30 TAC 106. 352(l)
30 TAC 106. 359

TCEQ CN: CN605746593
TCEQ RN: RN106552607
Registration No.: 106961

Prepared By:
EnTech Consulting Corp.
21 Waterway Ave., Ste. 300
The Woodlands, Texas 77380

Micheal K. Harris, P.E.
Senior Air Project Manager
(936) 443-5332

Date: 02/26/2024

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1 ADMINISTRATIVE SECTION

Ineos USA Oil & Gas LLC

02/26/2024

Texas Commission on Environmental Quality (TCEQ)
Air Permits Initial Review Team (APIRT)
12100 Park 35 Circle
Mail Code 161; Building C, Third Floor
Austin, Texas 78753

Subject: Ineos USA Oil & Gas LLC
1164 FM 2367, Carrizo Springs, Texas 78834
Mckenzie-Foley Unit B MCM Pad
CN: CN605746593
RN: RN106552607
Permit No.: 106961
PI-7-CERT Registration

The Executive Director:

Please find attached the following documents:

- PI-7-CERT Registration for the above referenced facility.

Please call for additional information or further assistance.

Sincerely,

Jase Perry
SHE-R Programs Manager
1164 FM 2367
Carrizo Springs, Texas 78834

Phone No.: 512-917-2685
Email: jase.perry@ineos.com

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (if other is checked please describe in space providede)

[ ] New Permit, Registration or Authorization (Core Data Form should be submitted with the program application)

[ ] Renewal (Core Data Form should be submitted with the renewal form)

[X] Other PI-7-CERT Registration

2. Customer Reference Number (if issued)		3. Regulated Entity Refernce Number (if issued)
CN CN605746593	Follow this link to search for CN or RN numbers in Centray Registry	**RN** RN106552607

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates (mm/dd/yyyy)** 02/26/2024

[ ] New Customer [X] Update to Customer Information [ ] Change in Regulated Entity Ownership

[ ] Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Custome Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

Customer Legal Name (if an individual, print last name fist: ex: Doe, John): Ineos USA Oil & Gas LLC

If new Customer, enter previous Customer below:

7. TX SOS Filing Number (if applicable)	8. TX State Franchise Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
803300949	32070505428	UNKNOWN	UNKNOWN

11. Type of Customer: [ ] Corporation [ ] Individual [X] Limited Partnership [ ] General [X] Limited

Government: [ ] City [ ] County [ ] Federal [ ] State [ ] Other [ ] Sole Proprietorship [ ] Other:

12. Number of Employees [ ] 0-20 [ ] 21-100 [X] 101-250 [ ] 251-500 [ ] 501 +

13. Independently Owned and Operated? [X] Yes [ ] No

14. Customer Role (Proposed or Actual) - as it relates to the Regulated Entity listed on this form. Please check only one of the following:

[ ] Owner [ ] Operator [X] Owner & Operator

[ ] Occupational Licensee [ ] Responsible Party [ ] Voluntary Cleanup Applicant [ ] Other

15. Mailing Address: 1164 FM 2367

City	State	ZIP	ZIP +4
Carrizo Springs	Texas	78834	

16. Country Mailing Information (if outside USA):

17. E-Mail Address (if applicable): jase.perry@ineos.com

18. Telephone Number	19. Extensionn or Code	20. Fax Number (if applicable)
512-917-2685		

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (if "New Regulated Entity" is selected below, this form should be accompanied by a permit application).

[ ] New Regulated Entity [ ] Update to Regulated Entity Name [ ] Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP or LLC)

22. Regulated Entity Name (name of the site where the regulated action is taking place).

Mckenzie-Foley Unit B MCM Pad

TCEQ Core Data Form (continued)

23. Street Address of Regulated Entity: (No P.O.Box)							
City		State		Zip		Zip + 4	

24. County	Mc Mullen

Enter Physical Location if no street address is provided.

25. Description to Physical Location:	From the intx of Hwy 72 & Hwy 16 go W on Hwy 72 for 5.1 mi to Pertle Rd turn R go 1.6 mi to lease entrance w/cattle guard entrance has game-proof 8 ft gate go thru gate NW for 0.8 mi to site on R

26. Nearest City	**State**	**Nearest ZIP Code**
Tilden	Texas	78072

27. Latitued (N) In Decimal:	28.502		**28. Longitude (W) In Decimal:**	-98.644	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
28.00	30.00	7.70	-98.00	38.00	38.80

29. Primary SIC Code	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
1311		211111	

33. What is the Primary Business of this entity? (Please do not repeatr the SIC or NAICS description)

Oil production well

34. Mailing Address:	1164 FM 2367						
City	Carrizo Springs	State	Texas	Zip	78834	Zip + 4	

35. Email Address:	jase.perry@ineos.com

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** (if applicable)
512-917-2685		

39. TCEQ Programs and ID Numbers. Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form or the updates may not be made. If your Program is not listed, check other and write it in. See the Core Data Form instructions for additional guidance.

