions authorized are not likely to affect cultural resources. Because this facility is an existing source that has been in operation for many years, no documentation is being provided. The NHPA documentation would have already been submitted upon construction of the site. If requested, XTO will provide the EPA with any requested documentation.

WILD HORSE BENCH ATTACHMENTS:

Attachment A: Application Report

Attachment B: Emission Inventory

Attachment C: Site Specific Gas Analysis

Attachment D: Tank Vapor Emissions Calculations

Attachment E: Dehydrator Emissions Calculations

Attachment F: Engine Manufacturer's Specs

Attachment G: Process Flow Diagram of Facility

ATTACHMENT A: APPLICATION REPORT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 8 Air Program
FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

Check List – Application for New Construction

(Form NEW)

Please check all that apply to show how you are using this form

- ○ **Proposed Construction of a New Facility**
- ○ **Proposed Construction of New Equipment at an Existing Facility**
- ○ **Proposed Modification of an Existing Facility**
- ● **Other – Please Explain**

Use of this information request form is voluntary and not yet approved by the Office of Management and Budget. The following is a check list of the type of information that Region 8 will use to process information on your proposed project. While submittal of this form is not required, it does offer details on the information we will use to complete your requested approval and providing the information requested may help expedite the process. Use of application forms for this program is currently under Office of Management and Budget review and these information request forms will be replaced/updated after that review is completed.

Please submit information to following two entities:

Minor NSR Permitting Coordinator
U.S. EPA, Region 8
1595 Wynkoop Avenue, 8P-AR
Denver, CO 80202-1129

The Tribal Environmental Contact for the specific reservation:

If you need assistance in identifying the appropriate Tribal Environmental Contact and address, please contact the EPA Region 8 Tribal Air Coordinator:

Alexis North, EPA Region 8 Tribal Air Coordinator
303-312-7005
north.alexis@epa.gov

A. GENERAL FACILITY INFORMATION

1. (a) **Company Name** XTO Energy, Inc. (b) **Operator Name** XTO Energy, Inc.		2. **Facility Name** Wild Horse Bench Compressor Station	
3. Type of Operation Oil and Gas Prodution		4. Portable Source? ☐ Yes ☒ No 5. Temporary Source? ☐ Yes ☒ No	
6. NAICS Code 213111		7. SIC Code 1311	
8. Physical Address: 810 W. Houston Street, Petro-4 Fort Worth, TX 76102			
9. Reservation* Uintah Tribal Airshed	10. County* Uintah	11a. Latitude* 39.88899°	11b. Longitude* -109. 734224°
12a. Quarter Quarter Section* NESE	12b. Section* 26	12c. Township* T11S	12d. Range* R19E

B. PREVIOUS PERMIT ACTIONS (Provide information in this format for each permit that has been issued to this facility. Provide as an attachment if additional space is necessary)

This section of the permit application is not applicable. This application is for a new facility for which no previous permit actions have been taken.

Facility Name on the Permit	N/A
Permit Number (xx-xxx-xxxxx-xxxx.xx)	N/A
Date of the Permit Action	N/A

C. CONTACT INFORMATION

Company Contact: Rykki Tepe	Title: Environmental Engineer
Mailing Address: 810 W. Houston Street, Petro-4 Fort Worth, TX 76102	
Email Address: Rykki_Tepe@xtoenergy.com	
Telephone Number: (817) 885-1249	Facsimile Number: (817) 885-2683
Operator Contact (if different from company contact): Same as above	Title
Mailing Address	
Email Address	
Telephone Number	Facsimile Number
Facility Contact: Same as above	Title
Mailing Address	
Email Address	
Telephone Number	Facsimile Number
Compliance Contact: Same as above	Title
Mailing Address	
Email Address	
Telephone Number	Facsimile Number

D. ATTACHMENTS

Include all of the following information (see the attached instructions)

- ✓ **FORM SYNMIN** - New Source Review Synthetic Minor Limit Request Form, if synthetic minor limits are being requested.
- ✓ Narrative description of the proposed production processes. This description should follow the flow of the process flow diagram to be submitted with this application.
- ✓ Process flow chart identifying all proposed processing, combustion, handling, storage, and emission control equipment.
- ✓ A list and descriptions of all proposed emission units and air pollution-generating activities.
- ✓ Type and quantity of fuels, including sulfur content of fuels, proposed to be used on a daily, annual and maximum hourly basis.
- ✓ Type and quantity of raw materials used or final product produced proposed to be used on a daily, annual and maximum hourly basis.
- ✓ Proposed operating schedule, including number of hours per day, number of days per week and number of weeks per year.
- ✓ A list and description of all proposed emission controls, control efficiencies, emission limits, and monitoring for each emission unit and air pollution generating activity.
- ✓ **Criteria Pollutant Emissions** - Estimates of Current Actual Emissions, Current Allowable Emissions, Post-Change Uncontrolled Emissions, and Post-Change Allowable Emissions for the following air pollutants: particulate matter, PM_{10}, $PM_{2.5}$, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, fluorides (gaseous and particulate), sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.
- ✓ These estimates are to be made for each emission unit, emission generating activity, and the project/facility in total.
- ✓ **Modeling – Air Quality Impact Analysis (AQIA)**
- ✓ **ESA (Endangered Species Act)**
- ✓ **NHPA (National Historic Preservation Act)**

E. TABLE OF ESTIMATED EMISSIONS

The following tables provide the total emissions in tons/year for all pollutants from the calculations required in Section D of this form, as appropriate for the use specified at the top of the form.

E(i) – Proposed New Facility

Pollutant	Potential Emissions (tpy)	Proposed Allowable Emissions (tpy)	
PM	1.6	1.6	PM - Particulate Matter PM_{10} - Particulate Matter less than 10 microns in size $PM_{2.5}$ - Particulate Matter less than 2.5 microns in size SOx - Sulfur Oxides NOx - Nitrogen Oxides CO - Carbon Monoxide VOC - Volatile Organic Compound Pb - Lead and lead compounds Fluorides - Gaseous and particulates H_2SO_4 - Sulfuric Acid Mist H_2S - Hydrogen Sulfide TRS - Total Reduced Sulfur RSC - Reduced Sulfur Compounds
PM_{10}	1.6	1.6	
$PM_{2.5}$	1.6	1.6	
SO_x	0.0	0.0	
NO_x	62.1	62.1	
CO	85.6	85.6	
VOC	185.8	47.6	
Pb	Negligible	Negligible	
Fluorides	Negligible	Negligible	
H_2SO_4	Negligible	Negligible	
H_2S	Negligible	Negligible	
TRS	Negligible	Negligible	
RSC	Negligible	Negligible	

Emissions calculations must include fugitive emissions if the source is one the following listed sources, pursuant to CAA Section 302(j):

(a) Coal cleaning plants (with thermal dryers);
(b) Kraft pulp mills;
(c) Portland cement plants;
(d) Primary zinc smelters;
(e) Iron and steel mills;
(f) Primary aluminum ore reduction plants;
(g) Primary copper smelters;
(h) Municipal incinerators capable of charging more than 250 tons of refuse per day;
(i) Hydrofluoric, sulfuric, or nitric acid plants;
(j) Petroleum refineries;
(k) Lime plants;
(l) Phosphate rock processing plants;
(m) Coke oven batteries;
(n) Sulfur recovery plants;
(o) Carbon black plants (furnace process);
(p) Primary lead smelters;
(q) Fuel conversion plants;
(r) Sintering plants;
(s) Secondary metal production plants;
(t) Chemical process plants
(u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
(v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
(w) Taconite ore processing plants;
(x) Glass fiber processing plants;
(y) Charcoal production plants;
(z) Fossil fuel-fired steam electric plants of more that 250 million British thermal units per hour heat input, and
(aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

E(ii) – Proposed New Construction at an Existing Facility or Modification of an Existing Facility

This section of the application is not applicable. The application is for a new facility only.

Pollutant	Current Actual Emissions (tpy)	Current Allowable Emissions (tpy)	Post-Change Potential Emissions (tpy)	Post-Change Allowable Emissions (tpy)
PM	N/A	N/A	N/A	N/A
PM_{10}	N/A	N/A	N/A	N/A
$PM_{2.5}$	N/A	N/A	N/A	N/A
SO_x	N/A	N/A	N/A	N/A
NO_x	N/A	N/A	N/A	N/A
CO	N/A	N/A	N/A	N/A
VOC	N/A	N/A	N/A	N/A
Pb	N/A	N/A	N/A	N/A
NH_3	N/A	N/A	N/A	N/A
Fluorides	N/A	N/A	N/A	N/A
H_2SO_4	N/A	N/A	N/A	N/A
H_2S	N/A	N/A	N/A	N/A
TRS	N/A	N/A	N/A	N/A
RSC	N/A	N/A	N/A	N/A

PM - Particulate Matter
PM_{10} - Particulate Matter less than 10 microns in size
$PM_{2.5}$ - Particulate Matter less than 2.5 microns in size
SOx - Sulfur Oxides
NOx - Nitrogen Oxides
CO - Carbon Monoxide
VOC - Volatile Organic Compound
Pb - Lead and lead compounds
NH_3 - Ammonia
Fluorides - Gaseous and particulates
H_2SO_4 - Sulfuric Acid Mist
H_2S - Hydrogen Sulfide
TRS - Total Reduced Sulfur
RSC - Reduced Sulfur Compounds

Instructions

Use of This Form

- Proposed new construction or modifications should first be evaluated to determine if the change is major under the major NSR program using the procedures at 40 CFR 52.21 (i.e., baseline actual to projected actual applicability test). If the proposed construction does not qualify as a major under that test, then it may be subject to the requirements of the minor NSR rule at 40 CFR 49.151.

Helpful Definitions from the Federal Minor NSR Rule (40 CFR 49) – This is not a comprehensive list.

- *40 CFR 49.152(d) - Modification* means any physical or operational change at a source that would cause an increase in the allowable emissions of the affected emissions units for any regulated NSR pollutant or that would cause the emission of any regulated NSR pollutant not previously emitted.

  The following exemptions apply:

  (1) A physical or operational change does not include routine maintenance, repair, or replacement.

  (2) An increase in the hours of operation or in the production rate is not considered an operational change unless such increase is prohibited under any federally-enforceable permit condition or other permit condition that is enforceable as a practical matter.

  (3) A change in ownership at a source is not considered a modification.

- *40 CFR 49.152(d) - Allowable emissions* means ''allowable emissions'' as defined in §52.21(b)(16), except that the allowable emissions for any emissions unit are calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit's potential to emit.

- *52.21(b)(16) - Allowable emissions* means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

  (i) The applicable standards as set forth in 40 CFR parts 60 and 61;

  (ii) The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or

  (iii) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

A. General Facility Information

1. Company Name & Operator Name (if different): Provide the complete company and operator names. For corporations, include divisions or subsidiary name, if any.

2. Facility Name: Provide the facility name. Please note that a facility is a site, place, location, etc... that may contain one or more air pollution emitting units.

3. Type of Operation: Indicate the generally accepted name for the operation (i.e., asphalt plant, gas station, dry cleaner, sand & gravel mining, oil and gas wellsite, tank battery, etc.).

4. Portable Source: Does the facility operate in more than one location? Some examples of portable sources include asphalt batch plants and concrete batch plants.

5. Temporary Source: A temporary source, in general, would have emissions that are expected last less than 2 years. Do you expect to cease operations within the next 2 years?

6. NAICS Code: North American Industry Classification System. The NAICS Code for your facility can be found at the following link → North American Industry Classification System (http://www.census.gov/epcd/naics/nsic2ndx.htm#S1).

7. SIC Code: Standard Industrial Classification Code. Although the new North American Industry Classification System (NAICS) has replaced the SIC codes, much of the Clean Air Act permitting processes continue to use these codes. The SIC Code for your facility can be found at the following link → Standard Industrial Classification Code (http://www.osha.gov/pls/imis/sic_manual.html).

8. Physical Address: Provide the actual address of where the facility is operating, not the mailing address. Include the State and the ZIP Code.

9. Reservation: Provide the name of the Indian reservation within which the facility is operating.

10. County: Provide the County within which the facility is operating.

11a & 11b. Latitude & Longitude: These are GPS (global positioning system) coordinates. This information can be provided in decimal format or degree-minute-second format.

12a – 12d. Section-Township-Range: Please provide these coordinates in 1/4 Section/Section/Township/Range. (e.g., SW ¼, NE ¼ /S36/T10N/R21E).

B. Current Permit Information

Provide a list of all permits that have been issued to your facility. This should include any Federal Minor New Source Review (MNSR), Prevention of Significant Deterioration (PSD) or Non-Attainment New Source Review (NA NSR) permits, in addition to the most recent Part 71 permit. The permit number must be included with each permit identified.

C. Contact Information

Please provide the information requested in full.

1. Company Contact: List the full name (last, middle initial, first) of the owners of the facility or the company contact.

2. Operator Contact: Provide the name of the operator of the facility if it is different from the company contact.

3. Facility Contact: The facility contact must be the local contact authorized to receive requests for data and information.

4. Compliance Contact: The compliance contact must be the local contact responsible for the facility's compliance with this rule. If this is the same as the Facility Contact please note this on the form.

D. Attachments

This section lists the information needed to complete the requested approval. This information should be accompanied by the supporting information listed on the form and described below. The information should be presented in enough detail to document how the facility is currently operating and/or how it is proposed to operate.

✓ **FORM SYNMIN**

If synthetic minor limits are being requested, we recommend that the information from checklist tiled Form SYNMIN be included with this application.

✓ Narrative description of the proposed production processes.

1. The narrative description should follow the flow of the process flow diagram to be submitted with this application. This needs to be as comprehensive as possible to help in understanding the proposed facility and how it will be operated. For example:

What are the raw materials?
What are the properties of the raw materials?
Does the production process include heating, drying, the application of chemicals, etc?
How will the raw materials be affected by this process?
What are the out puts from each step of the process (i.e., crushed ore, dry gas, water, etc...)?
Etc....

2. The proposed operating schedule presented in terms of hours per day, days per week, and weeks per year.
3. A list of the type and quantity of fuels and/or raw materials used. Each fuel and raw material should be described in enough detail to indicate its basic chemical components.

- ✓ A process flow chart identifying all proposed processing, combustion, handling, storage, and emission control equipment (include the unit identification # or code). This flow chart should illustrate the detailed narrative description requested above.

- ✓ List and describe all proposed units, emission units and air pollution-generating activities. At a minimum, provide the following:

    1. The hourly, daily and annual maximum operating rates for each operating unit, production process, and activity.
    2. The hourly, daily and annual maximum firing rates for each fuel and combustion equipment.
    3. The capacity for storage units and the hourly, daily and annual maximum throughput of material in the storage units.
    4. Material and product handling equipment and the hourly, daily and annual maximum throughput of material and product.
    5. Tank designs, tank storage capacities, hourly, daily and annual maximum throughput of material and product.

- ✓ Type and quantity of fuels, including sulfur content of fuels, proposed to be used on a daily, annual and maximum hourly basis.

- ✓ Type and quantity of raw materials used or final product produced proposed to be used on a daily, annual and maximum hourly basis.

- ✓ Proposed operating schedule, including number of hours per day, number of days per week and number of weeks per year.

- ✓ A list and description of all proposed emission controls, control efficiencies, emission limits, and monitoring for each emission unit and air pollution generating activity.

    1. Include manufacturer specifications and guarantees for each control device.

Criteria Pollutant Emissions Estimates

✓ Estimates of Current Actual Emissions, Current Allowable Emissions, Post-Change Uncontrolled Emissions, and Post-Change Allowable Emissions for the following air pollutants: particulate matter, PM_{10}, $PM_{2.5}$, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, ammonia (NH_3), fluorides (gaseous and particulate), sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

1. These estimates are to be made for each emission unit, emission generating activity, in addition to total emissions.

2. The information should include all of the supporting calculations, assumptions and references. Emission estimates must address all emission units and pollutants proposed and/or affected by the limitation and be presented in short term (e.g. pounds per hour) as well as annual (tons per year) units.

3. Any emission estimates submitted to the Regional Administrator must be verifiable using currently accepted engineering criteria. The following procedures are generally acceptable for estimating emissions from air pollution sources:

   - Source-specific emission tests;
   - Mass balance calculations;
   - Published, verifiable emission factors that are applicable to the source. (i.e. manufacturer specifications)
   - Other engineering calculations; or
   - Other procedures to estimate emissions specifically approved by the Regional Administrator.

4. Guidance for estimating emissions can be found at http://www.epa.gov/ttn/chief/efpac/index.html.

Current Actual Emissions: Current actual emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the actual hourly emissions rate in pounds per hour (lbs/hr) times actual hours operated (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. For an **existing air pollution source (permitted and unpermitted)** that operated prior to the application submittal, the current actual emissions are the actual rate of emissions for the preceding calendar year and must be calculated using the actual operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year. The emission estimates must be based upon actual test data or, in the absence of such data, upon procedures acceptable to the Regional Administrator.

Current Allowable Emissions: Current allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. "Allowed" means the source is restricted by permit conditions that limit its emissions and are enforceable as a practical matter (i.e., allowable emissions). The allowable emissions for any

emissions unit are calculated considering any emissions limitations that are enforceable as a practical matter on the unit's PTE.

2. For an **existing permitted air pollution source** that operated prior to the application submittal, the current allowable emissions are the allowable rate of emissions for the preceding calendar year and must be calculated using the permitted operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year.

3. For an **existing air pollution source** that does not have an established allowable emissions level prior to the modification must report the pre-change uncontrolled emissions.

Post-Change Potential Emissions (Potential uncontrolled emissions from proposed project): This is the maximum capacity of a source to emit a pollutant under its physical and operational design. This is expressed in tpy and generally is calculated by multiplying the maximum hourly emissions rate in pounds per hour (lbs/hr) times 8,760 hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

Post-Change Allowable Emissions: A source's allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. Unless the source is restricted by permit conditions or other requirements that are enforceable as a practical matter, the post-change allowable emissions would be equivalent to post-change uncontrolled emissions. For the post-change allowable emissions a lower level of allowable emissions may be proposed.

2. For physical or operational changes at minor sources and for minor physical or operational changes at major sources, the total increase in allowable emissions resulting from your proposed change would be the sum of following:

    - For each new emissions unit that is to be added, the emissions increase would be the potential to emit of each unit.
    - For each emissions unit with an allowable emissions limit that is to be changed or replaced, the emissions increase would be the allowable emissions of the emissions unit after the change or replacement minus the allowable emissions prior to the change or replacement. However, this may not be a negative value. If the allowable emissions of an emissions unit would be reduced as a result of the change or replacement, use zero in the calculation.
    - For each unpermitted emissions unit (i.e., a unit without any emissions limitations before the change) that is to be changed or replaced, the emissions increase would be the allowable emissions of the unit after the change or replacement minus the potential to emit prior to the change or replacement. However, this may not be a negative value. If the allowable emissions of an emissions unit would be reduced as a result of the change or replacement, use zero in the calculation.

✓ Modeling Analysis

Do I need to do a modeling analysis?

The Federal Minor New Source Review Regulations at 40 CFR 49.159(d) requires that a modeling analysis (AQIA) of proposed emissions be performed if there is reason to be concerned that new construction would cause or contribute to a National Ambient Air Quality Standard (NAAQS) or Prevention of Significant Deterioration (PSD) increment violation.

In addition, if the AQIA reveals that the new construction could cause or contribute to a NAAQS or PSD increment violation; such impacts must be reduced before a pre-construction permit can be issued.

To facilitate the protection of the NAAQS and PSD Increment, EPA Region 8 requests that those proposed activities that meet the following criteria perform an AQIA:

1. The proposed activity has air emissions that EPA Region 8 determines have the potential to cause adverse air quality effects for which an air quality impact analysis is necessary for an accurate assessment of the environmental impact of the activities proposed.

2. Modeling of proposed emissions is usually warranted, even though the proposed activity does not meet the modeling requirements, above, if it is reasonable to believe the new activity may cause or contribute to a violation of applicable ambient air quality standards or increments in circumstances such as:

   (a) A substantial portion of the new or modified emissions have poor dispersion characteristics (e.g., rain caps, horizontal stacks, fugitive releases, or ***building downwash***) in close proximity to ***ambient air*** at the site boundary;

   (b) The new or modified emissions are located in ***complex terrain*** (e.g., terrain above stack height in close proximity to the source); or

   (c) The new or modified emissions are located in areas with existing air quality concerns.

   (d) If you have questions about whether modeling may be necessary based on the 4th criteria above, please contact EPA Region 8's Modeling Lead:

   Gail Tonnesen
   Region 8 Modeling Lead
   Tonnesen.gail@epa.gov
   303-312- 6113

What Kind of Air Quality Modeling Analysis Is Needed?

1. EPA Region 8 considers a stepped or phased approach to modeling to be appropriate, as follows:

   Step 1: Qualitative Air Quality Assessment
   Step 2: Screening Modeling Analysis
   Step 3: Preliminary Modeling Analysis (refined modeling)
   Step 4: Full Impact Modeling Analysis (refined modeling)
   Step 5: PSD Increment and NAAQS Analysis
   Step 6: Additional Impact Analysis

2. Step 1: Qualitative Air Quality Assessment

   Narrative description of the current air quality conditions and the expected impact the permitted source would have on that air quality. Some suggested factors to consider in the qualitative discussion could include meteorology, terrain, distance to ambient air, expected emissions, etc. If a convincing case cannot be made qualitatively that no impacts to air quality would be expected, a screening analysis should next be performed.

3. Step 2: Screening Analysis

   For proposed new or modified sources that meet the modeling requirement criteria identified above, protection of air quality from proposed emissions may be shown by using a simple screening technique (e.g., SCREEN3 or AERSCREEN). Screening models are available for download at the EPA SCRAM website: http://www.epa.gov/ttn/scram/dispersion_screening.htm. A pre-approved modeling protocol is not necessary prior to conducting a Screening Analysis.

4. If the proposed new or modified emission increases do not increase ambient concentrations of a pollutant by more than the significant impact levels, as compared to the SILs identified below, no further modeling is necessary.

Significant Impact Levels

Pollutant	Averaging Period	Class II Area SIL (ug/m^3)	Class I Area SIL (ug/m^3)
SO_2	1 hr	3 ppb or 7.8 ug/m^3 (interim)	----
	3 hr	25	1.0
	24 hr	5	0.2
	Annual	1	0.08
$PM_{2.5}$	24 hr	0.07	1.2
	Annual	0.06	0.3
PM_{10}	24 hr	5	0.2
	Annual	1	0.08
NO_2	1 hr	4 ppb or 7.5 ug/m^3 (interim)	----
	Annual	1	0.08
CO	1 hr	2,000 ppb	
	8 hr	500 ppb	

Note: The Class I area SILs are provided as guidance and have not been formalized by EPA.

5. Sources that cannot demonstrate protection of air quality using a screening technique should continue to the modeling requirements in ***Step 3*** through ***Step 6***. Modeling in Steps 3 through 6 should be performed based an approved protocol.

6. Applicants are encouraged to contact the EPA Region 8 Modeling Lead prior to conducting any refined modeling analysis (Step 3 through Step 6) to obtain an approved protocol.

What Should I Include In My Application If Modeling Is Necessary?

1. Approved Modeling Protocol

   In order to expedite the permitting process, it is recommended that you include a protocol that has already been approved. An application will not be deemed complete until the protocol has been approved.

2. Modeling Results

   In all cases, the modeling results should include the name of the model used, all input parameters, and the resulting output. Electronic copies of the modeling input/output files should be provided to EPA Region 8.

✓ ESA

The Endangered Species Act requires us, in consultation with the U.S. Fish and Wildlife Service and/or the NOAA Fisheries Service, to ensure that actions we authorize are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species.

To expedite the approval of your proposed construction, we encourage you to identify any listed species that you may be readily aware of that could be affected by your proposal. The following website has been provided to assist you:

http://www.fws.gov/endangered/

Simply enter the State and County in which you propose to construct to obtain a general listing.

✓ NHPA

The National Historic Preservation Act requires us, in consultation with State and/or Tribal Historic Preservation Officers to ensure that actions we authorize are not likely to affect cultural resources.

To expedite the approval of your proposed construction, we encourage you to identify any cultural resources that you may be readily aware of that could be affected by your proposal. The following website has been provided to assist you:

http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome

Simply enter the State and County in which you propose to construct to obtain a general listing.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 8 Air Program
FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

Checklist - Synthetic Minor Limit Request

(Form SYNMIN)

Use of this information request form is voluntary and not yet approved by the Office of Management and Budget. The following is a check list of the type of information that Region 8 will use to process information on your proposed project. While submittal of this form is not required, it does offer details on the information we will use to complete your requested approval and providing the information requested may help expedite the process. Use of application forms for this program is currently under Office of Management and Budget review and these information request forms will be replaced/updated after that review is completed.

Please submit information to following two entities:

Federal Minor NSR Permit Coordinator
U.S. EPA, Region 8
1595 Wynkoop Avenue, 8P-AR
Denver, CO 80202-1129

The Tribal Environmental Contact for the specific reservation:

If you need assistance in identifying the appropriate Tribal Environmental Contact and address, please contact the EPA Region 8 Tribal Air Coordinator:

Alexis North, EPA Region 8 Tribal Air Coordinator
303-312-7005
north.alexis@epa.gov

A. GENERAL INFORMATION

Company Name XTO Energy, Inc.	**Facility Name** Wild Horse Bench Compressor Station
Company Contact or Owner Name Rykki Tepe	**Title** Environmental Engineer
Mailing Address 810 W. Houston Street, Petro-4 Fort Worth, TX 76102	
Email Address Rykki_Tepe@xtoenergy.com	
Telephone Number (817) 885-1249	**Facsimile Number** (817) 885-2683

B. ATTACHMENTS

For each criteria air pollutant, hazardous air pollutant and for all emission units and air pollutant-generating activities to be covered by a limitation, include the following:

- ✓ **Item 1** - The proposed limitation and a description of its effect on current actual, allowable and the potential to emit.
- ✓ **Item 2** - The proposed testing, monitoring, recordkeeping, and reporting requirements to be used to demonstrate and assure compliance with the proposed limitation.
- ✓ **Item 3** - A description of estimated efficiency of air pollution control equipment under present or anticipated operating conditions, including documentation of the manufacturer specifications and guarantees.
- ✓ **Item 4** - Estimates of the Post-Change Allowable Emissions that would result from compliance with the proposed limitation, including all calculations for the estimates.
- ✓ **Item 5** – Estimates of the potential emissions of Greenhouse Gas (GHG) pollutants before and after proposed emission controls.

Instructions

Use this form to provide general and summary information about the synthetic minor NSR source (facility or plant) on Tribal lands and to indicate the emissions limitations requested. Submit this form once, in addition to FORM NEW, for each synthetic minor NSR source on Tribal lands.

1. Who Can Request Federally-Enforceable Limitations Under the Tribal NSR Authority?

The Tribal NSR Rule applies only to sources located within the exterior boundaries of an Indian reservation in the United States of America or other lands as specified in 40 CFR part 49, collectively referred to as "Indian country". So, to use the authority in the Tribal NSR Rule to create federally-enforceable limitations, a facility must be located within Indian country. Land ownership status (for example, whether the land is owned by a Tribal member or whether the land is owned in fee or in trust) does not affect how the rule applies.

2. Who Might Want to Request Federally-Enforceable Limitations?

The primary reason for requesting federally-enforceable limitations is to avoid an otherwise applicable federal Clean Air Act program, rule or requirement. Many federal Clean Air Act programs use a source's "potential to emit" (PTE) air pollution to determine which rules or requirements apply. A facility's PTE is based on the maximum annual operational (production, throughput, etc) rate of the facility taking into consideration the capacity and configuration of the equipment and operations. Emission or operational limits can also be taken into consideration as maximums if they are federally enforceable. So, using a synthetic minor NSR permit to establish federally enforceable limitations can lower a facility's PTE and possibly allow the facility to avoid certain federal Clean Air Act requirements.

Three examples of federal Clean Air Act programs that use PTE to determine whether they apply are (1) the Prevention of Significant Deterioration (PSD) construction permitting program, (2) the Title V operating permit program, and (3) the Maximum Achievable Control Technology (MACT) program. For example, existing sources that are considered "major" for Title V (meaning they have the potential to emit air pollution at levels defined in that rule as "major") must apply for a Title V operating permit. If a source accepts a federally-enforceable limitation through a synthetic minor NSR permit that reduces their PTE to below the "major" threshold, and the source does not meet any of the other requirements that would trigger applicability to the part 71 program, then the source no longer needs a Title V operating permit. When planning for the construction of a new source or expansion of an existing source, a source can also accept limitations on PTE (using a synthetic minor NSR permit) that allow the source to avoid PSD. Limitations on PTE can similarly help a source to avoid new MACT standards that would otherwise apply to the source.

3. Section B. ATTACHMENTS

This section lists the information that must be attached to the application form for each requested limitation. The requested limitation(s) must be described for each affected emissions unit (or pollutant-generating activity) and pollutant and must be accompanied by the supporting information listed on the form and described below. Note that applicability of many federal Clean Air Act requirements (such as Title V, PSD and MACT) is often based on facility-wide emission levels of specific pollutants. In that

case, all emissions units at a facility and all pollutants regulated by that given rule or regulation must be addressed by this section of the application form.

Item 1 – The requested limitation and its effect on actual emissions or potential to emit must be presented in enough detail to document how the limitation will limit the source's actual or potential emissions as a legal and practical matter and, if applicable, will allow the source to avoid an otherwise applicable requirement. The information presented must clearly explain how the limitation affects each emission unit and each air pollutant from that emission unit. Use the information provided in response to Item 4 below to explain how the limitation affects emissions before and after the limitation is in effect.

Item 2 – For each requested limitation, the application must include proposed testing, monitoring, recordkeeping and reporting that will be used to demonstrate and assure compliance with the limitation. Testing approaches should incorporate and reference appropriate EPA reference methods where applicable. Monitoring should describe the emission, control or process parameters that will be relied on and should address frequency, methods, and quality assurance.

Item 3 – The application must include a description and estimated efficiency of air pollution control equipment under present or anticipated operating conditions. For control equipment that is not proposed to be modified to meet the requested limit, simply note that fact; however, for equipment that is proposed to be modified (e.g. improved efficiency) or newly installed to meet the proposed limit, address both current and future descriptions and efficiencies. Include manufacturer specifications and guarantees for each control device.

Items 4 – Any emission estimates submitted to the Regional Administrator must be verifiable using currently accepted engineering criteria. The following procedures are generally acceptable for estimating emissions from air pollution sources:

(i) Source-specific emission tests;
(ii) Mass balance calculations;
(iii) Published, verifiable emission factors that are applicable to the source. (i.e., manufacturer specifications).
(iv) Other engineering calculations; or
(v) Other procedures to estimate emissions specifically approved by the Regional Administrator.

Post-Change Allowable Emissions: A source's allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

Item 5 - New construction projects that have the potential to emit GHG emissions of at least 100,000 tpy CO_2e and 100 or 250 tpy on a mass basis, modifications at existing PSD facilities that increase GHG emissions by at least 75,000 tpy CO_2e and minor sources that increase GHG emissions by at least 100,000 tpy CO_2e and 100 or 250 tpy on a mass basis are subject to PSD permitting requirements, even if they do not significantly increase emissions of any other pollutant. As such, any requested limits to avoid PSD must take into account greenhouse gases.

Therefore, please include in your permit application estimates of the potential emissions of the following pollutants before and after proposed emission controls. More information about GHG permitting and how to calculate CO_2 equivalents (CO_2e), the mass emissions of each individual GHG

ATTACHMENT B: EMISSION INVENTORY

XTO Energy, Inc.
Wild Horse Bench Compressor Station - Synthetic Minor NSR
Federal Rule Applicability Determinations

Federal Regulations

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP): MACT STANDARDS	
40 CFR 63 Subpart HH	The WHB Compressor Station is a major source for HAP emissions based on uncontrolled emissions, not actual emissions. Without federally enforceable limits for the dehydration still column the individual HAPS are more than 10 TPY & Total Combined HAPs are more than 25 TPY. A reduction of 95 percent is required by Subpart HH.
41 CFR 63 Subpart HHH	The WHB Compressor Station is not a natrual gas transmission and storage facility.
40 CFR 63 Subpart EEEE	Per 40 CFR 63.2334(c), Organic liquid distribution operations do not include the activities and equipment, including product loading racks, used to process, store, or transfer organic liquids at oil and natural gas production field facilities.
40 CFR 63 Subpart ZZZZ	The WHB Compressor Station does have Reciprocating Engines, therefore this regulation is applicable. XTO will comply with the required Subpart ZZZZ applicable designations.

NEW SOURCE PREFORMANCE STANDARDS (NSPS)	
40 CFR 60 Subpart Ka/Kb	The storage tanks at the WHB Compressor Station are below the 40,000 gallon applicablity threshold limit.
40 CFR 60 Subpart KKK	The WHB Compressor Station is not subject to VOC leak detection because we do not meet the definition of an onshore natural gas processing plant.
40 CFR 60 Subpart LLL	The WHB Compressor Station's design capacity is less than 2 LT/D of H2S in the acid gas stream (Expressed as Sulfur), thus only required to comply with 40 CFR Subpart 60.647.
40 CFR 60 Subpart JJJJ	The WHB Compressor Station has two (2) NSPS JJJJ applicable engines - WHG-1 and WHG-2. These engines have complied and will continue to comply with the applicable NSPS JJJJ requirements. Emissions calculations reflect the NSPS JJJJ controls and a PTE reduction for the NSPS JJJJ criteria pollutants.
40 CFR 60 Subpart IIII	Since the WHB Compressor Station does not have any Diesel Engines, this regulation is not applicable.
40 CFR 60 Subpart GG or KKKK	Since the WHB Compressor Station does not have any Turbines greater than 10 MMBTU/HR , these regulations are not applicable.
40 CFR 60 Subpart OOOO	Since the WHB Compressor Station was constructed prior to August 23, 2011, this regulation is not applicable.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE	
40 CFR 64	The CAM Rule requires monitoring for certain emission units at major sources. Though the glycol dehydrator has uncontrolled emissions greater than the HAP major source threshold, the CAM rule does not apply to sources subject to Sections 111 (NSPS) or 112 (NESHAP) of the Clean Air Act (CAA). Therefore, the provisions of the CAM rule do not apply.

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Facility Emission Summary - Uncontrolled

Emissions Summary Table - All Sources Uncontrolled

Source / Unit Desciption	Emission Unit ID	NOx	VOC	SO_2	$PM_{10 \& 2.5}$	CO	HAPs
Caterpillar G3512 TALE Compressor Engine (Uncontrolled)	WHC-1	16.6	3.9	0.0	0.4	18.6	2.3
Caterpillar G3516 TALE Compressor Engine (Uncontrolled)	WHC-2	25.9	5.4	0.0	0.6	30.0	2.8
Cummins KTA19GC Generator (Uncontrolled)	WHG-1	47.0	3.7	0.0	0.2	22.4	0.4
Cummins KTA19GC Generator (Uncontrolled)	WHG-2	47.0	3.7	0.0	0.2	22.4	0.4
Fugitive Emissions	WHF-1	0.0	9.2	0.0	0.0	0.0	0.2
10 MMSCFD Glycol Dehydrator	WHD-1	0.0	145.5	0.0	0.0	0.0	70.8
Thermal Oxidizer Emissions	WHTO-1	2.0	7.5	0.0	0.1	5.5	3.5
Condensate Storage Tank: 400 bbls	WHT-1	0.0	1.0	0.0	0.0	0.0	0.1
Condensate Storage Tank: 400 bbls	WHT-2	0.0	1.0	0.0	0.0	0.0	0.1
Condensate Storage Tank: 400 bbls	WHT-3	0.0	1.0	0.0	0.0	0.0	0.1
Truck Loading: Oil/Condensate	TRUCKOC	0.0	1.9	0.0	0.0	0.0	0.1
Heaters	WHHTR	1.9	0.1	0.0	0.1	1.6	0.0
Equipment Blowdown Emissions	WHBD	0.0	1.9	0.0	0.0	0.0	0.1

TOTAL EMISSIONS (TPY)	NOx	VOC	SO_2	$PM_{10 \& 2.5}$	CO	HAPs
	140.4	**185.8**	**0.0**	**1.6**	**100.5**	**80.9**

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Facility Emission Summary - Potential to Emit (PTE)

Emissions Summary Table - All Sources PTE

Source / Unit Desciption	Emission Unit ID	NOx	VOC	SO_2	$PM_{10\ \&\ 2.5}$	CO	HAPs
Caterpillar G3512 TALE Compressor Engine (Uncontrolled)	WHC-1	16.6	3.9	0.0	0.4	18.6	2.3
Caterpillar G3516 TALE Compressor Engine (Uncontrolled)	WHC-2	25.9	5.4	0.0	0.6	30.0	2.8
Cummins KTA19GC Generator (Controlled)	WHG-1	7.3	3.7	0.0	0.2	14.7	0.4
Cummins KTA19GC Generator (Controlled)	WHG-2	7.3	3.7	0.0	0.2	14.7	0.4
Cummins Engine Catalyst Break-In (Uncontrolled)	WHGEN	1.1	0.0	0.0	0.0	0.5	0.0
Fugitive Emissions	WHF-1	0.0	9.2	0.0	0.0	0.0	0.2
10 MMSCFD Glycol Dehydrator	WHD-1	0.0	145.5	0.0	0.0	0.0	70.8
Thermal Oxidizer Emissions	WHTO-1	2.0	7.5	0.0	0.1	5.5	3.5
Condensate Storage Tank: 400 bbls	WHT-1	0.0	1.0	0.0	0.0	0.0	0.1
Condensate Storage Tank: 400 bbls	WHT-2	0.0	1.0	0.0	0.0	0.0	0.1
Condensate Storage Tank: 400 bbls	WHT-3	0.0	1.0	0.0	0.0	0.0	0.1
Truck Loading: Oil/Condensate	TRUCKOC	0.0	1.9	0.0	0.0	0.0	0.1
Heaters	WHHTR	1.9	0.1	0.0	0.1	1.6	0.0
Equipment Blowdown Emissions	WHBD	0.0	1.9	0.0	0.0	0.0	0.1

TOTAL EMISSIONS (TPY)	NOx	VOC	SO_2	$PM_{10\ \&\ 2.5}$	CO	HAPs
	62.1	**185.8**	**0.0**	**1.6**	**85.6**	**80.9**

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Table - Emission Sources (PPH & TPY) - Potential to Emit (PTE)

AIR CONTAMINANT DATA				
EMISSION POINT		COMPONENT OR AIR CONTAMINANT NAME	AIR CONTAMINANT EMISSION RATE	
EMISSIONS UNIT ID	SOURCE / UNIT DESCRIPTION		LBS/HR	TONS / YR
WHC-1	Caterpillar G3512 TALE Compressor Engine (Uncontrolled)	NOx	3.8	16.6
		VOC	0.9	3.9
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.1	0.4
		CO	4.2	18.6
		HCHO	0.5	2.3
WHC-2	Caterpillar G3516 TALE Compressor Engine (Uncontrolled)	NOx	5.9	25.9
		VOC	1.2	5.4
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.1	0.6
		CO	6.9	30.0
		HCHO	0.6	2.8
WHG-1	Cummins KTA19GC Generator (Controlled)	NOx	1.7	7.3
		VOC	0.8	3.7
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.2
		CO	3.4	14.7
		HCHO	0.1	0.4
		NOx	1.7	7.3
		VOC	0.8	3.7

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Table - Emission Sources (PPH & TPY) - Potential to Emit (PTE)

AIR CONTAMINANT DATA				
EMISSION POINT		COMPONENT OR AIR CONTAMINANT NAME	AIR CONTAMINANT EMISSION RATE	
EMISSIONS UNIT ID	SOURCE / UNIT DESCRIPTION		LBS/HR	TONS / YR
WHG-2	Cummins KTA19GC Generator (Controlled)	SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.2
		CO	3.4	14.7
		HCHO	0.1	0.4
WHGEN	Cummins Engine Catalyst Break-In (Uncontrolled)	NOx	10.7	1.1
		VOC	0.0	0.0
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.0
		CO	5.1	0.5
		HCHO	0.0	0.0
WHF-1	Fugitive Emissions	VOC (Includes HAPs)	2.1	9.2
		HAPs	0.0	0.2
WHD-1	Dehydration Still Column	VOC (Includes HAPs)	33.2	145.5
		HAPs	16.2	70.8
WHTO-1	Thermal Oxidizer Emissions Summary	NOx	0.3	2.0
		VOC (Includes HAPs)	1.7	7.5
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.1
		CO	0.7	5.5
		HAPs	0.8	3.5

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Table - Emission Sources (PPH & TPY) - Potential to Emit (PTE)

AIR CONTAMINANT DATA				
EMISSION POINT		COMPONENT OR AIR CONTAMINANT NAME	AIR CONTAMINANT EMISSION RATE	
EMISSIONS UNIT ID	SOURCE / UNIT DESCRIPTION		LBS/HR	TONS / YR
WHT-1	Condensate Storage Tank: 400 bbls	VOC (Includes HAPs)	0.2	1.0
		HAPs	0.0	0.1
WHT-2	Condensate Storage Tank: 400 bbls	VOC (Includes HAPs)	0.2	1.0
		HAPs	0.0	0.1
WHT-3	Condensate Storage Tank: 400 bbls	VOC (Includes HAPs)	0.2	1.0
		HAPs	0.0	0.1
TRUCKOC	Truck Loading: Oil/Condensate	VOC (Includes HAPs)	31.0	1.9
		HAPs	1.0	0.1
WHHTR	Reboiler & Heater Emissions Summary	NOx	0.4	1.9
		VOC (Includes HAPs)	0.0	0.1
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.1
		CO	0.4	1.6
		HAPs	0.0	0.0
WHBD	Equipment Blowdown Emissions	VOC (Includes HAPs)	157.9	1.9
		HAPs	4.2	0.1

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Facility Emission Summary - Proposed Emissions

Emissions Summary Table - Proposed Emissions

Source / Unit Desciption	Emission Unit ID	NOx	VOC	SO_2	$PM_{10 \& 2.5}$	CO	HAPs
Caterpillar G3512 TALE Compressor Engine (Uncontrolled)	WHC-1	16.6	3.9	0.0	0.4	18.6	2.3
Caterpillar G3516 TALE Compressor Engine (Uncontrolled)	WHC-2	25.9	5.4	0.0	0.6	30.0	2.8
Cummins KTA19GC Generator (Controlled)	WHG-1	7.3	3.7	0.0	0.2	14.7	0.4
Cummins KTA19GC Generator (Controlled)	WHG-2	7.3	3.7	0.0	0.2	14.7	0.4
Cummins Engine Catalyst Break-In Period (Uncontrolled)	WHGEN	1.1	0.0	0.0	0.0	0.5	0.0
Fugitive Emissions	WHF-1	0.0	9.2	0.0	0.0	0.0	0.2
10 MMSCFD Glycol Dehydrator	WHD-1	0.0	7.3	0.0	0.0	0.0	3.5
Thermal Oxidizer Emissions	WHTO-1	2.0	7.5	0.0	0.1	5.5	3.5
Condensate Storage Tank: 400 bbls	WHT-1	0.0	1.0	0.0	0.0	0.0	0.1
Condensate Storage Tank: 400 bbls	WHT-2	0.0	1.0	0.0	0.0	0.0	0.1
Condensate Storage Tank: 400 bbls	WHT-3	0.0	1.0	0.0	0.0	0.0	0.1
Truck Loading: Oil/Condensate	TRUCKOC	0.0	1.9	0.0	0.0	0.0	0.1
Heaters	WHHTR	1.9	0.1	0.0	0.1	1.6	0.0
Equipment Blowdown Emissions	WHBD	0.0	1.9	0.0	0.0	0.0	0.1

TOTAL EMISSIONS (TPY)	NOx	VOC	SO_2	$PM_{10 \& 2.5}$	CO	HAPs
	62.1	**47.6**	**0.0**	**1.6**	**85.6**	**13.6**

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Table - Emission Sources (PPH & TPY) - Proposed Emissions

AIR CONTAMINANT DATA				
EMISSION POINT		COMPONENT OR AIR CONTAMINANT NAME	AIR CONTAMINANT EMISSION RATE	
EMISSIONS UNIT ID	SOURCE / UNIT DESCRIPTION		LBS/HR	TONS / YR
WHC-1	Caterpillar G3512 TALE Compressor Engine (Controlled)	NOx	3.8	16.6
		VOC	0.9	3.9
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.1	0.4
		CO	4.2	18.6
		HCHO	0.5	2.3
WHC-2	Caterpillar G3516 TALE Compressor Engine (Controlled)	NOx	5.9	25.9
		VOC	1.2	5.4
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.1	0.6
		CO	6.9	30.0
		HCHO	0.6	2.8
WHG-1	Cummins KTA19GC Generator (Controlled)	NOx	1.7	7.3
		VOC	0.8	3.7
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.2
		CO	3.4	14.7
		HCHO	0.1	0.4
		NOx	1.7	7.3
		VOC	0.8	3.7

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Table - Emission Sources (PPH & TPY) - Proposed Emissions

AIR CONTAMINANT DATA

EMISSION POINT		COMPONENT OR AIR CONTAMINANT NAME	AIR CONTAMINANT EMISSION RATE	
EMISSIONS UNIT ID	SOURCE / UNIT DESCRIPTION		LBS/HR	TONS / YR
WHG-2	Cummins KTA19GC Generator (Controlled)	SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.2
		CO	3.4	14.7
		HCHO	0.1	0.4
WHGEN	Cummins Engine Catalyst Break-In Period (Uncontrolled)	NOx	10.7	1.1
		VOC	0.0	0.0
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.0
		CO	5.1	0.5
		HCHO	0.0	0.0
WHF-1	Fugitive Emissions	VOC (Includes HAPs)	2.1	9.2
		HAPs	0.0	0.2
WHD-1	Dehydration Still Column	VOC	1.7	7.3
		HAPs	0.8	3.5
WHTO-1	Thermal Oxidizer Emissions Summary	NOx	0.3	2.0
		VOC	1.7	7.5
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.1
		CO	0.7	5.5
		HAPs	0.8	3.5

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Table - Emission Sources (PPH & TPY) - Proposed Emissions

AIR CONTAMINANT DATA				
EMISSION POINT		COMPONENT OR AIR CONTAMINANT NAME	AIR CONTAMINANT EMISSION RATE	
EMISSIONS UNIT ID	SOURCE / UNIT DESCRIPTION		LBS/HR	TONS / YR
WHT-1	Condensate Storage Tank: 400 bbls	VOC (Includes HAPs)	0.2	1.0
		HAPs	0.0	0.1
WHT-2	Condensate Storage Tank: 400 bbls	VOC (Includes HAPs)	0.2	1.0
		HAPs	0.0	0.1
WHT-3	Condensate Storage Tank: 400 bbls	VOC (Includes HAPs)	0.2	1.0
		HAPs	0.0	0.1
TRUCKOC	Truck Loading: Oil/Condensate	VOC (Includes HAPs)	31.0	1.9
		HAPs	1.0	0.1
WHHTR	Reboiler & Heater Emissions Summary	NOx	0.4	1.9
		VOC (Includes HAPs)	0.0	0.1
		SO_2	0.0	0.0
		$PM_{10 \& 2.5}$	0.0	0.1
		CO	0.4	1.6
		HAPs	0.0	0.0
WHBD	Equipment Blowdown Emissions	VOC (Includes HAPs)	157.9	1.9
		HAPs	4.2	0.1

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Facility Emission Summary - GHG Summary

Emissions Summary Table - GHG Emissions - Uncontrolled

Source / Unit Desciption	Emission Unit ID	CO_2		CH_4		N_2O	
		CO_2eq Multiplier					
		1		21		310	
		PPH	TPY	PPH	TPY	PPH	TPY
Caterpillar G3512 TALE Compressor Engine (Uncontrolled)	WHC-1	813.0	3560.9	9.2	40.5	0.0	0.0
Caterpillar G3516 TALE Compressor Engine (Uncontrolled)	WHC-2	1266.8	5548.4	14.4	63.0	0.0	0.0
Cummins KTA19GC Generator (Controlled)	WHG-1	411.5	1802.5	0.8	3.6	0.0	0.0
Cummins KTA19GC Generator (Controlled)	WHG-2	411.5	1802.5	0.8	3.6	0.0	0.0
Fugitive Emissions	WHF-1	0.0	0.0	5.0	22.0	0.0	0.0
10 MMSCFD Glycol Dehydrator	WHD-1	0.0	0.0	17.7	77.3	0.0	0.0
Thermal Oxidizer Emissions	WHTO-1	210.9	923.6	0.1	0.4	0.1	0.5
Condensate Storage Tank: 400 bbls	WHT-1	0.1	0.3	0.5	2.4	0.0	0.0
Condensate Storage Tank: 400 bbls	WHT-2	0.1	0.3	0.5	2.4	0.0	0.0
Condensate Storage Tank: 400 bbls	WHT-3	0.1	0.3	0.5	2.4	0.0	0.0
Truck Loading: Oil/Condensate	TRUCKOC	0.0	0.0	0.0	0.0	0.0	0.0
Heaters	WHHTR	514.7	2254.4	0.0	0.0	0.0	0.0
Equipment Blowdown Emissions	WHBD	0.0	0.0	874.7	10.5	0.0	0.0

Total Emissions	CO_2		CH_4		N_2O	
	PPH	TPY	PPH	TPY	PPH	TPY
	3628.6	15893.2	924.4	228.2	0.1	0.6

CO_2eq (Total Emissions * Multipler)	CO_2		CH_4		N_2O	
	PPH	TPY	PPH	TPY	PPH	TPY
	3628.6	15893.2	19413.0	4791.5	41.0	179.4

CO_2eq (mtonnes)	CO_2		CH_4		N_2O	
	mtonnes/hr	mtonnes/yr	mtonnes/hr	mtonnes/yr	mtonnes/hr	mtonnes/yr
	3999.8	17519.1	21399.0	5281.7	45.1	197.7

Total CO_2eq(mtonnes/yr)	22998.5

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Compressor Engine and Generators

Emission Calculations - Proposed Allowable Compressor Engine & Generators

Criteria and Regulated Pollutants

Source / Unit Description	Emission Unit ID	Yearly Operating Hours	Rated HP	Heating Value (BTU/SCF)	Fuel Consumption (MMBTU/HF-HR)	Heat Rating (MMBTU/HR)	Fuel Usage (MMSCF/YR)	Emission Data g/hp-hr				AP-42 Factors lb/MMBtu		lb/hr						tpy					
								NO_x	VOC	CO	HCHO	SO_2	$PM_{10\&2.5}$	NOx	VOC*	SO_2	$PM_{10\&2.5}$	CO	HCHO	NOx	VOC*	SO_2	$PM_{10\&2.5}$	CO	HCHO
Caterpillar G3612 LALE Compressor Engine	WHC-1	8760	860	1020	9.50E-03	8.2	70.2	2.00	0.47	2.24	0.26	5.88E-04	9.91E-03	3.79	0.89	0.00	0.08	4.25	0.50	16.61	3.90	0.02	0.35	18.60	2.33
Caterpillar G3616 LALE Compressor Engine	WHC-2	8760	1340	1020	9.50E-03	12.7	109.3	2.00	0.42	2.32	0.22	5.88E-04	9.91E-03	5.91	1.24	0.01	0.13	6.85	0.65	25.88	5.43	0.03	0.55	30.02	2.85
Cummins KTA19GC Generator (Controlled)	WHG-1	8760	380	1020	9.50E-03	3.6	31.0	2.00	1.00	4.00	0.10	5.88E-04	9.91E-03	1.68	0.84	0.00	0.04	3.35	0.08	7.34	3.67	0.01	0.16	14.68	0.37
Cummins KTA19GC Generator (Controlled)	WHG-2	8760	380	1020	9.50E-03	3.6	31.0	2.00	1.00	4.00	0.10	5.88E-04	9.91E-03	1.68	0.84	0.00	0.04	3.35	0.08	7.34	3.67	0.01	0.16	14.68	0.37
Cummins Engine Catalyst Break-In Period (Uncontrolled)	WHGEN	200	380	1020	9.50E-03	3.6	0.7	12.80	0.00	6.10	0.00	5.88E-04	9.91E-03	10.72	0.00	0.00	0.04	5.11	0.00	1.07	0.00	0.00	0.00	0.51	0.00

Note 1: Caterpillar Engine Catalyst Break-in Period takes into account worst-case emission factors between the Caterpillar G3512 and G3516.