	Dam Safety		Districts		Edwards Aquifer		Industrial Hazardous Waste		Municipal Solid Waste
X	New Source Review - Air		OSSF		Petroleum Storage Tank		PWS		Sludge
##									
	Stormwater		Title V - Air		Tires		Used Oil		Utilities
	Voluntary Cleanup		Waste Water		Wastewater Agriculture		Water Rights		Other:

SECTION IV: Preparer Information

40. Name:	Jase Perry	**41. Title:**	SHE-R Programs Manager

42. Telephone Number	**43. Extension or Code**	**44. Fax Number** (if applicable)	**45. E-mail Address**
512-917-2685			jase.perry@ineos.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 9 and/or as required for the updates to the ID numbers identified in field 39.

(see the Core Data Form Instructions for more information on who should sign this form.)

Company:	Ineos USA Oil & Gas LLC	**Job Title:**	SHE-R Programs Manager		
Name (In Print):	Jase Perry			**Phone:**	512-917-2685
Signature:				**Date:**	

Texas Commission on Environmental Quality
Form PI-7-CERT
Certification and Registration for Permits by Rule
(Page 1)

The TCEQ requires that a complete Core Data Form bearing an original signature be submitted on all incoming applications unless a Regulated Entity and Customer Reference Number have been issued by the TCEQ and no core data information has changed. For more information regarding the Core Data Form, call (512) 239-5175 or go to the TCEQ Web site at www.tceq.texas.gov/permitting/central_registry/guidance.html.

I. REGISTRANT INFORMATION								
A. Company or Other Legal Customer Name:	Ineos USA Oil & Gas LLC							
B. Company Official Contact Name:	X	Mr.		Mrs.		Ms.		Other
Name:	Jase Perry							
Title:	SHE-R Programs Manager							
Mailing Address:	1164 FM 2367							
City:	Carrizo Springs	State:	Texas	Zip Code:	78834			
Phone:	512-917-2685	Fax:						
Email:	jase.perry@ineos.com							
All PBR registration responses will be sent via e-mail.								
C. Technical Contact Name:	X	Mr.		Mrs.		Ms.		Other
Name:	Micheal K Harris, P.E.							
Title:	Senior Air Project Manager							
Company:	EnTech Consulting Corp.							
Mailing Address:	21 Waterway Ave.							
City:	The Woodlands	State:	Texas	Zip Code:	77380			
Phone:	936-443-5332	Fax:						
Email:	mike.harris@entechservice.com							
II. FACILITY AND SITE INFORMATION								
A. Name/Type of Facility:								
Facility Name:	Mckenzie-Foley Unit B MCM Pad							
Type of Facility:	Oil production well			X	Permanent		Temporary	
For portable units, please provide the serial number of the equipment being authorized below.								
Serial No.:		Serial No.:						
B. Facility Location Information								
Street Address:								
If there is no street address, provide written driving directions to the site and provide the closest city or town, county, and ZIP code for the site (attach description if additional space is needed).								
From the intx of Hwy 72 & Hwy 16 go W on Hwy 72 for 5.1 mi to Pertle Rd turn R go 1.6 mi to lease entrance w/cattle guard entrance has game-proof 8 ft gate go thru gate NW for 0.8 mi to site on R								
City:	Tilden	County:	Mc Mullen	ZIP Code:	78072			

Texas Commission on Environmental Quality
Form PI-7-CERT
Certification and Registration for Permits by Rule
(Page 2)

II. FACILITY AND SITE INFORMATION (*continued*)

C. TCEQ Core Data Form

Is the Core Data Form (TCEQ Form Number 10400) attached? [X] **Yes** [ ] No

If "NO," provide customer reference number (CN) and regulated entity number (RN) below.

Customer Reference Number (CN): CN605746593

Regulatory Entity Number (RN): RN106552607

D. TCEQ Account Identification Number (if known):

E. Type of action: [ ] Initial Application [X] Change to Registration

For Change to Registration provide the Registration Number: 106,961.000

F. PBR numbers(s) claimed under 30 TAC Chapter 106

§ 106. 352(l)	§ 106.
§ 106. 359	§ 106.
§ 106.	§ 106.