Total Emissions Per Pollutant (TPY)	NOx	VOC	SO_2	$PM_{10\&2.5}$	CO	HCHO
	58.24	16.68	0.07	1.22	78.49	5.91

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Compressor Engine and Generators

Emission Calculations - Proposed Allowable Compressor Engine & Generators

Speciated HAP Emissions (Excluding HCHO)

Source/Unit Description	Emission Unit ID	Yearly Operating Hours	Rated HP	Heating Value (BTU/SCF)	Fuel Consumption (MMBTU/HP-HR)	Heat Rating (MMBTU/HR)	Fuel Usage (MMSCF/YR)	AP-42 Factors lb/MMBtu						lb/hr						tpy					
								Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein	Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein	Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein
Caterpillar G7012 TALE Compressor Engine	WHC-1	8760	860	1020	9.50E-03	8.2	70.2	4.40E-04	4.08E-04	3.97E-05	1.84E-04	8.36E-03	5.14E-03	0.004	0.003	0.000	0.002	0.068	0.042	0.016	0.015	0.001	0.007	0.299	0.184
Caterpillar G3516 TALE Compressor Engine	WHC-2	8760	1340	1020	9.50E-03	12.7	109.3	4.40E-04	4.08E-04	3.97E-05	1.84E-04	8.36E-03	5.14E-03	0.006	0.005	0.001	0.002	0.106	0.065	0.025	0.023	0.002	0.010	0.466	0.287
Cummins KTA19GC Generator (Controlled)	WHG-1	8760	380	1020	9.50E-03	3.6	31.0	1.58E-03	5.58E-04	2.48E-05	1.95E-04	2.79E-03	2.63E-03	0.006	0.002	0.000	0.001	0.010	0.009	0.025	0.009	0.000	0.003	0.044	0.042
Cummins KTA19GC Generator (Controlled)	WHG-2	8760	380	1020	9.50E-03	3.6	31.0	1.58E-03	5.58E-04	2.48E-05	1.95E-04	2.79E-03	2.63E-03	0.006	0.002	0.000	0.001	0.010	0.009	0.025	0.009	0.000	0.003	0.044	0.042
Cummins Engine Catalyst Break-In Period (Uncontrolled)	WHGEN	200	380	1020	9.50E-03	3.6	0.7	1.58E-03	5.58E-04	2.48E-05	1.95E-04	2.79E-03	2.63E-03	0.006	0.002	0.000	0.001	0.010	0.009	0.001	0.000	0.000	0.000	0.001	0.001

Total Emissions Per Pollutant (TPY)	Benzene	Toluene	E-Benzene	Xylene	Acetaldehyd	Acrolein
	0.09	0.06	0.00	0.02	0.85	0.55

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Compressor Engine and Generators

Emission Calculations - Potential to Emit (PTE) Compressor Engine & Generators

Criteria and Regulated Pollutants

Source/Unit Description	Emission Unit ID	Yearly Operating Hours	Rated HP	Heating Value (BTU/SCF)	Fuel Consumption (MMBTU/HP-HR)	Heat Rating (MMBTU/HR)	Fuel Usage (MMSCF/YR)	Manufacturer Specifications / NSPS JJJJ Emission Limit g/hp-hr				AP-42 Factors lb/MMBtu		lb/hr						tpy					
								NO_X	VOC	CO	HCHO	SO_2	$PM_{10 \& 2.5}$	NO_X	VOC*	SO_2	$PM_{10 \& 2.5}$	CO	HCHO	NO_X	VOC	SO_2	$PM_{10 \& 2.5}$	CO	HCHO
Caterpillar G3512 TALE Compressor Engine	WHC-1	8760	860	1020	9.50E-03	8.2	70.2	2.00	0.47	2.24	0.28	0.000588	0.00991	3.79	0.89	0.00	0.08	4.25	0.53	16.61	3.90	0.02	0.35	18.60	2.33
Caterpillar G3516 TALE Compressor Engine	WHC-2	8760	1340	1020	9.50E-03	12.7	109.3	2.00	0.42	2.32	0.22	0.000588	0.00991	5.91	1.24	0.01	0.13	6.85	0.66	25.88	5.43	0.03	0.56	30.02	2.85
Cummins KTA19GC Generator [1] (Controlled NSPS JJJJ)	WHG-1	8760	360	1020	9.50E-03	3.6	31.0	2.00	1.00	4.00	0.10	0.000588	0.00991	1.68	0.84	0.00	0.04	3.35	0.08	7.34	3.67	0.01	0.16	14.68	0.37
Cummins KTA19GC Generator [1] (Controlled NSPS JJJJ)	WHG-2	8760	360	1020	9.50E-03	3.6	31.0	2.00	1.00	4.00	0.10	0.000588	0.00991	1.68	0.84	0.00	0.04	3.35	0.08	7.34	3.67	0.01	0.16	14.68	0.37
Cummins Engine Catalyst Break-In [2] (Uncontrolled)	WHGEN	200	360	1020	9.50E-03	3.6	0.7	12.80	0.00	6.10	0.00	0.000588	0.00991	10.72	0.00	0.00	0.04	5.11	0.00	1.07	0.00	0.00	0.00	0.51	0.00

Note 1: WHG-1 and WHG-2 are NSPS JJJJ Engines. Federal Enforceability is allowed to reduce PTE to NSPS JJJJ emissions limits.

Note 2: Engine Catalyst Break-In Periods are permitted 200 hours in addition to annual operating hours in the case that a catalyst break-in is not needed. Additionally, Caterpillar break-in hours are overestimated as PTE for WHC-1 and WHC-2 are uncontrolled.

Total Emissions Per Pollutant (TPY)	NO_X	VOC	SO2	PM10 & 2.5	CO	HCHO
	58.24	16.68	0.07	1.22	78.19	5.91

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Compressor Engine and Generators

Emission Calculations - Potential to Emit (PTE) Compressor Engine & Generators

Speciated HAP Emissions (Excluding HCHO)

Source / Unit Description	Emission Unit ID	Yearly Operating Hours	Rated HP	Heating Value (BTU/SCF)	Fuel Consumption (MMBTU/HP-HR)	Heat Rating (MMBTU/HR)	Fuel Usage (MMSCF/YR)	AP-42 Factors lb/MMBtu						lb/hr						tpy					
								Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein	Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein	Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein
Caterpillar G3512 TALE Compressor Engine	WHC-1	8760	860	1020	9.50E-03	8.2	70.2	4.40E-04	4.08E-04	3.97E-05	1.84E-04	8.36E-03	5.14E-03	0.004	0.003	0.000	0.002	0.068	0.042	0.016	0.015	0.001	0.007	0.299	0.184
Caterpillar G3516 TALE Compressor Engine	WHC-2	8760	1340	1020	9.50E-03	12.7	109.3	4.40E-04	4.08E-04	3.97E-05	1.84E-04	8.36E-03	5.14E-03	0.006	0.005	0.001	0.002	0.106	0.065	0.025	0.023	0.002	0.010	0.466	0.287
Cummins KTA19GC Generator (Controlled NSPS JJJJ)	WHG-1	8760	380	1020	9.50E-03	3.6	31.0	1.58E-03	5.58E-04	2.48E-05	1.95E-04	2.79E-03	2.63E-03	0.006	0.002	0.000	0.001	0.010	0.009	0.025	0.009	0.000	0.003	0.044	0.042
Cummins KTA19GC Generator (Controlled NSPS JJJJ)	WHG-2	8760	380	1020	9.50E-03	3.6	31.0	1.58E-03	5.58E-04	2.48E-05	1.95E-04	2.79E-03	2.63E-03	0.006	0.002	0.000	0.001	0.010	0.009	0.025	0.009	0.000	0.003	0.044	0.042
Cummins Engine Catalyst Break-in (Uncontrolled)	WHGEN	200	380	1020	9.50E-03	3.6	0.7	1.58E-03	5.58E-04	2.48E-05	1.95E-04	2.79E-03	2.63E-03	0.006	0.002	0.000	0.001	0.010	0.009	0.001	0.000	0.000	0.000	0.001	0.001

Total Emissions Per Pollutant (TPY)	Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein
	0.09	0.06	0.00	0.02	0.85	0.55

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Compressor Engine and Generators

Emission Calculations - Uncontrolled Compressor Engine & Generators

Criteria and Regulated Pollutants

Source / Unit Description	Emission Unit ID	Yearly Operating Hours	Rated HP	Heating Value (BTU/SCF)	Fuel Consumption (MMBTU/HP-HR)	Heat Rating (MMBTU/HR)	Fuel Usage (MMSCF/YR)	Manufacturer Specifications g/hp-hr				AP-42 Factors lb/MMBtu		lb/hr						tpy					
								NO_x	VOC	CO	HCHO	SO_2	$PM_{10 \& 2.5}$	NOx	VOC*	SO_2	$PM_{10 \& 2.5}$	CO	HCHO	NOx	VOC	SO_2	$PM_{10 \& 2.5}$	CO	HCHO
Caterpillar G3512 TALE Compressor Engine (Uncontrolled)	WHC-1	8760	860	1020	9.50E-03	8.2	70.2	2.00	0.47	2.24	0.28	0.000568	0.00991	3.79	0.89	0.00	0.08	4.25	0.53	16.61	3.90	0.02	0.35	18.60	2.33
Caterpillar G3516 TALE Compressor Engine (Uncontrolled)	WHC-2	8760	1340	1020	9.50E-03	12.7	109.3	2.00	0.42	2.32	0.22	0.000588	0.00991	5.91	1.24	0.01	0.13	6.85	0.65	25.88	5.43	0.03	0.55	30.02	2.85
Cummins KTA19GC Generator (Uncontrolled)	WHG-1	8760	380	1020	9.50E-03	3.6	31.0	12.80	1.00	6.10	0.10	0.000588	0.00991	10.72	0.84	0.00	0.04	5.11	0.08	46.97	3.67	0.01	0.16	22.38	0.37
Cummins KTA19GC Generator (Uncontrolled)	WHG-2	8760	380	1020	9.50E-03	3.6	31.0	12.80	1.00	6.10	0.10	0.000588	0.00991	10.72	0.84	0.00	0.04	5.11	0.08	46.97	3.67	0.01	0.16	22.38	0.37

Total Emissions Per Pollutant (TPY)	NOx	VOC	SO2	PM10 & 2.5	CO	HCHO
	136.42	16.88	0.07	1.22	93.39	5.91

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Compressor Engine and Generators

Emission Calculations - Uncontrolled Compressor Engine & Generators

Speciated HAP Emissions (Excluding HCHO)

Source / Unit Description	Emission Unit ID	Yearly Operating Hours	Rated HP	Heating Value (BTU/SCF)	Fuel Consumption (MMBTU/HP-HR)	Heat Rating (MMBTU/HR)	Fuel Usage (MMSCF/YR)	AP-42 Factors lb/MMBtu						lb/hr						tpy					
								Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein	Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein	Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein
Caterpillar G3512 TALE Compressor Engine (Uncontrolled)	WHC-1	8760	860	1020	9.50E-03	8.2	70.2	4.40E-04	4.08E-04	3.97E-05	1.84E-04	8.36E-03	5.14E-03	0.004	0.003	0.000	0.002	0.068	0.042	0.018	0.015	0.001	0.007	0.299	0.184
Caterpillar G3516 TALE Compressor Engine (Uncontrolled)	WHC-2	8760	1340	1020	9.50E-03	12.7	109.3	4.40E-04	4.08E-04	3.97E-05	1.84E-04	8.36E-03	5.14E-03	0.006	0.005	0.001	0.002	0.106	0.065	0.025	0.023	0.002	0.010	0.466	0.287
Cummins KTA19GC Generator [1] (Controlled NSPS JJJJ)	WHG-1	8760	380	1020	9.50E-03	3.6	31.0	1.58E-03	5.58E-04	2.48E-05	1.95E-04	2.79E-03	2.63E-03	0.006	0.002	0.000	0.001	0.010	0.009	0.025	0.009	0.000	0.003	0.044	0.042
Cummins KTA19GC Generator [1] (Controlled NSPS JJJJ)	WHG-2	8760	380	1020	9.50E-03	3.6	31.0	1.58E-03	5.58E-04	2.48E-05	1.95E-04	2.79E-03	2.63E-03	0.006	0.002	0.000	0.001	0.010	0.009	0.025	0.009	0.000	0.003	0.044	0.042

Total Emissions Per Pollutant (TPY)	Benzene	Toluene	E-Benzene	Xylene	Acetaldehyde	Acrolein
	0.09	0.05	0.00	0.02	0.85	0.55

XTO Energy, Inc.
Wild Horse Bench Compressor Station - Synthetic Minor NSR
Compressor Engine and Generators

Emission Calculations - Uncontrolled Compressor Engine & Generators

GHG Emissions

Source / Unit Description	Emission Unit ID	Yearly Operating Hours	Rated HP	Heating Value (BTU/SCF)	Fuel Consumption (MMBTU/HP-HR)	Heat Rating (MMBTU/HR)	Fuel Usage (MMSCF/YR)	AP-42 Factors lb/MMBtu			lb/hr			tpy		
								CO_2	CH_4	N_2O	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Caterpillar G3512 TALE Compressor Engine (Uncontrolled)	WHC-1	8760	860	1020.0	8.59E-03	7.39	63.47	110.00	1.25	0.00	812.99	9.24	0.00	3560.91	40.46	0.00
Caterpillar G3516 TALE Compressor Engine (Uncontrolled)	WHC-2	8760	1340	1020.0	8.59E-03	11.52	98.90	110.00	1.25	0.00	1266.76	14.39	0.00	5548.39	63.05	0.00
Cummins KTA19GC Generator (Uncontrolled)	WHG-1	8760	380	1020.0	9.50E-03	3.61	31.00	114.00	0.23	0.00	411.54	0.83	0.00	1802.55	3.64	0.00
Cummins KTA19GC Generator (Uncontrolled)	WHG-2	8760	380	1020.0	9.50E-03	3.61	31.00	114.00	0.23	0.00	411.54	0.83	0.00	1802.55	3.64	0.00

GHG Total Emissions Per Pollutant (TPY)	CO_2	CH_4	N_2O
	12714.39	110.79	0.00

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Oil/Condensate Storage Tanks

Emissions Calculations - Oil/Condensate Tanks (WHT-1, 2, 3)

Average BOPD	Number of Oil Tanks	Emissions Controlled (Yes/No)	Control Type (Flare, VRU, etc)
60	3	No	N/A

Total Uncontrolled Emissions - All Tanks Combined			
Uncontrolled VOC Emissions		Uncontrolled HAP Emissions	
0.68	lb/hr	0.07	lb/hr
2.95	tpy	0.30	tpy

Total Uncontrolled Emissions - Emission Rates Per Tank			
Uncontrolled VOC Emissions		Uncontrolled HAP Emissions	
0.23	lb/hr	0.02	lb/hr
0.98	tpy	0.10	tpy

** Emissions estimated using E&P Tank V2.0 and the liquids analysis for the Tap 5 CS.*

[1] A safety factor of 50% was added to total tank emissions.

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Oil/Condensate Storage Tanks - GHG Emissions

Emissions Calculations - Oil/Condensate Tanks (WHT-1, 2, 3) - GHG Emissions

Average BOPD	Number of Oil Tanks	Emissions Controlled (Yes/No)	Control Type (Flare, VRU, etc)
60	3	No	N/A

GHG Emissions Summary			
Uncontrolled Methane Emissions		Uncontrolled CO_2 Emissions	
0.55	lb/hr	0.06	lb/hr
2.39	tpy	0.26	tpy

** Emissions estimated using E&P Tank V2.0 and the liquids analysis for the Tap 5 CS.*

[1] A safety factor of 50% was added to total tank emissions.

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Truck Loading Losses - Oil/Condensate

Truck Loading Losses Calculations (Emission Unit ID: TRUCKOC)

Average BOPD	**60**

LL= 12.46 * SPM/T * (1-EFF/100)

Saturation Factor (S) =	0.6
True Vapor Pressure of liquid loaded (P) =	5.7
Temperature of bulk liquid loaded in Rankin (T) =	520.0
Molecular Weight (M)[1] =	50.00
Control Efficiency * Collection Efficiency (EFF)=	0
LL (lb Total HC / bbl Throughput) =	0.1721
LL (lb VOC / bbl Throughput) =	**0.1721**
Estimated Throughput (bbls/Year) =	21900
Truck Loading Rate (bbls/hour) =	180
Estimated # of Loads (Approximately 1 hr/Load) =	122

	lb/hr	TPY
Total VOC Emissions	30.98	1.9
Total HAP Emissions	1.04	0.06

NOTE 1: Molecular Weight corresponds to AP-42 Table 7.1-2 Crude Oil RVP 5 @ 100 °F

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Total Thermal Oxidizer Emissions - All Sources Combined

Thermal Oxidizer Emission Summary Table (Emission Unit ID: WHTO-1)

Source Description	Emission Unit ID	NOx		Total VOC (Includes Total HAPs)		SO_2		$PM_{10 \& 2.5}$		CO		Total HAPs	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Thermal Oxidizer Emissions	WHTO-1	0.30	1.99	1.71	7.50	0.000	0.000	0.01	0.06	0.65	5.48	0.81	3.55

** Thermal Oxidizer Summary includes pilot gas, the regeneration emissions combusted, and the dehydration still column emissions.*

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Dehy Still Column - Emission Summary

Dehy Still Column Emissions (Emission Unit ID: WHD-1)

Emission Component	Uncontrolled Still Column		Controlled Still Column	
	lb/hr	TPY	lb/hr	TPY
Methane	1.0869	4.761	0.054	0.238
Ethane	1.6252	7.118	0.081	0.356
Propane	2.4431	10.701	0.122	0.535
H_2S	0.0000	0.000	0.000	0.000
Iso-Butane	1.1630	5.094	0.058	0.255
N-Butane	2.2281	9.759	0.111	0.488
Iso-Pentane	1.0775	4.719	0.054	0.236
N-Pentane	1.1695	5.122	0.058	0.256
Methylcyclopentane	0.0000	0.000	0.000	0.000
n-Hexane	0.9253	4.053	0.046	0.203
Hexane +	1.0450	4.577	0.052	0.229
2,2,4-Trimethylpentane	0.0512	0.224	0.003	0.011
Methycyclohexane	3.1291	13.705	0.156	0.685
Benzene	6.2552	27.398	0.313	1.370
Cyclohexane	2.4114	10.562	0.121	0.528
Heptanes	1.3795	6.042	0.069	0.302
Toluene	7.3058	31.999	0.365	1.600
Ethylbenzene	0.1626	0.712	0.008	0.036
Xylenes	1.4704	6.440	0.074	0.322
Octanes+	0.9996	4.378	0.050	0.219

TOTAL EMISSION SUMMARY	UNCONTROLLED		CONTROLLED	
Emission Component	**lb/hr**	**TPY**	**lb/hr**	**TPY**
Methane	**1.09**	**4.76**	**0.05**	**0.24**
NMNEVOC (Includes TOTAL HAPs)	**33.22**	**145.49**	**1.66**	**7.27**
NMNEVOC MINUS TABLE 1 HAPS	**17.05**	**74.66**	**0.85**	**3.73**
40CFR63 TABLE 1 HAPs	**16.17**	**70.83**	**0.81**	**3.54**

*Uncontrolled Emissions Based off of Gri-GlyCalc Output
*Controlled Emissions Were Calculated by the Following: Uncontrolled Emissions * (1-TO Eff) * (1-Condenser Eff)
*Thermal Oxidizer Reduction = 95%
*Still Column Emissions represented above are included in the Thermal Oxidizer Summary Emissions
*Table 1 is the HAPs referenced in 40 CFR 63 Table 1

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Dehy Flash Tank - Emission Summary

Dehy Flash Tank Emissions (Emission Unit ID: WHD-1)

Emission Component	Uncontrolled Flash Tank		Controlled Flash Tank	
	lb/hr	TPY	lb/hr	TPY
Methane	16.5705	72.579	0.000	0.000
Ethane	6.1599	26.980	0.000	0.000
Propane	4.2483	18.608	0.000	0.000
H_2S	0.0000	0.000	0.000	0.000
Iso-Butane	1.2339	5.404	0.000	0.000
N-Butane	1.7437	7.637	0.000	0.000
Iso-Pentane	0.6908	3.026	0.000	0.000
N-Pentane	0.5849	2.562	0.000	0.000
Methylcyclopentane	0.0000	0.000	0.000	0.000
n-Hexane	0.2342	1.026	0.000	0.000
Hexane +	0.3582	1.569	0.000	0.000
2,2,4-Trimethylpentane	0.0119	0.052	0.000	0.000
Methycyclohexane	0.1380	0.604	0.000	0.000
Benzene	0.0481	0.211	0.000	0.000
Cyclohexane	0.1446	0.633	0.000	0.000
Heptanes	0.1544	0.676	0.000	0.000
Toluene	0.0330	0.145	0.000	0.000
Ethylbenzene	0.0004	0.002	0.000	0.000
Xylenes	0.0024	0.011	0.000	0.000
Octanes+	0.0100	0.044	0.000	0.000

TOTAL EMISSION SUMMARY	UNCONTROLLED		CONTROLLED	
Emission Component	**lb/hr**	**TPY**	**lb/hr**	**TPY**
Methane	**16.57**	**72.58**	**0.00**	**0.00**
NMNEVOC (Includes TOTAL HAPs)	**9.64**	**42.21**	**0.00**	**0.00**
NMNEVOC MINUS BTEX	**9.55**	**41.84**	**0.00**	**0.00**
NMNEVOC MINUS TABLE 1 HAPS	**0.08**	**0.37**	**0.00**	**0.00**

*Uncontrolled Emissions Based off of Gri-GlyCalc Output
*Controlled Emissions Were Calculated by the Following: Uncontrolled Emissions * (1- Reduction Eff)
* Closed Loop System - Reduction = 100%
* Flash Tank Emissions are recycled to the inlet separator.
* Table 1 HAPs include n-Hexance, 224 Trimethylpentane, and BTEX

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Thermal Oxidizer - Products of Combustion

Thermal Oxidizer - Products of Combustion Calculations (Emission Unit ID: WHTO-1)

			AP-42 Emissions Factors lb/MMBTU			lb/hr			tpy		
Emission Unit ID	Operating Hours	MMBTU/Hr[1]	NOx	$PM_{10\ \&\ 2.5}$	CO	NOx	$PM_{10\ \&\ 2.5}$	CO	NOx	$PM_{10\ \&\ 2.5}$	CO
WHTO-1	8760	1.80	0.0980	0.0075	0.0824	0.177	0.014	0.149	0.774	0.059	0.651

NOTE 1: MMBTU/Hr includes dehydration regenerator combustion emissions and includes a 100% safety factor.

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Thermal Oxidizer - Products of Combustion

Thermal Oxidizer - Products of Combustion Calculations (Emission Unit ID: WHTO-1) - GHG Emissions

			AP-42 Emissions Factors lb/MMBTU			lb/hr			tpy		
Emission Unit ID	Operating Hours	MMBTU/Hr[1]	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
WHTO-1	8760	1.80	116.890	0.046	0.068	210.870	0.083	0.123	923.612	0.363	0.537

NOTE 1: MMBTU / Hr includes dehydration regenerator combustion emissions and includes a 100% safety factor.

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Thermal Oxidizer - Pilot Gas

Thermal Oxidizer Pilot Gas Emissions (Emission Unit ID: WHTO-1)

Pilot Fuel	19200	SCF/Day
Pilot Fuel	800	SCF/Hour (100% Safety Factor)
Duration	8760	Hours/Year
Vented	No	(Yes/No)
Flared	Yes	(Yes/No)
Heating Value	1144	BTU/SCF

Component	Total Quantity Vented from the TO (lb/day)	Total Quantity Emitted from the TO (lb/day)	Hourly Emission Rate (lb/hr)	Annualized Emission Rate (TPY)
Carbon Monoxide	12.075	12.075	0.503	4.830
NOx	3.032	3.032	0.126	1.213
Total VOCs	0.000	1.262	0.053	0.230
Total HAPs	0.000	0.034	0.001	0.006
Sulfur Dioxide	0.000	0.000	0.000	0.000
Methane	0.000	1.068	0.045	0.195

Calculations Based on Ideal Gas Law

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Reboiler & Heater Burner Calculations

Reboiler & Heater Calculations (Emission Unit ID: WHHTR)

Criteria and Regulated Pollutants

							AP-42 Factors lb/MMSCF					lb/hr					tpy				
Source Description	Emission Unit ID	Fuel Gas (BTU/SCF)	Operating Hours	Burner Rating (MMBTU/HR)	Fuel Usage (MSCF/HR)	Fuel Usage (MMSCF/YR)	NOx	VOC	SO_2	$PM_{10 \& 2.5}$	CO	NOx	VOC	SO_2	$PM_{10 \& 2.5}$	CO	NOx	VOC	SO_2	$PM_{10 \& 2.5}$	CO
Condensate Tank Emissions	WHT-1	1020	8760	0.25	0.245	2.147	100	5.5	0.6	7.6	84	0.031	0.002	0.000	0.002	0.026	0.134	0.007	0.001	0.010	0.113
Condensate Tank Emissions	WHT-2	1020	8760	0.25	0.245	2.147	100	5.5	0.6	7.6	84	0.031	0.002	0.000	0.002	0.026	0.134	0.007	0.001	0.010	0.113
Condensate Tank Emissions	WHT-3	1020	8760	0.25	0.245	2.147	100	5.5	0.6	7.6	84	0.031	0.002	0.000	0.002	0.026	0.134	0.007	0.001	0.010	0.113
Thermal Oxidizer Heater / Burner	WHD-1	1020	8760	2.00	1.961	17.176	100	5.5	0.6	7.6	84	0.245	0.013	0.001	0.019	0.206	1.074	0.059	0.006	0.082	0.902
Separator Heater	WHS-1	1020	8760	0.25	0.245	2.147	100	5.5	0.6	7.6	84	0.031	0.002	0.000	0.002	0.026	0.134	0.007	0.001	0.010	0.113
Dehydrator Reboiler	WHRB-1	1020	8760	0.50	0.490	4.294	100	5.5	0.6	7.6	84	0.061	0.003	0.000	0.005	0.051	0.268	0.015	0.002	0.020	0.225

*Source: AP-42 Table 1.4-1, 1.4-2, & 1.4-3

*Burners - 80% Efficiency

Total (tpy)	NOx	VOC	SO_2	$PM_{10 \& 2.5}$	CO
	1.88	0.10	0.01	0.14	1.58

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Reboiler & Heater Burner Calculations

Reboiler & Heater Calculations (Emission Unit ID: WHHTR)

Hazardous Air Pollutants (HAPs)

							AP-42 Factors lb/MMSCF					lb/hr					tpy				
Source Description	Emission Unit ID	Fuel Gas (BTU/SCF)	Operating Hours	Burner Rating (MMBTU/HR)	Fuel Usage (MSCF/HR)	Fuel Usage (MMSCF/YR)	Benzene	Toluene	N-Hexane	HCHO	Dichlorobenz.	Benzene	Toluene	N-Hexane	HCHO	Dichlorobenz.	Benzene	Toluene	N-Hexane	HCHO	Dichlorobenz.
Condensate Tank Emissions	WHT-1	1020	8760	0.25	0.245	2.147	2.10E-03	3.40E-03	1.80E+00	7.50E-02	1.20E-03	0.000001	0.000001	0.000551	0.000023	0.000000	0.000003	0.000005	0.002415	0.000101	0.000002
Condensate Tank Emissions	WHT-2	1020	8760	0.25	0.245	2.147	2.10E-03	3.40E-03	1.80E+00	7.50E-02	1.20E-03	0.000001	0.000001	0.000551	0.000023	0.000000	0.000003	0.000005	0.002415	0.000101	0.000002
Condensate Tank Emissions	WHT-3	1020	8760	0.25	0.245	2.147	2.10E-03	3.40E-03	1.80E+00	7.50E-02	1.20E-03	0.000001	0.000001	0.000551	0.000023	0.000000	0.000003	0.000005	0.002415	0.000101	0.000002
Thermal Oxidizer Heater / Burner	WHO-1	1020	8760	2.00	1.961	17.176	2.10E-03	3.40E-03	1.80E+00	7.50E-02	1.20E-03	0.000005	0.000005	0.004412	0.000184	0.000003	0.000023	0.000037	0.019324	0.000805	0.000013
Separator Heater	WHS-1	1020	8760	0.25	0.245	2.147	2.10E-03	3.40E-03	1.80E+00	7.50E-02	1.20E-03	0.000001	0.000001	0.000551	0.000023	0.000000	0.000003	0.000005	0.002415	0.000101	0.000002
Dehydrator Reboiler	WHRB-1	1020	8760	0.50	0.490	4.294	2.10E-03	3.40E-03	1.80E+00	7.50E-02	1.20E-03	0.000001	0.000002	0.001103	0.000046	0.000001	0.000006	0.000009	0.004831	0.000201	0.000003

***Source: AP-42 Table 1.4-1, 1.4-2, & 1.4-3**

***Burners - 80% Efficiency**

Total Individual HAPS (tpy)	Benzene	Toluene	Hexane	HCHO	Dichlorobenz.
	0.00	0.00	0.03	0.00	0.00

Total Combined HAPS (tpy)	0.04

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Reboiler & Heater Burner Calculations

Reboiler & Heater Calculations (Emission Unit ID: WHHTR)

Green House Gases (GHG)

							AP-42 Factors lb/MMSCF			lb/hr			tpy		
Source Description	Emission Unit ID	Fuel Gas (BTU/SCF)	Operating Hours	Burner Rating (MMBTU/HR)	Fuel Usage (MSCF/HR)	Fuel Usage (MMSCF/YR)	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Condensate Tank Emissions	WHT-1	1020	8760	0.25	0.25	2.15	1.20E+05	2.3	2.2	36.76	0.00	0.00	161.03	0.00	0.00
Condensate Tank Emissions	WHT-2	1020	8760	0.25	0.25	2.15	1.20E+05	2.3	2.2	36.76	0.00	0.00	161.03	0.00	0.00
Condensate Tank Emissions	WHT-3	1020	8760	0.25	0.25	2.15	1.20E+05	2.3	2.2	36.76	0.00	0.00	161.03	0.00	0.00
Thermal Oxidizer Heater / Burner	WHD-1	1020	8760	2.00	1.96	17.18	1.20E+05	2.3	2.2	294.12	0.01	0.01	1288.24	0.02	0.02
Separator Heater	WHS-1	1020	8760	0.25	0.25	2.15	1.20E+05	2.3	2.2	36.76	0.00	0.00	161.03	0.00	0.00
Dehydrator Reboiler	WHRB-1	1020	8760	0.50	0.49	4.29	1.20E+05	2.3	2.2	73.53	0.00	0.00	322.06	0.01	0.01

Totals	lb/hr			tpy		
	CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
	514.71	**0.01**	**0.01**	**2254.41**	**0.04**	**0.04**

***Source: AP-42 Table 1.4-1, 1.4-2, & 1.4-3**

***Burners - 80% Efficiency**

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Fugitive Emissions

Fugitive Emission Calculations (Emission Unit ID: WHF-1)

Component Type	Service	Estimated Components Count	Hours	Factors	Total VOC Weight % [2]	Emissions	
						lb/year	tons/year
Valves	Gas/Vapor	450	8760	0.00992000	20.00%	7820.9280	3.9105
	Light Oil	100	8760	0.00550000	100.00%	4818.0000	2.4090
	Heavy Oil	0	8760	0.00001900	100.00%	0.0000	0.0000
	Water/Light Oil	50	8760	0.00021600	100.00%	94.6080	0.0473
Pumps	Gas/Vapor	6	8760	0.00529000	20.00%	55.6085	0.0278
	Light Oil	3	8760	0.02866000	100.00%	753.1848	0.3766
	Heavy Oil	0	8760	0.00113000	100.00%	0.0000	0.0000
	Water/Light Oil	3	8760	0.00005300	100.00%	1.3928	0.0007
Flanges	Gas/Vapor	1200	8760	0.00086000	20.00%	1808.0640	0.9040
	Light Oil	75	8760	0.00024300	100.00%	159.6510	0.0798
	Heavy Oil	0	8760	0.00000086	100.00%	0.0000	0.0000
	Water/Light Oil	50	8760	0.00000620	100.00%	2.7156	0.0014
Open-ended Lines	Gas/Vapor	15	8760	0.00441000	20.00%	115.8948	0.0579
	Light Oil	0	8760	0.00309000	100.00%	0.0000	0.0000
	Heavy Oil	0	8760	0.00030900	100.00%	0.0000	0.0000
	Water/Light Oil	5	8760	0.00055000	100.00%	24.0900	0.0120
Connectors	Gas/Vapor	250	8760	0.00044000	20.00%	192.7200	0.0964
	Light Oil	0	8760	0.00046300	100.00%	0.0000	0.0000
	Heavy Oil	0	8760	0.00001700	100.00%	0.0000	0.0000
	Water/Light Oil	50	8760	0.00024300	100.00%	106.4340	0.0532
Other[1]:	Gas/Vapor	30	8760	0.01940000	20.00%	1019.6640	0.5098
	Light Oil	0	8760	0.01650000	100.00%	0.0000	0.0000
	Heavy Oil	0	8760	0.00006800	100.00%	0.0000	0.0000
	Water/Light Oil	5	8760	0.03090000	100.00%	1353.4200	0.6767

	lb/hr	lb/year	TPY
Total VOC Emissions	2.09	18326.38	9.16
HAPs	0.04	353.69	0.18

NOTE 1: Compressors, relief valves, process drains, diaphragms, dump arms, hatches, instruments, meters, polished rods, and vents

NOTE 2: A 20% and 100% Total VOC Weight % is assumed to be conservative.

XTO Energy, Inc.
Wild Horse Bench Compressor Station
Fugitive Emissions - GHG Emissions

Fugitive Emission Calculations (Emission Unit ID: WHF-1) GHG Emissions

Component Type	Service	Estimated Components Count	Hours	Factors	Total Methane Weight %	Emissions	
						lb/year	tons/year
Valves	Gas/Vapor	450	8760	0.00992000	74.06%	28961.1558	14.4806
	Light Oil	100	8760	0.00550000	42.93%	2068.3918	1.0342
	Heavy Oil	0	8760	0.00001900	42.93%	0.0000	0.0000
	Water/Light Oil	50	8760	0.00021600	42.93%	40.6157	0.0203
Pumps	Gas/Vapor	6	8760	0.00529000	74.06%	205.9200	0.1030
	Light Oil	3	8760	0.02866000	42.93%	323.3460	0.1617
	Heavy Oil	0	8760	0.00113000	42.93%	0.0000	0.0000
	Water/Light Oil	3	8760	0.00005300	42.93%	0.5980	0.0003
Flanges	Gas/Vapor	1200	8760	0.00086000	74.06%	6695.3210	3.3477
	Light Oil	75	8760	0.00024300	42.93%	68.5390	0.0343
	Heavy Oil	0	8760	0.00000086	42.93%	0.0000	0.0000
	Water/Light Oil	50	8760	0.00000620	42.93%	1.1658	0.0006
Open-ended Lines	Gas/Vapor	15	8760	0.00441000	74.06%	429.1623	0.2146
	Light Oil	0	8760	0.00309000	42.93%	0.0000	0.0000
	Heavy Oil	0	8760	0.00030900	42.93%	0.0000	0.0000
	Water/Light Oil	5	8760	0.00055000	42.93%	10.3420	0.0052
Connectors	Gas/Vapor	250	8760	0.00044000	74.06%	713.6486	0.3568
	Light Oil	0	8760	0.00046300	42.93%	0.0000	0.0000
	Heavy Oil	0	8760	0.00001700	42.93%	0.0000	0.0000
	Water/Light Oil	50	8760	0.00024300	42.93%	45.6927	0.0228
Other[1]:	Gas/Vapor	30	8760	0.01940000	74.06%	3775.8496	1.8879
	Light Oil	0	8760	0.01650000	42.93%	0.0000	0.0000
	Heavy Oil	0	8760	0.00006800	42.93%	0.0000	0.0000
	Water/Light Oil	5	8760	0.03090000	42.93%	581.0301	0.2905

Total Methane Emissions	lb/hr	lb/year	TPY
	5.01	43920.78	21.96

NOTE 1: Compressors, relief valves, process drains, diaphragms, dump arms, hatches, instruments, meters, polished rods, and vents

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Equipment Blowdown Emissions

Equipment Blowdown- Emission Calculations (Emission Unit ID: WHBD)

Equipment Information		
Volume of the Blowdowns	2000.00	ft^3
Volume of Gas Under Pressure[1]	26489.80	Standard ft^3
Pressure	180	psig
Pressure	194.7	psia
Atmospheric Temperature	80	°F
Atmospheric Temperature	540	°R

Gas Composition Information		
Atmospheric Pressure	14.7	Psia
Universal Gas Constant (R)	10.73	ft^3 psi/°R lb-mol
Molecular Weight	18.95	lb/lb-mole
Compressibility Factor	0.9971	Z
Methane Weight Percent	74.06%	Percent
VOC Weight Percent	13.37%	Percent
HAP Weight Percent	0.36%	Percent
Ending Gas Density (ρ_2)[2]	0.0482	lb/ft^3
Starting Gas Density (ρ_1)[3]	0.6388	lb/ft^3
Density (ρ_{TOTAL})[4]	0.5906	lb/ft^3

Emission Calculations		
Density (ρ_{TOTAL})	0.5906	lb/ft^3
Estimated Max Amount of Gas Vented[5]	1181.11	lbs/Event
Estimated Number of Blowdowns	24	Events/Year
Estimated Total Amount of Gas Released	28346.54	lbs/Year
Estimated Total Amount of Gas Released	14.17	Tons/Year

Estimated Total Emissions		
Total Methane Emissions	20993.63	lbs/Year
	874.73	lbs/event[1]
	10.50	Tons/Year
Total VOC Emissions (Includes Total HAPs)	3790.17	lbs/Year
	157.92	lbs/event[1]
	1.90	Tons/Year
Total HAPs Emissions	101.49	lbs/Year
	4.23	lbs/event[1]
	0.05	Tons/Year

Calculation Methodology		
[1]Ideal Gas Law - Constant Temp: $(V_1 * P_1) / P_2$	[2]$\rho_1=(P_1*MW)/R*T_1*Z$	[3]$\rho_2=(P_2*MW)/R*T_2*Z$
[4]$\rho TOTAL = \rho 1 - \rho 2$	[5]Estimated Max Gas Vented (lb/Event) = $\rho TOTAL * V_1$	

NOTE 1: lb/event rate is based off of total lbs released in an event not instantaneous flow rate

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Fuel Gas Analysis (Wild Horse Bench Pre Dehy - 06/2013)

Conversion of Mole Percent to Weight Percent

Component	Mole %	MW	Mole % *MW	Weight %
Carbon Dioxide	0.4917	44.010	0.216	0.011
Nitrogen	0.5428	28.013	0.152	0.008
Hydrogen Sulfide	0.0000	34.019	0.000	0.000
Helium	0.0000	4.000	0.000	0.000
Methane	87.5025	16.043	14.038	0.741
Ethane	6.6973	30.070	2.014	0.106
Propane	2.7360	44.097	1.206	0.064
Iso-Butane	0.5793	58.123	0.337	0.018
N-Butane	0.7086	58.123	0.412	0.022
Iso-Pentane	0.2628	72.150	0.190	0.010
N-Pentane	0.2028	72.150	0.146	0.008
Methylcyclopentane	0.0000	86.000	0.000	0.000
n-Hexane	0.0677	86.059	0.058	0.003
Hexane +	0.1078	86.177	0.093	0.005
2,2,4-Trimethylpentane	0.0027	114.231	0.003	0.000
Methycyclohexane	0.0199	96.000	0.019	0.001
Benzene	0.0084	78.114	0.007	0.000
Cyclohexane	0.0263	84.506	0.022	0.001
Heptanes	0.0382	94.829	0.036	0.002
Toluene	0.0033	92.141	0.003	0.000
Ethylbenzene	0.0000	106.167	0.000	0.000
Xylenes	0.0000	106.167	0.000	0.000
Octanes+	0.0019	106.289	0.002	0.000
Total	100.00	-	18.95	1.000

Molecular Weight	18.95	
Relative Density	0.666	
Compressibility Factor	0.9971	
Gross WET BTU	1144.30	
Methane	14.0380	74.061%
NMHC	4.5483	23.995%
VOCs (NMNEHC)	2.5344	13.371%
HAPs	0.0679	0.36%
H2S Mole Fraction	0.0000	0.000%
Total HC	18.5863	98.056%
THC:VOC Ratio	13.6359	13.636%

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Liquid Flash Analysis to Estimate Fugitive Oil Emissions

Conversion of Mole Percent to Weight Percent

Component	Mole %	MW	Mole % * MW	Weight %
Carbon Dioxide	0.030	44.010	0.0132	0.012%
Nitrogen	0.008	28.013	0.0022	0.002%
Hydrogen Sulfide	0.000	34.019	0.0000	0.000%
Methane	0.420	16.043	0.0674	0.064%
Ethane	0.409	30.070	0.1230	0.116%
Propane	0.867	44.097	0.3823	0.361%
Iso-Butane	0.612	58.123	0.3557	0.336%
N-Butane	1.333	58.123	0.7748	0.731%
Iso-Pentane	1.936	72.150	1.3968	1.318%
N-Pentane	2.610	72.150	1.8831	1.777%
n-Hexane	5.734	86.059	4.9346	4.657%
Hexanes	2.741	86.177	2.3621	2.229%
2,2,4-Trimethylpentane	0.127	114.231	0.1451	0.137%
Benzene	1.394	78.114	1.0889	1.028%
Heptanes	23.353	94.829	22.1454	20.900%
Toluene	5.495	92.141	5.0631	4.778%
Ethylbenzene	0.267	106.167	0.2835	0.268%
Xylenes	0.514	106.167	0.5457	0.515%
Octanes+	36.515	106.289	38.8114	36.629%
Nonanes+	11.033	123.784	13.6571	12.889%
Decanes+	4.602	259.067	11.9223	11.252%
Total	100.000	-	105.96	100.000%

Molecular Weight	105.96	
Relative Density	0.7388	
Gross WET BTU	---	
NMHC	105.8750	99.922%
VOCs (NMNEHC)	105.7520	99.806%
HAPs	11.9158	11.25%
H2S Mole Fraction	0.0000	0.000%
Total HC	105.9423	99.985%
THC:VOC Ratio	99.8203	99.820%

* Analysis taken from Tap 5 analysis dated December 10, 2012

XTO Energy, Inc.

Wild Horse Bench Compressor Station

Liquid Flash Analysis to Estimate Fugitive Oil Emissions

Conversion of Mole Percent to Weight Percent

Component	Mole %	MW	Mole % * MW	Weight %
Carbon Dioxide	1.7490	44.01	0.7697	3.017%
Nitrogen	3.5120	28.01	0.9838	3.856%
Hydrogen Sulfide	0.0000	34.02	0.0000	0.000%
Helium	0.0000	4.00	0.0000	0.000%
Methane	68.2760	16.04	10.9535	42.931%
Ethane	11.0290	30.07	3.3164	12.998%
Propane	5.9630	44.10	2.6295	10.306%
Iso-Butane	1.6260	58.12	0.9451	3.704%
N-Butane	2.3750	58.12	1.3804	5.410%
Iso-Pentane	1.2770	72.15	0.9214	3.611%
N-Pentane	1.3020	72.15	0.9394	3.682%
Methylcyclopentane	0.0000	86.00	0.0000	0.000%
n-Hexane	0.0000	86.06	0.0000	0.000%
Hexanes	1.1100	86.18	0.9566	3.749%
2,2,4-Trimethylpentane	0.0000	114.23	0.0000	0.000%
Methycyclohexane	0.0000	96.00	0.0000	0.000%
Benzene	0.1820	78.11	0.1422	0.557%
Cyclohexane	0.0000	84.51	0.0000	0.000%
Heptanes	0.9260	94.83	0.8781	3.442%
Toluene	0.1850	92.14	0.1705	0.668%
Ethylbenzene	0.0030	106.17	0.0032	0.012%
Xylenes	0.0040	106.17	0.0042	0.017%
Octanes+	0.4420	106.29	0.4698	1.841%
Nonanes+	0.0410	123.78	0.0508	0.199%
Decanes+	0.0000	259.07	0.0000	0.000%
Total	100.00	-	25.51	100.000%

Molecular Weight	25.51	
Relative Density	0.7388	
Gross WET BTU	1400.90	
Methane	10.9535	42.931%
NMHC	12.8075	50.197%
VOCs (NMNEHC)	9.4910	37.199%
HAPs	0.3201	1.25%
H2S Mole Fraction	0.0000	0.000%
Total HC	23.7610	93.127%
THC:VOC Ratio	39.9438	39.944%

* Analysis taken from Tap 5 analysis dated December 10, 2012

ATTACHMENT C: SITE SPECIFIC GAS ANALYSIS

QUESTAR APPLIED TECHNOLOGY

1210 D. Street, Rock Springs, Wyoming 82901

(307) 352-7292

LIMS ID:	N/A		Description:	Wild Horse Bench Pre-Contactor
Analysis Date/Time:	6/17/2013	12:25 PM	Field:	Wild Horse Bench
Analyst Initials:	PRP		ML#:	XTO
Instrument ID:	Instrument 1		GC Method:	Quesbtex
Data File:	QPC43.D			
Date Sampled:	6/10/2013			

Component	Mol%	Wt%	LV%
Methane	86.7241	72.3245	80.2311
Ethane	6.9650	10.8871	10.1940
Propane	2.9115	6.6740	4.3813
Isobutane	0.6035	1.8234	1.0781
n-Butane	0.7698	2.3260	1.3255
Neopentane	0.0086	0.0323	0.0180
Isopentane	0.2859	1.0722	0.5714
n-Pentane	0.2267	0.8502	0.4483
2,2-Dimethylbutane	0.0085	0.0382	0.0194
2,3-Dimethylbutane	0.0209	0.0936	0.0467
2-Methylpentane	0.0610	0.2735	0.1383
3-Methylpentane	0.0375	0.1680	0.0836
n-Hexane	0.0820	0.3673	0.1841
Heptanes	0.1693	0.8253	0.3615
Octanes	0.0091	0.0529	0.0242
Nonanes	0.0026	0.0156	0.0064
Decanes plus	0.0000	0.0000	0.0000
Nitrogen	0.4482	0.6527	0.2684
Carbon Dioxide	0.6658	1.5232	0.6197
Oxygen	0.0000	0.0000	0.0000
Hydrogen Sulfide	0.0000	0.0000	0.0000
Total	100.0000	100.0000	100.0000

Global Properties		Units	
Gross BTU/Real CF	1163.2		BTU/SCF at 60°F and14.73 psia
Sat.Gross BTU/Real CF	1144.3		BTU/SCF at 60°F and14.73 psia
Gas Compressibility (Z)	0.9971		
Specific Gravity	0.6660		air=1
Avg Molecular Weight	19.237		gm/mole
Propane GPM	0.797934		gal/MCF
Butane GPM	0.439052		gal/MCF
Gasoline GPM	0.340433		gal/MCF
26# Gasoline GPM	0.582501		gal/MCF
Total GPM	3.604023		gal/MCF
Base Mol%	99.808		%v/v

Sample Temperature:	92	°F
Sample Pressure:	1060	psig
H2SLength of Stain Tube	N/A	ppm

Component	Mol%	Wt%	LV%
Benzene	0.0148	0.0600	0.0226
Toluene	0.0116	0.0557	0.0213
Ethylbenzene	0.0002	0.0011	0.0004
M&P Xylene	0.0014	0.0079	0.0030
O-Xylene	0.0001	0.0008	0.0003
2,2,4-Trimethylpentane	0.0048	0.0283	0.0131
Cyclopentane	0.0000	0.0000	0.0000
Cyclohexane	0.0400	0.1749	0.0743
Methylcyclohexane	0.0435	0.2219	0.0954
Description:	Wild Horse Bench Pre-Contactor		

GRI GlyCalc Information

Component	Mol%	Wt%	LV%
Carbon Dioxide	0.6658	1.5232	0.6197
Hydrogen Sulfide	0.0000	0.0000	0.0000
Nitrogen	0.4482	0.6527	0.2684
Methane	86.7241	72.3245	80.2311
Ethane	6.9650	10.8871	10.1940
Propane	2.9115	6.6740	4.3813
Isobutane	0.6035	1.8234	1.0781
n-Butane	0.7698	2.3260	1.3255
Isopentane	0.2945	1.1045	0.5894
n-Pentane	0.2267	0.8502	0.4483
Cyclopentane	0.0000	0.0000	0.0000
n-Hexane	0.0820	0.3673	0.1841
Cyclohexane	0.0400	0.1749	0.0743
Other Hexanes	0.1279	0.5733	0.2880
Heptanes	0.0546	0.2845	0.1348
Methylcyclohexane	0.0435	0.2219	0.0954
2,2,4 Trimethylpentane	0.0048	0.0283	0.0131
Benzene	0.0148	0.0600	0.0226
Toluene	0.0116	0.0557	0.0213
Ethylbenzene	0.0002	0.0011	0.0004
Xylenes	0.0015	0.0087	0.0033
C8+ Heavies	0.0100	0.0587	0.0269
Subtotal	100.0000	100.0000	100.0000
Oxygen	0.0000	0.0000	0.0000
Total	100.0000	100.0000	100.0000

ATTACHMENT D: TANK VAPOR EMISSION CALCS

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

Project File : N:\EHS\Environmental\Air\Utah\Uintah County\Permits and Applications\Applications\Title V Permit Apps\Wild Horse Bench\Supporting Calc Documentation\Tank Emissions.ept

Flowsheet Selection : Oil Tank with Separator

Calculation Method : RVP Distillation

Control Efficiency : 100.00

Known Separator Stream : Low Pressure Oil

Entering Air Composition : No

Filed Name : WHB Compressor Station

Well Name : Uintah County, UT

Well ID : Representative Sample from Tap 5 CS

Date : 2013.12.11

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

Separator Pressure : 25.00[psig]

Separator Temperature : 40.00[F]

Ambient Pressure : 14.70[psia]

Ambient Temperature : 70.00[F]

C10+ SG : 0.8366

C10+ MW : 259.057

-- Low Pressure Oil ----------

No.	Component	mol %
1	H2S	0.0000
2	O2	0.0000
3	CO2	0.0300
4	N2	0.0060
5	C1	0.4200
6	C2	0.4090
7	C3	0.8670
8	i-C4	0.6120
9	n-C4	1.3330
10	i-C5	1.9360
11	n-C5	2.6100
12	C6	2.7410
13	C7	23.3530
14	C8	36.5150
15	C9	11.0330
16	C10+	4.6020
17	Benzene	1.3940
18	Toluene	5.4950
19	E-Benzene	0.2670
20	Xylenes	0.5140
21	n-C6	5.7340
22	224Trimethylp	0.1270

-- Sales Oil ----------

Production Rate : 60[bbl/day]

Days of Annual Operation : 365 [days/year]

API Gravity : 58.8

Reid Vapor Pressure : 5.60[psia]

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

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

Item	Uncontrolled (ton/yr)	Uncontrolled [lb/hr]

Total HAPs	0.200	0.046
Total HC	4.167	0.951
VOCs, C2+	2.571	0.587
VOCs, C3+	1.969	0.450

Uncontrolled Recovery Info.

Vapor	323.8000 x1E-3	[MSCFD]
HC Vapor	311.6300 x1E-3	[MSCFD]
GOR	5.40	[SCF/bbl]

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

No	Component	Uncontrolled [ton/yr]	Uncontrolled [lb/hr]
1	H2S	0.000	0.000
2	O2	0.000	0.000
3	CO2	0.171	0.039
4	N2	0.055	0.013
5	C1	1.595	0.364
6	C2	0.602	0.137
7	C3	0.478	0.109
8	i-C4	0.171	0.039
9	n-C4	0.259	0.059
10	i-C5	0.180	0.041
11	n-C5	0.178	0.041
12	C6	0.080	0.018
13	C7	0.261	0.060
14	C8	0.147	0.034
15	C9	0.018	0.004
16	C10+	0.000	0.000
17	Benzene	0.027	0.006
18	Toluene	0.035	0.008
19	E-Benzene	0.001	0.000
20	Xylenes	0.001	0.000
21	n-C6	0.134	0.031
22	224Trimethylp	0.001	0.000
	Total	4.394	1.003

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

No.	Component	MW	LP Oil mol %	Flash Oil mol %	Sale Oil mol %	Flash Gas mol %	W&S Gas mol %	Total Emissions mol %
1	H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	CO2	44.01	0.0300	0.0286	0.0144	1.8426	2.5911	2.4890
4	N2	28.01	0.0080	0.0052	0.0000	3.2572	0.9565	1.2704
5	C1	16.04	0.4200	0.3656	0.0186	63.6719	63.7994	63.7820
6	C2	30.07	0.4090	0.3993	0.3303	11.6987	13.0128	12.8336
7	C3	44.10	0.6670	0.6618	0.6285	6.8821	6.9561	6.9460
8	i-C4	58.12	0.6120	0.6109	0.6039	1.8828	1.8893	1.8884
9	n-C4	58.12	1.3330	1.3317	1.3234	2.8462	2.8541	2.8530
10	i-C5	72.15	1.9360	1.9363	1.9301	1.5979	1.6008	1.6004
11	n-C5	72.15	2.6100	2.6109	2.6165	1.5819	1.5849	1.5845
12	C6	86.18	2.7410	2.7428	2.7545	0.6103	0.6115	0.6113
13	C7	100.20	23.3530	23.3716	23.4900	1.7214	1.7252	1.7247
14	C8	114.23	36.5150	36.5457	36.7410	0.8456	0.8478	0.8475
15	C9	128.28	11.0330	11.0424	11.1023	0.0879	0.0935	0.0927
16	C10+	259.07	4.6020	4.6060	4.6312	0.0000	0.0000	0.0000
17	Benzene	78.11	1.3940	1.3950	1.4014	0.2201	0.2208	0.2207
18	Toluene	92.13	5.4930	5.4995	5.5283	0.2416	0.2425	0.2423
19	E-Benzene	106.17	0.2670	0.2672	0.2687	0.0038	0.0039	0.0038
20	Xylenes	106.17	0.5140	0.5144	0.5172	0.0064	0.0064	0.0064
21	n-C6	86.18	5.7340	5.7381	5.7640	0.9940	0.9959	0.9956
22	224Trimethylp	114.24	0.1270	0.1271	0.1278	0.0074	0.0075	0.0075
	MW		108.04	108.11	108.55	28.03	28.20	28.17
	Stream Mole Ratio		1.0000	0.9991	0.9937	0.0009	0.0054	0.0063
	Heating Value	[BTU/SCF]				1548.42	1576.47	1572.64
	Gas Gravity	[Gas/Air]				0.97	0.97	0.97
	Bubble Pt. @ 100F	[psia]	20.12	18.22	7.23			

RVP @ 100F	[psia]	7.94	7.42	5.47
Spec. Gravity @ 100F		0.675	0.675	0.676

SPL, Inc.
2440 Chambers Street
Suite A
Venus, TX 76084
817-539-2168 (O)
817-539-2170 (F)

Certificate of Analysis : 12120198-002A

Company:	Unitah County	**For:**	Rykki Tepe
Well:	Tap 5 CDP		
Field:	Unitah County		810 Houston Street
Sample of:	Condensate ;Spot		Fort Worth, Texas 76102
Conditions:	40 F @ 25 psig		
Sampled by:	J.Petree	**Report Date:**	5/8/2013
Sample date:	12/10/2012		
Sample Point:	Separator		
Remarks:			

Analysis: (*GPA 2103M*)	**Mol. %**	**MW**	**Wt. %**	**Sp. Gravity**	**L.V. %**
Nitrogen	0.008	28.013	0.002	0.8094	0.002
Methane	0.420	16.043	0.063	0.3000	0.155
Carbon Dioxide	0.030	44.010	0.012	0.8180	0.011
Ethane	0.409	30.070	0.115	0.3562	0.238
Propane	0.867	44.097	0.357	0.5070	0.520
Iso-butane	0.612	58.123	0.332	0.5629	0.436
N-butane	1.333	58.123	0.724	0.5840	0.915
Iso-pentane	1.936	72.150	1.304	0.6244	1.543
N-pentane	2.610	72.150	1.759	0.6311	2.059
i-Hexanes	2.741	86.177	2.224	0.6795	2.479
n-Hexane	5.734	86.059	4.587	0.6640	5.104
2,2,4 trimethylpentane	0.127	114.231	0.135	0.6967	0.143
Benzene	1.394	78.114	1.017	0.8846	0.848
Heptanes	23.353	94.829	20.876	0.7244	21.475
Toluene	5.495	92.141	4.729	0.8719	4.002
Octanes	36.515	106.289	36.973	0.7548	36.813
E-benzene	0.267	106.167	0.265	0.8718	0.224
M-,O-,P-xylene	0.514	106.167	0.510	0.8731	0.432
Nonanes	11.033	123.784	12.882	0.7516	12.769
Decanes Plus	4.602	259.067	11.134	0.8366	9.832
	100.000		100.000		100.000

Calculated Values	**Total Sample**	**Decanes Plus**
Specific Gravity at 60 °F	0.7388	0.8366
Api Gravity at 60 °F	60.026	37.629
Molecular Weight	107.078	259.067
Pounds per Gallon (in Vacuum)	6.160	6.975
Pounds per Gallon (in Air)	6.153	6.968
Cu. Ft. Vapor per Gallon @ 14.65 psia	21.762	10.250

Southern Petroleum Laboratories, Inc.

CERTIFICATE OF ANALYSIS
2012120198-001A

Customer:	XTO Energy	**Report Date:**	05/08/13
Attn:	Rykki Tepe		
	810 Houston Street	**PO / Ref. No.:**	
	Fort Worth, TX 76102		

Company:	XTO Energy	**Sample Of:**	Oil
Producer:	XTO Energy	**Sample Date/Time:**	12/10/2012
Well :	Tap 5 CDP	**Sample Psig & Temp:**	25 psig @ 40 °F
API #:		**Sampled By:**	J.P.
Sample Point:	Heater Treater	**Cylinder # :**	01190
	Unitah County		
Comments:	Staged Flash from 39.7 psi @ 40 to 0 psi @ 60°F		

Analytical Data

Parameters	Results	Units	Method	Lab Tech.	Date Analyzed
Shrinkage Factor	0.9997		Shrink-EOS	DDO	05/08/13
Flash Factor	0.7011	Cu.Ft./STBbl.	Shrink-EOS	DDO	05/08/13
	0.4787	Cu.Ft. Methane/STBbl.			
	0.0123	Cu.Ft. CO2/STBbl.			

David D Unruh.

Hydrocarbon Laboratory Manager

CERTIFICATE OF ANALYSIS
2012120198-001A

Customer:	XTO Energy	**Report Date:**	05/08/13
Attn:	Rykki Tepe		
	810 Houston Street	**PO / Ref. No.:**	
	Fort Worth, TX 76102		

Company:	XTO Energy	**Sample Of:**	Oil
Field:	XTO Energy	**Sample Date/Time:**	12/10/12
Well:	Tap 5 CDP	**Sample Psig & Temp:**	25 psig @ 40 °F
API #:		**Sampled By:**	J.P.
Sample Point:	Heater Treater	**Cylinder # :**	01190
Comments:	EOS Flash Gas Composition		
	Staged Flash from 39.7 psi @ 40 to 0 psi @ 60°F		

	MOL %	WEIGHT %	GPM's @ 14.73
NITROGEN	3.512	3.852	
CO2	1.749	3.015	
METHANE	68.276	42.889	
ETHANE	11.029	12.986	4.146
PROPANE	5.963	10.296	2.176
I-BUTANE	1.626	3.700	0.499
N-BUTANE	2.375	5.404	0.757
I-PENTANE	1.277	3.607	0.350
N-PENTANE	1.302	3.677	0.361
HEXANES	1.110	3.677	0.271
BENZENE	0.182	0.558	0.066
HEPTANES	0.926	3.504	0.202
TOLUENE	0.185	0.666	0.055
OCTANES	0.442	1.940	0.087
E-BENZENE	0.003	0.012	0.001
m,o,&p-XYLENE	0.004	0.017	0.001
NONANES	0.041	0.203	0.007
DECANES PLUS	0.000	0.000	0.000
TOTALS	100.000	100.000	8.979

CALCULATED VALUES

REAL DRY BTU AT 14.73 PSIA, 60 DEG.F	1425.8
REAL WET BTU AT 14.73 PSIA, 60 DEG.F	1400.9
RELATIVE DENSITY	0.8884
COMPRESSIBILITY FACTOR	0.99459

	C2+	C5+
GPM's @ 14.73 psia, 60 Deg.F	8.979	1.401

CERTIFICATE OF ANALYSIS
2012120198-001A

Customer:	XTO Energy	**Report Date:**	05/08/13
Attn:	Rykki Tepe		
	810 Houston Street	**PO / Ref. No.:**	
	Fort Worth, TX 76102		

Company:	XTO Energy	**Sample Of:**	Oil
Field:	XTO Energy	**Sample Date/Time:**	12/10/12
Well:	Tap 5 CDP	**Sample Psig & Temp:**	25 psig @ 40 °F
API #:		**Sampled By:**	J.P.
Sample Point:	Heater Treater	**Cylinder # :**	01190
Comments:	EOS Liquid Residue Composition		
	Staged Flash from 39.7 psi @ 40 to 0 psi @ 60°F		

	MOL %	WEIGHT %	L V %
NITROGEN	0.005	0.001	0.003
CO2	0.029	0.012	0.010
METHANE	0.366	0.054	0.129
ETHANE	0.401	0.111	0.223
PROPANE	0.863	0.350	0.497
I-BUTANE	0.611	0.327	0.401
N-BUTANE	1.332	0.712	0.907
I-PENTANE	1.937	1.284	1.470
N-PENTANE	2.611	1.732	1.967
HEXANES	8.481	6.594	7.106
BENZENE	1.395	1.002	0.813
HEPTANES	23.498	20.880	21.694
TOLUENE	5.499	4.658	3.821
OCTANES	36.544	37.686	38.245
E-BENZENE	0.267	0.261	0.214
m,o,&p-XYLENE	0.514	0.502	0.407
NONANES	11.042	12.866	12.758
DECANES PLUS	4.606	10.969	9.335
TOTALS	100.000	100.000	100.000

CALCULATED VALUES	TOTAL	C10+
Molecular Weight	108.774	218.083
BTU / Lb.	19,931	13,442
BTU / Gal.	119,159	99,588
Cu. Ft. / Gal. At 14.73 Psia, 60°F	20.810	12.862
Lbs. / Gal. (Absolute Density)	5.979	7.409
Lbs. / Gal. (Weight in Air)	5.971	7.399
Specific Gravity at 60°F (Water = 1)	0.7171	0.8886
API Gravity at 60°F	65.8	27.7

Certificate of Analysis

Number: 3040-12120198-003A

Venus Laboratory
2440 Chambers Street, Suite A
Venus, TX 76084

Rykki Tepe
810 Houston Street
Fort Worth, Texas 76102

Jan. 08, 2013

Station Name: Tap 5 CDP
Station Location: Unitah County
Sample Point: Separator
Cylinder No: Tin Can

Sampled By: J.Petree
Sample Of: Condensate Spot
Sample Date: 12/10/2012
Sample Conditions: 40 °F

Analytical Data

Test	Method	Result	Units	Detection Limit	Lab Tech.	Analysis Date
Reid Vapor Pressure @ 100°F	ASTM D-323	5.6	psia		TF	01/04/2013
API Gravity @ 60° F		58.8	° API		TF	01/04/2013
API Specific Gravity @ 60° F		0.7436	° API		TF	01/04/2013

ATTACHMENT E: DEHY EMISSIONS CALCS

GRI-GLYCalc VERSION 4.0 - AGGREGATE CALCULATIONS REPORT

Case Name: Wild Horse Bench
File Name: W:\EHS\Environmental\Air\Utah\Uintah County\Permits and Applications\Applications\Syn Minor Apps\Wild Horse Bench\RT20131016 WHP True Minor Application\RT20131209 WHB Dehy Model.ddf
Date: April 28, 2014

DESCRIPTION:

Description: Assume No Controls for Gly-Calc Model
Rotor-Tech GS1110-E (9.6 GPM)
Gas Analysis (6/17/2013)
Flash Tank Emissions - Recycled to Inlet Separator

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	1.0869	26.086	4.7608
Ethane	1.6252	39.006	7.1186
Propane	2.4431	58.634	10.7006
Isobutane	1.1630	27.912	5.0939
n-Butane	2.2281	53.474	9.7591
Isopentane	1.0775	25.860	4.7195
n-Pentane	1.1695	28.067	5.1222
n-Hexane	0.9253	22.207	4.0527
Cyclohexane	2.4114	57.873	10.5618
Other Hexanes	1.0450	25.080	4.5771
Heptanes	1.3795	33.108	6.0422
Methylcyclohexane	3.1291	75.099	13.7056
2,2,4-Trimethylpentane	0.0512	1.228	0.2242
Benzene	6.2552	150.124	27.3977
Toluene	7.3058	175.339	31.9993
Ethylbenzene	0.1626	3.902	0.7121
Xylenes	1.4704	35.290	6.4404
C8+ Heavies	0.9996	23.991	4.3784
Total Emissions	35.9284	862.281	157.3662
Total Hydrocarbon Emissions	35.9284	862.281	157.3662
Total VOC Emissions	33.2162	797.188	145.4869
Total HAP Emissions	16.1704	388.090	70.8264
Total BTEX Emissions	15.1939	364.655	66.5495

FLASH GAS EMISSIONS

Note: Flash Gas Emissions are zero with the Recycle/recompression control option.

FLASH TANK OFF GAS

Component	lbs/hr	lbs/day	tons/yr
Methane	16.5705	397.692	72.5787
Ethane	6.1599	147.837	26.9802
Propane	4.2483	101.959	18.6076

Isobutane	1.2339	29.614	5.4045
n-Butane	1.7437	41.849	7.6374
Isopentane	0.6908	16.578	3.0255
n-Pentane	0.5849	14.037	2.5617
n-Hexane	0.2342	5.622	1.0260
Cyclohexane	0.1446	3.471	0.6335
Other Hexanes	0.3582	8.596	1.5687
Heptanes	0.1544	3.706	0.6763
Methylcyclohexane	0.1380	3.312	0.6045
2,2,4-Trimethylpentane	0.0119	0.285	0.0520
Benzene	0.0481	1.155	0.2109
Toluene	0.0330	0.791	0.1444
Ethylbenzene	0.0004	0.009	0.0017
Xylenes	0.0024	0.058	0.0106
C8+ Heavies	0.0100	0.239	0.0436
Total Emissions	32.3671	776.810	141.7679
Total Hydrocarbon Emissions	32.3671	776.810	141.7679
Total VOC Emissions	9.6367	231.282	42.2089
Total HAP Emissions	0.3300	7.921	1.4456
Total BTEX Emissions	0.0839	2.014	0.3676

EQUIPMENT REPORTS:

ABSORBER

NOTE: Because the Calculated Absorber Stages was below the minimum allowed, GRI-GLYCalc has set the number of Absorber Stages to 1.25 and has calculated a revised Dry Gas Dew Point.

Calculated Absorber Stages:	1.25	
Calculated Dry Gas Dew Point:	1.59	lbs. H2O/MMSCF
Temperature:	92.0	deg. F
Pressure:	1060.0	psig
Dry Gas Flow Rate:	15.0000	MMSCF/day
Glycol Losses with Dry Gas:	0.2560	lb/hr
Wet Gas Water Content:	Saturated	
Calculated Wet Gas Water Content:	44.69	lbs. H2O/MMSCF
Calculated Lean Glycol Recirc. Ratio:	21.38	gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	3.56%	96.44%
Carbon Dioxide	99.00%	1.00%
Nitrogen	99.91%	0.09%
Methane	99.92%	0.08%
Ethane	99.77%	0.23%
Propane	99.68%	0.32%
Isobutane	99.59%	0.41%
n-Butane	99.46%	0.54%
Isopentane	99.50%	0.50%
n-Pentane	99.35%	0.65%
n-Hexane	99.01%	0.99%
Cyclohexane	95.40%	4.60%
Other Hexanes	99.23%	0.77%
Heptanes	98.30%	1.70%
Methylcyclohexane	95.36%	4.64%

2,2,4-Trimethylpentane	99.30%	0.70%
Benzene	66.94%	33.06%
Toluene	58.37%	41.63%
Ethylbenzene	53.46%	46.54%
Xylenes	43.92%	56.08%
C8+ Heavies	96.41%	3.59%

FLASH TANK

Flash Control: Recycle/recompression
Flash Temperature: 100.0 deg. F
Flash Pressure: 60.0 psig

Component	Left in Glycol	Removed in Flash Gas
Water	99.99%	0.01%
Carbon Dioxide	48.61%	51.39%
Nitrogen	6.07%	93.93%
Methane	6.16%	93.84%
Ethane	20.88%	79.12%
Propane	36.51%	63.49%
Isobutane	48.52%	51.48%
n-Butane	56.10%	43.90%
Isopentane	61.13%	38.87%
n-Pentane	66.83%	33.17%
n-Hexane	79.90%	20.10%
Cyclohexane	94.52%	5.48%
Other Hexanes	74.73%	25.27%
Heptanes	89.98%	10.02%
Methylcyclohexane	95.94%	4.06%
2,2,4-Trimethylpentane	81.45%	18.55%
Benzene	99.27%	0.73%
Toluene	99.59%	0.41%
Ethylbenzene	99.79%	0.21%
Xylenes	99.86%	0.14%
C8+ Heavies	99.13%	0.87%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	75.03%	24.97%
Carbon Dioxide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%
n-Butane	0.00%	100.00%
Isopentane	0.82%	99.18%
n-Pentane	0.75%	99.25%
n-Hexane	0.63%	99.37%
Cyclohexane	3.38%	96.62%
Other Hexanes	1.34%	98.66%
Heptanes	0.56%	99.44%
Methylcyclohexane	4.17%	95.83%

2,2,4-Trimethylpentane	1.84%	98.16%
Benzene	5.04%	94.96%
Toluene	7.93%	92.07%
Ethylbenzene	10.42%	89.58%
Xylenes	12.92%	87.08%
C8+ Heavies	12.11%	87.89%

STREAM REPORTS:

WET GAS STREAM

Temperature: 92.00 deg. F
Pressure: 1074.70 psia
Flow Rate: 6.26e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	9.41e-002	2.80e+001
Carbon Dioxide	6.65e-001	4.83e+002
Nitrogen	4.48e-001	2.07e+002
Methane	8.66e+001	2.29e+004
Ethane	6.96e+000	3.45e+003
Propane	2.91e+000	2.12e+003
Isobutane	6.03e-001	5.78e+002
n-Butane	7.69e-001	7.38e+002
Isopentane	2.94e-001	3.50e+002
n-Pentane	2.26e-001	2.70e+002
n-Hexane	8.19e-002	1.17e+002
Cyclohexane	4.00e-002	5.55e+001
Other Hexanes	1.28e-001	1.82e+002
Heptanes	5.45e-002	9.02e+001
Methylcyclohexane	4.35e-002	7.04e+001
2,2,4-Trimethylpentane	4.80e-003	9.04e+000
Benzene	1.48e-002	1.91e+001
Toluene	1.16e-002	1.76e+001
Ethylbenzene	2.00e-004	3.50e-001
Xylenes	1.50e-003	2.63e+000
C8+ Heavies	9.99e-003	2.81e+001
Total Components	100.00	3.18e+004

DRY GAS STREAM

Temperature: 92.00 deg. F
Pressure: 1074.70 psia
Flow Rate: 6.25e+005 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	3.36e-003	9.96e-001
Carbon Dioxide	6.60e-001	4.78e+002
Nitrogen	4.48e-001	2.07e+002
Methane	8.68e+001	2.29e+004
Ethane	6.96e+000	3.45e+003
Propane	2.91e+000	2.11e+003
Isobutane	6.02e-001	5.76e+002
n-Butane	7.67e-001	7.34e+002
Isopentane	2.93e-001	3.49e+002

n-Pentane	2.26e-001	2.68e+002
n-Hexane	8.13e-002	1.15e+002
Cyclohexane	3.82e-002	5.30e+001
Other Hexanes	1.27e-001	1.80e+002
Heptanes	5.37e-002	8.87e+001
Methylcyclohexane	4.15e-002	6.72e+001
2,2,4-Trimethylpentane	4.77e-003	8.98e+000
Benzene	9.92e-003	1.28e+001
Toluene	6.78e-003	1.03e+001
Ethylbenzene	1.07e-004	1.87e-001
Xylenes	6.60e-004	1.15e+000
C8+ Heavies	9.65e-003	2.71e+001
Total Components	100.00	3.17e+004

LEAN GLYCOL STREAM

Temperature: 92.00 deg. F
Flow Rate: 9.60e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.85e+001	5.32e+003
Water	1.50e+000	8.10e+001
Carbon Dioxide	8.95e-012	4.83e-010
Nitrogen	3.49e-013	1.88e-011
Methane	1.10e-017	5.93e-016
Ethane	6.80e-008	3.67e-006
Propane	5.04e-009	2.72e-007
Isobutane	1.33e-009	7.19e-008
n-Butane	1.82e-009	9.85e-008
Isopentane	1.64e-004	8.88e-003
n-Pentane	1.63e-004	8.81e-003
n-Hexane	1.08e-004	5.83e-003
Cyclohexane	1.56e-003	8.45e-002
Other Hexanes	2.62e-004	1.42e-002
Heptanes	1.43e-004	7.71e-003
Methylcyclohexane	2.52e-003	1.36e-001
2,2,4-Trimethylpentane	1.78e-005	9.60e-004
Benzene	6.14e-003	3.32e-001
Toluene	1.17e-002	6.30e-001
Ethylbenzene	3.50e-004	1.89e-002
Xylenes	4.04e-003	2.18e-001
C8+ Heavies	2.55e-003	1.38e-001
Total Components	100.00	5.40e+003

RICH GLYCOL STREAM

Temperature: 92.00 deg. F
Pressure: 1074.70 psia
Flow Rate: 9.81e+000 gpm
NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.67e+001	5.32e+003
Water	1.96e+000	1.08e+002
Carbon Dioxide	8.79e-002	4.83e+000
Nitrogen	3.43e-003	1.89e-001
Methane	3.21e-001	1.77e+001

Ethane	1.41e-001	7.79e+000
Propane	1.22e-001	6.69e+000
Isobutane	4.36e-002	2.40e+000
n-Butane	7.22e-002	3.97e+000
Isopentane	3.23e-002	1.78e+000
n-Pentane	3.20e-002	1.76e+000
n-Hexane	2.12e-002	1.17e+000
Cyclohexane	4.80e-002	2.64e+000
Other Hexanes	2.58e-002	1.42e+000
Heptanes	2.80e-002	1.54e+000
Methylcyclohexane	6.19e-002	3.40e+000
2,2,4-Trimethylpentane	1.16e-003	6.40e-002
Benzene	1.21e-001	6.64e+000
Toluene	1.45e-001	7.97e+000
Ethylbenzene	3.31e-003	1.82e-001
Xylenes	3.07e-002	1.69e+000
C8+ Heavies	2.09e-002	1.15e+000
Total Components	100.00	5.50e+003

FLASH TANK OFF GAS STREAM

Temperature: 100.00 deg. F
Pressure: 74.70 psia
Flow Rate: 5.61e+002 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	5.68e-002	1.51e-002
Carbon Dioxide	3.82e+000	2.48e+000
Nitrogen	4.28e-001	1.77e-001
Methane	6.98e+001	1.66e+001
Ethane	1.38e+001	6.16e+000
Propane	6.51e+000	4.25e+000
Isobutane	1.43e+000	1.23e+000
n-Butane	2.03e+000	1.74e+000
Isopentane	6.47e-001	6.91e-001
n-Pentane	5.48e-001	5.85e-001
n-Hexane	1.84e-001	2.34e-001
Cyclohexane	1.16e-001	1.45e-001
Other Hexanes	2.81e-001	3.58e-001
Heptanes	1.04e-001	1.54e-001
Methylcyclohexane	9.50e-002	1.38e-001
2,2,4-Trimethylpentane	7.03e-003	1.19e-002
Benzene	4.17e-002	4.81e-002
Toluene	2.42e-002	3.30e-002
Ethylbenzene	2.48e-004	3.90e-004
Xylenes	1.54e-003	2.42e-003
C8+ Heavies	3.95e-003	9.96e-003
Total Components	100.00	3.50e+001

FLASH TANK GLYCOL STREAM

Temperature: 100.00 deg. F
Flow Rate: 9.73e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.73e+001	5.32e+003

Water	1.98e+000	1.08e+002
Carbon Dioxide	4.30e-002	2.35e+000
Nitrogen	2.10e-004	1.15e-002
Methane	1.99e-002	1.09e+000
Ethane	2.97e-002	1.63e+000
Propane	4.47e-002	2.44e+000
Isobutane	2.13e-002	1.16e+000
n-Butane	4.08e-002	2.23e+000
Isopentane	1.99e-002	1.09e+000
n-Pentane	2.16e-002	1.18e+000
n-Hexane	1.70e-002	9.31e-001
Cyclohexane	4.57e-002	2.50e+000
Other Hexanes	1.94e-002	1.06e+000
Heptanes	2.54e-002	1.39e+000
Methylcyclohexane	5.97e-002	3.27e+000
2,2,4-Trimethylpentane	9.54e-004	5.21e-002
Benzene	1.20e-001	6.59e+000
Toluene	1.45e-001	7.94e+000
Ethylbenzene	3.32e-003	1.81e-001
Xylenes	3.09e-002	1.69e+000
C8+ Heavies	2.08e-002	1.14e+000
Total Components	100.00	5.47e+003

FLASH GAS EMISSIONS

Control Method: Recycle/recompression
Control Efficiency: 100.00

Note: Flash Gas Emissions are zero with the Recycle/recompression control option.

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
Pressure: 14.70 psia
Flow Rate: 7.96e+002 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	7.14e+001	2.70e+001
Carbon Dioxide	2.55e+000	2.35e+000
Nitrogen	1.95e-002	1.15e-002
Methane	3.23e+000	1.09e+000
Ethane	2.58e+000	1.63e+000
Propane	2.64e+000	2.44e+000
Isobutane	9.54e-001	1.16e+000
n-Butane	1.83e+000	2.23e+000
Isopentane	7.12e-001	1.08e+000
n-Pentane	7.73e-001	1.17e+000
n-Hexane	5.12e-001	9.25e-001
Cyclohexane	1.37e+000	2.41e+000
Other Hexanes	5.78e-001	1.05e+000
Heptanes	6.57e-001	1.38e+000
Methylcyclohexane	1.52e+000	3.13e+000
2,2,4-Trimethylpentane	2.14e-002	5.12e-002
Benzene	3.82e+000	6.26e+000
Toluene	3.78e+000	7.31e+000
Ethylbenzene	7.30e-002	1.63e-001
Xylenes	6.61e-001	1.47e+000
C8+ Heavies	2.80e-001	1.00e+000

Total Components	100.00	6.53e+001

INDUSTRIAL
REFRACTORY SERVICES INC™

2300 South Main Street
Fort Worth, Texas 76110
(817)924-9991
www.irsvc.com

June 9, 2009

Damien Jones

XTO Energy
Roosevelt Field Office
133 East 1000 North
Roosevelt, Utah 84066

Commissioning Certificate

This certificate confirms the successful Commissioning and Operation for the Thermal Oxidizer at the location listed below.

Location:	Roosevelt Field, Utah
Site:	Wild Horse Bench
Serial Number:	28152
Commissioning Date:	02/13/09
Operating Range:	1400 – 1800 °F
Heating Set Point:	1450 °F
Cooling Set Point:	1500 °F
DRE %:	≥99.0%

Mike Riddell
V.P. Sales Thermal Oxidizer Division

ATTACHMENT F: ENGINE MANUFACTURER'S SPECS

G3512
NON-CURRENT

GAS COMPRESSION APPLICATION

GAS ENGINE SITE SPECIFIC TECHNICAL DATA

CATERPILLAR®

Wild Horse Bench - Uintah, UT

ENGINE SPEED (rpm):	1200	RATING STRATEGY:	STANDARD
COMPRESSION RATIO:	8:1	FUEL SYSTEM:	HPG IMPCO
AFTERCOOLER TYPE:	SCAC	SITE CONDITIONS:	
AFTERCOOLER WATER INLET (°F):	130	FUEL:	Field Gas
JACKET WATER OUTLET (°F):	210	FUEL PRESSURE RANGE(psig):	35.0-40.0
ASPIRATION:	TA	FUEL METHANE NUMBER:	62.2
COOLING SYSTEM:	JW+OC, AC	FUEL LHV (Btu/scf):	1027
CONTROL SYSTEM:	EIS	ALTITUDE(ft):	500
EXHAUST MANIFOLD:	ASWC	MAXIMUM INLET AIR TEMPERATURE(°F):	77
COMBUSTION:	Low Emission	STANDARD RATED POWER:	810 bhp@1200rpm
NOx EMISSION LEVEL (g/bhp-hr NOx):	2.0		
SET POINT TIMING:	27		

			MAXIMUM RATING	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE		
RATING	**NOTES**	**LOAD**	**100%**	**100%**	**75%**	**50%**
ENGINE POWER (WITHOUT FAN)	(1)	bhp	810	810	607	405
INLET AIR TEMPERATURE		°F	77	77	77	77
ENGINE DATA						
FUEL CONSUMPTION (LHV)	(2)	Btu/bhp-hr	7544	7544	7741	8084
FUEL CONSUMPTION (HHV)	(2)	Btu/bhp-hr	8336	8336	8553	8932
AIR FLOW (@inlet air temp, 14.7 psia) (WET)	(3)(4)	ft3/min	1679	1679	1218	832
AIR FLOW (WET)	(3)(4)	lb/hr	7446	7446	5399	3690
FUEL FLOW (60°F, 14.7 psia)		scfm	99	99	76	53
INLET MANIFOLD PRESSURE	(5)	in Hg(abs)	60.2	60.2	45.4	32.0
EXHAUST TEMPERATURE - ENGINE OUTLET	(6)	°F	842	842	827	818
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia) (WET)	(7)(4)	ft3/min	4405	4405	3170	2154
EXHAUST GAS MASS FLOW (WET)	(7)(4)	lb/hr	7740	7740	5625	3848
EMISSIONS DATA - ENGINE OUT						
NOx (as NO2)	(8)(9)	g/bhp-hr	2.00	2.00	3.30	3.30
CO	(8)(9)	g/bhp-hr	2.24	2.24	2.52	2.66
THC (mol. wt. of 15.84)	(8)(9)	g/bhp-hr	2.71	2.71	2.45	2.80
NMHC (mol. wt. of 15.84)	(8)(9)	g/bhp-hr	0.70	0.70	0.64	0.73
NMNEHC (VOCs) (mol. wt. of 15.84)	(8)(9)(10)	g/bhp-hr	0.47	0.47	0.43	0.49
HCHO (Formaldehyde)	(8)(9)	g/bhp-hr	0.28	0.28	0.31	0.34
CO2	(8)(9)	g/bhp-hr	523	523	537	560
EXHAUST OXYGEN	(8)(11)	% DRY	7.9	7.9	7.1	6.8
HEAT REJECTION						
HEAT REJ. TO JACKET WATER (JW)	(12)	Btu/min	27453	27453	23480	18004
HEAT REJ. TO ATMOSPHERE	(12)	Btu/min	3643	3643	3036	2429
HEAT REJ. TO LUBE OIL (OC)	(12)	Btu/min	4341	4341	3713	2847
HEAT REJ. TO AFTERCOOLER (AC)	(12)(13)	Btu/min	4513	4513	2742	759

COOLING SYSTEM SIZING CRITERIA			
TOTAL JACKET WATER CIRCUIT (JW+OC)	(13)	Btu/min	35407
TOTAL AFTERCOOLER CIRCUIT (AC)	(13)(14)	Btu/min	4738
A cooling system safety factor of 0% has been added to the cooling system sizing criteria.			

CONDITIONS AND DEFINITIONS

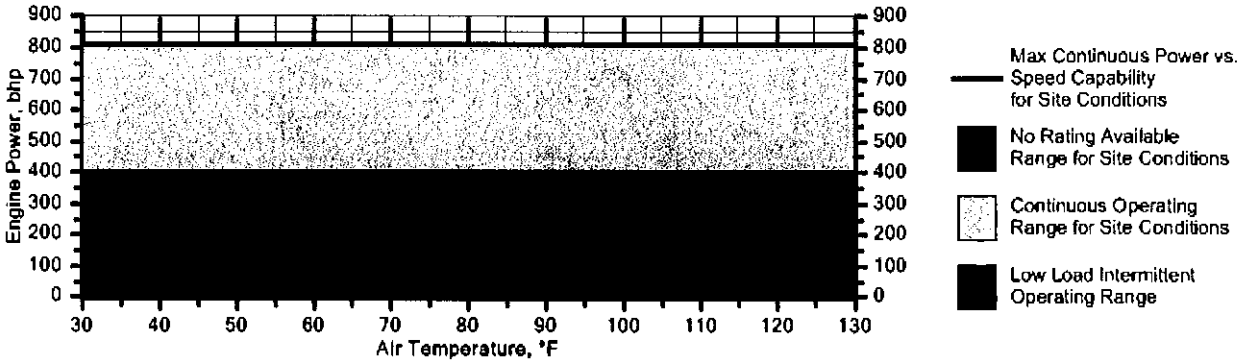
Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site inlet air temperature. 100% rating at maximum inlet air temperature is the maximum engine capability for the specified fuel at site altitude and maximum site inlet air temperature. Max. rating is the maximum capability for the specified fuel at site altitude and reduced inlet air temperature. Lowest load point is the lowest continuous duty operating load allowed. No overload permitted at rating shown.

For notes information consult page three.

PREPARED BY: Rykki Tepe, XTO Energy
Data generated by Gas Engine Rating Pro Version 4.05.00
Ref. Data Set DM0150-09-001, 7NJ, Printed 21Oct2013

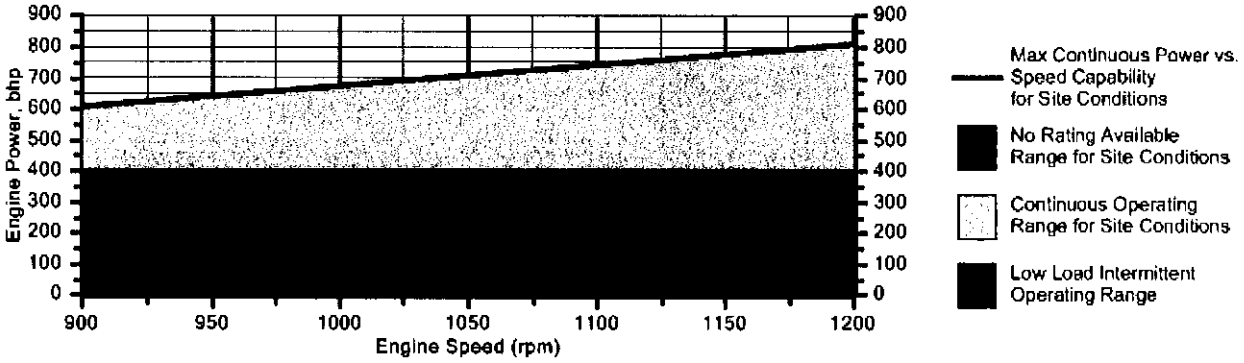
Engine Power vs. Inlet Air Temperature

Data represents temperature sweep at 500 ft and 1200 rpm



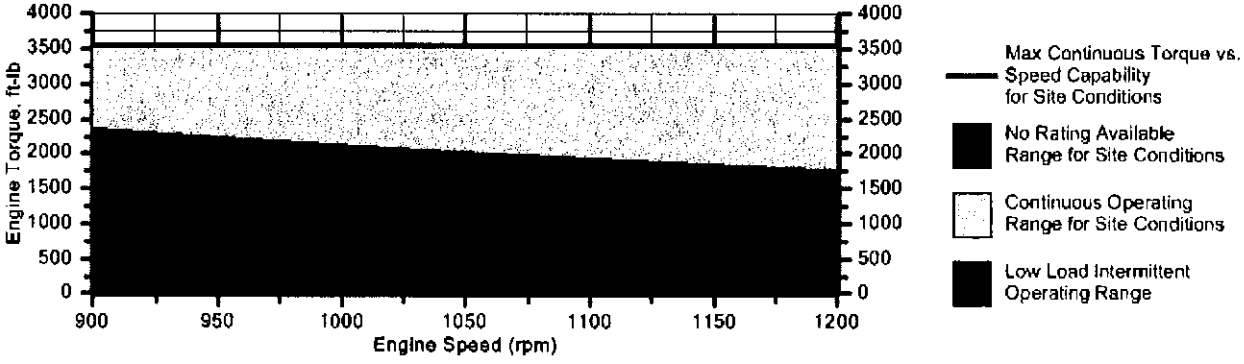
Engine Power vs. Engine Speed

Data represents speed sweep at 500 ft and 77 °F



Engine Torque vs. Engine Speed

Data represents speed sweep at 500 ft and 77 °F



Note: At site conditions of 500 ft and 77°F inlet air temp., constant torque can be maintained down to 900 rpm. The minimum speed for loading at these conditions is 900 rpm.

NOTES

1. Engine rating is with two engine driven water pumps. Tolerance is ± 3% of full load.

2. Fuel consumption tolerance is ± 3.0% of full load data.

3. Air flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of ± 5 %.

4. Inlet and Exhaust Restrictions must not exceed A&I limits based on full load flow rates from the standard technical data sheet.

5. Inlet manifold pressure is a nominal value with a tolerance of ± 5 %.

6. Exhaust temperature is a nominal value with a tolerance of (+)63°F, (-)54°F.

7. Exhaust flow value is on a "wet" basis. Flow is a nominal value with a tolerance of ± 6 %.

8. Emissions data is at engine exhaust flange prior to any after treatment.

9. Emission values are based on engine operating at steady state conditions, adjusted to the specified NOx level at 100% load. Fuel methane number cannot vary more than ± 3. NOx values are set points and will vary with operating conditions. All other emission values listed are higher than nominal levels to allow for instrumentation, measurement, and engine-to-engine variations. They indicate "Not to Exceed" values. THC, NMHC, and NMNEHC do not include aldehydes. Part load data may require engine adjustment.

10. VOCs - Volatile organic compounds as defined in US EPA 40 CFR 60, subpart JJJJ

11. Exhaust Oxygen level is the result of adjusting the engine to operate at the specified NOx level. Tolerance is ± 0.5.

12. Heat rejection values are nominal. Tolerances, based on treated water, are ± 10% for jacket water circuit, ± 50% for radiation, ± 20% for lube oil circuit, and ± 5% for aftercooler circuit.

13. Aftercooler heat rejection includes an aftercooler heat rejection factor for the site elevation and inlet air temperature specified. Aftercooler heat rejection values at part load are for reference only. Do not use part load data for heat exchanger sizing.

14. Cooling system sizing criteria are maximum circuit heat rejection for the site, with applied tolerances.

Constituent	Abbrev	Mole %	Norm
Water Vapor	H2O	2.5211	2.5211
Methane	CH4	86.6340	86.6340
Ethane	C2H6	4.9767	4.9767
Propane	C3H8	3.5670	3.5670
Isobutane	iso-C4H1O	0.0000	0.0000
Norbutane	nor-C4H1O	1.8211	1.8211
Isopentane	iso-C5H12	0.0000	0.0000
Norpentane	nor-C5H12	0.4802	0.4802
Hexane	C6H14	0.0000	0.0000
Heptane	C7H16	0.0000	0.0000
Nitrogen	N2	0.0000	0.0000
Carbon Dioxide	CO2	0.0000	0.0000
Hydrogen Sulfide	H2S	0.0000	0.0000
Carbon Monoxide	CO	0.0000	0.0000
Hydrogen	H2	0.0000	0.0000
Oxygen	O2	0.0000	0.0000
Helium	HE	0.0000	0.0000
Neopentane	neo-C5H12	0.0000	0.0000
Octane	C8H18	0.0000	0.0000
Nonane	C9H20	0.0000	0.0000
Ethylene	C2H4	0.0000	0.0000
Propylene	C3H6	0.0000	0.0000
TOTAL (Volume %)		100.0000	100.0000

Fuel Makeup:	Field Gas
Unit of Measure:	English
Calculated Fuel Properties	
Caterpillar Methane Number:	62.2
Lower Heating Value (Btu/scf):	1027
Higher Heating Value (Btu/scf):	1135
WOBBE Index (Btu/scf):	1274
THC: Free Inert Ratio:	Not Applicable
Total % Inerts (% N2, CO2, He):	0%
RPC (%) (To 905 Btu/scf Fuel):	100%
Compressibility Factor:	0.997
Stoich A/F Ratio (Vol/Vol):	10.68
Stoich A/F Ratio (Mass/Mass):	16.43
Specific Gravity (Relative to Air):	0.650
Specific Heat Constant (K):	1.297

CONDITIONS AND DEFINITIONS

Caterpillar Methane Number represents the knock resistance of a gaseous fuel. It should be used with the Caterpillar Fuel Usage Guide for the engine and rating to determine the rating for the fuel specified. A Fuel Usage Guide for each rating is included on page 2 of its standard technical data sheet.

RPC always applies to naturally aspirated (NA) engines, and turbocharged (TA or LE) engines only when they are derated for altitude and ambient site conditions.

Project specific technical data sheets generated by the Caterpillar Gas Engine Rating Pro program take the Caterpillar Methane Number and RPC into account when generating a site rating.

Fuel properties for Btu/scf calculations are at 60F and 14.696 psia.

Caterpillar shall have no liability in law or equity, for damages, consequently or otherwise, arising from use of program and related material or any part thereof.

FUEL LIQUIDS

Field gases, well head gases, and associated gases typically contain liquid water and heavy hydrocarbons entrained in the gas. To prevent detonation and severe damage to the engine, hydrocarbon liquids must not be allowed to enter the engine fuel system. To remove liquids, a liquid separator and coalescing filter are recommended, with an automatic drain and collection tank to prevent contamination of the ground in accordance with local codes and standards.

To avoid water condensation in the engine or fuel lines, limit the relative humidity of water in the fuel to 80% at the minimum fuel operating temperature.

Cummins Engines Gas Compression Ratings.

Cummins Southern Plains

Engine Model	CR	CONTINUOUS RATING HP @ RPM 1200	1500	1800	2200	NOx (g/bhp-hr)	CO (g/bhp-hr)	NMHC (g/bhp-hr)	Delivery (weeks)	Length (in)	Width (in)	Height (in)	Weight (lbs)
G5.9C49	10.5:1	-	41	49	60	3.85	2	0.40	6-8	38.7	29.1	40.0	825
G5.9C80 - 10TPY	10.5:1	-	67	80	-	11.7	7.52	0.01	6-8	38.7	29.1	40.0	825
G5.9C84	10.5:1	-	70	84	98	11.41	14.64	0.22	6-8	38.7	29.1	40.0	825
GTA5.9C116	8.5:1	-	98	116	140	11.75	0.57	0.13	6-8	38.7	29.1	40.0	825
G8.3C99 - Catalyst	10.5:1	-	83	99	121	14.0	6.8	0.09	6-8	60.3	31.8	46.1	1,590
G8.3C118 - Catalyst	10.5:1	-	99	118	135	13.0	8.0	2.26	6-8	60.9	31.6	46.1	1,590
GTA8.3C163 - 10TPY	8.5:1	-	135	163	-	4.34	2.06	0.07	6-8	60.0	31.6	46.1	1,590
GTA8.3C175	8.5:1	-	145	175	-	14.5	2.4	0.08	6-8	60.0	31.8	45.1	1,590
GTA8.3C175-SLB*	8.5:1	-	135	175	-	1.44	2.58	0.38		60.0	31.8	45.1	1,590
GTA8.3C190	8.5:1	-	160	190	-	16.4	1.7	0.57	6-8	60.4	31.8	45.1	1,600
G855C188	10:1	-	160	188	-	5.0	26.7	1.0	6-8	70.1	40.6	62.5	2,070
GTA855C225 - Catalyst*	8.5:1	-	190	225	-					70.1	40.6	62.5	2,070
GTA855C258	8.5:1	-	215	258	-	7.0	6.6	0.37	6-8	70.1	40.6	62.5	2,070
GTA855C285	8.5:1	-	238	285	-	7.6	[illegible]	0.62	6-8	70.1	40.6	62.5	2,070
KTA19GC265 - Catalyst	8.5:1	265	-	-	-	11.57	4.6	1.43	14-16	78.0	37.9	65.9	4,840
KTA19GC380 - Catalyst	8.5:1	-	317	380	-	12.8	6.1	6.5	14-16	78.0	37.9	65.0	4,840
KTA19GC420 - Standard	8.5:1	-	350	420	-	3.67	1.60	0.1	14-16	78.0	37.9	65.9	4,880
KTA19GC420- SLB*	8.5:1	-	350	420	-	2.5	4.0	1.0		78.0	37.4	65.9	4,880
KTA38GC710 - Standard	8.5:1	588	710	-		1.15	1.53	0.1	14-18	112.2	77	73.3	11,932
KTA38GC795 - Catalyst	8.5:1	-	635	795	-	13.0	2.5	0.1	14-18	112.2	77	73.5	11,932
KTA38GC850 - SLB	8.5:1	-	710	855	-	1.47	1.97	0.1	14-18	112.2	77	73.3	11,932

Emissions: Pipeline quality gas @ 1800 rpm. Subject to specific Fuel Rating for each engine. Delivery in [illegible] only. [illegible] * Engine in development. [illegible]
Approximate dimensions and weights. ALL DATA SUBJECT TO CHANGE. For more information contact [illegible]

DCL International Inc.

Head office address: 241 Bradwick Drive, Concord, Ontario, Canada L4K 1K5
Mailing address: P.O. Box 90, Concord, Ontario, Canada L4K 1B2
Tel: (905) 660-6450 *Toll free:* 1-800-872-1968 *Fax:* (905) 660-6435 *E-mail:* info@dcl-inc.com *Website:* www.dcl-inc.com

QUOTATION

To	Mike Dawson	**Phone**	
	Cummins NPower	**Fax**	
Date	Nov 3rd 2008	**Email**	

Quote No.: 13-1223

RE:

ENGINE DATA

Engine model	**Cummins K19C**
Power	380 bhp
Fuel	Pipeline Quality Natural Gas

CATALYST SYSTEM DATA

Catalyst Model	DC49-6 CC
Catalyst Type	NSCR
Number of Elements	1
Cell Density	300 cpsi
Approx. Dimensions	See Attached Drawing
Connection Size	Recommended 6"
Approx Weight	50 lbs
Approx. Pressure Drop	2.6" w.c

EMISSION REQUIREMENTS

Exhaust Gas Component	Converter Output (g/bhp-hr)
NOx	1.0
CO	2.0
VOC	0.7

This quotation is subject to DCL's standard terms and conditions of sale attached. Copies of limited warranty statement are available from DCL upon request (DCL doc. No. X0010-0000-56).

G3516

GAS COMPRESSION APPLICATION

GAS ENGINE SITE SPECIFIC TECHNICAL DATA
Tap 1 - 3 C-1, Tap 1 C-2, RBU 11-18F C-3, WHB C-1

CATERPILLAR®

ENGINE SPEED (rpm):	1400	FUEL SYSTEM:	HPG IMPCO WITH AIR FUEL RATIO CONTROL
COMPRESSION RATIO:	8:1		
AFTERCOOLER WATER INLET (°F):	130	**SITE CONDITIONS:**	
JACKET WATER OUTLET (°F):	210	FUEL:	Field Gas
ASPIRATION:	TA	FUEL PRESSURE RANGE(psig):	35.0-40.0
COOLING SYSTEM:	JW+OC, AC	FUEL METHANE NUMBER:	62.2
IGNITION SYSTEM:	ADEM3	FUEL LHV (Btu/scf):	1027
EXHAUST MANIFOLD:	ASWC	ALTITUDE(ft):	500
COMBUSTION:	Low Emission	MAXIMUM INLET AIR TEMPERATURE(°F):	77
NOx EMISSION LEVEL (g/bhp-hr NOx):	2.0	STANDARD RATED POWER:	1340 bhp@1400rpm
SET POINT TIMING:	27		

			MAXIMUM RATING	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE		
RATING	**NOTES**	**LOAD**	**100%**	**100%**	**75%**	**50%**
ENGINE POWER (WITHOUT FAN)	(1)	bhp	1340	1340	1005	670
INLET AIR TEMPERATURE		°F	77	77	77	77
ENGINE DATA						
FUEL CONSUMPTION (LHV)	(2)	Btu/bhp-hr	7721	7721	7954	8518
FUEL CONSUMPTION (HHV)	(2)	Btu/bhp-hr	8532	8532	8789	9412
AIR FLOW (77°F, 14.7 psia) (WET)	(3)(4)	scfm	2864	2864	2160	1490
AIR FLOW (WET)	(3)(4)	lb/hr	12699	12699	9579	6607
INLET MANIFOLD PRESSURE	(5)	in Hg(abs)	70.0	70.0	55.2	39.3
EXHAUST TEMPERATURE - ENGINE OUTLET	(6)	°F	907	907	907	911
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia) (WET)	(7)(4)	ft3/min	7886	7886	5955	4128
EXHAUST GAS MASS FLOW (WET)	(7)(4)	lb/hr	13197	13197	9964	6882
EMISSIONS DATA - ENGINE OUT						
NOx (as NO2)	(8)(9)	g/bhp-hr	2.00	2.00	2.00	2.00
CO	(8)(9)	g/bhp-hr	2.32	2.32	2.43	2.61
THC (mol. wt. of 15.84)	(8)(9)	g/bhp-hr	2.43	2.43	2.55	2.72
NMHC (mol. wt. of 15.84)	(8)(9)	g/bhp-hr	0.63	0.63	0.66	0.71
NMNEHC (VOCs) (mol. wt. of 15.84)	(8)(9)(10)	g/bhp-hr	0.42	0.42	0.45	0.47
HCHO (Formaldehyde)	(8)(9)	g/bhp-hr	0.22	0.22	0.22	0.24
CO2	(8)(9)	g/bhp-hr	509	509	519	546
EXHAUST OXYGEN	(8)(11)	% DRY	7.9	7.9	7.8	7.6
HEAT REJECTION						
HEAT REJ. TO JACKET WATER (JW)	(12)	Btu/min	43625	43625	36281	29879
HEAT REJ. TO ATMOSPHERE	(12)	Btu/min	5313	5313	4428	3543
HEAT REJ. TO LUBE OIL (OC)	(12)	Btu/min	6506	6506	5411	4456
HEAT REJ. TO AFTERCOOLER (AC)	(12)(13)	Btu/min	9466	9466	6120	2108

COOLING SYSTEM SIZING CRITERIA			
TOTAL JACKET WATER CIRCUIT (JW+OC)	(14)	Btu/min	55795
TOTAL AFTERCOOLER CIRCUIT (AC)	(13)(14)	Btu/min	9939
A cooling system safety factor of 0% has been added to the cooling system sizing criteria.			

CONDITIONS AND DEFINITIONS

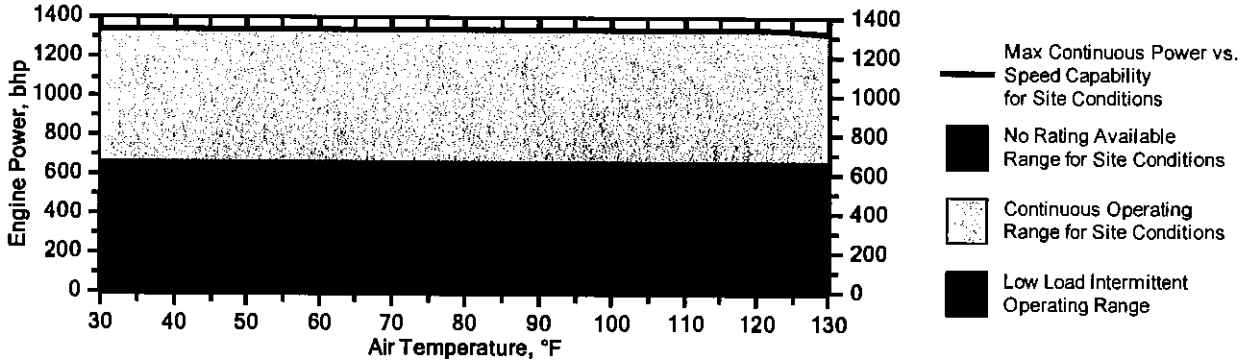
Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site inlet air temperature. 100% rating at maximum inlet air temperature is the maximum engine capability for the specified fuel at site altitude and maximum site inlet air temperature. Max. rating is the maximum capability for the specified fuel at site altitude and reduced inlet air temperature. Lowest load point is the lowest continuous duty operating load allowed. No overload permitted at rating shown.

For notes information consult page three.

PREPARED BY: Clare Hoang, XTO Energy Inc.
Data generated by Gas Engine Rating Pro Version 4.01.02
Ref. Data Set DM8618-02-001, Printed 13Jul2012

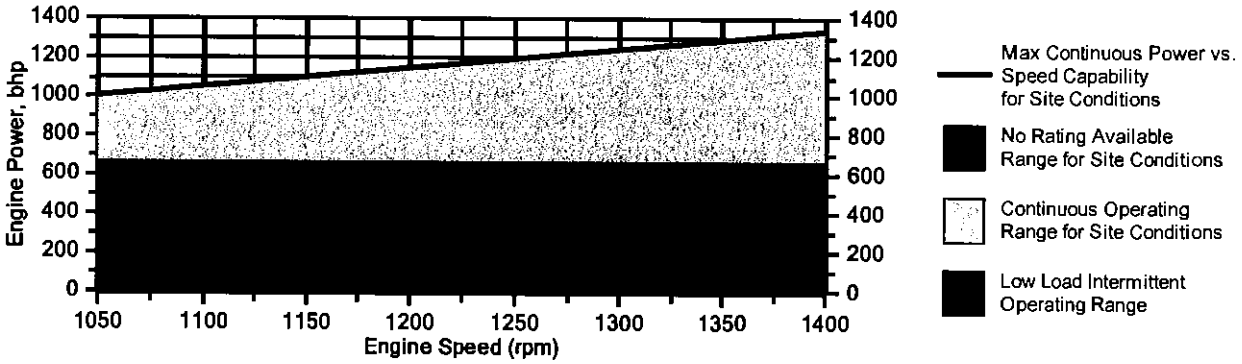
Engine Power vs. Inlet Air Temperature

Data represents temperature sweep at 500 ft and 1400 rpm



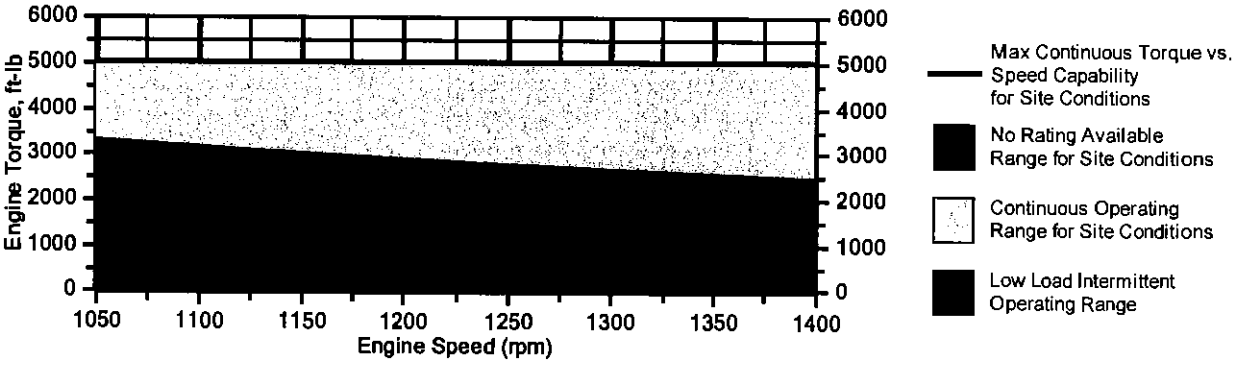
Engine Power vs. Engine Speed

Data represents speed sweep at 500 ft and 77 °F



Engine Torque vs. Engine Speed

Data represents speed sweep at 500 ft and 77 °F



Note: At site conditions of 500 ft and 77°F inlet air temp., constant torque can be maintained down to 1050 rpm. The minimum speed for loading at these conditions is 1050 rpm.

NOTES

1. Engine rating is with two engine driven water pumps. Tolerance is ± 3% of full load.

2. Fuel consumption tolerance is ± 3.0% of full load data.

3. Air flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of ± 5 %.

4. Inlet and Exhaust Restrictions must not exceed A&I limits based on full load flow rates from the standard technical data sheet.

5. Inlet manifold pressure is a nominal value with a tolerance of ± 5 %.

6. Exhaust temperature is a nominal value with a tolerance of (+)63°F, (-)54°F.

7. Exhaust flow value is on a "wet" basis. Flow is a nominal value with a tolerance of ± 6 %.

8. Emissions data is at engine exhaust flange prior to any after treatment.

9. Emission values are based on engine operating at steady state conditions. Fuel methane number cannot vary more than ± 3. Values listed are higher than nominal levels to allow for instrumentation, measurement, and engine-to-engine variations. They indicate "Not to Exceed" values. THC, NMHC, and NMNEHC do not include aldehydes. An oxidation catalyst may be required to meet Federal, State or local CO or HC requirements.

10. VOCs - Volatile organic compounds as defined in US EPA 40 CFR 60, subpart JJJJ

11. Exhaust Oxygen level is the result of adjusting the engine to operate at the specified NOx level. Tolerance is ± 0.5.

12. Heat rejection values are nominal. Tolerances, based on treated water, are ± 10% for jacket water circuit, ± 50% for radiation, ± 20% for lube oil circuit, and ± 5% for aftercooler circuit.

13. Aftercooler heat rejection includes an aftercooler heat rejection factor for the site elevation and inlet air temperature specified. Aftercooler heat rejection values at part load are for reference only. Do not use part load data for heat exchanger sizing.

14. Cooling system sizing criteria are maximum circuit heat rejection for the site, with applied tolerances.

Constituent	Abbrev	Mole %	Norm
Water Vapor	H2O	2.5211	2.5211
Methane	CH4	86.6340	86.6340
Ethane	C2H6	4.9767	4.9767
Propane	C3H8	3.5670	3.5670
Isobutane	iso-C4H1O	0.0000	0.0000
Norbutane	nor-C4H1O	1.8211	1.8211
Isopentane	iso-C5H12	0.0000	0.0000
Norpentane	nor-C5H12	0.4802	0.4802
Hexane	C6H14	0.0000	0.0000
Heptane	C7H16	0.0000	0.0000
Nitrogen	N2	0.0000	0.0000
Carbon Dioxide	CO2	0.0000	0.0000
Hydrogen Sulfide	H2S	0.0000	0.0000
Carbon Monoxide	CO	0.0000	0.0000
Hydrogen	H2	0.0000	0.0000
Oxygen	O2	0.0000	0.0000
Helium	HE	0.0000	0.0000
Neopentane	neo-C5H12	0.0000	0.0000
Octane	C8H18	0.0000	0.0000
Nonane	C9H20	0.0000	0.0000
Ethylene	C2H4	0.0000	0.0000
Propylene	C3H6	0.0000	0.0000
TOTAL (Volume %)		100.0000	100.0000

Fuel Makeup:	Field Gas
Unit of Measure:	English
Calculated Fuel Properties	
Caterpillar Methane Number:	62.2
Lower Heating Value (Btu/scf):	1027
Higher Heating Value (Btu/scf):	1135
WOBBE Index (Btu/scf):	1274
THC: Free Inert Ratio:	Not Applicable
Total % Inerts (% N2, CO2, He):	0%
RPC (%) (To 905 Btu/scf Fuel):	100%
Compressibility Factor:	0.997
Stoich A/F Ratio (Vol/Vol):	10.68
Stoich A/F Ratio (Mass/Mass):	16.43
Specific Gravity (Relative to Air):	0.650
Specific Heat Constant (K):	1.297

CONDITIONS AND DEFINITIONS

Caterpillar Methane Number represents the knock resistance of a gaseous fuel. It should be used with the Caterpillar Fuel Usage Guide for the engine and rating to determine the rating for the fuel specified. A Fuel Usage Guide for each rating is included on page 2 of its standard technical data sheet.

RPC always applies to naturally aspirated (NA) engines, and turbocharged (TA or LE) engines only when they are derated for altitude and ambient site conditions.

Project specific technical data sheets generated by the Caterpillar Gas Engine Rating Pro program take the Caterpillar Methane Number and RPC into account when generating a site rating.

Fuel properties for Btu/scf calculations are at 60F and 14.696 psia.

FUEL LIQUIDS

Field gases, well head gases, and associated gases typically contain liquid water and heavy hydrocarbons entrained in the gas. To prevent detonation and severe damage to the engine, hydrocarbon liquids must not be allowed to enter the engine fuel system. To remove liquids, a liquid separator and coalescing filter are recommended, with an automatic drain and collection tank to prevent contamination of the ground in accordance with local codes and standards.

To avoid water condensation in the engine or fuel lines, limit the relative humidity of water in the fuel to 80% at the minimum fuel operating temperature.

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES[a]
(SCC 2-02-002-54)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO_x[c] 90 - 105% Load	4.08 E+00	B
NO_x[c] <90% Load	8.47 E-01	B
CO[c] 90 - 105% Load	3.17 E-01	C
CO[c] <90% Load	5.57 E-01	B
CO_2[d]	1.10 E+02	A
SO_2[e]	5.88 E-04	A
TOC[f]	1.47 E+00	A
Methane[g]	1.25 E+00	C
VOC[h]	1.18 E-01	C
PM10 (filterable)[i]	7.71 E-05	D
PM2.5 (filterable)[i]	7.71 E-05	D
PM Condensable[j]	9.91 E-03	D
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane[k]	<4.00 E-05	E
1,1,2-Trichloroethane[k]	<3.18 E-05	E
1,1-Dichloroethane	<2.36 E-05	E
1,2,3-Trimethylbenzene	2.30 E-05	D
1,2,4-Trimethylbenzene	1.43 E-05	C
1,2-Dichloroethane	<2.36 E-05	E
1,2-Dichloropropane	<2.69 E-05	E
1,3,5-Trimethylbenzene	3.38 E-05	D
1,3-Butadiene[k]	2.67E-04	D
1,3-Dichloropropene[k]	<2.64 E-05	E
2-Methylnaphthalene[k]	3.32 E-05	C
2,2,4-Trimethylpentane[k]	2.50 E-04	C
Acenaphthene[k]	1.25 E-06	C

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES
(Continued)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Acenaphthylene[k]	5.53 E-06	C
Acetaldehyde[k,l]	8.36 E-03	A
Acrolein[k,l]	5.14 E-03	A
Benzene[k]	4.40 E-04	A
Benzo(b)fluoranthene[k]	1.66 E-07	D
Benzo(e)pyrene[k]	4.15 E-07	D
Benzo(g,h,i)perylene[k]	4.14 E-07	D
Biphenyl[k]	2.12 E-04	D
Butane	5.41 E-04	D
Butyr/Isobutyraldehyde	1.01 E-04	C
Carbon Tetrachloride[k]	<3.67 E-05	E
Chlorobenzene[k]	<3.04 E-05	E
Chloroethane	1.87 E-06	D
Chloroform[k]	<2.85 E-05	E
Chrysene[k]	6.93 E-07	C
Cyclopentane	2.27 E-04	C
Ethane	1.05 E-01	C
Ethylbenzene[k]	3.97 E-05	B
Ethylene Dibromide[k]	<4.43 E-05	E
Fluoranthene[k]	1.11 E-06	C
Fluorene[k]	5.67 E-06	C
Formaldehyde[k,l]	5.28 E-02	A
Methanol[k]	2.50 E-03	B
Methylcyclohexane	1.23 E-03	C
Methylene Chloride[k]	2.00 E-05	C
n-Hexane[k]	1.11 E-03	C
n-Nonane	1.10 E-04	C

Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES
(Continued)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
n-Octane	3.51 E-04	C
n-Pentane	2.60 E-03	C
Naphthalene[k]	7.44 E-05	C
PAH[k]	2.69 E-05	D
Phenanthrene[k]	1.04 E-05	D
Phenol[k]	2.40 E-05	D
Propane	4.19 E-02	C
Pyrene[k]	1.36 E-06	C
Styrene[k]	<2.36 E-05	E
Tetrachloroethane[k]	2.48 E-06	D
Toluene[k]	4.08 E-04	B
Vinyl Chloride[k]	1.49 E-05	C
Xylene[k]	1.84 E-04	B

[a] Reference 7. Factors represent uncontrolled levels. For NO_x, CO, and PM10, "uncontrolled" means no combustion or add-on controls; however, the factor may include turbocharged units. For all other pollutants, "uncontrolled" means no oxidation control; the data set may include units with control techniques used for NOx control, such as PCC and SCR for lean burn engines, and PSC for rich burn engines. Factors are based on large population of engines. Factors are for engines at all loads, except as indicated. SCC = Source Classification Code. TOC = Total Organic Compounds. PM-10 = Particulate Matter ≤ 10 microns (μm) aerodynamic diameter. A "<" sign in front of a factor means that the corresponding emission factor is based on one-half of the method detection limit.

[b] Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA Method 19. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

$$\text{lb/hp-hr} = (\text{lb/MMBtu})\ (\text{heat input, MMBtu/hr})\ (1/\text{operating HP, 1/hp})$$

[c] Emission tests with unreported load conditions were not included in the data set.

[d] Based on 99.5% conversion of the fuel carbon to CO_2. CO_2 [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO_2, C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10^6 scf, and

[e] h = heating value of natural gas (assume 1020 Btu/scf at 60 °F).
Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content in natural gas of 2,000 gr/10^6scf.
[f] Emission factor for TOC is based on measured emission levels from 22 source tests.
[g] Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor. Measured emission factor for methane compares well with the calculated emission factor, 1.31 lb/MMBtu vs. 1.25 lb/MMBtu, respectively.
[h] VOC emission factor is based on the sum of the emission factors for all speciated organic compounds less ethane and methane.
[i] Considered ≤ 1 μm in aerodynamic diameter. Therefore, for filterable PM emissions, PM10(filterable) = PM2.5(filterable).
[j] PM Condensable = PM Condensable Inorganic + PM-Condensable Organic
[k] Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.
[l] For lean burn engines, aldehyde emissions quantification using CARB 430 may reflect interference with the sampling compounds due to the nitrogen concentration in the stack. The presented emission factor is based on FTIR measurements. Emissions data based on CARB 430 are available in the background report.

Table 3.2-3. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE RICH-BURN ENGINES[a]
(SCC 2-02-002-53)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Criteria Pollutants and Greenhouse Gases		
NO_x[c] 90 - 105% Load	2.21 E+00	A
NO_x[c] <90% Load	2.27 E+00	C
CO[c] 90 - 105% Load	3.72 E+00	A
CO[c] <90% Load	3.51 E+00	C
CO_2[d]	1.10 E+02	A
SO_2[e]	5.88 E-04	A
TOC[f]	3.58 E-01	C
Methane[g]	2.30 E-01	C
VOC[h]	2.96 E-02	C
PM10 (filterable)[i,j]	9.50 E-03	E
PM2.5 (filterable)[j]	9.50 E-03	E
PM Condensable[k]	9.91 E-03	E
Trace Organic Compounds		
1,1,2,2-Tetrachloroethane[l]	2.53 E-05	C
1,1,2-Trichloroethane[l]	<1.53 E-05	E
1,1-Dichloroethane	<1.13 E-05	E
1,2-Dichloroethane	<1.13 E-05	E
1,2-Dichloropropane	<1.30 E-05	E
1,3-Butadiene[l]	6.63 E-04	D
1,3-Dichloropropene[l]	<1.27 E-05	E
Acetaldehyde[l,m]	2.79 E-03	C
Acrolein[l,m]	2.63 E-03	C
Benzene[l]	1.58 E-03	B
Butyr/isobutyraldehyde	4.86 E-05	D
Carbon Tetrachloride[l]	<1.77 E-05	E

Table 3.2-3. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE RICH-BURN ENGINES
(Concluded)

Pollutant	Emission Factor (lb/MMBtu)[b] (fuel input)	Emission Factor Rating
Chlorobenzene[l]	<1.29 E-05	E
Chloroform[l]	<1.37 E-05	E
Ethane[n]	7.04 E-02	C
Ethylbenzene[l]	<2.48 E-05	E
Ethylene Dibromide[l]	<2.13 E-05	E
Formaldehyde[l,m]	2.05 E-02	A
Methanol[l]	3.06 E-03	D
Methylene Chloride[l]	4.12 E-05	C
Naphthalene[l]	<9.71 E-05	E
PAH[l]	1.41 E-04	D
Styrene[l]	<1.19 E-05	E
Toluene[l]	5.58 E-04	A
Vinyl Chloride[l]	<7.18 E-06	E
Xylene[l]	1.95 E-04	A

[a] Reference 7. Factors represent uncontrolled levels. For NO_x, CO, and PM-10, "uncontrolled" means no combustion or add-on controls; however, the factor may include turbocharged units. For all other pollutants, "uncontrolled" means no oxidation control; the data set may include units with control techniques used for NOx control, such as PCC and SCR for lean burn engines, and PSC for rich burn engines. Factors are based on large population of engines. Factors are for engines at all loads, except as indicated. SCC = Source Classification Code. TOC = Total Organic Compounds. PM10 = Particulate Matter ≤ 10 microns (μm) aerodynamic diameter. A "<" sign in front of a factor means that the corresponding emission factor is based on one-half of the method detection limit.

[b] Emission factors were calculated in units of (lb/MMBtu) based on procedures in EPA Method 19. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by the heat content of the fuel. If the heat content is not available, use 1020 Btu/scf. To convert from (lb/MMBtu) to (lb/hp-hr) use the following equation:

$$\text{lb/hp-hr} = (\text{lb/MMBtu})(\text{heat input, MMBtu/hr})(\text{1/operating HP, 1/hp})$$

[c] Emission tests with unreported load conditions were not included in the data set.

[d] Based on 99.5% conversion of the fuel carbon to CO_2. CO_2 [lb/MMBtu] = (3.67)(%CON)(C)(D)(1/h), where %CON = percent conversion of fuel carbon to CO_2,

C = carbon content of fuel by weight (0.75), D = density of fuel, 4.1 E+04 lb/10^6 scf, and h = heating value of natural gas (assume 1020 Btu/scf at 60 °F).

[e] Based on 100% conversion of fuel sulfur to SO_2. Assumes sulfur content in natural gas of 2,000 gr/10^6scf.

[f] Emission factor for TOC is based on measured emission levels from 6 source tests.

[g] Emission factor for methane is determined by subtracting the VOC and ethane emission factors from the TOC emission factor.

[h] VOC emission factor is based on the sum of the emission factors for all speciated organic compounds. Methane and ethane emissions were not measured for this engine category.

[i] No data were available for uncontrolled engines. PM10 emissions are for engines equipped with a PCC.

[j] Considered ≤ 1 μm in aerodynamic diameter. Therefore, for filterable PM emissions, PM10(filterable) = PM2.5(filterable).

[k] No data were available for condensable emissions. The presented emission factor reflects emissions from 4SLB engines.

[l] Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.

[m] For rich-burn engines, no interference is suspected in quantifying aldehyde emissions. The presented emission factors are based on FTIR and CARB 430 emissions data measurements.

[n] Ethane emission factor is determined by subtracting the VOC emission factor from the NMHC emission factor.

References For Section 3.2

1. *Engines, Turbines, And Compressors Directory*, American Gas Association, Catalog #XF0488.

2. *Standards Support And Environmental Impact Statement, Volume I: Stationary Internal Combustion Engines*, EPA-450/2-78-125a, U. S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC, July 1979.

3. *Alternative Control Techniques Document - NO_x Emissions From Stationary Reciprocating Engines*, EPA-453/R-93-032, July 1993.

4. *Handbook - Control Technologies For Hazardous Air Pollutants*, EPA-625/6-91-014, June 1991.

5. *Limiting Net Greenhouse Gas Emissions In The United States, Volume II: Energy Responses,* Report for the Office of Environmental Analysis, Office of Policy, Planning and Analysis, Department of Energy (DOE), DOE/PE-0101 Volume II, September 1991.

6. C. Castaldini, *NO_x Reduction Technologies For Natural Gas Industry Prime Movers*, GRI-90/0215, Gas Research Institute, Chicago, IL, August 1990.

7. *Emission Factor Documentation for AP-42 Section 3.2, Natural Gas-Fired Reciprocating Engines*, EPA Contract No. 68-D2-0160, Alpha-Gamma Technologies, Inc., Raleigh, North Carolina, July 2000.

Table 3.1-2a. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM STATIONARY GAS TURBINES

Emission Factors[a] - Uncontrolled				
Pollutant	Natural Gas-Fired Turbines[b]		Distillate Oil-Fired Turbines[d]	
	(lb/MMBtu)[c] (Fuel Input)	Emission Factor Rating	(lb/MMBtu)[e] (Fuel Input)	Emission Factor Rating
CO_2[f]	110	A	157	A
N_2O	0.003[g]	E	ND	NA
Lead	ND	NA	1.4 E-05	C
SO_2	0.94S[h]	B	1.01S[h]	B
Methane	8.6 E-03	C	ND	NA
VOC	2.1 E-03	D	4.1 E-04[j]	E
TOC[k]	1.1 E-02	B	4.0 E-03[l]	C
PM (condensible)	4.7 E-03[l]	C	7.2 E-03[l]	C
PM (filterable)	1.9 E-03[l]	C	4.3 E-03[l]	C
PM (total)	6.6 E-03[l]	C	1.2 E-02[l]	C

[a] Factors are derived from units operating at high loads (≥80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at "www.epa.gov/ttn/chief". ND = No Data, NA = Not Applicable.

[b] SCCs for natural gas-fired turbines include 2-01-002-01, 2-02-002-01 & 03, and 2-03-002-02 & 03.

[c] Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by 1020. Similarly, these emission factors can be converted to other natural gas heating values.

[d] SCCs for distillate oil-fired turbines are 2-01-001-01, 2-02-001-01, 2-02-001-03, and 2-03-001-02.

[e] Emission factors based on an average distillate oil heating value of 139 MMBtu/10^3 gallons. To convert from (lb/MMBtu) to (lb/10^3 gallons), multiply by 139.

[f] Based on 99.5% conversion of fuel carbon to CO_2 for natural gas and 99% conversion of fuel carbon to CO_2 for distillate oil. CO_2 (Natural Gas) [lb/MMBtu] = (0.0036 scf/Btu)(%CON)(C)(D), where %CON = weight percent conversion of fuel carbon to CO_2, C = carbon content of fuel by weight, and D = density of fuel. For natural gas, C is assumed at 75%, and D is assumed at 4.1 E+04 lb/10^6scf. For distillate oil, CO_2 (Distillate Oil) [lb/MMBtu] = (26.4 gal/MMBtu) (%CON)(C)(D), where C is assumed at 87%, and the D is assumed at 6.9 lb/gallon.

[g] Emission factor is carried over from the previous revision to AP-42 (Supplement B, October 1996) and is based on limited source tests on a single turbine with water-steam injection (Reference 5).

[h] All sulfur in the fuel is assumed to be converted to SO_2. S = percent sulfur in fuel. Example, if sulfur content in the fuel is 3.4 percent, then S = 3.4. If S is not available, use 3.4 E-03 lb/MMBtu for natural gas turbines, and 3.3 E-02 lb/MMBtu for distillate oil turbines (the equations are more accurate).

[j] VOC emissions are assumed equal to the sum of organic emissions.

[k] Pollutant referenced as THC in the gathered emission tests. It is assumed as TOC, because it is based on EPA Test Method 25A.

[l] Emission factors are based on combustion turbines using water-steam injection.

Table 3.1-3. EMISSION FACTORS FOR HAZARDOUS AIR POLLUTANTS FROM NATURAL GAS-FIRED STATIONARY GAS TURBINES[a]

Emission Factors[b] - Uncontrolled		
Pollutant	Emission Factor (lb/MMBtu)[c]	Emission Factor Rating
1,3-Butadiene[d]	< 4.3 E-07	D
Acetaldehyde	4.0 E-05	C
Acrolein	6.4 E-06	C
Benzene[e]	1.2 E-05	A
Ethylbenzene	3.2 E-05	C
Formaldehyde[f]	7.1 E-04	A
Naphthalene	1.3 E-06	C
PAH	2.2 E-06	C
Propylene Oxide[d]	< 2.9 E-05	D
Toluene	1.3 E-04	C
Xylenes	6.4 E-05	C

[a] SCC for natural gas-fired turbines include 2-01-002-01, 2-02-002-01, 2-02-002-03, 2-03-002-02, and 2-03-002-03. Hazardous Air Pollutants as defined in Section 112 (b) of the *Clean Air Act*.

[b] Factors are derived from units operating at high loads (≥80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at "www.epa.gov/ttn/chief".

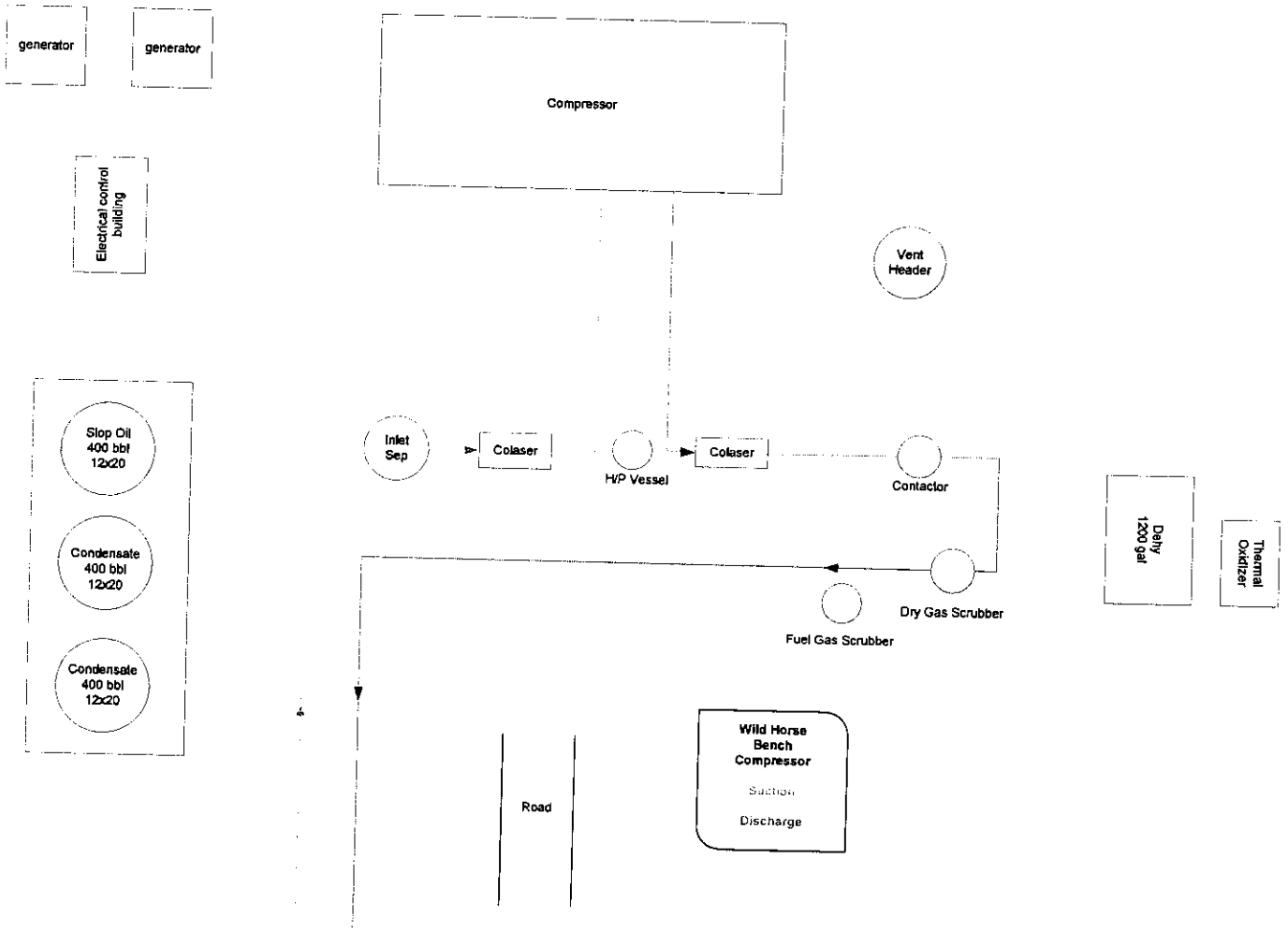
[c] Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by 1020. These emission factors can be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this heating value.

[d] Compound was not detected. The presented emission value is based on one-half of the detection limit.

[e] Benzene with SCONOX catalyst is 9.1 E-07, rating of D.

[f] Formaldehyde with SCONOX catalyst is 2.0 E-05, rating of D.

ATTACHMENT G: PROCESS FLOW DIAGRAM OF FACILITY


generator
generator
Compressor
Electrical control building
Vent Header
Slop Oil 400 bbl 12x20
Condensate 400 bbl 12x20
Condensate 400 bbl 12x20
Inlet Sep
Colaser
H/P Vessel
Colaser
Contactor
Dehy 1200 gal
Thermal Oxidizer
Dry Gas Scrubber
Fuel Gas Scrubber
Road
Wild Horse Bench Compressor
Suction
Discharge

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF UTAH

UNITED STATES OF AMERICA Plaintiff	)	
v.	)	Civil Action No.
DOMINION EXPLORATION & PRODUCTION, INC. and XTO ENERGY, INC. Defendants	)	

CONSENT DECREE

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WHEREAS, Plaintiff, the United States of America, (the "United States") on behalf of the United States Environmental Protection Agency ("EPA"), has simultaneously with lodging this Consent Decree filed a Complaint alleging that Dominion Exploration & Production, Inc., ("Dominion E&P" and as more specifically defined below) violated requirements of the Clean Air Act (the "Act") and the federal regulations implementing the Act applicable to three compressor stations referred to herein as the Kings Canyon Facility, the TAP-4 Facility, and the TAP-5 Facility, which are located in the Uinta Basin near Vernal, Utah (the "Uinta Basin"), **and** located on Indian country lands in the State of Utah;

WHEREAS, EPA administers the Act's programs for National Emission Standards for Hazardous Air Pollutants ("NESHAP"), New Source Performance Standards ("NSPS"), and federal operating permits under Title V with respect to the facilities located on Indian country lands in Utah;

WHEREAS, on December 22, 2006, and January 8, 2007, Dominion E&P disclosed to EPA, pursuant to EPA's policy titled "Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations" published at 65 Fed. Reg. 19,618 - 27 (April 11, 2000) ("EPA Self-Disclosure Policy"), that: (1) the Kings Canyon, TAP-4, and TAP-5 Facilities had the potential to emit greater than the major source thresholds of hazardous air pollutants and were subject to the Federal NESHAPs from oil and natural gas production facilities (40 C.F.R. Part 63, Subpart HH) and for reciprocating internal combustion engines (40 C.F.R. Part 63, Subpart ZZZZ); and were subject to the federal operating permit requirements of Title V of the Act; and (2) the Kings Canyon, and TAP-4 Facilities had potential violations of the Federal NSPS for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants (40 C.F.R.,

Part 60, Subpart KKK). Dominion also conducted a compliance evaluation of its Uinta Basin facilities and submitted to EPA on April 4, 2007, a report entitled "Uinta Basin Compliance Evaluation." Dominion E&P subsequently submitted applications for Title V permits for the Kings Canyon, TAP-4, and TAP-5 Facilities to EPA and submitted notifications required under 40 C.F.R. Part 63:

WHEREAS, on April 4, 2007, Dominion E&P submitted to EPA a written documentation that it had met all pre-requisite requirements for treatment of the violations disclosed in accordance with EPA Self-Disclosure Policy. EPA has accepted Dominion E&P's documentation;

WHEREAS, on June 1, 2007, Dominion E&P entered into an asset purchase agreement with XTO Energy, Inc. ("XTO")" to sell and transfer ownership and operation of the Uinta Basin Facilities, including the Facilities subject to this Consent Decree, and which sale closed on July 31, 2007. The United States was notified in advance of the proposed sale and XTO was invited to participate in ongoing settlement discussions with Dominion E&P;

WHEREAS, Dominion E&P and XTO (referred to as "Defendants"), as the prior and current owner/operator of the Facilities, do not admit the violations occurred and further do not admit any liability for civil penalties, fines, or injunctive relief to the United States arising out of the transactions or occurrences alleged in the Complaint;

WHEREAS, XTO will prepare and submit by no later than 60 days after the lodging of this Consent Decree revised emission inventories to determine whether the Uinta Basin Facilities, other than Kings Canyon, TAP-4, and TAP-5, are major sources prior to and after the application of controls for purposes of NESHAPs, Title V, and New Source Review;

WHEREAS, Dominion E&P and XTO have worked cooperatively with the Plaintiff to settle this matter and committed to reduce annual emissions in the Uinta Basin by more than 247 tons of carbon monoxide ("CO"), 290 tons of VOCs, and 165 tons of hazardous air pollutants;

WHEREAS, the United States, Dominion E&P, and XTO (the "Parties") recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and at arm's length, will avoid litigation among the Parties, and that this Consent Decree is fair, reasonable, consistent with the goals of the Act and its implementing regulations, and that its entry is in the best interests of the Parties and is in the public interest;

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I (Jurisdiction and Venue), and with the consent of the Parties,

IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and the Parties pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Sections 113(b) of the Act, 42 U.S.C. § 7413(b). Venue lies in this District pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) & (c) and 1395(a), because the violations alleged in the Complaint are alleged to have occurred in, and Dominion E&P and XTO conduct business in, this judicial district.

2. The Uinta Basin Facilities are located on Indian country lands in Uintah County, Utah. For purposes of this Consent Decree or any action to enforce this Consent Decree, Dominion E&P and XTO consent to and will not contest the jurisdiction of the Court over this

matter. For purposes of this Consent Decree, Dominion E&P and XTO agree that the Complaint states claims upon which relief may be granted pursuant to Sections 113 of the Act, 42 U.S.C. §§ 7413.

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States and upon Dominion E&P and XTO, as defined herein, and any of their successors and assigns.

4. Dominion E&P and XTO shall ensure that any of their corporate subsidiaries or affiliates that now or in the future may own or operate any of the Uinta Basin Facilities, or other natural gas production or gathering facilities subject to any work or compliance requirements of this Consent Decree, take all necessary and appropriate actions and provide EPA access to facilities, equipment, and information as may be required to enforce this Consent Decree so that Dominion E&P and XTO may fully and timely comply with all requirements of this Consent Decree.

5. In any action to enforce this Consent Decree, Dominion E&P and XTO shall not raise as a defense the failure by any of its officers, directors, employees, agents, contractors, or corporate affiliates or subsidiaries to take any actions necessary to comply with the provisions of this Consent Decree.

III. DEFINITIONS

6. Terms used in this Consent Decree that are defined in the Act or in regulations promulgated pursuant to the Act shall have the meanings assigned to them in the Act or such

regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

(a) "Code of Federal Regulations" or "C.F.R." unless otherwise noted shall refer to the 2006 codification.

(b) "Consent Decree" or "Decree" shall mean this Consent Decree and all appendices attached hereto (listed in Section XXIX).

(c) "Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

(d) "Dominion E&P" shall mean Dominion Exploration and Production, Inc., its subsidiaries, successors, and assigns.

(e) "XTO" shall mean XTO Energy, Inc., its subsidiaries, successors, and assigns.

(f) "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

(g) "HAP" shall mean hazardous air pollutant as provided under Section 112 of the Act.

(h) "Indian country" shall refer to the definition of "Indian Country" at 18 U.S.C. § 1151,[1] including:

1 Consistent with federal case law, Indian country includes any lands held in trust by the United States for an Indian tribe.

1. all land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation;

2. all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state; and

3. all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

(i) "Indian governing body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the Unites States and recognized by the United States as possessing power of self-government.

(j) "Minor source" means a source that emits or has the potential to emit pollutants regulated under the Clean Air Act in amounts less than the major stationary source levels in 40 C.F.R. § 52.21 or 40 C.F.R. § 63.2, as applicable

(k) "Non-major for HAPs under Section 112 of the CAA" or "non-major" source means a stationary source that is not a "major source" under the applicable provisions of 40 C.F.R. § 63.2 (general provisions), and the applicable source category "major source" definition or 40 C.F.R. § 63.761 (Subpart HH), or" § 63.6675 (Subpart ZZZZ).

(l) "Paragraph" shall mean a portion of this Decree identified by an Arabic numeral.

(m) "Performance Optimization Review" shall mean an evaluation of energy efficiency and the potential for product recovery at certain facilities for purposes of conserving natural gas and returning it to the marketplace.

(n) "Plaintiff" shall mean the United States.

(o) "Pneumatic Controller" shall mean a natural gas-driven pneumatic controller.

(p) "RICE" shall mean one or more stationary, natural gas-fired Reciprocating Internal Combustion Engines.

(q) "Section" shall mean a portion of this Decree identified by a Roman numeral.

(r) "Title V Permit" shall mean a permit issued pursuant to the federal operating permit program established by Title V of the Act, 42 U.S.C. §§ 7661 - 7661f, and as implemented by 40 C.F.R. Parts 70 (applicable to states) or 71 (applicable to EPA).

(s) "TPY" shall mean tons per year.

(t) "Uinta Basin Facilities" shall collectively mean the Hill Creek, Kings Canyon, Little Canyon (LCU), RBU 9-17E, RBU 11-18F, TAP-1, TAP-2, TAP-3, TAP-4, TAP-5, and West Willow Creek compressor stations, each of which is located in the Uinta Basin near Vernal, Utah, as more specifically described in Appendix A.

(u) "Uinta Basin Properties" shall mean the oil and gas lease properties under lease to Dominion E&P and/or operated by Dominion E&P prior to the lodging of this Consent Decree, located within the Uinta Basin near Vernal, Utah, and within Indian Country as identified on the maps shown in Appendix B.

IV. EMISSION REDUCTION REQUIREMENTS

A. DEHYDRATION UNITS

Uinta Basin Existing Major Sources

7. Dominion E&P's and/or XTO's dehydrators at the Kings Canyon, TAP-4, and TAP-5 Facilities are subject to "major source" standards under 40 C.F.R. Part 63, Subpart HH – NESHAPs From Oil and Natural Gas Production Facilities (hereinafter "Subpart HH").

8. This Consent Decree imposes compliance deadlines to accommodate the operational problems that XTO has encountered in achieving Subpart HH level controls at its Uinta Basin Properties as a result of the extremely cold winter conditions at these locations and as a result of high natural gas liquids concentrations being carried over into control devices, XTO shall install thermal oxidizers or other devices as control equipment necessary to achieve compliance with Subpart HH major source standards. By no later than 60 Days after the date of lodging of this Consent Decree, Dominion E&P and/or XTO shall install, operate, and maintain at the Kings Canyon, TAP-4, and TAP-5 Facilities, emission controls in compliance with Subpart HH major source standards.

9. By no later than 120 Days after the date of lodging of this Consent Decree, XTO shall provide a written notice to EPA and certify that the process equipment or control system

installed at the Kings Canyon, TAP-4, and TAP-5 Facilities is achieving emissions reductions sufficient that those Facilities are in compliance with the major source requirements of Subpart HH. The 120 Days may be extended with written EPA approval.

10. [RESERVED].

Uinta Basin Existing Non-Major Sources

11. XTO shall install and operate emissions controls on all gas dehydration units at the Hill Creek, LCU, RBU 9-17E, RBU 11-18F, and West Willow Creek Facilities, and any other compressor stations constructed on Uinta Basin Properties, and shall operate the emissions controls in compliance with Subpart HH major source standards. Controls shall be installed and operating for RBU 9-17E, and RBU11-18F by no later than 90 Days after the date of lodging of this Consent Decree, and for Hill Creek, LCU, and West Willow Creek Facilities, and any new compressor stations constructed on Uinta Basin Properties as of the date of lodging, XTO shall install the required emissions controls by no later than 120 Days after the lodging of this Consent Decree. As a result of the extremely cold winter conditions at these locations and as a result of high natural gas liquids concentrations being carried over into control devices, XTO shall install thermal oxidizers or other devices as control equipment necessary to achieve compliance with Subpart HH major source standards.

12. By no later than 60 Days after each compliance date in Paragraph 11 of this Consent Decree, XTO shall provide a written notice to EPA and certify that the facilities referenced in Paragraph 11 are achieving emissions reductions that would comply with the requirements of Subpart HH.

13. XTO shall operate and maintain emission controls for all gas dehydration performed at the facilities referenced in Paragraph 11, such that the emission controls achieve the emission limitations in Subpart HH for major sources.

14. General Record-Keeping Requirement: XTO shall maintain records and information adequate to demonstrate compliance with the requirements of this Section IV.A., and shall report the status of its compliance with these requirements in its Annual Report submitted pursuant to Section XI (Reporting Requirements).

B. COMPRESSOR ENGINES

Uinta Basin Existing Major Sources

15. XTO's eight (8) RICEs greater than 500 horsepower at the Kings Canyon, TAP-4, and TAP-5 Facilities are subject to 40 C.F.R. Part 63, Subpart ZZZZ – NESHAPs for Stationary Reciprocating Internal Combustion Engines as for major sources (hereinafter "Subpart ZZZZ").

16. On or before July 31, 2007, Dominion E&P shall install, and after August 1, 2007, XTO shall operate and maintain emission controls in compliance with major source standards under Subpart ZZZZ, including catalytic converters, at the eight RICEs greater than 500 horsepower at the Kings Canyon, TAP-4, and TAP-5 Facilities.

17. (a) XTO shall operate and maintain each engine and catalytic converter according to the manufacturers' written instructions or procedures necessary to achieve the destruction efficiencies or emission limits specified in Subpart ZZZZ.

(b) On or after August 1, 2007, XTO shall continuously operate the non-selective catalytic reduction (NSCR) control device and the air-fuel ratio (AFR) control device

on each rich burn RICE greater than 500 horsepower or an oxidation catalyst on each lean burn RICE greater than 500 horsepower installed on the RICE referenced in Paragraph 15.

(c) The NSCR control devices shall meet a limit of 1.0 gram per horsepower hour (g/hp-hr) for NOx and 2 g/hp-hr for CO, when the RICEs are operating at a 90% load or higher.

(d) The oxidation catalyst shall meet a limit of 2.0 g/hp-hr for CO, when the RICEs are operating at a 90% load or higher.

(e) Lean burn RICEs shall be operated and maintained so as to meet a limit of 2.0 g/hp-hr for NOx, when the RICEs are operating at a 90% load or higher.

18. By no later than 60 Days after the lodging of this Consent Decree, XTO shall provide a written notice to EPA and certify that the Kings Canyon, TAP-4, and TAP-5 Facilities are achieving emissions reductions as required to comply with the requirements of Subpart ZZZZ. The 60 Days may be extended with written EPA approval.

Uinta Basin Existing Non-Major Facilities

19. By no later than 90 Days after the lodging of this Consent Decree, XTO shall install and operate control equipment such that the control equipment achieves the emission limitations in Subpart ZZZZ for major sources on the RICE greater than 500 horsepower located at the Hill Creek, LCU, TAP-1, TAP-2, TAP-3, RBU 9-17E, RBU 11-18F and West Willow Creek Facilities, and any other compressor stations constructed on Uinta Basin Properties as of the date of the lodging of this Consent Decree and containing RICE greater than 500 horsepower.

20. (a) The catalytic converters installed on the RICE referenced in Paragraph 19 shall achieve the emissions reductions set forth in Subpart ZZZZ.

(b) XTO shall continuously operate the non-selective catalytic reduction (NSCR) control device and the air-fuel ratio (AFR) control device on each rich burn RICE or an oxidation catalyst on each lean burn RICE installed on the RICE referenced in Paragraph 19.

(c) The NSCR control devices shall and meet a limit of 1.0 g/hp-hr for NOx and 2.0 g/hp-hr for CO, when the RICEs are operating at a 90% load or higher.

(d) The oxidation catalyst shall meet a limit of 2.0 g/hp-hr for CO, when the RICEs are operating at a 90% load or higher.

(e) Lean burn RICEs shall be operated and maintained so as to meet a limit of 2.0 g/hp-hr for NOx, when the RICEs are operating at a 90% load or higher.

21. Immediately following installation of each catalytic converter, XTO shall operate and maintain the RICE and catalytic converters referenced in Paragraph 19 according to the catalyst manufacturer's written instructions or procedures necessary to achieve the emission limitations in Subpart ZZZZ for major sources.

22. (a) XTO shall conduct an initial emissions test of each catalytic converter referenced in Paragraphs 16 and 19 to demonstrate compliance with the Subpart ZZZZ emission limitations using either EPA approved reference methods or a portable analyzer in accordance with Appendix D. An initial emissions test on each catalytic converter installed pursuant to the requirements of Paragraph 20 shall be completed no later than 90 Days after installation of the catalytic converter or 90 Days after the date of lodging of this Consent Decree, whichever date is later.

(b) If any catalytic converter fails to meet the control requirements specified in Subpart ZZZZ, XTO shall take appropriate steps to correct such non-compliance and retest the emissions from the engine within 30 Days after receiving the initial test(s) results. XTO shall submit a report to EPA no later than 60 Days after each retest summarizing the retest results. The 60 Days may be extended with written EPA approval.

(c) Upon successful demonstration that a catalytic converter has met the control requirements specified in Subpart ZZZZ, XTO shall thereafter monitor the parameters of temperature and pressure and shall test the emissions on a semi-annual calendar-year basis using either EPA approved reference methods or a portable analyzer in accordance with the testing protocol as set forth in Appendix D. The semi-annual test date may be extended with written EPA approval.

23. General Record-Keeping Requirement: XTO shall maintain records and information adequate to demonstrate its compliance with the requirements of this Section IV.B, and shall report the status of its compliance with these requirements in its Annual Reports submitted pursuant to Section XI (Reporting Requirements).

C. HYDROCARBON DEWPOINT SKIDS

Uinta Basin Existing Facilities

24. (a) The hydrocarbon dew point skids located at Kings Canyon,TAP-4, and TAP-5 Facilities are subject to NSPS for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants under 40 C.F.R., Part 60, Subpart KKK (hereinafter "Subpart KKK").

(b) On or before the date of lodging of this Consent Decree, XTO shall implement the Subpart KKK standards at the Kings Canyon, and TAP-4 Facilities.

(c) By no later than 60 Days after the lodging of this Consent Decree, XTO shall provide a written notice to EPA and certify that the Kings Canyon and TAP-4 Facilities are in compliance with Subpart KKK. The 60 Days may be extended with written EPA approval.

(d) On or before the lodging of this Consent Decree, XTO shall submit a request for an applicability determination from EPA Region 8 for Risk Management Plan requirements under the Chemical Accident Prevention provisions of 40 C.F.R. Part 68 with respect to the hydrocarbon liquids stored as a result of the dew-point skid processes at the Kings Canyon, RBU 9-17E, TAP-4, and TAP-5 Facilities. If EPA determines that RMP requirements are applicable to the dew-point skids, XTO shall submit a Risk Management Plan to EPA for such affected facilities within 120 days.

25. General Record-Keeping Requirement: XTO shall maintain records and information adequate to demonstrate its compliance with the requirements of this Section IV.C (Hydrocarbon Dew-point Skids), and shall report the status of its compliance with these requirements upon request by EPA.

D. PNEUMATIC CONTROLLERS

Existing High-Bleed Pneumatic Controllers

26. Pneumatic Controller Survey: By no later than 6 months after the lodging of this Consent Decree, XTO shall complete a survey of the Uinta Basin Facilities to identify and develop an approximate tally of the high-bleed Pneumatic Controllers in use at the Uinta Basin Facilities. By no later than 60 Days thereafter, XTO shall report the findings of the Pneumatic Controller survey to EPA. For purposes of this Consent Decree, a "high-bleed" Pneumatic

Controller is any Pneumatic Controller that has the capacity to bleed in excess of six standard cubic feet of natural gas per hour (52,560 scf/year) in normal operation.

27. Retrofits: By no later than 1 year after the lodging of this Consent Decree, XTO shall retrofit or replace high-bleed Pneumatic Controllers with "low-bleed" Pneumatic Controllers on the controllers identified in the Survey Report, unless it is not technically feasible to retrofit or replace particular high-bleed pneumatic controllers. If XTO is not able to retrofit or replace any particular high-bleed pneumatic controllers, the Survey Report shall identify each such pneumatic controller and explain why it is not technically feasible to retrofit or replace each such pneumatic controller with a low-bleed pneumatic controller.

New Construction

28. Beginning on the date of lodging of this Consent Decree, and continuing for the life of this Consent Decree, XTO shall install and operate low or no-bleed Pneumatic Controllers to conserve natural gas at all newly constructed facilities located on Uinta Basin Properties. XTO need not, however, install low or no-bleed controllers at sites for which XTO can demonstrate that the use of low or no-bleed Pneumatic Controllers would not be technically or operationally feasible.

29. General Record-Keeping Requirement: XTO shall maintain records and information adequate to demonstrate its compliance with the requirements of this Section IV.D (Pneumatic Controllers), and shall report the status of its compliance with these requirements upon request by EPA.

V. FUTURE DEVELOPMENT

A. DEHYDRATION UNITS

30. (a) For Dehydration Units constructed at compressor stations located on Uinta Basin Properties after the lodging of this Consent Decree, XTO shall install, operate, and maintain emission control equipment in compliance with major source standards under Subpart HH.

(b) For Dehydration Units constructed at each new oil and/or natural gas production facility located on Uinta Basin Properties after the lodging of this Consent Decree, XTO shall install and operate controls that achieve a 95% by weight or greater reduction of VOC or total HAP emissions from each dehydrator with uncontrolled annual VOC emissions from the reboiler still vent, glycol flash separator, and still vent condenser in excess of 20.0 tons per year ("tpy"), rounded to the nearest 0.1 ton (for purposes of this Paragraph, it is stipulated that "uncontrolled" emissions shall be calculated as the emissions from the outlet vents of glycol flash separators, and flash tanks,). If actual annual average throughput to a unit equals or exceeds 3.0 MMscfd and actual benzene emissions from the unit is equal to or greater than 1.0 tpy considering controls, the unit is an affected unit under 40 CFR part 63, subpart HH for Area Source Oil and Natural Gas Production Facilities, XTO must comply with the applicable provisions of the rule. The uncontrolled VOC emissions analysis shall be determined by using GRI GLYCalc version 4.0 or higher with the results of a recent extended gas analysis from a representative field-specific sample of the stream entering the natural gas dehydrator contactor tower; the maximum lean glycol recirculation rate for the glycol circulation pump in use (redundant pumps may be present in the system) provided:

1. (i) the evaluation is performed using the maximum circulation rate of the largest volume pump; (ii) only one pump may operate at any

one time (if the maximum circulation rate for the pump in use is not included in the GRI GLYCalc User Manual then documentation must be provided to EPA upon request); and (iii) the average operational parameters including wet gas temperature and pressure, dry gas water content, glycol flash separator temperature and pressure, stripping gas source and rate, and average daily gas production are used in the analysis. The average daily gas production for wells not completed prior to twelve months before the effective date of this Consent Decree shall be estimated based on best engineering judgment considering existing wells in the area, and for wells completed at least twelve months prior to the effective date of this Consent Decree shall be determined based on actual gas production for the Twelve Month period prior to the month of the Effective Date of this Consent Decree, as reported to the Utah Division of Oil and Gas and Mining (DOGM) or equivalent agency with jurisdiction.

2. Each dehydrator shall be controlled for a minimum of One Year, after which time the control system or device may be removed without prior EPA approval provided, within 30 Days of removal, the Defendant notifies EPA in writing of the removal date and submits information demonstrating that the uncontrolled, annualized VOC emission rate is less than 5 tpy, using the method

of calculation described in this Paragraph (with the exception that the operating and production data used in the model be the annual average of the most recent Twelve Month period following at least One Year of operation with controls).

(c) By no later than the due date of the next annual compliance certification date or 180 Days after startup, whichever is later, XTO shall provide written notice to EPA and certify that the process equipment or control system installed at a compressor station located on Uinta Basin Properties after the lodging of this Consent Decree is achieving emissions reductions sufficient that those Facilities are in compliance with the major source emission limitations of Subpart HH. The 180 Days may be extended with written EPA approval.

(d) By no later than the due date of the next annual compliance certification or 180 Days after startup, whichever is later, XTO shall provide written notice to EPA and certify that each dehydrator located at a well-site on Uinta Basin Properties with uncontrolled annual emissions of 20 tons per year or more of VOC are achieving the emissions reductions required under Paragraph 30(b). The 180 Days may be extended with written EPA approval.

B. <u>RICE UNITS OF 500 HORSEPOWER OR GREATER</u>

31. For any non-major compressor stations located on Uinta Basin Properties with an on-site RICE unit with a nameplate rating of 500 horsepower ("hp") or greater, such RICE unit shall be subject to emission reduction controls as specified in this Section, in accordance with MACT ZZZZ requirements.

32. Beginning at the date of lodging of this Consent Decree, and continuing for so long as this Consent Decree is in effect, the RICE units subject to emission reduction controls under this Section shall meet the emission limitations for major sources under Subpart ZZZZ.

33. (a) XTO shall continuously operate the non-selective catalytic reduction (NSCR) control device and the air-fuel ratio (AFR) control device on each rich burn RICE or an oxidation catalyst on each lean burn RICE installed on the RICE referenced in Paragraph 31.

(b) The NSCR control devices shall meet a limit of 1.0 gram g/hp-hr for NOx and 2.0 g/hp-hr for CO, when the RICEs are operating at a 90% load or higher.

(c) The oxidation catalyst shall meet a limit of 2.0 g/hp-hr for CO, when the RICEs are operating at a 90% load or higher.

(d) Lean burn RICEs shall be operated and maintained so as to meet a limit of 2.0 g/hp-hr for NOx, when the RICEs are operating at a 90% load or higher.

34. (a) Each RICE unit with a nameplate rating of 500 hp or greater shall comply with the following:

1. Each engine and catalyst shall be operated and maintained according to the manufacturers' written instructions or procedures necessary to achieve the destruction efficiency and/or the emission limits specified in Subpart ZZZZ.
2. By no later than 180 Days following the startup date of a new catalyst controlled RICE, an initial emissions test of such catalyst to demonstrate compliance with the destruction efficiency and/or the emission limits specified in Paragraph 34(a)(1) must be performed, using either EPA Approved reference methods or

portable analyzers in accordance with the Test Protocol set forth in Appendix D.

3. If the catalyst fails to meet the destruction efficiency and/or the emission limits specified in Subpart ZZZZ, XTO shall take appropriate steps to correct such non-compliance and retest the catalytic converter within 30 Days after the receipt of the initial test report. XTO shall submit a report to EPA no later than 60 Days after each retest. The retest report shall include a summary of the steps taken to comply and the retest results. The 60 Days may be extended with written EPA approval.

4. Upon successful demonstration that the catalyst has met the destruction efficiency and/or the emission limits specified in Subpart ZZZZ, XTO shall thereafter test the catalytic converter emission control efficiency on a semi-annual calendar-year basis using either EPA approved reference methods or a portable analyzer in accordance with the Test Protocol set forth in Appendix D. The semi-annual test date may be extended with written EPA approval.

(b) For each RICE unit with a nameplate rating of 500 hp or greater and subject to emission reduction requirements herein, XTO shall submit a test report to EPA within 90 Days after each initial emission test is performed. The report shall contain the emission test results and the following information applicable to each RICE:

1. RICE make, model, nameplate hp rating, location, serial number, installation date and manufacturer emission data;
2. catalyst make, model, installation date and manufacturer emission data;
3. initial emission test results including date and times of test runs, name(s) of employee(s) or contractor(s) who conducted the test; performance data in compliance with 40 C.F.R.§ 63.6620 and with

the applicable provisions of Subpart ZZZZ Tables 3 and 4;

4. a certification pursuant to Paragraph 52 of the information contained in the report in accordance with Section XI (Reporting Requirements).

(c) XTO shall include all subsequent test results in the Annual Report submitted pursuant to Section XI (Reporting Requirements), as well as the information gathered pursuant to the preceding Paragraph 34(a)(4), and shall maintain at the facility a catalyst maintenance log (e.g., date of last catalyst replacement, number of engine operating hours since last catalyst or O_2 sensor replacement, and date and description of any catalyst activities).

35. [RESERVED.]

C. FUTURE PERMIT AND EMISSION REDUCTION CONTROL REQUIREMENTS

36. For compressor stations located on Uinta Basin Properties that are non-major for HAP emissions under Section 112 of the Act, but that are subject to the emission reduction requirements of this Consent Decree, XTO agrees to apply for minor source permits, if EPA promulgates final regulations implementing the regulations proposed for the Review of New Sources and Modification in Indian Country, 79 Fed. Reg. 48696 (August 21, 2006), and if such minor source permits are available for the Uinta facilities. XTO agrees to apply for such minor source permit no later than 180 Days prior to termination of the Consent Decree or sooner if required by law. Notwithstanding the foregoing, this Paragraph does not apply to any facility whose emissions are limited to an equivalent or greater extent by area source regulations under Section 112 of the Act or other emission control regulations (including but not limited to federal implementation of plan regulations, if applicable).

D. GENERAL RECORD-KEEPING REQUIREMENT

37. XTO shall maintain records and information adequate to demonstrate its compliance with the requirements of this Section and shall report the status of its compliance with these requirements in its Annual Reports submitted pursuant to Section XI (Reporting Requirements).

VI. PERFORMANCE OPTIMIZATION REVIEW

38. Within one year after the date of lodging of this Consent Decree, XTO shall complete a Performance Optimization Review ("POR") to increase energy efficiency and enhance product recovery at two facilities in the Uinta Basin in accordance with the Scope of Work attached as Appendix E. The POR shall be performed by third-party consultants acceptable to EPA. XTO will notify EPA of the proposed third-party consultant at least 30 Days prior to initiating the POR.

39. The scope of the POR is expressly limited to the following activities, as set forth in the POR SOW:

(a) Pressure Relief Devices - repair or replace components, as appropriate, to specifically reduce product losses;

(b) Pneumatic Controllers - evaluate for use of low-bleed devices or instrument air;

(c) Production Separators - identify optimal pressures and temperatures, and reset as needed;

(d) Dehydrators - evaluate for use of condensers, enclosed flares, thermal oxidizers, flash tanks and electric pumps to reduce product losses;

(e) Internal Combustion Engines - evaluate maintenance practices and planned shutdown procedures to minimize product losses from blow down and the use of starter gas;

(f) Flare and Vent Systems - evaluate flare and vent system components and associated operating procedures to reduce the loss of product, where possible;

(g) Producing Wells - install plunger lifts and perform "green completion" practices on new wells, as appropriate;

(h) Operating Pressures - review and optimize, where possible; and

(i) Component Inspections and Repairs - perform component inspections using OVA, TVA, or other EPA-approved leak detection field equipment and repair or replace leaking components, as appropriate, to enhance product recovery.

40. POR Reports. Within 60 Days of completion of the POR, XTO shall submit a POR Report to EPA for the Uinta Basin which shall include:

(a) the contractor(s) used to conduct the POR;

(b) the name, location and original construction date of each of the compressor stations at which the POR was completed;

(c) a general description of the components by type and service that were inspected, how they were inspected, a summary and description of any repairs made, an estimate of natural gas conserved as a result of the repairs to the extent quantifiable, and the repair cost;

(d) a general description of the pressure relief devices that were inspected, how they were inspected, a summary description of any repairs made, an estimate of natural gas conserved as a result of the repairs to the extent quantifiable, and the repair cost;

(e) an evaluation of pneumatic devices for use of low-bleed devices or instrument air, and potential product losses avoided;

(f) a description of the review of production separators, identification of those for which optimal pressures and temperatures were calculated and how that was done; a comparison of those values to prior separator operating conditions, a summary of the adjustments to pressures or temperatures that were made, an estimate of the amount of natural gas conserved as a result, and the cost if significant, to adjust pressures and temperatures;

(g) a description of the evaluation of dehydrators for the use of condensers, enclosed flares, thermal oxidizers, flash tanks, and electric pumps; a summary of the projects identified as a result of such review for possible future implementation by XTO on a voluntary basis; if sufficient data exists to prepare an estimate, an estimate of the amount of natural gas potentially conserved if such projects were implemented, and the cost to implement such projects;

(h) a description of the review of RICE shutdown procedures to reduce blow down and the use of starter gas; a summary of any changes that were made based on such review; an estimate of product losses avoided as a result of

any changes made, if reasonably capable of estimation; and the cost to implement such changes;

(i) a description of the review of flare and vent systems, a summary of the repairs made, if any; an estimate of the amount of natural gas conserved as a result of repairs made, and the cost to implement such repairs;

(j) a list of well names and locations at which plunger lift systems were installed, if any, or at which green completion procedures were followed; a description of any plunger lift system(s) used and the well condition(s) that made such system(s) practicable or how new well completion procedures were "green"; an estimate of the amount of natural gas conserved as a result of POR evaluations of certain producing wells, and the cost to implement any such systems and/or procedures; and

(k) a description of how operating pressures were evaluated and, where possible, optimized; an estimate of the amount of natural gas conserved as a result of such evaluation, and an estimate of the cost, if non-negligible, to optimize operating pressures.

The 60 Days may be extended with written EPA approval.

41. Within 120 Days of completion of the POR, XTO may identify in writing to EPA, any areas of non-compliance with the Act (including federal implementing regulations) that are discovered during the POR. The 120 Days may be extended with written EPA approval. Under this Paragraph, for other than PSD/NSR, XTO shall include in its written submission: (1) a certification pursuant to Paragraph 52 that it has subsequently complied with all applicable

statutory and regulatory requirements, or it shall propose a schedule for coming into compliance; (2) a description of the corrective measures taken, or proposed to be taken; and (3) a proposed calculation of any economic benefit pursuant to the EPA Stationary Source Civil Penalty Policy and BEN Model. EPA will review XTO's certifications, and/or proposed schedule for compliance, corrective measures, and economic benefit calculation(s), and will respond with written concurrence or comments. In the event that EPA does not approve of the proposed corrective measures or economic benefit calculation(s), each, as applicable, will respond with written comments. Should EPA still not agree with the economic benefit calculation(s), EPA's independent economic benefit calculations shall be final and payable. At EPA's discretion, the Parties will address any PSD/NSR violations as a new and separate enforcement action. XTO's release from liability as specified in Section XVI (Effect of Settlement/Reservation of Rights) for the areas of non-compliance identified and corrected pursuant to this Section VI will take effect upon the Plaintiff's written concurrence with XTO's certification and its payment in full of any economic benefit. Any areas of non-compliance discovered by EPA and any disclosures by XTO beyond this specific 120-Day period (except as otherwise extended by written EPA approval) are not covered by this Paragraph.

VII. LIMITS ON POTENTIAL TO EMIT

42. The control requirements established in Sections IV.A and V.A (Dehydration Units) and Sections IV.B and V.B (Compressor Engines) under this Consent Decree shall be considered "federally enforceable" and, as applicable, "legally and practicably enforceable" for purposes of calculating the potential to emit (PTE) of a source or facility as may be applicable under the Act and any implementing federal regulations.

43. The PTE for VOCs from Dehydration Units at any facility in the Uinta Basin Properties shall be limited by the control requirements set forth in Sections IV.A and V.A (Dehydration Units), and shall be federally enforceable on that basis.

44. The PTE for CO, NOx and HAPs for all RICE identified in Sections IV.B and V.B at any facility in the Uinta Basin Properties shall be limited by the requirement that emissions be controlled by catalytic converters that achieve the destruction efficiency specified in Paragraphs 17, 20 and 34(a)(1).

VIII. TITLE V OPERATING PERMITS

45. (a) XTO certifies that, as of the date of lodging of this Consent Decree, complete Title V permit applications have been submitted to EPA for the Kings Canyon, TAP-4, and TAP-5 Facilities. The United States agrees that these facilities shall operate in accordance with the terms of this Consent Decree until such time as EPA has issued the Title V permits for those facilities and this Consent Degree is terminated in whole or in part.

(b) By no later than 60 days after the lodging of this Consent Decree, XTO shall submit to EPA an estimate of potential emissions for the Uinta Basin facilities, other than Kings Canyon, TAP-4, and TAP-5, calculated both without controls and with the application of controls required by this Consent Decree. Should any Uinta Basin facilities, other than Kings Canyon, TAP-4, or TAP-5, be major sources before the application of controls required by this Consent Decree, XTO shall submit complete Title V Permit applications for any such source within 180 days after the lodging of this Consent Decree. The United States agrees that these facilities shall operate in accordance with the terms of this Consent Decree until such time as

EPA has issued the Title V permits for those facilities and this Consent Degree is terminated in whole or in part.

IX. CIVIL PENALTY

46. Within 30 Days after the Effective Date of this Consent Decree, Dominion E&P shall pay to the Plaintiff a total civil penalty pursuant to Section 113 of the Act, 42 U.S.C. § 7413, in the amount of $250,000. Dominion E&P shall pay interest on any overdue civil penalty at the rate specified in 28 U.S.C. § 1961; however, in the case of overdue payments, interest shall accrue from the date of entry until the date of payment..

47. Federal Payment Instructions: Dominion E&P or XTO shall make payment by Electronic Funds Transfer ("EFT") to the United States Department of Justice ("DOJ"), in accordance with current EFT procedures, referencing the United States Attorney's Office ("USAO") File Number and DOJ Case Number 90-5-2-1-09196. Payment shall be made in accordance with instructions provided by the USAO for the District of Utah, Northern Division. Any funds received after 11:00 a.m. (EST/EDT) shall be credited on the next business Day. Dominion E&P or XTO shall provide notice of payment, referencing the USAO File Number, DOJ Case Number 90-5-2-1-09196 and the civil case name and case number, to DOJ and to EPA, as provided in Section XIX (Notices).

48. No amount of the civil penalty to be paid by Dominion E&P shall be used to reduce its federal tax obligations.

X. [RESERVED].

49. [RESERVED].

XI. REPORTING REQUIREMENTS

50. Dominion E&P and/or XTO shall submit the following reports:

(a) In compliance with any specific deadline requirement of this Consent Decree, Dominion E&P and/or XTO shall submit all initial performance test results, retest reports, initial status reports, progress reports, final reports, and notices (this Paragraph is not a cumulative requirement)

(b) By no later than March 1 of each year, XTO shall submit an Annual Report for the preceding calendar year to EPA. XTO shall provide a paper and electronic copy of each Annual Report to EPA. The Annual Report shall: (i) describe all work or other activities that Dominion E&P and/or XTO performed pursuant to any requirement of this Consent Decree during the applicable reporting period; (ii) transmit any specific (non-annual) reports to be included in an Annual Report; (iii) describe compliance status; and (iv) describe any non-compliance with the requirements of this Consent Decree and explain the likely cause(s) of the violation(s) and the remedial steps taken, or to be taken, to prevent or minimize such violation(s).

(c) Within 10 Days of the date XTO first becomes aware of any violation(s), or potential violation(s), or has reason to believe that it may violate, any requirement of this Consent Decree, XTO shall notify EPA of such violation(s), and its likely duration, in writing, with an explanation of the likely cause of such violation(s) and the remedial steps taken, or to be taken, to prevent or minimize such violation(s) should it occur. If the cause of a violation cannot be fully explained at the time the notification is due, XTO shall state this in the 10-Day notice, investigate the cause of each such violation in the event that it occurs, and **within 30 Days** of the date that XTO determines such cause, submit a full written explanation of the cause of the

violation. Nothing in this Paragraph relieves XTO of its obligation to provide the notice required by Section XIII (Force Majeure).

51. All reports shall be submitted to the persons designated in Section XIX (Notices) of this Consent Decree.

52. Each Annual Report submitted by XTO shall be signed by a Responsible Official. All other reports or submissions may be signed by a delegated employee representative, unless otherwise required by applicable statute or regulation. All reports and submissions shall include the following certification:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete.

53. The reporting requirements of this Section shall continue until termination of this Consent Decree; however, upon written agreement by EPA where a Consent Decree reporting requirement is added to a final Title V permit or other non-Title V permit such that the permit meets or exceeds such Consent Decree reporting requirement, XTO may fulfill that Consent Decree reporting requirement by notifying EPA that the required report has been provided pursuant to a permit requirement, and by identifying the relevant permit in XTO's Annual Reports, submitted pursuant to this Section XI (Reporting Requirements).

54. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as

otherwise permitted by law, except for disclosures made pursuant to Paragraph 41 of this Consent Decree.

XII. STIPULATED PENALTIES

55. Dominion E&P and/or XTO shall be liable for stipulated penalties to the United States for violations of this Consent Decree as specified below, unless excused under Section XIII (Force Majeure), or reduced or waived by the Plaintiff pursuant to Paragraph 60 of this Decree. A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

(a) Dehydration Units (Sections IV.A and V.A).

	Violation	Stipulated Penalty
1.	For failure to install and operate controls as required by Paragraphs 8, 11 and 30 per unit per Day.	For each unit: $1000 per Day for the first 30 Days of noncompliance, $1500 per Day from the 31st to 60th Day of noncompliance, and $2000 per Day thereafter.
2.	For failure to provide written notice as required by Paragraphs 9 and 12 per unit per Day.	For each unit: $200 per Day for the first 30 Days of noncompliance, $500 per Day from the 31st to 60th Day of noncompliance, and $1000 per Day thereafter.
3.	For failure to maintain records and information as required by Paragraphs 14 and 37.	For each unit: $200 per Day for the first 30 Days of noncompliance, $500 per Day from the 31st to 60th Day of noncompliance, and $1000 per Day thereafter.

(b) Compressor Engines (Sections IV.B. and V.B).

	Violation	Stipulated Penalty
1.	For failure to install emission controls on RICE as required by	For each engine: $1000 per Day for the first 30 Days of noncompliance, $1500 per Day from

	Paragraphs16, 19, 31, 32, 33, and 34.	the 31st to 60th Day of noncompliance, and $2000 per Day thereafter.
2.	For failure to conduct initial performance test on the RICE emission controls as required by Paragraphs 22(a) and 34(a)(2).	For each engine: $500 per Day for the first 30 Days of noncompliance, $1000 per Day from the 31st to 60th Day of noncompliance, and $1500 per Day thereafter.
3.	For failure to submit reports as required by Paragraphs 22(b) and 34(a)(3).	For each report: $200 per Day for the first 30 Days of noncompliance, $500 per Day from the 31st to 60th Day of noncompliance, and $1000 per Day thereafter.
4.	For failure to maintain records as required by Paragraph 23.	For each engine: $200 per Day for the first 30 Days of noncompliance, $500 per Day from the 31st to 60th Day of noncompliance, and $1000 per Day thereafter.

(c) **Pneumatic Controllers (Section IV.D)**

	Violation	Stipulated Penalty
1.	For failure to complete the Survey and submit a Report on existing high-bleed Pneumatic Controllers, as required by Paragraph 26.	$200 per Day for the first 30 Days of noncompliance; $500 per Day from the 31st to 60th Day of noncompliance, and $1000 per Day thereafter.
2.	For failure to retrofit high-bleed Pneumatic Controllers as required by Paragraph 27.	For each device that is not retrofitted, $100 per Day for the first 30 Days of noncompliance; $250 per Day from the 31st to 60th Day of noncompliance, and $500 per Day thereafter.

56. Late Payment of Civil Penalty: If Dominion E&P fails to pay the civil penalty required to be paid under Section IX (Civil Penalty) of this Consent Decree when due, Dominion E&P shall pay a stipulated penalty of $1,000 per Day for each Day that the payment is late.

57. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue

to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

58. Dominion E&P and/or XTO shall pay any stipulated penalty within 30 Days of receipt of written demand of the United States and shall continue to make such payments every 30 Days thereafter until the violation(s) no longer continue, unless Dominion E&P and/or XTO elects within 20 Days of receipt of written demand from the United States to dispute the accrual of stipulated penalties in accordance with the provisions in Section XIV (Dispute Resolution) of this Consent Decree.

59. Dominion E&P and/or XTO shall pay stipulated penalties in accordance with the payment instructions set forth in Paragraph 47.

60. The United States may, in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due under this Consent Decree.

61. Stipulated penalties shall continue to accrue as provided in Paragraph 57 during any dispute, with interest on accrued stipulated penalties payable and calculated by the Secretary of Treasury, pursuant to 28 U.S.C. § 1961, but need not be paid until the following:

(a) If the dispute is resolved by agreement or by a decision of the Plaintiff pursuant to Section XIV (Dispute Resolution) of this Consent Decree that is not appealed to the Court, Dominion E&P and/or XTO shall pay accrued stipulated penalties and accrued interest agreed or determined to be owing within 30 Days of the effective date of such agreement or the receipt of Plaintiff's decision.

(b) If the dispute is appealed to the Court, and the Plaintiff prevails in whole or in part, Dominion E&P and/or XTO shall pay all accrued stipulated penalties determined by

the Court to be owing, together with accrued interest, within 60 Days of receiving the Court's decision or order, except as provided in Subparagraph c., below.

(c) If either Party appeals the Court's decision, Dominion E&P and/or XTO shall pay all accrued penalties determined by the appellate court to be owing, together with accrued interest, within 15 Days of receiving the final appellate court decision.

62. Dominion E&P and/or XTO shall not deduct stipulated penalties paid under this Section XII in calculating its federal or state income tax.

63. Subject to the provisions of Section XVI (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States for Dominion E&P's and/or XTO's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of the Act or regulatory requirements of the Act, Dominion E&P and/or XTO shall be allowed a dollar-for-dollar credit, for any stipulated penalties paid, against any statutory penalties imposed for such violation.

XIII. FORCE MAJEURE

64. If any event occurs which causes or may cause a delay or impediment to performance in complying with any provision of this Consent Decree (*e.g.*, would require operation in an unsafe manner), and which Dominion E&P and/or XTO believes qualifies as an event of *Force Majeure*, Dominion E&P and/or XTO shall notify the Plaintiff in writing as soon as practicable, but in any event within 45 Days of when Dominion E&P and/or XTO first knew of the event or should have known of the event by the exercise of reasonable diligence. In this notice Dominion E&P and/or XTO shall specifically reference this Paragraph of this Consent

Decree and describe the anticipated length of time the delay may persist, the cause or causes of the delay, the measures taken and/or to be taken by Dominion E&P and/or XTO to prevent or minimize the delay and the schedule by which those measures will be implemented. Dominion E&P and/or XTO shall adopt all reasonable measures to avoid or minimize such delays.

65. Failure by Dominion E&P and/or XTO to substantially comply with the notice requirements of Paragraph 64, as specified above, shall render this Section voidable by the Plaintiff, as to the specific event for which Dominion E&P and/or XTO has failed to comply with such notice requirement. If so voided, this Section shall be of no effect as to the particular event involved.

66. The Plaintiff shall notify Dominion E&P and/or XTO in writing regarding its agreement or disagreement with any claim of a Force Majeure event within 45 Days of receipt of each Force Majeure notice provided under Paragraph 64.

67. If the Plaintiff agrees that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Dominion E&P and/or XTO, including any entity controlled or contracted by it, and that Dominion E&P and/or XTO could not have prevented the delay by the exercise of reasonable diligence, the Parties shall stipulate to an extension of the required deadline(s) for all requirement(s) affected by the delay by a period equivalent to the delay actually caused by such circumstances, or such other period as may be appropriate in light of the circumstances. Such stipulation may be filed as a modification to this Consent Decree by agreement of the Parties pursuant to the modification procedures established in this Consent Decree. Dominion E&P and/or XTO shall not be liable for stipulated penalties for the period of any such delay.

68. If the Plaintiff does not agree that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Dominion E&P and/or XTO, including any entity controlled or contracted by it, the position of the Plaintiff on the Force Majeure claim shall become final and binding upon Dominion E&P and/or XTO, and Dominion E&P and/or XTO shall pay applicable stipulated penalties, unless Dominion E&P and/or XTO submits the matter to this Court for resolution by filing a petition for determination with this Court within 20 business Days after receiving the written notification of the Plaintiff as set forth in Paragraph 64. Once Dominion E&P and/or XTO has submitted such matter to this Court, the Plaintiff shall have 20 business Days to file a response to the petition. If Dominion E&P and/or XTO submits the matter to this Court for resolution and the Court determines that the delay or impediment to performance has been or will be caused by circumstances beyond the control of Dominion E&P and/or XTO, including any entity controlled or contracted by Dominion E&P and/or XTO, and that it could not have prevented the delay by the exercise of reasonable diligence, Dominion E&P and/or XTO shall be excused as to such event(s) and delay (including stipulated penalties) for all requirements affected by the delay for a period of time equivalent to the delay caused by such circumstances or such other period as may be determined by the Court.

69. Dominion E&P and/or XTO shall bear the burden of proving that any delay of any requirement(s) of this Consent Decree was (were) caused by or will be caused by circumstances beyond its control, including any entity controlled or contracted by Dominion E&P and/or XTO, and that it could not have prevented the delay by the exercise of reasonable diligence. Dominion E&P and/or XTO shall also bear the burden of proving the duration and extent of any delay(s) attributable to such circumstances. An extension of one compliance date

based on a particular event may, but does not necessarily, result in an extension of a subsequent compliance date or dates. Unanticipated or increased costs or expenses associated with the performance of obligations under this Consent Decree shall not constitute circumstances beyond the control of Dominion E&P and/or XTO.

70. As part of the resolution of any matter submitted to this Court under this Section, the Parties by agreement, or this Court by order, may in appropriate circumstances extend or modify the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of any delay or impediment to performance on which an agreement by the Plaintiff or approval by this Court is based. Dominion E&P and/or XTO shall be liable for stipulated penalties for its failure thereafter to complete the work in accordance with the extended or modified schedule, except to the extent that such schedule is further modified, extended or otherwise affected by a subsequent Force Majeure event under this Section XIV.

XIV. DISPUTE RESOLUTION

71. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree.

72. Informal Dispute Resolution: Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Dominion E&P and/or XTO sends the Plaintiff a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 20 Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal

negotiations, then the position advanced by the Plaintiff shall be considered binding unless, within 20 Days after the conclusion of the informal negotiation period, Dominion E&P and/or XTO invokes formal dispute resolution procedures as set forth below.

73. Formal Dispute Resolution: Dominion E&P and/or XTO may only invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the Plaintiff a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting Dominion E&P's and/or XTO's position and any supporting documentation relied upon by Dominion E&P and/or XTO.

74. The Plaintiff shall serve its Statement of Position within 30 Days of receipt of Dominion E&P's and/or XTO's Statement of Position. The Plaintiff's Statement of Position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the Plaintiff. The Plaintiff's Statement of Position shall be binding on Dominion E&P and/or XTO, unless Dominion E&P and/or XTO files a motion for judicial review of the dispute in accordance with Paragraph 75.

75. Dominion E&P and/or XTO may seek judicial review of the dispute by filing with the Court and serving on the Plaintiff, in accordance with Section XIX of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 30 Days of receipt of the Plaintiff's Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Dominion E&P's and/or XTO's position on the matter in dispute, including any supporting factual data, analysis, opinion, or

documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

76. The Plaintiff shall respond to Dominion E&P's and/or XTO's motion within the time period allowed by the Local Rules of the Court. Dominion E&P and/or XTO may file a reply memorandum, to the extent permitted by the Local Rules and allowed by the Court.

77. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 75, Dominion E&P and/or XTO shall bear the burden of demonstrating that its position complies with this Consent Decree.

78. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Dominion E&P and/or XTO under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of alleged noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 61. If Dominion E&P and/or XTO does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XII (Stipulated Penalties).

XV. INFORMATION COLLECTION AND RETENTION

79. The United States, and its representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree at all reasonable times, upon presentation of credentials, for the purpose of monitoring compliance with any provision of this Consent Decree, including to:

(a) monitor the progress of activities required under this Consent Decree;

(b) inspect equipment and facilities covered by this Consent Decree; and

(c) inspect and copy documents, records, or other information to be maintained in accordance with the terms of this Consent Decree.

80. Dominion E&P and/or XTO shall be entitled to: (1) splits of samples, where feasible, and (2) copies of any sampling and analytical results, documentary evidence and data obtained by the United States pursuant to Paragraph 79 of this Consent Decree.

81. Dominion E&P and/or XTO shall retain, and shall instruct its contractors and agents to retain, for a period of five (5) years after each record is generated or created copies, of all records, test results, or monitoring information required pursuant to this Consent Decree. Records of monitoring information also includes calibration and maintenance records, original strip-chart recordings for continuous monitoring, and copies of all reports required by the Consent Decree or applicable regulations. Such documents, records, or other information may be kept in electronic form. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States, Dominion E&P and/or XTO shall provide copies of any non-privileged documents, records, or other information required to be maintained under this Paragraph.

82. [RESERVED].

83. Dominion E&P and/or XTO may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal and/or state law. If Dominion E&P and/or XTO asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of each author of the document, record, or

information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Dominion E&P and/or XTO. However, no final documents, records or other information that Dominion E&P and/or XTO is explicitly required to create or generate to satisfy a specific requirement of this Consent Decree shall be withheld on the grounds of privilege.

84. Dominion E&P and/or XTO may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Dominion E&P and/or XTO seeks to protect as CBI, Dominion E&P and/or XTO shall follow the procedures set forth in 40 C.F.R. Part 2.

85. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Dominion E&P and/or XTO to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XVI. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

86. This Consent Decree resolves all civil claims of the United States for violations alleged in the Complaint through the date of lodging, and all civil claims of the United States for violations addressed in this Consent Decree and disclosed in Appendices C and F: Letters of December 22, 2006, and January 8, 2007.

87. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Section VI of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States to

obtain penalties or injunctive relief under the Act or its implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly provided in Section VII (Limits on Potential to Emit), and Paragraph 86.

88. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Nothing in this Consent Decree shall relieve Dominion E&P and/or XTO of its obligation to achieve and maintain full compliance with all applicable federal, State, and local laws, regulations, and permits. The United States does not, by its consent to the entry of this Consent Decree, warrant or aver in any manner that Dominion E&P and/or XTO's compliance with any aspect of this Consent Decree will result in compliance with other provisions of the Act or its implementing regulations or with any other provisions of federal, State, or local laws, regulations, or permits.

89. This Consent Decree does not limit or affect the rights of Dominion E&P and/or XTO or of the United States against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Dominion E&P and/or XTO, except as provided herein or as otherwise provided by law.

90. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not a party to this Consent Decree.

XVII. EMISSION REDUCTION CREDIT GENERATION

91. Dominion E&P and/or XTO shall not generate or use any NOx, CO or VOC emission reductions that result from any projects conducted pursuant to this Consent Decree as credits or offsets in any PSD, major non-attainment and/or minor New Source Review ("NSR") permit or permit proceeding. The foregoing notwithstanding, Dominion E&P and/or XTO may

conduct projects pursuant to this Consent Decree that create more emission reductions of CO or VOCs than are required for these pollutants by the underlying applicable requirement(s). In such instances, Dominion E&P and/or XTO may retain a portion of the achieved emissions reductions for use as credits or offsets. All other emission sources of CO or VOCs, and any netting associated with other pollutants, are outside the scope of these netting limitations and are subject to PSD/NSR applicability as implemented by the appropriate permitting authority or EPA. Use of emission reductions in netting and as offsets in any PSD, major non-attainment and/or minor NSR permit or permit proceeding pursuant to the limitations herein shall be further limited by the applicable regulations, and by the PSD, major non-attainment, and/or minor NSR permit(s) in question, as applicable.

XVIII. COSTS

92. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect the costs (including reasonable attorneys' fees) incurred in any action in which it is the prevailing party and which is necessary to collect any portion of the civil penalty or any stipulated penalties if due.

XIX. NOTICES

93. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and mailed or hand delivered addressed as follows:

As to the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-2-1-08656

and

Director, Air Enforcement Division
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
Ariel Rios Building [2242A]
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

and

Assistant Regional Administrator
Office of Enforcement, Compliance, and Environmental Justice
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

As to Dominion E&P:

Rodney J. Biggs
Vice President - Operations
Dominion Exploration & Production, Inc.
One Dominion Drive
Jane Lew, West Virginia 26378

As to XTO:

Nina Hutton
Vice President – EH&S
XTO Energy Inc.
810 Houston Street
Fort Worth, TX 76102-6298

94. Any Party may, by written notice to the other Party, change its designated notice recipient or notice address provided above.

95. Notices submitted by mail pursuant to this Section XIX shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XX. SALES OR TRANSFERS OF OWNERSHIP/OPERATOR INTERESTS

96. Dominion E&P and XTO entered into an asset purchase agreement, which includes the sale and transfer of ownership and operation of the Uinta Basin Facilities. XTO Energy, Inc. has been notified of the existence of this Consent Decree. The Plaintiff has been notified of such sale and agrees to the following terms regarding the transfer of liability under this Consent Decree resulting from such sale.

97. As of the date of the closing of the sale, July 31, 2007, XTO consents to: (a) accept all of the obligations, terms and conditions of this Consent Decree applicable to Uinta Basin Facilities and Properties, exclusive of wellhead facilities, that are subject to any requirement of this Consent Decree; (b) the jurisdiction of the Court to enforce the terms of this Consent Decree; and (c) become a party to this Consent Decree. On the date of the closing of the sale, Dominion E&P shall be relieved of all liability for implementing this Consent Decree. Notwithstanding the foregoing, Dominion E&P may not assign, and may not be released from, obligations under this Consent Decree to pay the civil penalty in accordance with Section IX (Civil Penalty), pay stipulated penalties with respect to actions occurring prior to the date of transfer of ownership or operator responsibility in accordance with Section XII (Stipulated Penalties), or maintain documents or provide reports with respect to those obligations in

accordance with Sections XI (Reporting Requirements) and XV (Information Collection and Retention).

98. Thereafter, if XTO proposes to sell or transfer all or part of its ownership or its responsibility as operator of any of the Uinta Basin Facilities, except for individual wells or groups of wells and associated wellhead facilities, to any entity unrelated to XTO Energy, Inc. ("Third Party"), XTO Energy, Inc. shall advise the Third Party in writing of the existence of this Consent Decree prior to such sale or transfer and shall send a copy of such written notification to the Plaintiff pursuant to Section XIX (Notices) of this Consent Decree at least 30 Days before such proposed sale or transfer.

99. No sale or transfer of ownership to a Third Party shall take place before the Third Party consents in writing, by a stipulation to be filed with the Court, to: (a) accept all of the obligations, terms and conditions of this Consent Decree applicable to Uinta Basin Facilities, exclusive of wellhead facilities, that are subject to any requirement of this Consent Decree; (b) the jurisdiction of the Court to enforce the terms of this Consent Decree as to such party; and (c) become a party to this Consent Decree. Notwithstanding such a sale or transfer to a Third Party, XTO shall remain jointly and severally liable with the Third Party unless the Consent Decree is modified or XTO's joint and several liability is restricted in accordance with Paragraph 103.

100. If the United States agrees, XTO and the Third Party may execute a modification to this Consent Decree that relieves XTO of its liability under this Consent Decree for, and makes the Third Party liable for, all obligations and liabilities applicable to the purchased or transferred facilities or operator responsibility. Notwithstanding the foregoing, XTO may not assign, and may not be released from, obligations under this Consent Decree to pay stipulated

penalties with respect to actions occurring subsequent to the date it accepted liability under this Consent Decree and prior to the date of transfer of ownership or operator responsibility in accordance with Section XII (Stipulated Penalties). XTO may propose, and the United States may agree, to restrict the scope of the joint and several liability of any purchaser or transferee for any obligations of this Consent Decree that are not specific to the transferred or purchased facilities or operator responsibility, to the extent such obligations may be adequately separated in an enforceable manner.

XXI. EFFECTIVE DATE

101. Unless otherwise specifically provided herein, the Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court.

XXII. RETENTION OF JURISDICTION

102. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree pursuant to Section XIV (Dispute Resolution) or entering, partially terminating or terminating orders modifying this Decree, pursuant to Sections XX (Sales or Transfers of Ownership/Operator Interests), XXIII (Modification), and XXIV (Termination), or otherwise effectuating, or enforcing compliance with, the terms of this Consent Decree.

XXIII. MODIFICATION

103. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by the Parties affected by the modification (e.g., if the modification only affects operational requirements, the "Parties affected" would consist of EPA and the party responsible at that time for operational

requirements, but not predecessor entities). With respect to any modification that constitutes a material change to this Consent Decree, such written agreement shall be filed with the Court and effective only upon the Court's approval. Any modification of a reporting requirement of this Consent Decree shall be deemed a non-material modification. Any disputes concerning modification of this Consent Decree shall be resolved pursuant to Section XIV (Dispute Resolution) of this Consent Decree.

XXIV. TERMINATION

104. This Consent Decree shall remain in effect for a period of five (5) years after the Date of Lodging of this Consent Decree or until otherwise terminated or partially terminated in accordance with the provisions of this Section.

105. Dominion E&P and/or XTO may serve upon the United States a Request for Termination or partial termination at any time after the Effective Date]. The Request for Termination or partial termination shall certify that Dominion E&P and/or XTO have paid the civil penalty and all stipulated penalties, if any, that have accrued, and has fulfilled all other obligations of this Consent Decree.

106. Where a control requirement, recordkeeping requirement, reporting requirement or other requirement of this Consent Decree is incorporated into a federally enforceable permit, Dominion E&P and/or XTO may serve upon the United States a Request for Partial Termination. Upon approval of such request by the Plaintiff, the filing of a joint stipulation by the Parties and the Court's approval in accordance with Paragraph 103, the Consent Decree provision in question shall be superseded by the corresponding permit provision, which shall govern as the applicable requirement.

107. Following receipt by the United States of Dominion E&P and/or XTO's Request for Termination or Partial Termination, the Parties shall confer informally concerning the Request for Termination or Partial Termination and any disagreement that the Parties may have as to whether Dominion E&P and/or XTO has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States agrees that the Decree may be terminated or partially terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating or partially terminating the Decree.

108. If the United States does not agree that the Decree may be terminated, Dominion E&P and/or XTO may immediately appeal the disposition of its Request for Termination to the Court.

XXV. PUBLIC PARTICIPATION

109. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Dominion E&P and/or XTO consent to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Consent Decree, unless the United States has notified Dominion E&P and/or XTO in writing that it no longer supports entry of the Consent Decree.

XXVI. SIGNATORIES/SERVICE

110. Each undersigned representative of Dominion E&P, XTO, and the Assistant Attorney General for the Environment and Natural Resources Division of DOJ certifies that he or she is fully authorized to enter into this Consent Decree and to execute and legally bind the Party he or she represents to the terms and conditions of this document.

111. Dominion E&P and/or XTO represent that they have authority to legally obligate any of its corporate subsidiaries or affiliates that own or operate any of the Uinta Basin Facilities or any other natural gas production or gathering facilities subject to any work or compliance requirements of this Consent Decree to take all actions necessary to comply with the provisions of this Consent Decree.

112. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Dominion E&P and/or XTO agree to accept service of process by mail pursuant to the provisions of Section XIX (Notices) with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. The Parties agree that Dominion and/or XTO need not file a responsive pleading to the complaint in this action unless or until the Court expressly declines to enter this Consent Decree. If the Court so declines to enter the Consent Decree, Dominion and/or XTO shall have 60 Days from the date of such Order to answer or otherwise plead or move in response to Plaintiff's Complaint.

XXVII. INTEGRATION

113. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding between the Parties with respect to the settlement of matters addressed in the Decree, and supersedes all prior agreements and understandings, whether oral or written, concerning such matters. Other than the appendices listed in Section XXIX (Appendices), which are attached to and incorporated in this Consent Decree, and deliverables that are subsequently submitted and approved pursuant to this Decree, no other document, representation, inducement, agreement, understanding, or promise constitutes any part of this Decree or the settlement it memorializes, nor shall evidence of any such document, representation, inducement, agreement, understanding or promise be used in construing the terms of this Consent Decree.

XXVIII. FINAL JUDGMENT

114. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States and Dominion E&P.

XXIX. APPENDICES

A. Uinta Basin Facilities

B. Uinta Basin Properties

C. Self-Disclosure Letter of December 22, 2006

D. Test Protocol for Portable Analyzers

E Scope of Work for Performance Optimization Review

F. Self-Disclosure Letter of January 8, 2007

Dated and entered this 16th Day of November, 2009

UNITED STATES DISTRICT JUDGE
District of Utah

FOR PLAINTIFF, UNITED STATES OF AMERICA

Date_____

JOHN C CRUDEN
Acting Assistant Attorney General
Environment & Natural Resources Division
950 Pennsylvania Avenue, N.W.
Room 2143
Washington, D.C. 20530

Date Mar. 19, 2009

DIANNE M. SHAWLEY
Senior Counsel
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
1961 Stout Street – 8th Floor
Denver, CO 80294
Telephone (303) 844-1363
Fax (303) 844-1350

FOR THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY:

Date 3/27/09

CATHERINE R. McCABE
Acting Assistant Administrator
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Date March 20, 2009

ADAM M. KUSHNER
Director, Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

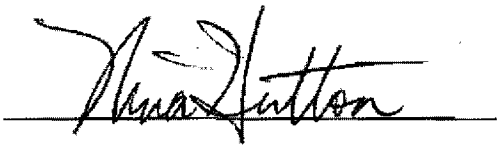
Date 6 March 2009

for ANDREW M. GAYDOSH
Assistant Regional Administrator
Office of Enforcement, Compliance and
Environmental Justice
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, CO 80202

FOR DEFENDANT, DOMINION EXPLORATION & PRODUCTION, INC.

Bob Boggs Date 3/2/2009

FOR DEFENDANT, XTO ENERGY INCORPORATED:



Date: 2-27-09

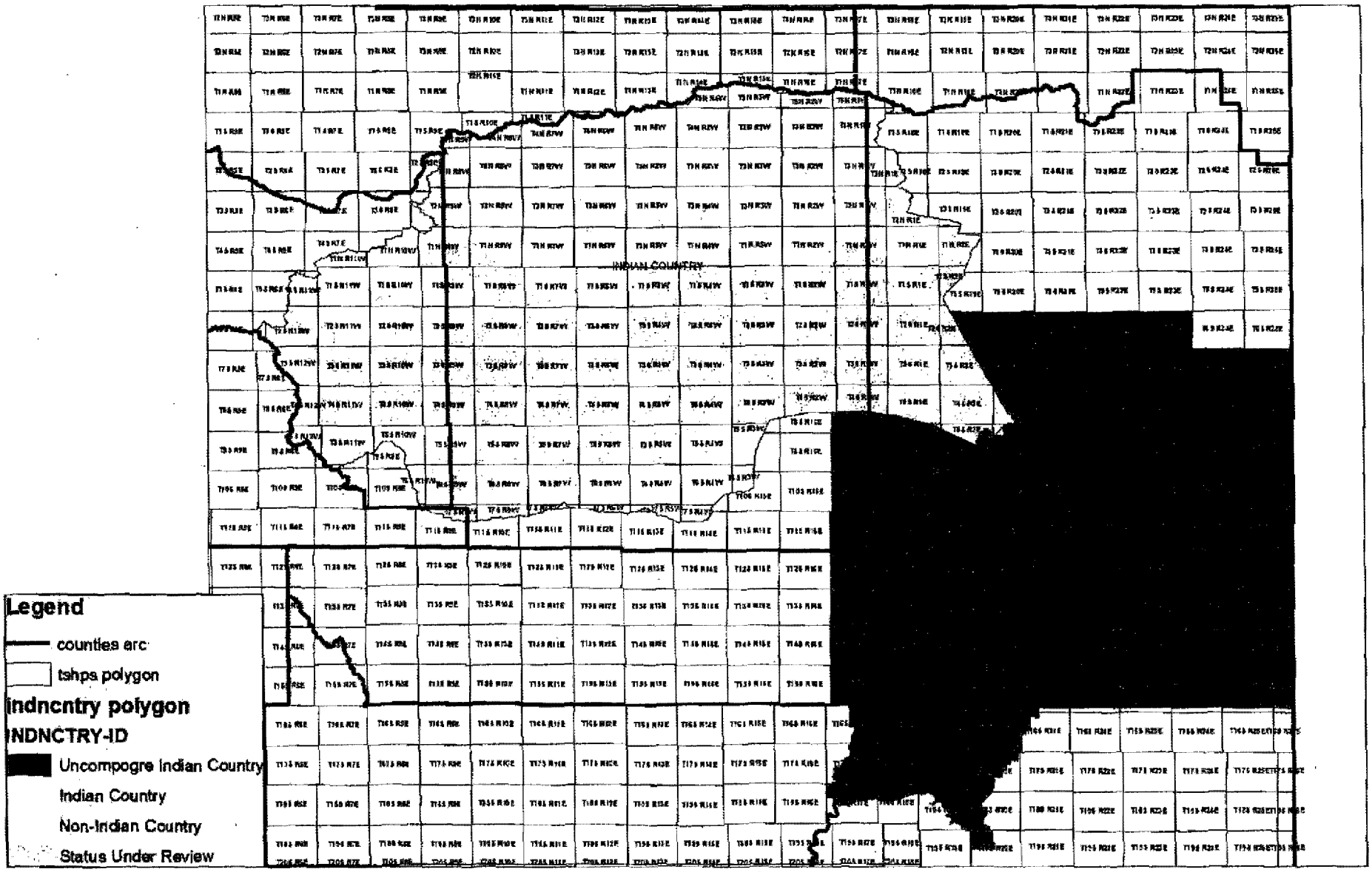
735229_1.DOC

Appendix A

Uinta Basin Facilities

Facility	Legal Location	Title V Status
Hill Creek	SWSW Section 20, R 20 East, T 10 South, Uintah County, Utah	Minor Source
Kings Canyon	NWSE Section 26, R 19 East, T 10 South, Uintah County, Utah	Title V application received by EPA on 4/13/07.
Little Canyon	SESE Section 36, R 20 East, T 10 South, Uintah County, Utah	Minor Source
RBU 9-17E	NWSE Section 17, R 19 East, T 10 South, Uintah County, Utah	Minor Source
RBU 11-18F	NWSE Section 18, R 20 East, T 10 South, Uintah County, Utah	Minor Source
TAP-1	NW Section 15, R 19 East, T 10 South, Uintah County, Utah	Minor Source
TAP-2	NW Section 14, R 19 East, T 10 South, Uintah County, Utah	Minor Source
TAP-3	NWNW Section 13, R 19 East, T 10 South, Uintah County, Utah	Minor Source
TAP-4	NW Section 18, R 20 East, T 10 South, Uintah County, Utah	Title V application received by EPA on 4/13/07.
TAP-5	SW Section 2, R 20 East, T 10 South, Uintah County, Utah	Title V application received by EPA on 4/13/07.
West Willow Creek	NENE Section 26, R 19 East, T 9 South, Uintah County, Utah	Minor Source

Appendix B


INDIAN COUNTRY
Legend
counties arc
tshps polygon
indncntry polygon
INDNCTRY-ID
Uncompogre Indian Country
Indian Country
Non-Indian Country
Status Under Review

APPENDIX C

Self-Disclosure Letter of December 22, 2006

Dominion Exploration & Production, Inc.
16945 Northchase Dr., Suite 1750, Houston, TX 77060
Web Address: www.dom.com

December 22, 2006

VIA FAX, ELECTRONIC MAIL AND OVERNIGHT DELIVERY

Ms. Carol Rushin
Assistant Regional Administrator
Enforcement, Compliance, and Environmental Justice
EPA Region 8 (MC 8ENF)
999 18th Street, Suite 300
Denver, CO 80202-2466

Re: Dominion Exploration and Production
"TAP-5" Facility
SW/4 of Section 2, Township 10 South, Range 20 East
Uintah County, Utah

Dear Ms. Rushin:

In accordance with the Environmental Protection Agency's (EPA's) self-disclosure policy, "Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations," 65 Fed. Reg. 19618 (April 11, 2000)(hereinafter "Self-Disclosure Policy"), Dominion Exploration and Production, Inc., ("Dominion E&P" or "the Company") discloses potential violations of 40 C.F.R. Part 63, Subparts HH and ZZZZ, and consequently, of 40 C.F.R. Part 71, at one of its facilities located in Uintah County, Utah. This facility is known as the "TAP-5" facility.

Dominion Resources, the parent company of Dominion E&P, has an independent auditing group that audits compliance on a regular basis. As part of this regular audit, the Dominion E&P facilities in Utah were reviewed last month. The audit raised questions about the TAP-5 facility that led to a closer examination of the facility's equipment and production capacity. In addition, Dominion E&P had samples of natural gas from the facility analyzed to confirm its composition.

The examination of the facility conducted as a result of the questions raised by the audit has led Dominion E&P to conclude that the TAP-5 facility has a potential to emit hazardous air pollutants equal to or greater than the major source thresholds specified in section 112(a)(1) of the Clean Air Act. The facility is therefore subject to the hazardous air pollutant emission standards for oil and gas production facilities (40 C.F.R. Part 63, Subpart HH) and for reciprocating internal combustion engines (40 C.F.R. Part 63, Subpart ZZZZ). As a Section 112 "major source," the facility is required to obtain a Title V operating permit.

The facility's actual emissions of hazardous air pollutants do not exceed the major source thresholds. As shown in Attachment A, a table summarizing the facility's actual emissions from July 1, 2005 to June 30, 2006, the actual total HAP emissions were 18.8 tons. Emissions of benzene were 4.1 tons, and emissions of toluene were 4.9 tons. The time period of July 1, 2005 through June 30, 2006, was chosen to reflect 12 months of representative operation after the last piece of emitting equipment was installed. Attachment B summarizes the facility's potential to emit. The potential to emit calculations include all of the units that are shown in Attachment A, and the calculations of potential to emit assume that these units operate for 8760 hours per year without emission controls. According to Attachment B, the facility's potential to emit HAPs is 42.4 tons per year, and the potential to emit benzene and toluene exceed the 10 ton per year major source threshold for individual HAPs. The facility's actual emissions of these pollutants were less than half of their potential to emit amounts.

The facility would have been able to limit its potential to emit through a federally enforceable minor source permit if it were not located in an Indian air shed, and, thus, would not have been subject to state permitting. However, as there are no federal minor sources permitting regulations currently in effect for facilities located within a tribal air shed, that course of action was not possible.

The largest source of potential hazardous air pollutant emissions at the TAP-5 facility is a glycol dehydration unit that was installed and commenced operations on April 21, 2005. Dominion E&P operates the dehydration unit at the TAP-5 facility only in connection with a secondary sales market. This means that, on average, the dehydration unit is in operation only 40 percent of the time. For this reason, the facility's actual emissions are significantly lower than its potential to emit, as noted above. As a result of its start-up on April 21, 2005, Dominion E&P was required to submit Subpart HH and ZZZZ notifications to EPA, and to submit a Title V permit application to EPA by April 21, 2006. Being subject to Subparts HH and ZZZZ means that the facility must achieve the emissions reductions required by those standards and must implement the required emissions monitoring programs.

The Self-Disclosure Policy establishes nine conditions for its applicability.

1. **Systematic Discovery of the Violation Through an Environmental Audit or a Compliance Management System:** The Self-Disclosure Policy states that the discovery "must reflect the regulated entity's due diligence in preventing, detecting, and correcting violations." 65 Fed. Reg. at 19625.

Response: As discussed earlier in this letter, the company's regular program of self-auditing raised questions about this facility. The company quickly called upon outside consultants and counsel to focus on the compliance questions. On December 4, 2006, Dominion had collected sufficient information on the facility's equipment and throughput to perform

reliable emissions calculations. The facility's configuration was verified through an inspection on December 11 and 12, 2006. This emissions calculations, along with the verification of the facility's configuration, provided Dominion staff and outside professionals with an objectively reasonable basis for believing that the facility was potentially not in compliance with applicable requirements.

2. **Voluntary Discovery**: The violation must have been discovered through a process other than "a legally mandated monitoring or sampling requirement prescribed by statute, regulation, permit, judicial or administrative order, or consent agreement." *Id.*

   Response: Please see the response to No. 1 above.

3. **Prompt Disclosure**: The company must fully disclose the specific violation in writing to EPA within 21 days after discovering "that the violation has, or may have, occurred." This time period begins when "any officer, director, employee or agent of the facility has an objectively reasonable basis for believing that a violation has, or may have, occurred." 65 Fed. Reg. at 19626.

Response: The company had an objectively reasonable basis for believing that the facility was potentially out of compliance with applicable requirements as of December 4, the date when its consultants had sufficient reliable information to calculate the facility's potential to emit. The potential to emit calculations performed on December 4 showed that the facility's potential to emit exceeded the major source thresholds for hazardous air pollutants. The last date of the 21-day period fell on December 25, which is a legal holiday, and this letter is submitted timely.

4. **Discovery and Disclosure Independent of Government or Third-Party Plaintiff**: The company must discover and disclose the violation before EPA or another government agency would have been likely to become aware of it through inspection or from information received from a third party. *Id.*

Response: Based upon the circumstances described in this letter, Dominion E&P became aware of the potential violation before EPA or any other governmental entity discovered it. Also, Dominion E&P became aware of the potential violation before any third-party plaintiffs have become involved.

5. **Correction and Remediation**: The company must correct the violation within 60 calendar days from the date of the discovery; certify in writing that the violation has been corrected; and take appropriate measures as determined by EPA to remedy any harm to the environment or human health. *Id.*

Response: Upon discovery that the TAP-5 facility was potentially out of compliance, Dominion E&P conducted a review of emission control options, ordered control equipment, and initiated the preparation of a Title V permit application. The facility has taken out of service the dehydrator unit that triggered the requirement to submit a Title V operating permit application within one year after its startup. This dehydrator unit will remain out of service until the facility is in compliance with the applicable MACT standards and has obtained either a Title V operating permit or EPA's authorization to operate. The facility is working to come into compliance with Subpart HH and Subpart ZZZZ as promptly as possible, including filing the required notices of startup and implementing the required emission reductions and monitoring procedures. The facility is also working to complete and submit a Title V permit application as quickly as possible.

6. **Prevent Recurrence:** The company must agree in writing to take steps to prevent a recurrence of the violation. *Id.*

Response: As noted above, Dominion E&P is in the process of bringing the facility into compliance with the applicable requirements. The company's regular audit procedure led to the discovery of these potential violations, and the company continues to conduct audits on a regular basis. Dominion E&P understands the importance of effective compliance tools. The company has identified and is working to develop additional measures to help assure that its facilities comply with environmental requirements. In addition, Dominion E&P is willing to discuss with EPA the Agency's compliance assurance suggestions.

7. **No Repeat Violations:** The violation at issue may not have occurred within the previous three years at the same facility, and may not have occurred within the previous five years as part of a pattern at multiple facilities owned or operated by the same company. *Id.*

Response: The potential violations at issue here are not repeat violations.

8. **Other Violations Excluded:** The self-disclosure policy does not apply where the violation has resulted in serious actual harm or imminent and substantial endangerment to human health or the environment. Also, violations of the terms of a consent agreement or judicial or administrative order are not eligible.

Response: Based upon the low level of actual emissions from the facility, Dominion E&P does not believe that these potential violations have posed a harm to public health or to the environment.

9. **Cooperation:** The company must cooperate as requested by EPA and must provide EPA with all appropriate information to determine whether the self-disclosure policy applies.

Response: Dominion E&P will provide EPA with all appropriate information necessary to assess these issues. Dominion E&P is committed to working with EPA to resolve these issues and to ensure that its facilities comply with environmental requirements.

Dominion E&P is working to bring the TAP-5 facility into compliance, and is continuing to review the compliance status of other facilities for which the audit raised questions. Close review of the other facilities for which the November 2006 compliance audit raised questions may identify potential violations at those facilities. If other potential violations are identified, Dominion E&P will contact EPA promptly. Dominion E&P will be pleased to provide EPA with additional information concerning the TAP-5 facility on request. Should you have any questions about this matter, please contact me at 281-873-3615.

Sincerely,

Dominion Exploration & Production Inc.

Tray S. Taylor, P.E.
Director, Environmental, Safety & Regulatory

Attachments:

Attachment A – Actual Emission Summary
Attachment B – Potential to Emit Emission Summary

ATTACHMENT A

EMISSION SUMMARY

(July 1, 2005 - June 30, 2006)*

Company: Dominion Exploration
Facility Name: Tap 5
Facility Location: Uintah County, Utah

Source	NOx		CO		VOC		Formaldehyde		HAPs*		BTEX	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Caterpillar 3516LE	4.02	15.74	5.10	19.93	0.24	0.94	0.80	3.15	0.99	3.87	0.05	0.20
Caterpillar 3412CLE	2.44	9.24	2.32	8.78	0.20	0.74	0.37	1.39	0.45	1.71	0.02	0.09
Caterpillar 3512TALE	3.11	10.40	3.94	13.17	0.64	2.15	0.62	2.08	0.77	2.58	0.03	0.13
TEG Dehydrator #1	-	-	-	-	6.14	26.90	-	-	2.43	10.64	2.29	10.01
TEG Dehy Glycol Reboiler Heater #1	0.01	0.05	0.01	0.04	0.00	0.01	-	-	-	-	-	-
Separator	0.02	0.08	0.02	0.07	0.00	0.01	-	-	-	-	-	-
Condensate Tank Emissions	-	-	-	-	0.42	1.82	-	-	-	-	-	-
Oil Tank Emissions	-	-	-	-	0.11	0.46	-	-	-	-	-	-
Tank Heaters Emissions (Oil, Condensate)	0.09	0.40	0.08	0.34	0.01	0.04			-	-	-	-
Tank Flashing Emissions	-	-	-	-	0.03	0.15	-	-	-	-	-	-
Truck Loading (Oil & Condensate)	-	-	-	-	0.02	0.10	-	-	-	-	-	-
Pump Jack engine (Propane fueled)	0.0005	0.0020	0.0001	0.0003	0.0000	0.0001	-	-	-	-	-	-
Totals	9.70	35.9	11.46	42.3	7.81	33.3	1.79	6.6	4.64	18.8	2.38	10.4

*Engine HAP emissions include Formaldehyde

Source	Benzene		Toluene		Ethylbenzene		Xylene	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TEG Dehydrator #1	0.85	3.71	1.11	4.86	0.03	0.12	0.30	1.33
Caterpillar 3516LE	0.04	0.17	0.00	0.02	0.00	0.00	0.00	0.01
Caterpillar 3412CLE	0.02	0.08	0.00	0.01	0.00	0.00	0.00	0.00
Caterpillar 3512TALE	0.03	0.11	0.00	0.01	0.00	0.00	0.00	0.00
Totals	0.94	4.1	1.12	4.9	0.03	0.1	0.31	1.3

Operational information used to calculate Engine, dehydrator, truck loading, and tank emissions
8760 hours used to calculate tank heater emissions

* Time period represents the emissions from the first full year of operation with all listed equipment installed and operational. Actual operational data was used in calculations.

Buys Associates, Inc.
300 East Mineral Ave., Ste 10
Littleton CO 80122
ph. 303-781-8211

ATTACHMENT B

ANNUAL POTENTIAL TO EMIT (PTE) EMISSION SUMMARY

Company: Dominion Exploration
Facility Name: Tap 8
Facility Location: Uintah County, Utah

Source	NOx		CO		VOC		Formaldehyde		HAPs*		BTEX	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Caterpillar 3516LE	4.02	17.63	5.10	22.33	0.24	1.06	0.80	3.53	0.99	4.34	0.05	0.22
Caterpillar 3412CLE	2.44	10.68	2.32	10.15	0.20	0.85	0.37	1.60	0.45	1.97	0.02	0.10
Caterpillar 3512TALE	3.11	13.63	3.94	17.26	0.64	2.82	0.62	2.73	0.77	3.36	0.04	0.17
TEG Dehydrator #1	-	-	-	-	15.76	69.05	-	-	7.48	32.77	7.17	31.39
TEG Dehy Glycol Reboiler Heater #1	0.03	0.11	0.02	0.09	0.00	0.01	-	-	-	-	-	-
Separator	0.02	0.08	0.02	0.07	0.00	0.01	-	-	-	-	-	-
Condensate Tank Emissions	-	-	-	-	0.48	2.09	-	-	-	-	-	-
Oil Tank Emissions	-	-	-	-	0.13	0.55	-	-	-	-	-	-
Tank Heaters Emissions (Oil, Condensate)	0.09	0.40	0.08	0.34	0.01	0.04	-	-	-	-	-	-
Tank Flashing Emissions (Cond.)	-	-	-	-	0.03	0.16	-	-	-	-	-	-
Truck Loading (Oil and Condensate)	-	-	-	-	0.12	0.52	-	-	-	-	-	-
Pump Jack engine (Propane fueled)	0.00	0.01	0.00	0.00	0.00	0.00	-	-	-	-	-	-
Totals	9.71	42.5	11.47	50.2	17.61	77.1	1.79	7.9	9.69	42.4	7.28	31.9

*Engine HAP emissions include Formaldehyde

Source	Benzene		Toluene		Ethylbenzene		Xylene	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TEG Dehydrator #1	2.42	10.60	3.50	15.32	0.09	0.40	1.16	5.07
Caterpillar 3516LE	0.04	0.19	0.00	0.02	0.00	0.00	0.00	0.01
Caterpillar 3412CLE	0.02	0.09	0.00	0.01	0.00	0.00	0.00	0.00
Caterpillar 3612TALE	0.03	0.15	0.00	0.01	0.00	0.00	0.00	0.01
Totals	2.52	11.0	3.51	15.4	0.09	0.4	1.16	5.1

Emissions calculated with no controls on engine or dehy emissions
8760 hours used to calculate annual PTE emissions

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Appendix D

XTO ENERGY

Guidance for Portable Electrochemical Analyzer Testing used for Compliance Monitoring

SECTION I. INTRODUCTION

This guidance is applicable to the determination of nitrogen oxides (NO and NO_2), carbon monoxide (CO), and oxygen (O_2) concentrations in controlled and uncontrolled emissions from combustion sources using fuels such as natural gas, propane, butane, and fuel oils. A gas sample is extracted from a stack and is conveyed to an EC analyzer for determination of the NO, NO_2, CO, and O_2 gas concentrations. Additions to, or modifications of, vendor supplied EC analyzers (e.g., heated sample lines, thermocouples, flow meters, etc.) may be required to meet the specifications indicated in this guidance. The instrument and EC cell design will determine the analytical range (span) for each gas component. The minimum detectable limit depends on the span and resolution of the EC cell and the signal to noise ratio of the measurement system.

SECTION II. EC ANALYZER APPARATUS

A. Use any measurement system that meets the performance and design specifications of this guidance. The sampling system should maintain the gas sample at conditions that will prevent condensation in the lines or when it contacts the EC cells. A diagram of an acceptable measurement system is shown in Figure 2. Some of the components of the measurement system are described below.

B. The **sample probe** and **sample line** should be made of glass, stainless steel or other non-reactive material and should be designed to prevent condensation.

C. The **calibration assembly** should introduce calibration gases at ambient pressure to the sample probe during calibration checks. The assembly should be designed such that only the calibration gases are processed and that the calibration gases flow through all the filters in the sampling line.

D. The **moisture removal** system should be used to remove condensate from the sample gas while maintaining minimal contact between the condensate and the sample gases.

E. **Particulate filters** should be utilized before the inlet of the EC analyzer to prevent accumulation of particulate material in the measurement system and to extend the useful life of the EC analyzer. All filters should be fabricated of materials that are non-reactive to the gases being sampled.

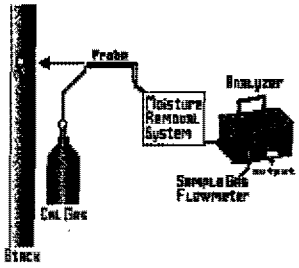
F. The **sample pump** should be a leak-free pump that will transport the sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If upstream of the EC cells, the pump should be constructed of material that is non-reactive to the gases being sampled.

G. The **sample flow rate** should not vary by more than 10% throughout the calibration, testing, and drift check.

H. **Interference gas scrubbers** should be checked and replenished in accordance with the manufacturer's recommendations. EC analyzers should have a means to determine when the agent is depleted.

I. A **data recorder** should be used for recording the EC analyzer data.

Figure 1 – EC analyzer Measurement System



SECTION III. EC ANALYZER CALIBRATION & TESTING SPECIFICATIONS

A Except for an initial compliance test, all combustion equipment shall be tested "as-found." No tuning or maintenance for the purpose of lowering tested emissions is allowed within 24 hours prior to testing. If tests are conducted before and after maintenance, the test results should be recorded and made available for review.

B. Assemble the measurement system by following the manufacturer's recommended procedures for preparing and preconditioning the EC analyzer. Ensure the system has no leaks and verify that the gas-scrubbing agent is not depleted. When an EC cell is replaced, the EC analyzer should be re-calibrated.

C. Calibration will be done at the start of each testing day. Calibration of the EC analyzer should be done using certified calibration gases (EPA Protocol gases). Fresh air, free from ambient CO and NO_X, is permitted for O_2 calibration (20.9% O_2), and as a zero gas for CO and NO_X. Calibration gases for NO, NO_2, and CO should be chosen so that the concentration of the calibration gas is between 20% and 125% of the range of concentrations of the EC analyzer cell for each pollutant. Alternatively, calibration gases should not exceed 200% of the anticipated concentration expected from the emission unit being tested. If the measured concentration exceeds 125% of the span of the EC analyzer, at any time during the sampling run, that test run should be considered invalid. For NO_2 concentrations below 10% of the total NO_X concentration, NO_2 does not have to be measured directly and calibration of the EC analyzer for NO_2 is not required.

D. Individually inject each calibration gas into the EC analyzer and record the start time, response time, and concentrations. Gases should be injected through the entire sample handling system. All EC analyzer output responses should be recorded at least once per minute. The response time is the time it takes for the EC analyzer to get a steady response from a calibration gas after injecting the calibration gas into the measurement system. Actual measurements should not be averaged until the after the response time of the measurement system. After each calibration gas run, the EC analyzer should be refreshed with fresh air, free from CO, NO_X, and other pollutants. Repeat these steps for each calibration gas.

E. For the EC analyzer O_2 cell calibration, the minimum detectable limit should be 0.3%. For the EC analyzer NO_X and CO cells, the minimum detectable limit should be 2% of the calibration gas or 2 ppm whichever is less restrictive. If an invalid calibration is exhibited, corrective action should be taken and the EC analyzer calibration check should be repeated until an acceptable EC analyzer performance is achieved.

F. Calculate the mean of the readings from the EC analyzer for each calibration gas. The average calculated EC analyzer response error, for each calibration gas, should not exceed ±5% of the calibration gas concentration. The maximum allowable deviation of any single reading, after the response time and prior to the refresh period, should not exceed ±2% of the average calculated EC analyzer response. *For Example: For a calibration gas with a concentration of 100 ppm, the calibration gas check should be considered valid only if the average of the measured concentrations for that calibration gas are within 5 ppm of 100 ppm, i.e., 95 to 105 ppm, and if the maximum deviation of any single measurement comprising that average is less than 2% or approximately 2 ppm.*

G. During calibration an interference check should be performed. During the calibration check of a single gas species (e.g., NO & NO_2), record the response displayed by the other EC cells (i.e., CO & NO). Record the interference response for each EC cell to each calibration gas. The CO, NO, and NO_2 interference response should not exceed 5% of the calibration gas concentration. EC analyzers that have been verified for interference response using an interference scrubber are considered to be in compliance with this interference check specification when the interference scrubber is replenished per manufacturers specifications. The potential for interference from other flue gas constituents should be reviewed with the EC analyzer manufacturer based on site-specific data.

H. A post-test calibration check should be performed in the same manner as the pre-test calibration after each emissions test day. If the post-test calibration checks do not meet the required specifications, all test data for that emissions unit should be considered null and void and re-calibration and re-testing should be conducted. To prevent loss of data, the drift of the analyzer should be determined after each measurement cycle. This should be done by performing a calibration check after each measurement cycle and determining the drift to ensure that it is still within the limit of ±5%. No changes to the sampling system or EC analyzer calibration should be made until all of the post-test calibration checks have been recorded. The difference (% Drift) between the pre-test calibration and the post-test calibration should not exceed 5% for each pollutant.

SECTION IV. EMISSIONS MEASUREMENTS

A. Field testing should be conducted by personnel trained in the use of the specific EC analyzer utilized for the testing. Samples of pollutant concentrations should be taken from sample ports in the stack or using a "Shepard's hook" from a location in the stack such that a representative concentration is measured and bias (e.g., air leakage at weep holes) is prevented. A single sampling location near the center of the duct may be selected.

B. Prior to sample collection, ensure that the pre-test calibration has been performed. Zero the EC analyzer with fresh air, free from ambient CO and NO_X or other combustion gases. Each test for an emission unit should consist **of at least three 15-minute measurement cycles**. Position the probe at the sampling point and begin the measurement cycle at the same flow rate used during the calibration check. Measurements should not be recorded and averaged until the measurement system response time has passed. The EC analyzer should be "refreshed," the analyzer drift should be determined, and the moisture collection system emptied after each sampling cycle. Use the measurement data to calculate the mean effluent concentration. Record the average gas sample concentration for each pollutant from the cycle on a form similar to the one provided.

C. Conduct the post-test calibration zero check after testing of each emission unit. If the EC analyzer calibration is adjusted, the EC analyzer should be recalibrated before conducting the next emission unit test.

D. The emissions testing should produce at least three sets of concentration data for each pollutant of concern. Results from each test represent a "quasi steady-state" measurement of pollutant concentration and the measured pollutant concentrations should be calculated as the mean gas concentration using the emissions data collected during the three test runs. Data from additional tests may be included in the calculation so long as other operational parameters remain relatively unchanged.

E. The measured pollutant concentrations should then be corrected to give actual values using the pre-test calibration and post-test calibration results. The following equation should be used.

$$C_{ACTUAL} = (C_{MEAS} - C_{CZ}) \times \frac{(C_{CAL} - C_{CZ})}{(C_{CM} - C_{CZ})}$$

Where: C_{ACTUAL} = actual pollutant concentration, ppmdv
C_{MEAS} = measured pollutant concentration, ppmdv
C_{CAL} = concentration of the calibration gas, ppmv
C_{CZ} = average of pre-test and post-test calibration zero checks, ppmdv

C_{CM} = average of pre-test and post-test measured concentrations of the calibration gas measurement checks, ppmdv

SECTION V. OPERATIONAL PARAMETER MEASUREMENTS

Emissions testing results, i.e., NO_X, CO, and O_2 concentrations (ppmv), are typically used in conjunction with stack flow to determine compliance with a permitted emissions limitation (lb/hr). Other specific parameters may also need to be documented. The results of any measurements or calculated parameters should also be recorded on a form similar to the one provided in Appendix A.

A. During the emissions testing of the emission unit, the following operational parameters should be measured or determined:
   1. Engine/turbine load and speed (RPM) or power (HP);
   2. Fuel BTU content (BTU/SCF); and
   3. Fuel consumption (SCFH).

B. Sampling of the fuel, that is representative of the fuel combusted in the emission unit, should be performed. The fuel sampling should be conducted within a calendar quarter of the testing. The sampling should determine the C_1 to C_{6+} composition and BTU content. The sample should be taken from the inlet gas line, downstream from any inlet separator, and using a manifold to remove entrained liquids from the sample and a probe to collect the sample from the center of the gas line. GPA standard method 2166 (or similar method) should be used. Emission units utilizing "commercial-grade natural gas" are exempt from the fuel sampling requirements.

C. During emissions testing, the stack velocity (or flow) shall be measured or determined using one of the following methods.
   1. EPA Reference Methods 2;
   2. EPA Reference Method 19; or
   3. An equivalent method, as approved by the Department.

SECTION VI. CALCULATIONS

As mentioned previously, emissions testing results, i.e., NO_X, CO, and O_2 concentrations, are typically used in conjunction with other measured parameters to determine compliance with a permitted emissions limitation. The following issues should be considered in documenting compliance with the various criteria.

A. Calculation of the emissions (lb/hr) to show compliance with the permitted emissions should be calculated as the corrected mean concentration multiplied by the stack flow corrected to zero percent oxygen.

$$E_{MEAS} = C_{ACTUAL} \times Q_{STACK} \times \left(\frac{MW_P}{385.4}\right) \times (1E-6)$$

Where: E_{MEAS} = the measured emissions from the emission unit at standard conditions and 0% O_2, lb/hr;
C_{ACTUAL} = average actual pollutant concentration, ppmdv;
Q_{STACK} = stack flow of the emission unit, DSCFH @ 0% O_2;
MW_P = molecular weight of the pollutant, lb/lb-mole:
= 46 lb/lb-mole for NO_X (as NO_2);
= 28 lb/lb-mole for CO.
For an Ideal Gas at EPA standard conditions: 20 °C (68 °F) and 1 atm (760 mm); there are 385.4 SCF/lb-mole.
The factor of (1E-6) is used to convert ppmdv to a fraction.

B. Calculation of the flow (Q_{STACK}, DSCFH) from the emission unit using the calculations provided in Reference Method 19 is shown below. The stack flow should be corrected to zero percent oxygen.

$$Q_{STACK} = Q_{FUEL} \times F_{BTU} \times F_d \times \left(\frac{20.9\%}{20.9\% - \%O_{2MEAS}}\right) \times (1E-6)$$

Where: Q_{STACK} = stack flow of the emission unit, DSCFH @ 0% O_2;
Q_{FUEL} = flow of the fuel to the emission unit, SCFH;
F_{BTU} = gas heating value, HHV, (from fuel analysis), BTU/SCF;
F_d = stack flow per unit of heat input, SCF/MMBTU;
$\%O_{2MEAS}$ = measured oxygen concentration, % dry basis.
20.9% is the concentration of O_2 in the air.
The factor of (1E-6) is used to convert BTU to MMBTU.

C. Additional calculations that may be helpful during calibration.

$$\text{Calibration Error} \equiv \left(\frac{\text{Analyzer Response} - \text{Calibration Gas Concentration}}{\text{Calibration Gas Concentration}} \right) \times 100\% \quad \leq 5\%$$

$$\%\ \text{Interference} \equiv \left(\frac{\text{Analyzer Response}}{\text{Calibration Gas Concentration}} \right) \times 100\% \quad \leq 5\%$$

$$\%\text{Drift} \equiv \left(\frac{\text{Post - Test Analyzer Response} - \text{Pre - Test Analyzer Response}}{\text{Pre - Test Analyzer Response}} \right) \times 100\% \quad \leq 5\%$$

SECTION VII. RECORDKEEPING REQUIREMENTS

A. Each company performing portable EC analyzer analysis shall develop and maintain a testing protocol. These protocols shall be made available for review by the Department. Each protocol should also contain the following elements:
   1. Information regarding the EC analyzer, including but not limited to, a copy of the make, model, serial number, and manufacturer's EC analyzer specifications.
   2. EC analyzer certification documentation.
   3. Documentation of the EC analyzer operator's training, experience, and other qualifications.

B. A report of each test shall be prepared. Each report should contain, the following items:
   1. Date, place, and time of test, company or entity performing the test, and signature of person conducting the test.
   2. Manufacturer, model, serial number, and emission unit I.D (as listed in an applicable permit) of the emission unit tested.
   3. Emission unit rating (horsepower and RPM) and control device utilized, if applicable.
   4. Applicable permit emissions limitations, e.g., lb/hr.
   5. EC analyzer calibration records: start times, response times, end times, measured concentrations, interference responses, calibration gas concentrations, percent error, and minimum detectable limit.
   6. The testing records: start times, end times, duration test runs, measured concentrations, average concentrations, and corrected concentrations.

7. Emission unit load (service power) and speed or power during testing. The method of determining the service power for engines and turbines should be described or shown.
8. Emission unit fuel consumption, fuel BTU analysis, and stack flow.
9. Copies of the strip chart recording or computer or digital recording of actual measurements taken during the calibration and testing.
10. Calculated emissions on a lb/hr basis for the emission unit.

C. All testing records shall be maintained for a period of five years for *major sources* and a period of two years for all other *sources*, unless an applicable permit specifies a longer period.

SECTION VIII. REPORTING REQUIREMENTS

A. The person performing emissions testing should promptly report the results of such tests to EHS so that any notifications required by an applicable regulation or permit condition can be submitted in a timely manner.

B. Testing results that show emissions exceeding those allowed in an applicable permit shall be reported as provided in the permit, and with OAC 252:100-9, Excess Emission Reporting Requirements.

C. A copy of the testing protocol shall be submitted to the Department and updated as necessary.

SECTION IX. REFERENCES

1. USEPA, OAQPS Emissions Measurement Center, "Draft Method for the Determination of O_2, CO_2, & (NO and NO_2) for Periodic Monitoring," September 8, 1999, http://www.epa.gov/ttn/emc/.

2. US EPA 40 CFR, Pt 60, Appendix A, Method 19 - Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide and Nitrogen Oxides Emissions Rates.

Appendix A **Revised 3/7/03**

Emission Unit Test Results

Company:_____ **Facility:**_____
Source Tested:_____ **Date:** _____
Source Manufacturer/Model #:_____ **Source Serial #:**_____
Site Rated Horsepower:_____ **Load During Test:** _____
Analyst:_____ **Type of Control:** _____
Analyzer Manufacturer/Model #:_____ **Analyzer Serial #:** _____

Calibration Measurements

	Pre-Test Calibration			
Run #1	CO	NO	NO_2	% O_2
Zero Resp., ppmdv/%				
Interference Resp., ppmdv/%				
Min. Det. Resp., ppmdv/%				
Start Time				
Response Time				
End Time				
Avg. Conc., ppmdv/%				
Cal. Gas Conc., ppmdv				
Conc. Difference, ppmdv				
Calibration Error, %				
% Interference, %				
Diff. Pre & Post Test, ppmdv				
%Drift, %				

Post-Test Calibration Check			
CO	NO	NO_2	% O_2

Interference Response should only be recorded as required for NO and NO_2 interference for CO and NO_2 for NO.

Emission Measurements

	Run #1			
	CO	NO	NO_2	% O_2
Start Time				
End Time				
Run Duration				
Avg. Conc., ppmdv/%				
Cal. Drift Check, ppmdv/%				
%Drift				
	Run #3			
	CO	NO	NO_2	% O_2
Start Time				
End Time				
Run Duration				
Avg. Conc., ppmdv/%				

Run #2			
CO	NO	NO_2	% O_2

Testing Results

	CO	NO	NO_2	% O_2
Average Conc., ppmdv/%				
Cal. Conc. Diff., ppmdv				
Corrected Conc., ppmdv				

Engine Parameters

Eng. Speed/Power, rpm/hp	
Fuel Flow, SCFH	
Fuel BTU Content, BTU/SCF	
Fd, SCF/MMBTU	
Calc. Stack Flow, SCFH	
Avg. % O2, %	
Stack Flow at 0% O2, SCFH	

Calculated Emissions & Limits

	CO	NO_X
Concentration, ppmdv		
Stack Flow, SCFH		
MWp	28	46
Calc. Emissions, lb/hr		
Permit Limits, lb/hr		

CERTIFICATION: Based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this report are true, accurate, complete and representative of the emissions from this source.

Print Name **Date**

Signature **Title**

Appendix E

SCOPE OF WORK FOR PERFORMANCE OPTIMIZATION REVIEW

FOR:

XTO ENERGY, INC.

July 15, 2008

TABLE OF CONTENTS

appropriate, to enhance product recovery. For this process a leak is defined by an instrument reading of 10,000 ppm or greater for all components with the exception of pressure relief devices in gas/vapor service which shall have a leak definition of 500 ppm or greater.

2.2 Review Details

Each site will be visited by the same group of individuals to verify consistency throughout the process. Once at a site, a site walk through will occur to identify sections of the review that will be applicable to that site. The date, location, and personnel involved will be documented for each site visit. Each component of the POR will be detailed in the following sections.

2.2.1 Pressure Relief Devices will be inspected using OVA, TVA, or other leak detection equipment to determine if any relief devices are leaking. Any leaks found will be repaired or replaced to minimize product losses. Any replacements or repairs that would require a facility shutdown will be put on a shutdown list that will be signed and documented.

A review will be conducted of any company procedures for testing pressure relief devices and documentation of any such reviews. Personnel responsible for any pressure relief device testing will be interviewed. Suggestions for any potential procedural improvements will be provided.

2.2.2 Pneumatic controllers will be evaluated for gas losses. Opportunities for retrofit or replacement of high-bleed controllers will be outlined. Vendors of low-bleed retrofit devices will be relied upon to determine if a device is capable of having a retrofit component added. Upgrading high-bleed controllers could be through use of low or no-bleed controllers, use of instrument air, or other options.

2.2.3 Separators will be evaluated for optimal operating pressures. Pressures must be sufficient to allow production into the available gathering pipelines and production facilities.

Pressures at compressor stations will be evaluated for optimal operation pressures based on equipment utilized at the station. Process engineers familiar with the particular station under review will be interviewed. The intent is to minimize product losses, if possible, under the physical and operational design of the station.

2.2.4 Dehydrator process reviews will detail any opportunities to reduce or minimize product losses associated with the process. The dehydration process for each facility will be reviewed on the ground rather than from P&IDs. Process variables related to product recovery will be reviewed during the on-site review, including but not limited to, glycol circulation rate, flash tank pressure (if applicable), condenser temperature (if applicable), glycol circulation pump and associated control equipment.

1.0 INTRODUCTION

XTO Energy, Inc. (XTO) will be conducting a POR in order to comply with the anticipated terms of a Consent Decree being negotiated with the United States that will resolve certain alleged violations of the Clean Air Act. The project as proposed will follow the requirements as set forth in the Consent Decree.

XTO will utilize a third party consultant to conduct a Performance Optimization Review (POR) at two facilities, to be identified by XTO, in the Uinta Basin in Utah. A thirty-day prior notice of the consultant choice and facility identification will be given to the EPA prior to initiating the POR. The POR is a newly proposed process that will follow several EPA Natural Gas STAR Program practices and technologies with the goal of increasing product recovery and reducing or minimizing air emissions. The following scope of work will detail the proposed components of the POR.

2.0 SCOPE OF WORK

The scope will be broken down by POR components and review details as more specifically described below.

2.1 POR Components

The items to be addressed in the POR will include the following list.

Pressure Relief Devices – repair or replace components as appropriate to reduce product losses;

Pneumatic Controllers – evaluate for use of low-bleed devices or instrument air;

Production Separators – identify optimal pressures and temperatures;

Dehydrators – evaluate for use of condensers, flares, thermal oxidizers, flash tanks, and electric pumps to reduce natural gas product losses;

Internal Combustion Engines – evaluate maintenance practices and planned shutdown procedures to reduce product losses from blow down and to eliminate use of starter gas as appropriate;

Flare and Vent Systems – evaluate flare and vent system components and associated operating procedures to reduce venting and loss of product where possible;

Producing Wells – install plunger lifts where appropriate and perform "green completion" practices on new wells, as appropriate;

Operating Pressures – review and optimize where possible; and

Component Inspections and Repair – perform component inspections using OVA, TVA, or other leak detection equipment and repair or replace leaking components, as

2.2.5 Internal combustion engines maintenance practices and shutdown procedures will be reviewed. Opportunities for reducing venting and product loss will be reviewed and discussed with appropriate personnel. Written processes or procedures that are available will be reviewed. Recommendations will be based on what constraints are found at the specific site.

2.2.6 Flare and vent systems will be evaluated and reviewed for options to reduce loss of product. Leak monitoring may include OVA, TVA or equivalent. Review options of flare systems versus vent systems and other reasonable alternatives.

2.2.7 A representative sample of producing wells will be reviewed for options to reduce any gas losses. Options for review may include plunger lifts and green completion options. Processes for recompletes or reworks will be discussed with appropriate personnel. Opportunities for reduction in gas venting will be documented.

2.2.8 Operating pressures will be evaluated to determine if there are any opportunities to improve product recovery within the current design of the systems in place. This will not include re-engineering any of the current systems. This evaluation may include components as described in section 2.2.3.

2.2.9 Component inspections and repairs will take place at the listed facilities. A reputable leak detection and repair company will be contracted to perform all leak inspections. Any leak discovered will be tagged and appropriate company personnel will be notified of the leaking component for addressing the issue consistent with the Consent Decree requirements as applicable.

3.0 DELIVERABLE

A detailed final report of the reviewed items as listed in the proposed scope of work will be submitted to XTO. The report will include documentation on all review details listed in the scope of work consistent with the Consent Decree requirements. The report will list estimated emission reductions or gas recovered as appropriate and calculation procedures for those estimations.

APPENDIX F

Self-Disclosure Letter of January 8, 2007

Dominion Exploration & Production, Inc.
16945 Northchase Dr., Suite 1750, Houston, TX 77060
Web Address: www.dom.com

Dominion

January 8, 2007

Via Overnight Mail, Fax and Electronic Mail

Ms. Carol Rushin
Assistant Regional Administrator
Enforcement, Compliance, and Environmental Justice
EPA Region 8 (MC 8ENF)
1595 Wynkoop Street
Denver, CO 80202-1129

Re: Dominion Exploration and Production
"Kings Canyon" Facility,
SE/4 of Section 26, Township 10 South, Range 19 East,
Uintah County, Utah
"TAP-4" Facility,
NW/4 of Section 20, Township 10 South, Range 20 East,
Uintah County, Utah

Dear Ms. Rushin:

In a self-disclosure letter dated December 22, 2006, Dominion Exploration and Production ("Dominion E&P") informed you of potential violations at its "TAP-5" facility and stated that the company continues to investigate compliance questions raised pursuant to the November 2006 compliance audit of its Utah facilities. In accordance with the Environmental Protection Agency's (EPA's) self-disclosure policy, "Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations," 65 Fed. Reg. 19618 (April 11, 2000)(hereinafter "Self-Disclosure Policy"), Dominion E&P is writing to disclose potential violations of 40 C.F.R. Parts 63 and 71 at two facilities located in Uintah County, Utah, known as the "Kings Canyon" and "TAP-4" facilities. In addition, this letter will address the need for regulatory guidance for a third facility, the "RBU 9-17E" facility. This letter will discuss the potential violations at each facility individually, and then it will explain why the EPA Self-Disclosure Policy should apply for the potential violations at these facilities.

As with the December 22, 2006, self-disclosure, this self-disclosure is made as a result of a regular environmental compliance audit of Dominion E&P facilities in Utah. The parent company of Dominion E&P, Dominion Resources Inc., has an independent auditing group that regularly audits compliance. The Dominion E&P facilities in Utah were audited in November 2006, and this audit raised questions about the compliance status of the Kings Canyon, TAP-4, and RBU 9-17E facilities. To resolve these questions, Dominion E&P closely examined

information relating to the facilities' equipment and production capacity, which has led Dominion to disclose to EPA potential Clean Air Act violations at the facilities.

I. Kings Canyon Facility

A. Major Source PTE and Title V.

As a result of its internal review prompted by the November 2006 audit, Dominion E&P believes that the Kings Canyon compressor station and the Barton #126 Well site (collectively referred to herein as the "Kings Canyon facility"), which are co-located on the same pad, have a potential to emit hazardous air pollutants (HAPs) equal to or greater than the major source thresholds specified in Section 112(a)(1) of the Clean Air Act. The facility would thus be subject to the HAP emission standards for oil and gas production facilities (40 C.F.R. Part 63, Subpart HH) and for reciprocating internal combustion engines (40 C.F.R. Part 63, Subpart ZZZZ). As a "major source" under CAA Section 112, the facility would be required to obtain a Title V operating permit.

Attachments A and B provide the emissions calculations for the facility. Attachment A summarizes the facility's potential to emit. The potential to emit calculations assume that the emitting units operate for 8760 hours per year without emission controls. Attachment B summarizes the facility's actual emissions. The actual emissions calculations include all of the units that are represented in the potential to emit emissions calculations. Attachment B shows that from April 5, 2005, to April 4, 2006, the facility's actual emissions of total HAPs were approximately 41 tons. This time period was chosen to reflect 12 months of representative operation after the most recent installation of emitting equipment

Based upon the examination of the Kings Canyon facility, Dominion E&P believes that the facility's potential to emit first exceeded the Section 112 major source in April 2005 when the tri-ethylene glycol (TEG) dehydrators A and B were moved to the current location and commenced operation. Dominion E&P was required to submit notifications to EPA pursuant to Subparts HH and ZZZZ and to submit a Title V permit application to EPA no later than April 2006. Being subject to Subparts HH and ZZZZ would mean that the facility must achieve the emissions reductions required by those standards and must implement the required emissions monitoring programs.

B. Request for NSPS Subpart KKK Guidance.

In addition, the Kings Canyon facility uses a hydrocarbon dew-point skid that commenced operations on April 4, 2005. The November 2006 audit raised an issue concerning the potential applicability of New Source Performance Standards (NSPS), 40 C.F.R. Part 60, Subpart KKK. Dominion E&P believes that the Kings Canyon hydrocarbon dew-point skid is oil and gas production equipment, and not a "natural gas processing plant" subject to Subpart KKK. This position is supported by guidance from the Colorado Department of Public Health and Environment.[1] However, in an abundance of caution, pursuant to the EPA Self-Disclosure

[1] Memorandum from Jim King and Dennis Myers, to CP and OP Permit Engineers, regarding "NSPS KKK Guidance," dated October 20 1997 (Attachment E).

Policy, Dominion E&P is providing this notice to EPA of the issue. Dominion E&P requests guidance from EPA Region 8 concerning the applicability of Subpart KKK to this equipment.

The Kings Canyon hydrocarbon dew-point skid delivers gas to the Questar Pipeline Company (QPC) 20-inch pipeline. To reduce the potential for liquids build-up and the need for pigging of the QPC pipeline, the hydrocarbon dew-point skid is used to reduce the hydrocarbon dew-point of the gas delivered to the QPC pipeline (*i.e.*, to reduce the concentration of heavy hydrocarbons). Based on the temperature of the pipeline, QPC varies the gas hydrocarbon dew-point requirements for gas delivered to its system. The Kings Canyon hydrocarbon dew-point skid is used intermittently in response to the QPC hydrocarbon dew-point requirements.

For two principal reasons, Dominion does not believe the Kings Canyon hydrocarbon dew-point skid is subject to Subpart KKK.

First, Subpart KKK applies to a "natural gas processing plant," which is defined in part as "any processing site engaged in the extraction of natural gas liquids from field gas." 40 C.F.R. § 60.631. "Natural gas liquids" (NGLs) are defined as:

> the hydrocarbons, such as ethane, propane, butane, and pentane, that are extracted from field gas.

Id. Based on a review of the Subpart KKK rulemaking record and Frick's *Petroleum Production Handbook*, the Colorado Department of Public Health and Environment (CDPHE) concluded that Subpart KKK applies to liquefied petroleum gases but is not intended to encompass natural gasoline. When it is operating, the Kings Canyon hydrocarbon dew-point skid produces approximately 30 barrels per day of natural gasoline. "Natural gasoline" is an intermediate vapor pressure material with relatively low concentrations of ethane, propane, butane, and pentane, when compared to liquefied petroleum gases (which are high vapor pressure compounds).

Second, the preamble to the proposed Subpart KKK rule clarified that "equipment used in crude oil and natural gas production" is "not to be confused with natural gas processing." 49 Fed. Reg. 2636, 2637 (January 20, 1984). EPA's rationale was that the Subpart KKK provisions, which mainly address leak detection and repair, should not apply to production facilities because they are "widely dispersed over large areas." *Id.* Kings Canyon facility is a natural gas production facility. Its operations are upstream of lease custody transfer. The Kings Canyon facility does not have fractionation capability. QPC's pipeline collects field gas from numerous production facilities and then performs the natural gas processing at plants located in Price, Utah, and the Clay Basin facility. For these reasons, Dominion E&P believes the hydrocarbon dew-point skid should not be considered a "natural gas processing plant" subject to Subpart KKK.

C. Summary

In summary, Dominion E&P believes that there may be potential Clean Air Act violations at the Kings Canyon facility and requests that any potential violations be handled pursuant to the EPA Self-Disclosure Policy. Dominion E&P will provide additional information concerning potential violations at the Kings Canyon facility upon EPA's request.

II. TAP-4 Facility

A. Major Source PTE and Title V.

The examination of the TAP-4 facility conducted as a result of the questions raised by the November 2006 audit has led Dominion E&P to believe that the facility has a potential to emit HAPs equal to or greater than the major source thresholds specified in Section 112(a)(1) of the Clean Air Act. The TAP-4 facility would thus be subject to the HAP emission standards for oil and gas production facilities (40 C.F.R. Part 63, Subpart HH) and for reciprocating internal combustion engines (40 C.F.R. Part 63, Subpart ZZZZ). The emissions inventory for the TAP-4 facility also indicates a potential to emit greater than 100 tons per year of nitrogen oxides (NOx). As a "major source" under CAA Sections 112 and 302(j), the TAP-4 facility would be required to obtain a Title V operating permit.

Actual emissions of HAPs from the TAP-4 facility are less than the major source thresholds in CAA Section 112(a). As shown in Attachment D, a table summarizing the TAP-4 facility's actual emissions from April 7, 2005, to April 6, 2006, the actual total HAP emissions were 16.30 tons. During this time period, the facility's actual emissions of benzene were 3.43 tons and the facility's actual emissions of toluene were 5.75 tons. The time period of April 7, 2005, to April 6, 2006, was chosen to reflect 12 months of representative operation after the most recent installation of emitting equipment.

Attachment C shows the TAP-4 facility's potential to emit. The potential to emit calculations include all of the units that are shown in Attachment D, and the calculations of potential to emit assume that these units operate for 8760 hours per year without emission controls. Attachment C shows the TAP-4 facility's potential to emit NOx as 135.94 tons per year, while the facility's actual NOx emissions in 2005-2006 were 46.2 tons, as shown in Attachment D. According to Attachment C, the TAP-4 facility's potential to emit HAPs is 37.41 tons per year, compared with actual emissions of 16.30 tons in 2005-2006. The facility has a potential to emit 16.97 tons per year of toluene and 9.97 tons per year of benzene. As noted above, the facility's actual emissions of these pollutants were 5.76 tons and 3.43 tons, respectively, in 2005-2006.

The TAP-4 facility would have been able to limit its potential to emit through a federally enforceable state minor source permit if it were not located in an Indian air shed under Federal jurisdiction. However, as there are no federal minor source permitting regulations currently in effect for facilities located within a tribal air shed, that course of action was not possible.

Based upon the examination of the TAP-4 facility, Dominion E&P believes that a glycol dehydration unit that commenced operation on April 6, 2005, was the unit whose potential to emit pushed the facility's potential to emit over the major source threshold for hazardous air pollutants. In addition, the NOx potential to emit first exceeded the 100 ton-per-year threshold on April 6, 2005, when a generator for the hydrocarbon dew-point skid at TAP-4 began operating. As a major source of NOx and hazardous air pollutants, Dominion E&P would have been required to submit a Title V permit application to EPA Region 8 by April 6, 2006. Being subject to Subparts HH and ZZZZ means that the TAP-4 facility should have submitted any

required notifications and must achieve emissions reductions and implement emissions monitoring programs required by those standards.

B. Request for NSPS Subpart KKK Guidance.

The TAP-4 facility uses a hydrocarbon dew-point skid that commenced operations on April 6, 2005. The TAP-4 hydrocarbon dew-point skid is larger than the Kings Canyon skid described above. The TAP-4 hydrocarbon dew-point skid produces about 60 barrels of liquids per day when operating. The TAP-4 facility is a natural gas production facility. Its operations are upstream of lease custody transfer, and it does not have fractionation capability. For the same reasons as set forth above with respect to the Kings Canyon hydrocarbon dew-point skid, Dominion believes that the TAP-4 hydrocarbon dew-point skid should not be subject to NSPS Subpart KKK. However, in an abundance of caution, pursuant to the EPA Self-Disclosure Policy, Dominion is providing this notice to EPA of the issue. Dominion E&P requests guidance from EPA Region 8 concerning the applicability of Subpart KKK to this equipment.

C. Summary

In summary, Dominion E&P believes that there may be potential Clean Air Act violations at the TAP-4 facility and requests that any potential violations be handled pursuant to the EPA Self-Disclosure Policy. Dominion E&P will provide additional information concerning potential violations at the TAP-4 facility upon EPA's request.

IV. RBU 9-17E Facility

Dominion E&P has one additional facility, known as the RBU 9-17E facility, with a hydrocarbon dew-point skid. The hydrocarbon dew-point skid commenced operations on October 3, 2006. This facility also does not have fractionation capability. For the reasons discussed above in connection with the hydrocarbon dew-point skids at the Kings Canyon and TAP-4 facilities, Dominion E&P does not believe that the hydrocarbon dew-point skid is subject to Subpart KKK. However, in an abundance of caution, pursuant to the EPA Self-Disclosure Policy, Dominion E&P is providing this notice to EPA of the issue. Dominion E&P requests guidance from EPA Region 8 concerning the applicability of Subpart KKK to this equipment.

V. EPA Self-Disclosure Policy

The Self-Disclosure Policy establishes nine conditions for its applicability.

1. **Systematic Discovery of the Violation Through an Environmental Audit or a Compliance Management System:** The Self-Disclosure Policy states that the discovery "must reflect the regulated entity's due diligence in preventing, detecting, and correcting violations." 65 Fed. Reg. at 19625.

Response: As discussed earlier in this letter, the company's regular program of self-auditing raised questions about the Kings Canyon,TAP-4 and RBU 9-17E facilities. The company quickly called upon outside consultants and counsel to focus on these compliance questions. The facilities' configurations were verified through site inspections on December 11

and 12, 2006. On December 19, 2006, Dominion had collected sufficient information on these facilities' equipment and throughput to perform reliable emissions calculations. The emissions calculations, along with the verification of the facilities' configurations, provided Dominion staff and outside professionals with an objectively reasonable basis for believing that the Kings Canyon and TAP-4 facilities were potentially not in compliance with applicable requirements.

2. **Voluntary Discovery**: The violation must have been discovered through a process other than "a legally mandated monitoring or sampling requirement prescribed by statute, regulation, permit, judicial or administrative order, or consent agreement." *Id.*

Response: Please see the response to No. 1 above.

3. **Prompt Disclosure**: The company must fully disclose the specific violation in writing to EPA within 21 days after discovering "that the violation has, or may have, occurred." This time period begins when "any officer, director, employee or agent of the facility has an objectively reasonable basis for believing that a violation has, or may have, occurred." 65 Fed. Reg. at 19626.

Response: Dominion E&P has been examining the compliance status of the Kings Canyon, TAP-4, and RBU 9-17E facilities simultaneously. Site inspections were conducted on December 11 and 12, 2006, to verify the facilities' configurations. The company had an objectively reasonable basis for believing that the facilities were potentially out of compliance with applicable requirements as of December 19, the date when its consultants had sufficient reliable information to calculate the facilities' potential to emit. The potential to emit calculations performed on December 19 showed that the Kings Canyon and TAP-4 facilities' potential to emit exceeded the major source thresholds. The last date of the 21-day period falls on January 9, 2007, and this self-disclosure letter is submitted timely.

4. **Discovery and Disclosure Independent of Government or Third-Party Plaintiff**: The company must discover and disclose the violation before EPA or another government agency would have been likely to become aware of it through inspection or from information received from a third party. *Id.*

Response: Based upon the circumstances described in this letter, Dominion E&P became aware of the potential violations before EPA or any other governmental entity discovered them. Also, Dominion E&P became aware of the potential violations before any third-party plaintiffs have become involved.

5. **Correction and Remediation**: The company must correct the violation within 60 calendar days from the date of the discovery; certify in writing that the violation has been corrected; and take appropriate measures as determined by EPA to remedy any harm to the environment or human health. *Id.*

Response: Upon discovery that the Kings Canyon and TAP-4 facilities were potentially out of compliance, Dominion E&P conducted a review of emission control options, ordered

control equipment, and initiated the preparation of Title V permit applications. The TAP-4 facility has taken out of service the dehydrator unit that triggered the requirement to submit a Title V operating permit application within one year after the unit's startup. Since this dehydrator unit is not in service, the facility's potential to emit is below the major source threshold. At the Kings Canyon facility, Dehydrator A and a cleanup dehydrator have been taken out of service to reduce the facility's potential to emit. These dehydrator units will remain out of service until each facility is in compliance with the applicable MACT standards and has obtained either a Title V operating permit or EPA's authorization to operate. Both facilities are working to come into compliance with Subpart HH and Subpart ZZZZ as promptly as possible, including filing any required notices of startup and implementing any required emission reductions and monitoring procedures. Each facility is also working to complete and submit a Title V permit application as quickly as possible.

6. **Prevent Recurrence:** The company must agree in writing to take steps to prevent a recurrence of the violation. *Id.*

Response: As noted above, Dominion E&P is in the process of bringing the facilities into compliance with the applicable requirements. The company's regular audit procedure led to the discovery of these potential violations, and the company continues to conduct audits on a regular basis. Dominion E&P understands the importance of effective compliance tools. The company has identified and is working to develop additional measures to help assure that its facilities comply with environmental requirements. In addition, Dominion E&P is willing to discuss with EPA the Agency's compliance assurance suggestions.

7. **No Repeat Violations:** The violation at issue may not have occurred within the previous three years at the same facility, and may not have occurred within the previous five years as part of a pattern at multiple facilities owned or operated by the same company. *Id.*

Response: The potential violations at issue here are not repeat violations. As noted above, they were discovered as part of a single environmental audit that also raised concerns about potential violations at the company's TAP-5 facility, which was the subject of the December 22, 2006, self-disclosure letter.

8. **Other Violations Excluded:** The self-disclosure policy does not apply where the violation has resulted in serious actual harm or imminent and substantial endangerment to human health or the environment. Also, violations of the terms of a consent agreement or judicial or administrative order are not eligible.

Response: Dominion E&P does not believe that these potential violations have posed a substantial harm to public health or to the environment. Both facilities are located in remote areas, so they are less likely to affect human health than facilities located in densely populated areas would be. In addition, actual emissions from the TAP-4 facility are below the major source threshold. Finally, these potential violations do not violate the terms of a consent agreement or judicial or administrative order.

9. **Cooperation:** The company must cooperate as requested by EPA and must provide EPA with all appropriate information to determine whether the self-disclosure policy applies.

Response: As stated above, Dominion E&P will provide EPA with all appropriate information necessary to assess these issues. Dominion E&P is committed to working with EPA to resolve these issues and to ensure that its facilities comply with environmental requirements.

Dominion E&P is working to bring these facilities into compliance. The company's review of the compliance status of other facilities for which the audit raised questions is nearly complete, and if other potential violations are identified, Dominion E&P will contact EPA promptly. Dominion E&P will be pleased to provide EPA with additional information concerning these facilities on request. Dominion E&P would like to resolve these compliance issues, and we will be contacting your staff shortly to discuss arranging a meeting. Should you have any questions about this matter, please contact me at 281-873-3615.

Sincerely,

Dominion Exploration & Production, Inc.

Tray S. Taylor, P.E.
Director, Environmental, Safety & Regulatory

Attachments:

Attachment A – Kings Canyon Potential to Emit Summary
Attachment B – Kings Canyon Actual Emissions Summary
Attachment C – TAP-4 Potential to Emit Summary
Attachment D – TAP-4 Actual Emissions Summary
Attachment E – Memorandum from Jim King and Dennis Myers, Colorado Department of Public Health and Environment, to CP and OP Engineers, regarding "NSPS KKK Guidance," dated October 20, 1997.

ATTACHMENT A

POTENTIAL TO EMIT SUMMARY

Company: Dominion Exploration
Facility Name: Kings Canyon
Facility Location: Uintah County, Utah

Source	NOx		CO		VOC		Formaldehyde		HAPs		BTEX	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Caterpillar 3516LE	5.37	23.50	4.83	21.15	0.86	3.76	0.67	2.94	0.67	2.94	-	-
Caterpillar 3512LE	3.34	14.64	2.67	11.71	0.85	3.73	0.42	1.83	0.42	1.83	-	-
TEG Dehydrator A	-	-	-	-	5.75	25.17	-	-	3.19	13.96	3.09	13.52
TEG Dehy Glycol Reboiler Heater A	0.05	0.20	0.04	0.17	0.00	0.02	0.00	0.00	0.00	0.00	-	-
TEG Dehydrator B	-	-	-	-	8.38	36.70	-	-	3.71	16.23	3.54	15.49
TEG Dehy Glycol Reboiler Heater B	0.03	0.13	0.03	0.11	0.00	0.01					-	-
TEG Cleanup Dehydrator	-	-	-	-	2.97	13.01	-	-	1.34	5.86	1.28	5.62
TEG Cleanup Dehy Reboiler Heater	0.03	0.13	0.03	0.11	0.00	0.01	-	-	-	-	-	-
Wellsite Dehy	-	-	-	-	4.29	18.80	-	-	3.37	14.76	3.34	14.64
Wellsite Dehy Reboiler Heater	0.02	0.07	0.01	0.06	0.00	0.01	-	-	-	-	-	-
Condensate Tank Emissions	-	-	-	-	0.76	3.35	-	-	-	-	-	-
Truck loading Emissions	-	-	-	-	0.86	3.78	-	-	-	-	-	-
Other Heaters	0.17	0.73	0.14	0.62	0.02	0.07	-	-	-	-	-	-
Tank Flashing Emissions	-	-	-	-	4.84	21.19	-	-	0.16	0.70	-	-
Genset 3406	13.77	60.30	0.70	3.06	0.44	1.93	0.19	0.83	0.19	0.83	-	-
Totals	**22.76**	**99.7**	**8.45**	**37.0**	**30.03**	**131.6**	**1.28**	**5.6**	**13.04**	**57.1**	**11.25**	**49.3**

Source	Benzene		Toluene		Ethylbenzene		Xylene	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TEG Dehydrator A	0.98	4.28	1.47	6.46	0.05	0.22	0.59	2.56
TEG Dehydrator B	1.17	5.11	1.73	7.57	0.05	0.21	0.60	2.61
TEG Cleanup Dehydrator	0.50	2.17	0.58	2.53	0.01	0.06	0.20	0.86
Wellsite Dehy (Barton Federal 1-26)	0.45	1.97	1.52	6.66	0.08	0.36	1.29	5.65
Totals	**3.09**	**13.53**	**5.30**	**23.22**	**0.19**	**0.84**	**2.67**	**11.68**

300 East Mineral Ave., Ste 10
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ph. 303-781-8211

ATTACHMENT B

EMISSION SUMMARY

(April 5, 2005 - April 4, 2006)*

Company: Dominion Exploration
Dominion Exploration Kings Canyon
Facility Location: Uintah County, Utah

Source	NOx		CO		VOC		Formaldehyde		HAPs		BTEX	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Caterpillar 3516LE	5.31	23.26	4.78	20.93	0.85	3.72	0.66	2.91	0.84	3.68	-	-
Caterpillar 3512LE	3.33	14.58	2.66	11.66	0.85	3.72	0.42	1.82	0.53	2.30	-	-
TEG Dehydrator A	-	-	-	-	5.66	24.80	-	-	3.10	13.59	3.01	13.18
TEG Dehy Glycol Reboiler Heater A	0.05	0.20	0.04	0.17	0.00	0.02	-	-	-	-	-	-
TEG Dehydrator B	-	-	-	-	0.00	0.00	-	-	3.65	15.98	3.48	15.26
TEG Dehy Glycol Reboiler Heater B	0.03	0.13	0.03	0.11	0.00	0.01	-	-	-	-	-	-
TEG Cleanup Dehydrator	-	-	-	-	0.60	2.64	-	-	0.27	1.18	0.26	1.14
TEG Cleanup Dehy Reboiler Heater	0.01	0.03	0.00	0.02	0.00	0.00	-	-	-	-	-	-
Wellsite Dehy	-	-	-	-	1.46	6.40	-	-	0.75	3.30	0.73	3.19
Wellsite Dehy Reboiler Heater	0.01	0.06	0.01	0.05	0.00	0.01	-	-	-	-	-	-
Condensate Tank Emissions					0.92	4.04	-	-	-	-	-	-
Truck loading Emissions	-	-	-	-	2.65	11.59	-	-	-	-	-	-
Other Heaters	0.11	0.46	0.09	0.39	0.01	0.04	-	-	-	-	-	-
Tank Flashing Emissions					3.87	16.95			0.13	0.56		
Genset 3406	2.81	12.29	0.14	0.62	0.09	0.39	0.04	0.17	0.04	0.17	-	-
Totals	11.64	51.0	7.75	34.0	16.97	74.3	1.12	4.9	9.31	40.8	7.48	32.8

Source	Benzene		Toluene		Ethylbenzene		Xylene	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TEG Dehydrator A	0.96	4.20	1.44	6.29	0.05	0.21	0.56	2.44
TEG Dehydrator B	1.14	5.01	1.70	7.46	0.05	0.20	0.59	2.59
TEG Cleanup Dehydrator	0.10	0.44	0.12	0.51	0.00	0.01	0.04	0.17
Wellsite Dehy (Barton Federal 1-26)	0.17	0.76	0.39	1.70	0.01	0.06	0.16	0.68
Totals	2.38	10.42	3.64	15.96	0.11	0.47	1.34	5.89

* Time period represents the emissions from the first full year of operation with all listed equipment installed and operational. Actual operational data was used in calculations.

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ATTACHMENT C

POTENTIAL TO EMIT SUMMARY

Company: Dominion Exploration
Facility Name: Tap 4
Facility Location: Uintah County, Utah

Source	NOx		CO		VOC		Formaldehyde		HAPs		BTEX	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Caterpillar 3516LE	5.37	23.50	5.07	22.21	0.83	3.64	0.67	2.94	0.67	2.94	0	0.00
TEG Dehydrator #1	-	-	-	-	4.45	19.51	-	-	2.30	10.08	2.22	9.73
TEG Dehy Glycol Reboiler Heater #1	0.03	0.13	0.03	0.11	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Hill Creek DP Cleanup	-	-	-	-	10.31	45.17	-	-	5.14	22.50	4.91	21.51
Hill Creek DP Cleanup boiler	0.03	0.13	0.03	0.11	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Tank Flashing Emissions	-	-	-	-	3.27	14.31	-	-	0.11	0.48	-	-
Condensate Tank Emissions	-	-	-	-	0.71	3.12	-	-	-	-	-	-
Truck loading Emissions	-	-	-	-	1.19	5.22	-	-	-	-	-	-
Genset 3412	25.61	112.18	1.81	7.94	0.36	1.59	0.33	1.43	0.33	1.43	0.00	0.00
Totals	31.04	135.94	6.93	30.37	21.14	92.59	1.00	4.37	8.54	37.41	7.13	31.24

Source	Benzene		Toluene		Ethylbenzene		Xylene	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TEG Dehydrator #1	0.54	2.36	0.94	4.12	0.04	0.19	0.70	3.07
Hill Creek DP Cleanup	1.74	7.62	2.93	12.85	0.09	0.40	0.15	0.64
Totals	2.28	9.97	3.87	16.97	0.13	0.59	0.85	3.71

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ATTACHMENT D

EMISSION SUMMARY

(April 7, 2005 - April 6, 2006)*

Company: Dominion Exploration
Facility Name: Tap 4
Facility Location: Uintah County, Utah

Source	NOx		CO		VOC		Formaldehyde		HAPs		BTEX	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Caterpillar 3516LE	4.58	19.82	4.28	18.73	0.70	3.07	0.57	2.48	0.72	3.14	0	0.00
TEG Dehydrator #1	-	-	-	-	3.41	14.92	-	-	1.76	7.70	1.70	7.44
TEG Dehy Glycol Reboiler Heater #1	0.04	0.17	0.03	0.14	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Hill Creek DP Cleanup	-	-	-	-	2.34	10.26	-	-	1.07	4.67	1.01	4.43
Hill Creek DP Cleanup boiler	0.01	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tank Flashing Emissions	-	-	-	-	2.61	11.45	-	-	0.09	0.38	-	-
Condensate Tank Emissions	-	-	-	-	0.48	2.08	-	-	-	-	-	-
Truck loading Emissions	-	-	-	-	0.64	2.81	-	-	-	-	-	-
Genset 3412	5.97	26.14	0.42	1.85	0.08	0.37	0.08	0.33	0.09	0.41	0.00	0.00
Totals	10.54	46.2	4.74	20.7	10.27	45.0	0.64	2.81	3.72	16.30	2.71	11.87

Source	Benzene		Toluene		Ethylbenzene		Xylene	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TEG Dehydrator #1	0.41	1.79	0.72	3.15	0.03	0.15	0.54	2.35
Hill Creek DP Cleanup	0.37	1.64	0.60	2.61	0.02	0.08	0.02	0.11
Totals	0.78	3.43	1.31	5.76	0.05	0.22	0.56	2.46

* Time period represents the emissions from the first full year of operation with all listed equipment installed and operational. Actual operational data was used in calculations.

300 East Mineral Ave., Ste 10
Littleton CO 80122
ph. 303-781-8211

MEMO TO FILE

DATE: February 24, 2015

SUBJECT: Uintah and Ouray Indian Reservation Natural Gas Production Facilities; XTO Energy Inc., Environmental Justice

FROM: Victoria Parker-Christensen, EPA Region 8 Air Program

TO: Source Files:
205c AirTribal UO XTO Energy, Inc., RBU 11-18F
SMNSR-UO-000123-2012.001
FRED # 99951

205c AirTribal UO XTO Energy, Inc., Wild Horse Bench
SMNSR-UO-000124-2012.001
FRED # 99952

On February 11, 1994, the President issued Executive Order 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The Executive Order calls on each federal agency to make environmental justice a part of its mission by "identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations."

The EPA defines "Environmental Justice" as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and polices. The EPA's goal with respect to Environmental Justice in permitting is to enable overburdened communities to have full and meaningful access to the permitting process and to develop permits that address environmental justice issues to the greatest extent practicable under existing environmental laws. *Overburdened* is used to describe the minority, low-income, tribal and indigenous populations or communities in the United States that potentially experience disproportionate environmental harms and risks as a result of greater vulnerability to environmental hazards.

This discussion describes our efforts to identify environmental justice communities and assess potential effects in connection with issuing this permit in Uintah County, Utah, within the exterior boundaries of the Uintah and Ouray Indian Reservation.

Region 8 Air Program Determination

Based on the findings described in the following sections of this memorandum, we conclude that issuance of the aforementioned permits are not expected to have disproportionately high or adverse human health effects on overburdened communities in the vicinity of the facility on the Uintah and Ouray Indian Reservation.

Permit Request

The EPA has received synthetic minor NSR permit applications from XTO Energy, Inc. (XTO) requesting approval to transfer requirements from a federal consent decree (Civil Action No. 2:09-CV-00331-SA) to synthetic minor NSR permits for existing natural gas production facilities on the Uintah and Ouray Indian Reservation in Uintah County, Utah. These permits are intended only to incorporate allowable and requested emission limits and provisions from the following documents:

1. November 17, 2009, Federal Consent Decree (CD) between the EPA and Dominion Exploration & Production, Inc. and XTO Energy, Inc. (Civil Action No. 2:09-CV-00331-SA) and
2. Associated applications from XTO requesting a synthetic minor NSR permit for the specified facilities in accordance the requirements of the "Review of New Sources and Modifications in Indian Country; Final Rule," at 40 CFR Parts 49 and 51.

The transfer of the requirements from the CD, in addition to the incorporation of limits requested by XTO in the applications into a single permit, consolidates the requirements originating from these documents into one permit.

The following table lists the facility, synthetic minor NSR permit number and location.

Facility/Permit Number	Location
RBU 11-18F SMNSR-UO-000123-2012.001	NESW S18, T10S, R20E Lat. 39.94625, Long. -109.71063
Wild Horse Bench SMNSR-UO-000124-2012.001	NESE S26, T11S, R19E Lat. 39.88899, Long. -109.734224

The emissions at this existing facility will not be increasing due to this permit action. In addition, this permit action does not authorize the construction of any new emission sources, or emission increases from existing units, nor does it otherwise authorize any other physical modifications to the facility or its operations and the substantive requirements of the CD (emission controls and reductions) have already been fulfilled at this facility. The emissions, approved at present, from each existing facility will not increase due to the associated permit action.

Air Quality Review

The MNSR regulations at 40 CFR 49.154(d) require that an Air Quality Impact Assessment (AQIA) modeling analysis be performed if there is reason to be concerned that new construction would cause or contribute to a National Ambient Air Quality Standard (NAAQS) or PSD increment violation. If an AQIA reveals that the proposed construction could cause or contribute to a NAAQS or PSD increment violation, such impacts must be addressed before a pre-construction permit can be issued. Because the permit actions do not authorize the construction of any new emission sources, or emission increases from existing units we have determined that an AQIA modeling analysis is not required for this action.

For purposes of Executive Order 12898 on environmental justice, the EPA has recognized that compliance with the NAAQS is "emblematic of achieving a level of public health protection that, based

on the level of protection afforded by a primary NAAQS, demonstrates that minority or low-income populations will not experience disproportionately high and adverse human health or environmental effects due to the exposure to relevant criteria pollutants." *In re Shell Gulf of Mexico, Inc. & Shell Offshore, Inc.*, 15 E.A.D., slip op. at 74 (EAB 2010). This is because the NAAQS are health-based standards, designed to protect public health with an adequate margin of safety, including sensitive populations such as children, the elderly, and asthmatics.

Environmental Impacts to Potentially Overburdened Communities

This permit action does not authorize the construction of any new air emission sources, or air emission increases from existing units, nor does it otherwise authorize any other physical modifications to the associated facility or its operations. The air emissions at the existing facility will not increase due to the associated action. A map of the area surrounding the facilities showing total population based on the U.S. Census Bureau 2010 demographic data is attached to this memorandum.

Furthermore, the permit contains a provision stating, "*The permitted source shall not cause or contribute to a National Ambient Air Quality Standard violation or a PSD increment violation.*" Noncompliance with this permit provision is a violation of the permit and is grounds for enforcement action and for permit termination or revocation. As a result, we conclude that issuance of the aforementioned permit will not have disproportionately high or adverse human health effects on communities in the vicinity of the Uintah and Ouray Indian Reservation.

Tribal Consultation and Enhanced Public Participation

Given the presence of potentially overburdened communities in the vicinity of the facility, we are providing an enhanced public participation process for this permit.

1. Interested parties can subscribe to an EPA listserve that notifies them of public comment opportunities on the Uintah and Ouray Indian Reservation for proposed air pollution control permits via email at http://www2.epa.gov/region8/air-permit-public-comment-opportunities.

2. All minor source applications (synthetic minor, modification to an existing facility, new true minor or general permit) are submitted to both the Tribe and us per the application instructions (see http://www2.epa.gov/region8/tribal-minor-new-source-review-permitting).

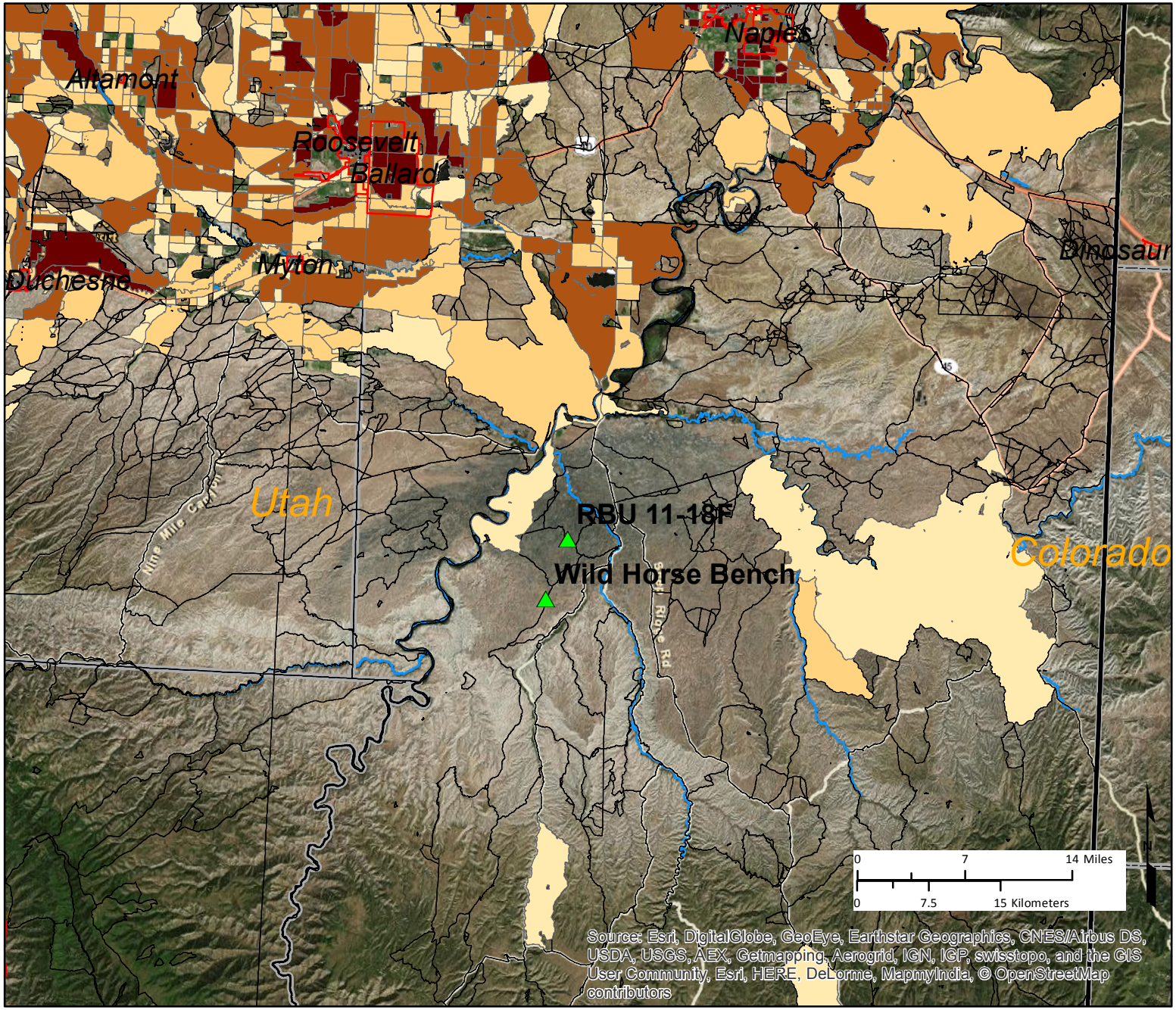
3. The Tribe has 10 business days to respond to us with questions and comments on the application.

4. In the event an AQIA is triggered, we email a copy of that document to the Tribe within 5 business days from the date we receive it.

5. We notify the Tribe of the public comment period for the proposed permit and provide copies of the notice of public comment opportunity to post in various locations of their choosing on the Reservation. We also notify the Tribe of the issuance of the final permit.

Attachment

Map of total population based on the U.S. Census Bureau 2010 demographic data



Uintah-Ouray Indian Reservation
CAA New Source Review Program
US Census Bureau 2010
Population Distrubution

- XTO Facilities
- CITY BOUNDARY

TOTAL_POPULATION

- 0
- 1 - 5
- 6 - 25
- 26 - 75
- 76 - 177
- STATE BOUNDARY
- COUNTY BOUNDARY
- RIVERS

Date: February 24, 2015

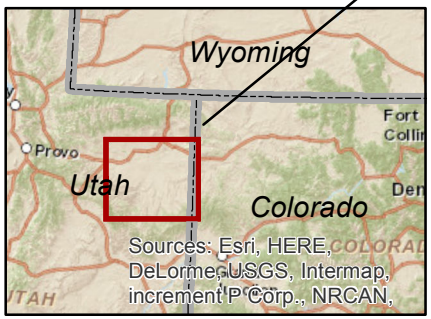
Map Projection: UTM, Meters, Zone 13N, NAD83.

Data Sources:

City Boundary - Navteq (2013);
Census Block Population - U.S. Census Bureau (2010);
County Boundary - U.S. Census Bureau (2010);
State Boundary - U.S. Census Bureau (2010);
Base - ESRI Imagery Webservice (2014).

Disclaimer: EPA makes no claim regarding the accuracy or precision of these data. Questions concerning the data should be referred to the source agency. This map does not necessarily represent EPA's position on any Indian Country boundaries or the jurisdictional status of any specific location.

Area Enlarged



EPA United States Environmental Protection Agency
REGION 8
serving the states & tribes of Colorado, Montana, Wyoming, Utah, North Dakota & South Dakota

MEMO TO FILE

DATE: February 24, 2015

SUBJECT: Uintah and Ouray Indian Reservation Natural Gas Production Facilities; XTO Energy Inc., Endangered Species Act

FROM: Victoria Parker-Christensen, EPA Region 8 Air Program

TO: Source Files:
205c AirTribal UO XTO Energy, Inc., RBU 11-18F
SMNSR-UO-000123-2012.001
FRED # 99951

205c AirTribal UO XTO Energy, Inc., Wild Horse Bench
SMNSR-UO-000124-2012.001
FRED # 99952

Pursuant to Section 7 of the Endangered Species Act (ESA), 16 U.S.C. §1536, and its implementing regulations at 50 CFR, part 402, the EPA is required to ensure that any action authorized, funded, or carried out by the Agency is not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or result in the destruction or adverse modification of such species' designated critical habitat. Under ESA, those agencies that authorize, fund, or carry out the federal action are commonly known as "action agencies." If an action agency determines that its federal action "may affect" listed species or critical habitat, it must consult with the U.S. Fish and Wildlife Service (FWS). If an action agency determines that the federal action will have no effect on listed species or critical habitat, the agency will make a "no effect" determination. In that case, the action agency does not initiate consultation with the FWS and its obligations under Section 7 are complete.

In complying with its duty under ESA, the EPA, as the action agency, examined the potential effects on listed species and designated critical habitat relating to issuing these Clean Air Act (CAA) synthetic minor New Source Review (NSR) permits.

Region 8 Air Program Determination

The EPA has concluded that the proposed synthetic minor NSR permit actions will have "*No effect"* on listed species or critical habitat. These proposed permit actions do not authorize the construction of any new emission sources, or emission increases from existing units, nor do they otherwise authorize any other physical modifications to the associated facility or its operations. Because the EPA has determined that the federal action will have no effect, the agency made a *"No effect"* determination, did not initiate consultation with the FWS and its obligations under Section 7 are complete.

Permit Request

The EPA has received synthetic minor NSR permit applications from XTO Energy, Inc. (XTO) requesting approval to transfer requirements from a federal consent decree (Civil Action No. 2:09-CV-00331-SA) to synthetic minor NSR permits for existing natural gas production facilities on the Uintah and Ouray Indian Reservation in Uintah County, Utah. These permits are intended only to incorporate allowable and requested emission limits and provisions from the following documents:

1. November 17, 2009, Federal Consent Decree (CD) between the EPA and Dominion Exploration & Production, Inc. and XTO Energy, Inc. (Civil Action No. 2:09-CV-00331-SA) and
2. Associated applications from XTO requesting a synthetic minor NSR permit for the specified facilities in accordance the requirements of the "Review of New Sources and Modifications in Indian Country; Final Rule," at 40 CFR Parts 49 and 51.

The transfer of the requirements from the CD, in addition to the incorporation of limits requested by XTO in the applications into a single permit, consolidates the requirements originating from these documents into one permit.

The following table lists the facility, synthetic minor NSR permit number and location.

Facility/Permit Number	Location
RBU 11-18F SMNSR-UO-000123-2012.001	NESW S18, T10S, R20E Lat. 39.94625, Long. -109.71063
Wild Horse Bench SMNSR-UO-000124-2012.001	NESE S26, T11S, R19E Lat. 39.88899, Long. -109.734224

Process and Construction Information

These proposed permit actions do not authorize the construction of any new emission sources, or emission increases from existing units, nor do they otherwise authorize any other physical modifications to the associated facility or its operations. The emissions, approved at present, from each existing facility will not increase due to the associated permit action.

Threatened and Endangered Species

The EPA accessed U.S. Fish and Wildlife Service (FWS) websites for information on threatened and endangered species and designated critical habitat for those species. FWS maintains a website titled *Environmental Conservation Online System* (ECOS, http://ecos.fws.gov/ecos/indexPublic.do) that provides access to databases for threatened and endangered species that may be present within the proposed project area and designated critical habitat for threatened and endangered species.

The EPA accessed the FWS Information, Planning, and Conservation System (IPaC) database (http://ecos.fws.gov/ipac) to identify species listed as threatened and endangered that have been documented as being present in Uintah County, Utah, and received an official species list from the FWS Utah Ecological Services Field Office on February 24, 2015. Information on critical habitat is available

on-line at http://criticalhabitat.fws.gov/crithab/. The following threatened or endangered species may be found in Uintah County:

Flowering Plants

Clay reed-mustard (*Schoenocrambe argillacea*)
Threatened

Pariette cactus (*Sclerocactus brevispinus*)
Threatened

Shrubby reed-mustard (*Schoenocrambe suffrutescens*)
Endangered

Uinta Basin hookless cactus (*Sclerocactus wetlandicus)*
Threatened

Ute ladies'-tresses (*Spiranthes diluvialis*)
Threatened

Fishes

Bonytail chub (*Gila elegans*)
Listing Status: Endangered
Final designated critical habitat

Colorado pikeminnow (*Ptychocheilus lucius*)
Endangered
Final designated critical habitat

Humpback chub (*Gila cypha*)
Listing Status: Endangered
Final designated critical habitat

Razorback sucker (*Xyrauchen texanus*)
Endangered
Final designated critical habitat

Mammals

Black-Footed ferret (*Mustela nigripes*)
Experimental Population, Non-Essential

Canada Lynx (*Lynx canadensis*)
Threatened

Birds

Mexican Spotted owl (*Strix occidentalis lucida*)
Threatened, Final designated critical habitat

Yellow-Billed Cuckoo (Coccyzus americanus)

Conclusion

The EPA has concluded that the proposed synthetic minor NSR permit actions will have "*No effect"* on listed species or critical habitat. These proposed permit actions do not authorize the construction of any new emission sources, or emission increases from existing units, nor do they otherwise authorize any other physical modifications to the associated facility or its operations. The emissions, approved at present, from each existing facility will not increase due to the associated permit action. Because the EPA has determined that the federal action will have no effect, the agency will make a *"No effect"* determination. In that case, the EPA does not initiate consultation with the FWS and its obligations under Section 7 are complete.

Attachments:
Map of Facilities and FWS Designated Critical Habitat
FWS Official Species List

Uintah-Ouray Indian Reservation
CAA New Source Review Program
Endangered and Threatened Species
US FWS Designated Critical Habitat

- XTO Facilities
- Mexican Spotted Owl
- Endangered Colorado River Fishes
- CITY BOUNDARY
- STATE BOUNDARY
- COUNTY BOUNDARY
- RIVERS
- MAJOR STREAMS

Date: February 24, 2015

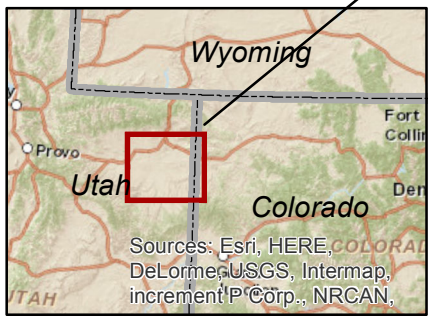
Map Projection: UTM, Meters, Zone 13N, NAD83.

Data Sources:

Rivers - National Hydrography Dataset Plus (NHDPlus) V2;
Critical Habitat - U.S. Fish &Wildlife Service (2004);
City Boundary - Navteq (2013);
County Boundary - U.S. Census Bureau (2010);
State Boundary - U.S. Census Bureau (2010);
Base - ESRI Imagery Webservice (2014).

Disclaimer: EPA makes no claim regarding the accuracy or precision of these data. Questions concerning the data should be referred to the source agency. This map does not necessarily represent EPA's position on any Indian Country boundaries or the jurisdictional status of any specific location.

Area Enlarged



EPA United States Environmental Protection Agency
REGION 8
serving the states & tribes of Colorado, Montana, Wyoming, Utah, North Dakota & South Dakota

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Utah Ecological Services Field Office
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UT 84119
PHONE: (801)975-3330 FAX: (801)975-3331
URL: www.fws.gov; www.fws.gov/utahfieldoffice/

Consultation Code: 06E23000-2015-SLI-0109 February 24, 2015
Event Code: 06E23000-2015-E-00339
Project Name: U&O Indian Reservation SMNSR

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: U&O Indian Reservation SMNSR

Official Species List

Provided by:

Utah Ecological Services Field Office
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UT 84119
(801) 975-3330
http://www.fws.gov
http://www.fws.gov/utahfieldoffice/

Consultation Code: 06E23000-2015-SLI-0109
Event Code: 06E23000-2015-E-00339

Project Type: Oil Or Gas

Project Name: U&O Indian Reservation SMNSR
Project Description: XTO SMNSR facilities in Uintah County February 2015

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Counties: Uintah, UT

Endangered Species Act Species List

There are a total of 14 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Greater sage-grouse *(Centrocercus urophasianus)* Population: entire	Candidate		
Mexican Spotted owl *(Strix occidentalis lucida)* Population: Entire	Threatened	Final designated	
Yellow-Billed Cuckoo *(Coccyzus americanus)* Population: Western U.S. DPS	Threatened	Proposed	
Fishes			
Bonytail chub *(Gila elegans)* Population: Entire	Endangered	Final designated	
Colorado pikeminnow *(Ptychocheilus lucius)* Population: Entire, except EXPN	Endangered	Final designated	
Humpback chub *(Gila cypha)* Population: Entire	Endangered	Final designated	
Razorback sucker *(Xyrauchen*	Endangered	Final designated	

texanus) Population: Entire			
Flowering Plants			
Clay reed-mustard *(Schoenocrambe argillacea)*	Threatened		
Pariette cactus *(Sclerocactus brevispinus)*	Threatened		
Shrubby reed-mustard *(Schoenocrambe suffrutescens)*	Endangered		
Uinta Basin hookless cactus *(Sclerocactus wetlandicus)*	Threatened		
Ute ladies'-tresses *(Spiranthes diluvialis)*	Threatened		
Mammals			
Black-Footed ferret *(Mustela nigripes)* Population: U.S.A. (specific portions of AZ, CO, MT, SD, UT, and WY)	Experimental Population, Non-Essential		
Canada Lynx *(Lynx canadensis)* Population: (Contiguous U.S. DPS)	Threatened		

Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Birds	**Critical Habitat Type**
Mexican Spotted owl *(Strix occidentalis lucida)* Population: Entire	Final designated
Yellow-Billed Cuckoo *(Coccyzus americanus)* Population: Western U.S. DPS	Proposed
Fishes	
Bonytail chub *(Gila elegans)* Population: Entire	Final designated
Colorado pikeminnow *(Ptychocheilus lucius)* Population: Entire, except EXPN	Final designated
Humpback chub *(Gila cypha)* Population: Entire	Final designated
Razorback sucker *(Xyrauchen texanus)* Population: Entire	Final designated

MEMO TO FILE

DATE: February 24, 2015

SUBJECT: Uintah and Ouray Indian Reservation Natural Gas Production Facilities; XTO Energy Inc., Endangered Species Act

FROM: Victoria Parker-Christensen, EPA Region 8 Air Program

TO: Source Files:
205c AirTribal UO XTO Energy, Inc., RBU 11-18F
SMNSR-UO-000123-2012.001
FRED # 99951

205c AirTribal UO XTO Energy, Inc., Wild Horse Bench
SMNSR-UO-000124-2012.001
FRED # 99952

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment with regard to such undertakings. Under the ACHP's implementing regulations at 36 C.F.R. Part 800, Section 106 consultation is generally with state and tribal historic preservation officials in the first instance, with opportunities for the ACHP to become directly involved in certain cases. An "undertaking" is "a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval." 36 C.F.R. § 800.16(y).

Under the NHPA Section 106 implementing regulations, if an undertaking is a type of activity that has the potential to cause effects on historic properties, assuming any are present, then federal agencies consult with relevant historic preservation partners to determine the area of potential effect (APE) of the undertaking, to identify historic properties that may exist in that area, and to assess and address any adverse effects that may be caused on historic properties by the undertaking. If an undertaking is a type of activity that does not have the potential to cause effects on historic properties, the federal agency has no further obligations. 36 C.F.R. § 800.3(a)(1).

This memorandum describes EPA's efforts to assess potential effects on historic properties in connection with issuing draft Federal New Source Review (NSR) permits to XTO Energy Inc. located within the exterior boundaries of the Uintah and Ouray Indian Reservation in Uintah County, Utah. As explained further below, EPA is finding that the proposed actions do not have the potential to cause effects on historic properties, even assuming such historic properties are present.

Permit Request

The EPA has received synthetic minor NSR permit applications from XTO Energy, Inc. (XTO) requesting approval to transfer requirements from a federal consent decree (Civil Action No. 2:09-CV-00331-SA) to synthetic minor NSR permits for existing natural gas production facilities on the Uintah and Ouray Indian Reservation in Uintah County, Utah. These permits are intended only to incorporate allowable and requested emission limits and provisions from the following documents:

1. November 17, 2009, Federal Consent Decree (CD) between the EPA and Dominion Exploration & Production, Inc. and XTO Energy, Inc. (Civil Action No. 2:09-CV-00331-SA) and
2. Associated applications from XTO requesting a synthetic minor NSR permit for the specified facilities in accordance the requirements of the "Review of New Sources and Modifications in Indian Country; Final Rule," at 40 CFR Parts 49 and 51.

The transfer of the requirements from the CD, in addition to the incorporation of limits requested by XTO in the applications into a single permit, consolidates the requirements originating from these documents into one permit.

The following table lists the facility, synthetic minor NSR permit number and location.

Facility/Permit Number	Location
RBU 11-18F SMNSR-UO-000123-2012.001	NESW S18, T10S, R20E Lat. 39.94625, Long. -109.71063
Wild Horse Bench SMNSR-UO-000124-2012.001	NESE S26, T11S, R19E Lat. 39.88899, Long. -109.734224

These proposed permit actions do not authorize the construction of any new emission sources, or emission increases from existing units, nor do they otherwise authorize any other physical modifications to the associated facility or its operations. The emissions, approved at present, from each existing facility will not increase due to the associated permit action.

Finding of No Potential to Cause Effects

The EPA has reviewed the proposed actions for potential impacts on historic properties. Because the activities authorized by the EPA permits are not expected to involve any new ground disturbance, the Agency finds that this project does not have the potential to cause effects on historic properties, even assuming any are present.

Registered Historic Places

As a further consideration, our review of information from the National Park Service indicated that the proposed action is not located near any properties listed on the National Register of Historic Places.

The National Park Service maintains an internet resource that was used to determine whether any registered historic places are within the area of potential effect at http://www.nps.gov/history/nr/research/index.htm .

The results of the database search indicated that there are 19 registered cultural places and properties within Uintah County. The historic places and properties and their locations and distance from the facilities are listed below:

Registered Historic Place	Address	Latitude	Longitude	RBU 11-18F Distance (mile)	White Horse Bench Distance (mile)
Desolation Canyon	Green River	39.8416667	-109.9166667	13	10
Carter Road	Ashley National Forest	40.7197222	-109.7194444	53	57
Earl Douglass Workshop—Laboratory	U.S. Highway 40, Dinosaur National Monument	40.4405556	-109.3011111	40	44
Morris, Josie Bassett, Ranch Complex	U.S. Highway 40, Dinosaur National Monument	40.4252778	-109.1752778	43	47
Quarry Visitor Center	U.S. Highway 40, Dinosaur National Monument	40.4425	-109.3013889	40	45
Cockleburr Wash Petroglyphs	Address Restricted, Jensen				
Bank of Vernal	3 W. Main Street, Vernal	40.4558333	-109.5286111	36	41
Lewis Curry House	189 S. Vernal Avenue, Vernal	40.4441667	-109.5275	36	40
Fenn--Bullock House	388 W 100 N, Vernal	40.4572222	-109.5352778	36	41
Gibson--Sowards House	3110 N 250 W, Vernal	40.5013889	-109.5330556	39	44
Little Brush Creek Petroglyphs	Address Restricted				
Manfred and Ethel Martin House	163 N Vernal Avenue, Vernal	40.4577778	-109.5280556	37	41
McConkie Ranch Petroglyphs	SE of Dry Fork, Vernal	40.5486111	-109.6380556	42	46
William and Emily Siddoway House	1055 N Vernal Avenue, Vernal	40.4711111	-109.5288889	37	42
Francis 'Frank' and Eunice Smith House	1847 N 3000 W, Vernal	40.4733333	-109.5866667	37	41
St. Paul's Episcopal Church and Lodge	226 W Main Street, Vernal	40.4558333	-109.5325	36	41
Vernal Tithing Office	NW Corner of 500 W & 200 S, Vernal	40.4530556	-109.5377778	36	40
Washington School - Vernal LDS Relief Society Hall	270 North 500 West, Vernal	40.4594444	-109.5369444	37	41
Whiterocks Village Site	Address Restricted, Whiterocks				

State and Tribal Consultation

Because this undertaking is a type of activity that does not have the potential to cause effects on historic properties, the EPA has no further obligations under Section 106 of the National Historic Preservation Act or 36 C.F.R. part 800. However, we consulted with the Utah State Historic Preservation Officer (SHPO) and requested any information the SHPO had regarding any historic properties within the APE and our determination of "*No historic properties affected*" in a letter to the SHPO on August 30, 2013. We received concurrence with our determination of "*No historic properties affected*" in a letter from the SHPO dated September 10, 2013.

We also consulted with the tribal government by sending letters to the Tribal Chairman, Vice-Chairman, Energy, Minerals and Air Director, and each member of the Tribal Council Ute Indian Tribe inviting them to consult with us and provide information concerning historic properties relating to this project and our determination of "*No historic properties affected*" for the APE. The EPA sent the letters on September 9, 2013.

Attachment:

Letter to Utah State Historic Preservation Officer dated August 30, 2013
Letters to Ute Indian Tribe dated September 9, 2013
Map of National Park Service National Historic Places in Uintah County

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
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http://www.epa.gov/region08

AUG 3 0 2013

Ref: 8P-AR

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Wilson Martin, Director
Utah State History
300 South Rio Grande Street
Salt Lake City, UT 84101

RE: Section 106 of the National Historic Preservation Act regarding Proposed Federal Clean Air Act Synthetic Minor New Source Review Permits on the Uintah and Ouray Indian Reservation

Dear Mr. Martin:

The Environmental Protection Agency Region 8 (EPA) received federal Clean Air Act (CAA) permit applications and is preparing proposed synthetic minor New Source Review (NSR) air pollution control permits for several existing natural gas production facilities on the Uintah and Ouray Indian Reservation in Uintah County, Utah. To comply with our obligations under Section 106 of the National Historic Preservation Act and its implementing regulations at 36 C.F.R. Part 800, we are consulting with you concerning our finding as to the potential effects and we are seeking any information you may have as to whether there are any historic properties within the area of potential effects for these facilities.

The permit applications request approval to transfer conditions from a federal consent decree into synthetic minor NSR permits. The synthetic minor NSR permits are intended only to incorporate allowable and requested emission limits and provisions from the associated federal consent decree and permit applications.

The EPA has made the finding "*No historic properties affected*" for the proposed synthetic minor NSR permit actions. The proposed permit actions do not authorize the construction of any new emission sources, or emission increases from existing units, nor do they otherwise authorize any other physical modifications to the associated facility or its operations. The emissions, approved at present, from each existing facility will not increase due to the associated permit action and the emissions will continue to be well controlled at all times. This is an administrative action with no physical changes to the existing facilities or surrounding area. A map showing the locations of the facilities is enclosed with this letter.

The following table lists the applicant, facility and location affected by each proposed permit action.

Applicant/Facility	Location
Chipeta Processing LLC Natural Buttes Compressor Station	SW S24, T9S, R21E Lat. 40.017, Long. -109.508
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XTO Energy Inc. RBU 9-17E	NESE S17, T10S, R19E Lat. 39.94387, Long. -109.79873

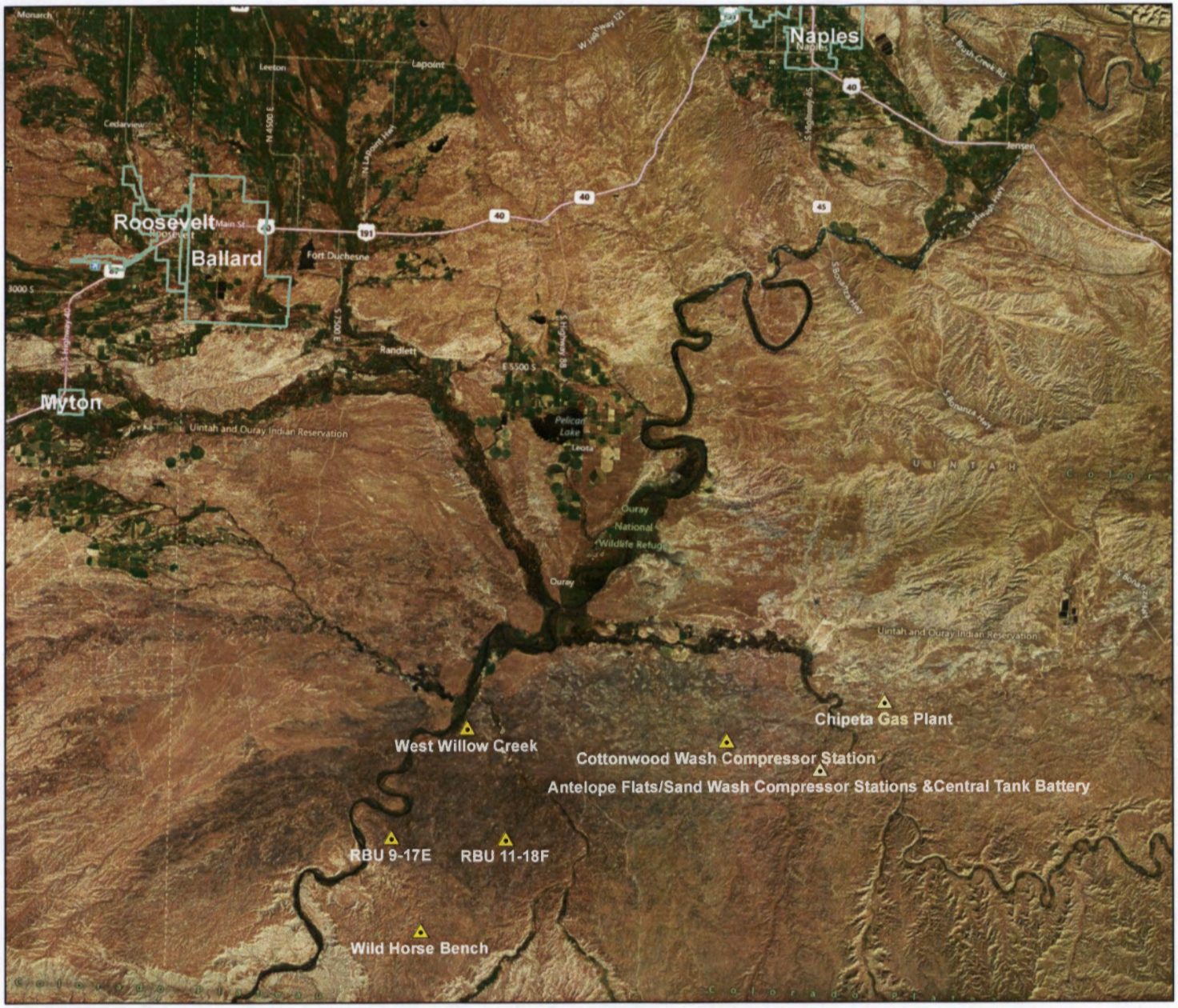
If you have any concerns regarding our determination, please notify me in writing within the 30 day time period described at 36 C.F.R. § 800.3(c)(4). If we haven't heard back from you within 30 days, we will assume you concur with our finding. In addition, please send any comments or information concerning historic properties within the project areas to me within 30 days, so as to ensure that we will have ample time to review them. You can reach me by phone at (303) 312-6441 or email at parker-christensen.victoria@epa.gov. Thank you for your assistance.

Sincerely,

Victoria Parker-Christensen
Environmental Engineer
Air Program

Enclosure

cc: Lori Hunsaker, Deputy SHPO, Antiquities



Uintah-Ouray Indian Reservation Proposed Clean Air Act Synthetic Minor New Source Review (SM NSR) Permit Actions

City Boundary

SM NSR Permit Applicants

Date: August 30, 2013

Map Projection: UTM, Meters, Zone 13N, NAD83.

Data Sources:

Base - Microsoft Bing web service (2012).

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Area Enlarged

EPA REGION 8

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Honorable Gordon Howell, Chairman
Ute Indian Tribe
Uintah and Ouray Indian Reservation
P.O. Box 190
Fort Duchesne, Utah 84026

RE: Section 106 of the National Historic Preservation Act regarding Proposed Synthetic Minor New Source Review Permits on the Uintah and Ouray Indian Reservation

Dear Chairman Howell:

The U.S. Environmental Protection Agency Region 8 (EPA) is initiating consultation and coordination with the Ute Indian Tribe regarding potential impacts to historic, religious or cultural properties covered by section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations at 36 C.F.R. Part 800.

The EPA has received federal Clean Air Act (CAA) permit applications, as detailed in the enclosure, and is preparing draft synthetic minor New Source Review (NSR) air pollution control permits for seven existing natural gas production facilities within the exterior boundary of the Uintah and Ouray Indian Reservation in Uintah County, Utah. As required by the NHPA, we are assessing whether approving the permits would cause any impacts on these properties. The EPA permit issuance process includes public notice of a draft permit, opportunity for public comment, as well as administrative and judicial review provisions. A copy of the draft permit document and technical support document will be available on the internet during the public comment period at www.epa.gov/region8/air/permitting/pubcomment.html.

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We seek consultation with you concerning 1) how the Ute Indian Tribe wishes us to address the NHPA consultation process, 2) the presence of historic properties within the areas of potential effects (APE) and 3) our proposed determination as to the potential effects of these proposed permit actions. We want to ensure that we fulfill our obligations under the NHPA and that we are working with the appropriate representatives of the Tribe on air permitting matters. If a tribe does not have a federally designated Tribal Historic Preservation Officer (THPO), which is the case for the Ute Indian Tribe, then federal agencies consult directly with the State Historic Preservation Officer (SHPO) concerning undertakings that may affect historic properties on tribal lands. The EPA initiated consultation with the Utah SHPO on August 30, 2013. The enclosed letter to the Utah SHPO describes the specific information for the facility and seeks their concurrence with our proposed determination.

In addition, the NHPA and its implementing regulations require that the agencies consult with federally recognized tribes to ensure that tribes attaching religious or cultural significance to historic properties that may be affected by an undertaking have a reasonable opportunity to participate in the process. Therefore, please advise us as to the Tribe's preference for the process we should follow for the NHPA. Would you prefer that we communicate only with the SHPO, do you have a NHPA designated representative for the Tribe, or would you prefer that we communicate with the Tribal government as well as the SHPO and/or NHPA designated representative concerning any NHPA matters on the Reservation?

Second, to ensure that we are considering all relevant information, we would appreciate your assistance in identifying any historic properties of traditional religious or cultural importance to the Ute Indian Tribe that may be located within the APE that may be directly or indirectly affected. The area is described in the enclosed letter. If the Tribe has any information concerning such properties, please contact us.

We understand the Ute Indian Tribe may not wish to divulge information about historic properties that have religious or cultural significance. The NHPA and its regulations provide a means to consider protecting information about a historic property if public disclosure might cause harm to the property, a significant invasion of privacy or impediments to traditional religious practices. We are open to working with the Tribe to seek to address any concerns that you may have regarding the sensitivity of information. If any properties are determined to be historic properties under the NHPA, the EPA would propose to consult with you on possible measures to avoid or minimize potential adverse effects.

Finally, based on the information we have reviewed to date, we are proposing to determine that there are no historic properties within the APE for the project, and therefore, that no historic properties will be affected as a result of issuing this permit. If you have any concerns regarding our determination or additional information about historic properties related to this permit, please notify me in writing within the 30 day time period described at 36 C.F.R. § 800.3(c)(4). If we have not received comments from you within 30 days, we will assume you concur with our finding.

If you have questions or comments, please contact me directly at (303) 312-6611 or your staff can contact Victoria Parker-Christensen, Air Program, at (303) 312-6441 or parker-christensen.victoria@epa.gov. We are available to meet with you or your representatives to consult further regarding this permit action.

Sincerely,

Derrith R. Watchman-Moore
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Enclosures:

cc: Cover Letter Only:
Ronald Wopsock, Vice-Chairman, Ute Indian Tribe
Phillip Chimburas, Councilman, Ute Indian Tribe
Stewart Pike, Councilman, Ute Indian Tribe
Tony Small, Councilman, Ute Indian Tribe
Bruce Ignacio, Councilman, Ute Indian Tribe
Manuel Myore, Energy, Minerals, and Air Director, Ute Indian Tribe
Reannin Tapoof, Executive Assistant, Ute Indian Tribe

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300 South Rio Grande Street
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Environmental Engineer
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Enclosure

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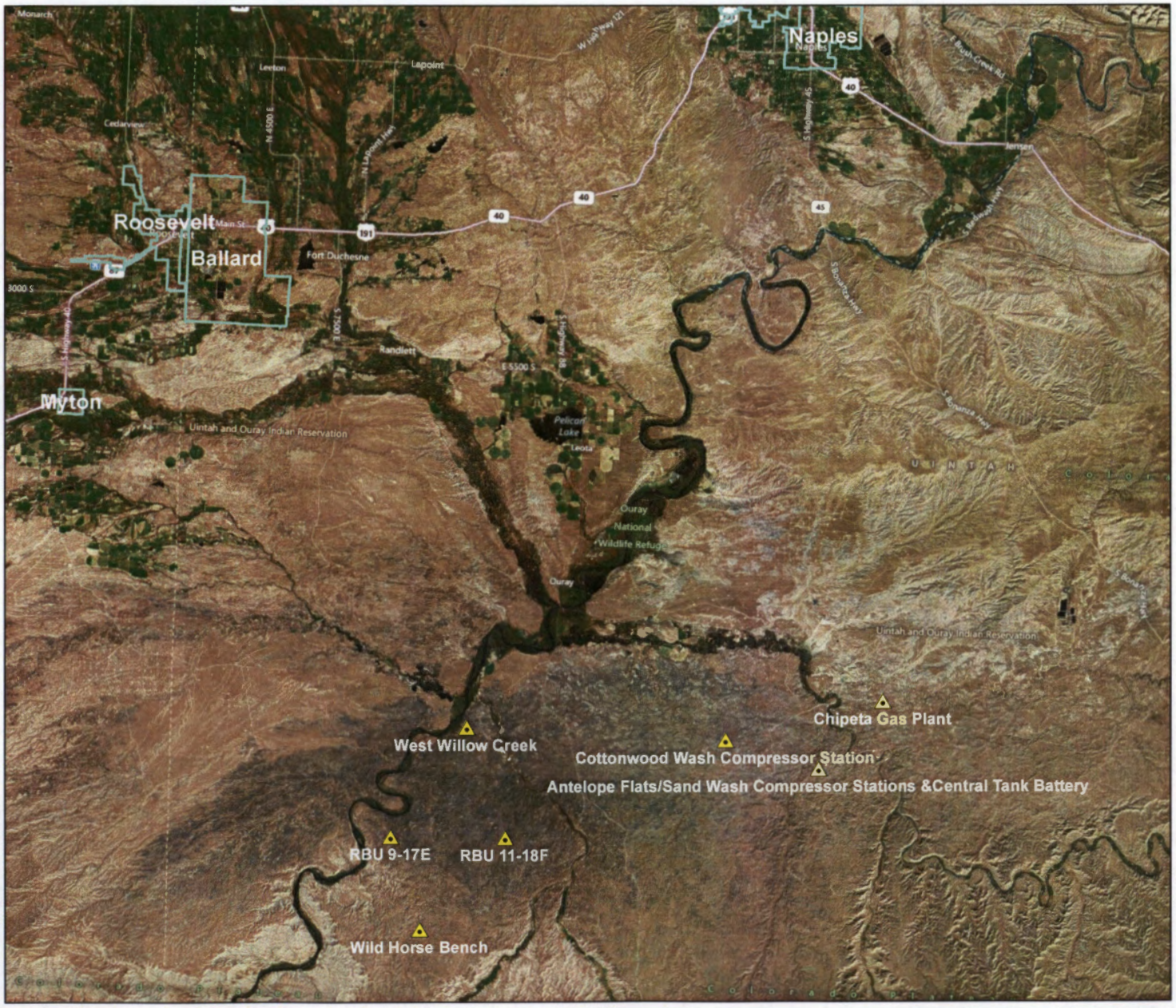

Uintah-Ouray Indian Reservation Proposed Clean Air Act Synthetic Minor New Source Review (SM NSR) Permit Actions

City Boundary

SM NSR Permit Applicants

Date: August 30, 2013

Map Projection: UTM, Meters, Zone 13N, NAD83.

Data Sources:

Base - Microsoft Bing web service (2012).

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Area Enlarged

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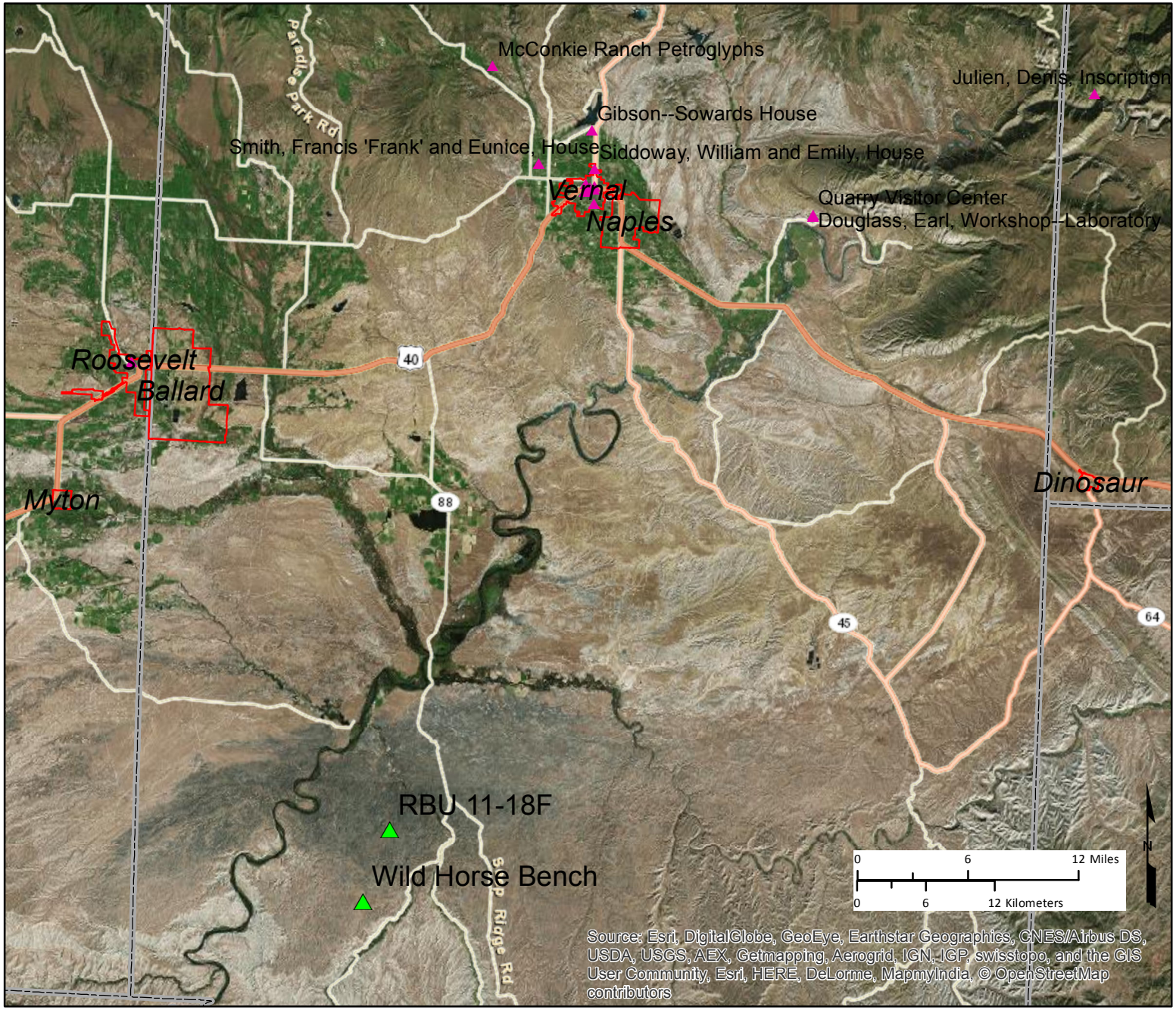

Uintah-Ouray Indian Reservation
CAA New Source Review Program
National Historic Places

- XTO Facilities
- NPS HISTORIC PLACES
- CITY BOUNDARY
- COUNTY BOUNDARY

Date: February 24, 2015

Map Projection: UTM, Meters, Zone 13N, NAD83.

Data Sources:
Historic Places - National Park Service (2014);
City Boundary - Navteq (2013);
County Boundary - U.S. Census Bureau (2010);
State Boundary - U.S. Census Bureau (2010);
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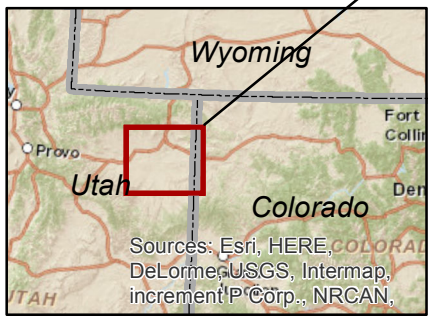

EPA United States Environmental Protection Agency
REGION 8
serving the states & tribes of Colorado, Montana, Wyoming, Utah, North Dakota & South Dakota

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Uintah and Ouray Indian Reservation
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Derrith R. Watchman-Moore
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Enclosures:

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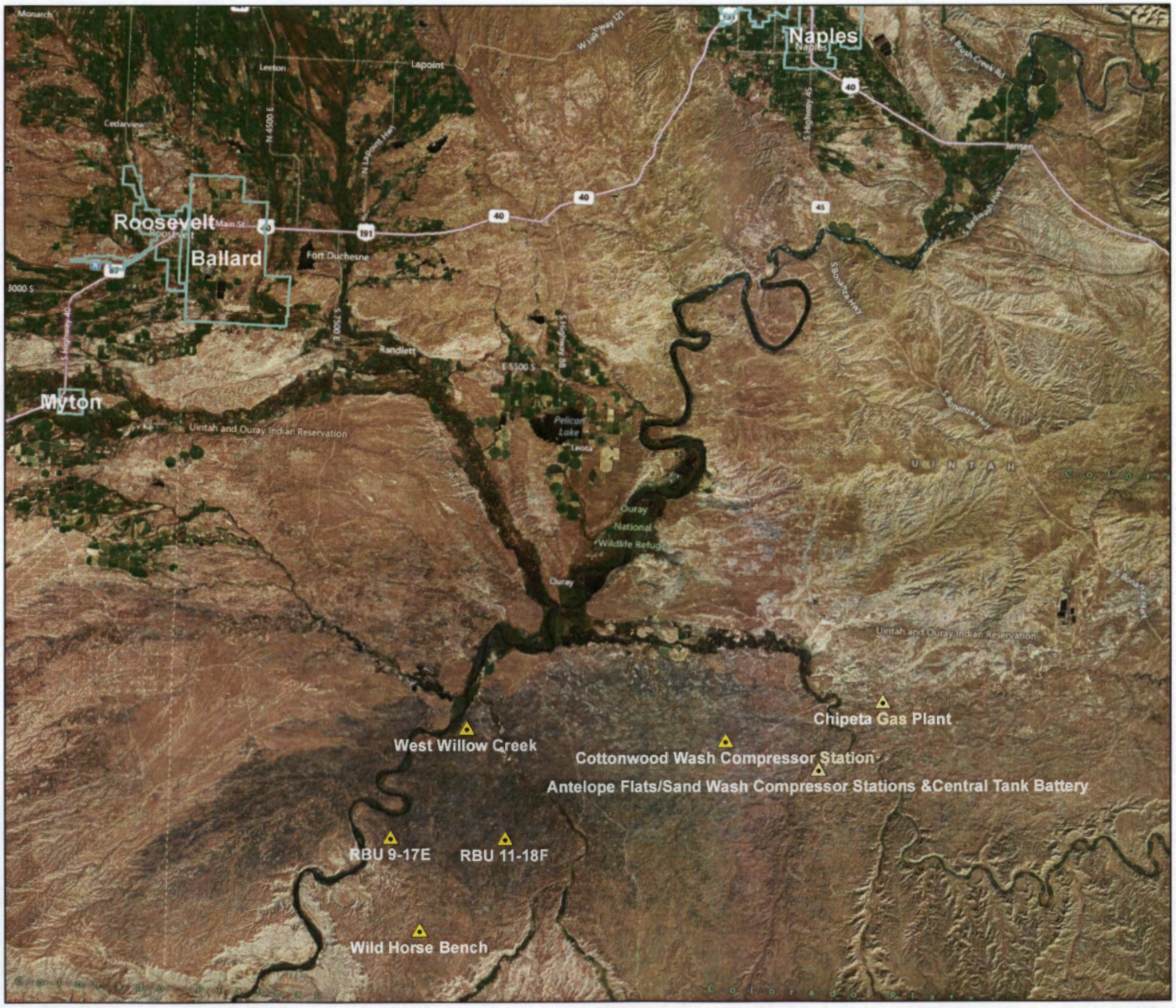
Victoria Parker-Christensen
Environmental Engineer
Air Program

Enclosure

cc: Lori Hunsaker, Deputy SHPO, Antiquities



Uintah-Ouray Indian Reservation Proposed Clean Air Act Synthetic Minor New Source Review (SM NSR) Permit Actions

City Boundary

SM NSR Permit Applicants

Date: August 30, 2013

Map Projection: UTM, Meters, Zone 13N, NAD83.

Data Sources:

Base - Microsoft Bing web service (2012).

Disclaimer: EPA makes no claim regarding the accuracy or precision of these data. Questions concerning the data should be referred to the source agency. This map does not necessarily represent EPA's position on any Indian Country boundaries or the jurisdictional status of any specific location.

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Area Enlarged

EPA REGION 8

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Julie Fisher
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

September 10, 2013

Victoria Parker-Christensen
Environmental Engineer
Air Program
United States Environmental
Protection Agency – Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

RE: Proposed Federal Clean Air Act Synthetic Minor New Source Review Permits on the Uintah and Ouray Indian Reservation

For future correspondence, please reference Case No. 13-1088

Dear Ms. Parker-Christensen:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on September 5, 2013. From the information you provided, it appears that no cultural resources were located in the undertaking's Area of Potential Effects. We concur with your determination of No Historic Properties Affected, §36CFR800.4(d)(1) for the undertaking.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263 or Lori Hunsaker at 801-245-7241 *lhunsaker@utah.gov*.

Sincerely,

Chris Merritt, Ph.D.
Senior Preservation Specialist
cmerritt@utah.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

AUG 3 0 2013

Ref: 8P-AR

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Wilson Martin, Director
Utah State History
300 South Rio Grande Street
Salt Lake City, UT 84101

RE: Section 106 of the National Historic Preservation Act regarding Proposed Federal Clean Air Act Synthetic Minor New Source Review Permits on the Uintah and Ouray Indian Reservation

Dear Mr. Martin:

The Environmental Protection Agency Region 8 (EPA) received federal Clean Air Act (CAA) permit applications and is preparing proposed synthetic minor New Source Review (NSR) air pollution control permits for several existing natural gas production facilities on the Uintah and Ouray Indian Reservation in Uintah County, Utah. To comply with our obligations under Section 106 of the National Historic Preservation Act and its implementing regulations at 36 C.F.R. Part 800, we are consulting with you concerning our finding as to the potential effects and we are seeking any information you may have as to whether there are any historic properties within the area of potential effects for these facilities.

The permit applications request approval to transfer conditions from a federal consent decree into synthetic minor NSR permits. The synthetic minor NSR permits are intended only to incorporate allowable and requested emission limits and provisions from the associated federal consent decree and permit applications.

The EPA has made the finding "*No historic properties affected*" for the proposed synthetic minor NSR permit actions. The proposed permit actions do not authorize the construction of any new emission sources, or emission increases from existing units, nor do they otherwise authorize any other physical modifications to the associated facility or its operations. The emissions, approved at present, from each existing facility will not increase due to the associated permit action and the emissions will continue to be well controlled at all times. This is an administrative action with no physical changes to the existing facilities or surrounding area. A map showing the locations of the facilities is enclosed with this letter.

The following table lists the applicant, facility and location affected by each proposed permit action.

Applicant/Facility	Location
Chipeta Processing LLC Natural Buttes Compressor Station	SW S24, T9S, R21E Lat. 40.017, Long. -109.508
Anadarko Uintah Midstream, LLC Cottonwood Compressor Station	S27, T9S, R21E Lat. 40.009722, Long. -109.543889
Anadarko Uintah Midstream, LLC Antelope Flats/Sand Wash Compressor Station	NE S32, T9S, R22E Lat. 39.995. Long. -109.4712
XTO Energy Inc. RBU 11-18F	NESW S18, T10S, R20E Lat. 39.94625, Long. -109.71063
XTO Energy Inc. Wild Horse Bench	NESE S26, T11S, R19E Lat. 39.88899, Long. -109.7342
XTO Energy Inc. RBU 9-17E	NESE S17, T10S, R19E Lat. 39.94387, Long. -109.79873

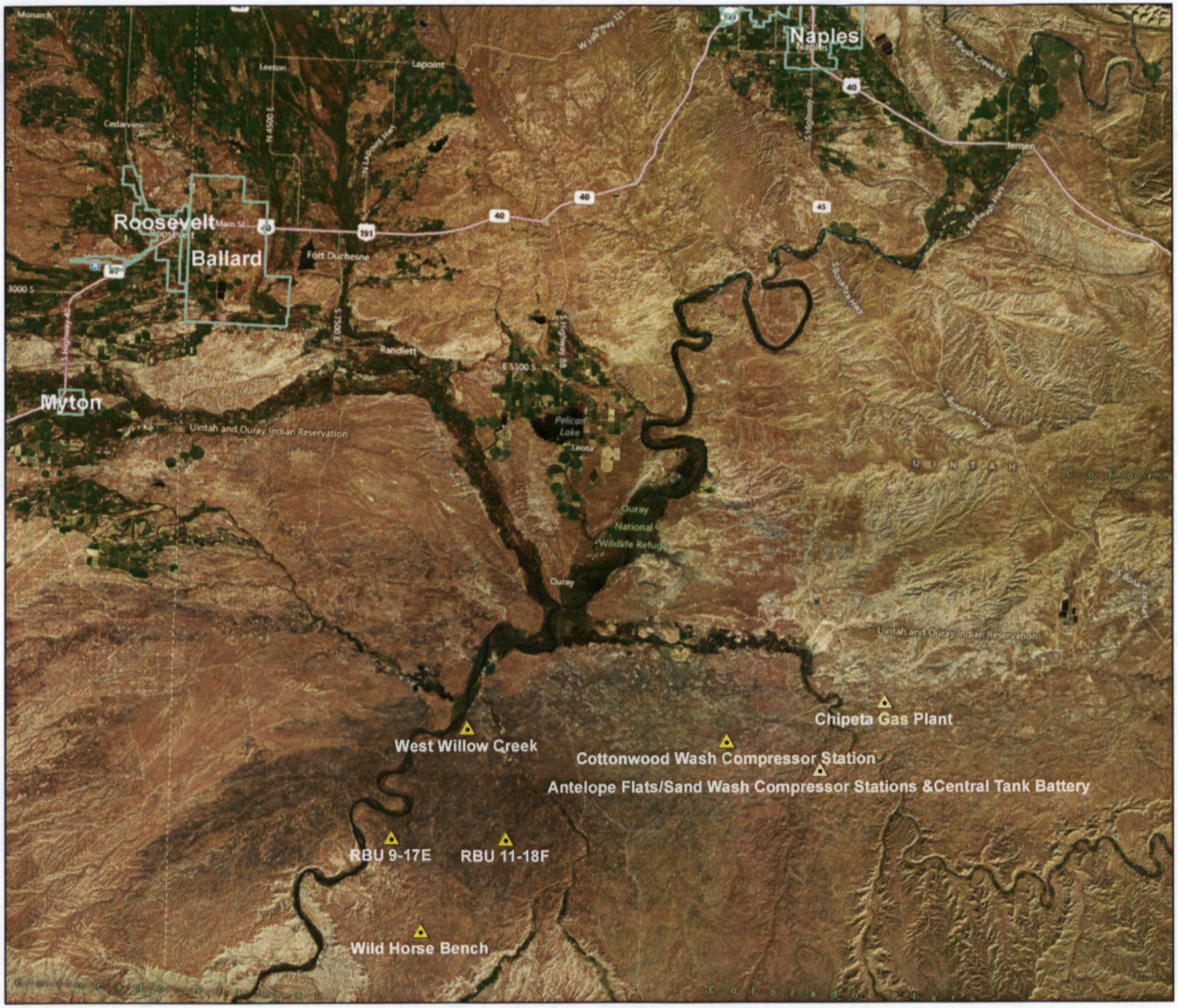
If you have any concerns regarding our determination, please notify me in writing within the 30 day time period described at 36 C.F.R. § 800.3(c)(4). If we haven't heard back from you within 30 days, we will assume you concur with our finding. In addition, please send any comments or information concerning historic properties within the project areas to me within 30 days, so as to ensure that we will have ample time to review them. You can reach me by phone at (303) 312-6441 or email at parker-christensen.victoria@epa.gov. Thank you for your assistance.

Sincerely,

Victoria Parker-Christensen
Environmental Engineer
Air Program

Enclosure

cc: Lori Hunsaker, Deputy SHPO, Antiquities



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