G. Historical Standard Exemption or PBR

Are you claiming an historical standard exemption or **PBR**? [ ] Yes [X] No

If "YES," enter rule number(s) and associated effective date in the spaces provided below.

Rule Number(s)	Effective Date

H. Previous Standard Exemption or PBR Registration Number

Is this authorization for a change to an existing facility previously authorized under a standard exemption or PBR? [X] Yes [ ] No

If "YES," enter previous standard exemption number(s) and PBR registration number(s), and associated effective dates in the spaces provided below.

Standard Exemption and PBR Registration Njumber(s)	Effective Date	Registration Number
106.352(l)	11/22/2012	106961
106.359	09/10/2013	106961
106.492	09/04/2000	106961
106.512	06/13/2001	106961

I. H. Other Facilities at this Site Authorized by Standard Exemption, PBR, or Standard Permit

Are there any other facilities at this site that are authorized by an Air Standard Exemption, PBR, or Standard Permit? [ ] Yes [X] No

If "YES," enter standard exemption number(s), PBR registration number(s), and Standard Permit registration number(s),

and associated effective date in the spaces provided below.

Standard Exemption and PBR Registration Njumber(s)	Effective Date	Registration Number

II. FACILITY AND SITE INFORMATION (*continued*)

J. Other Air Preconstruction Permits

Are there any other air preconstruction permits at this site?	[ ] Yes	[X] No

If "YES," enter permit number(s) in the spaces provided below.

K. Affected Air Preconstruction Permits

Does the PBR being claimed directly affect any permitted facility?	[ ] Yes	[X] No

If "YES," enter the permit number(s) in the spaces provided below.

L. Federal Operating Permit (FOP) Requirements (30 TAC Chapter 122 Applicability)

1. Is this facility located at a site that is required to obtain an FOP pursuant to 30 TAC Chapter 122?	[ ] Yes	[X] No	[ ] To Be Determined

If the site currently has an existing federal operating permit, enter the permit number.

Check the requirements of 30 TAC Chapter 122 that will be triggered if this certification is accepted (*check all that apply*).

[ ] Initial Application for an FOP
[ ] Significant Revision for an SOP
[ ] Minor Revision for an SOP
[ ] Operational Flexibility/off Permit Notification for an SOP
[ ] Revision for GOP
[ ] To Be Determined
[X] None

2. Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site (*check all that apply*).

[ ] SOP
[ ] GOP
[ ] GOP application/revision application: Submitted or under APD review.
[X] N/A
[ ] SOP application/revision application: submitted or under APD review.

III. FEE INFORMATION (See Section VII. for address to send fee or go to www.tceq.texas.gov/epay to pay online.)

A. Fee Requirements

Is a fee required per Title 30 TAC § 106.50?	[X] Yes	[ ] No

If "NO," specify the exception. There are three exceptions to paying a PBR fee. (*check all that apply*).

1. Registration is solely to establish a federally enforceable emission limit.	[ ] Yes
2. Registration is within six months of an initial PBR review, and it is addressing deficiencies, administrative changes, or other allowed changes.	[ ] Yes
3. Registration is for a remediation project (30 TAC § 106.533).	[ ] Yes

III. FEE INFORMATION *(See Section VII. for address to send fee or go to www.tceq.texas.gov/epay to pay online). (continued)*				
B. Fee Amount				
1. A $100 fee is required if any of the answers in III.B.1 are "YES."				
This business have less than 100 employees?		Yes	X	No
This business have less than 6 million dollars in annual gross receipts?		Yes	X	No
This registration is submitted by a governmental entity with a population of less than 10,000?		Yes	X	No
This registration is submitted by a non-profit organization		Yes	X	No
2. A $450 fee is required for all other registrations				
C. Payment Information				
Check/money order/transaction or voucher number:				
Individual or company name check:				
Fee amount (*$*):	$450.00			
Was fee Paid online?	X	Yes		No
IV. Technical Information Including State And Federal Regulatory Requirements **Place a check next to the appropriate box to indicate what is included in your submittal.** **NOTE:** *Any technical or essential information needed to confirm that facilities are meeting the requirements of the PBR must be provided. Not providing key information could result in an automatic deficiency and voiding of the project.*				
A. PBR requirements (Checklists are optional; however, your review will go faster if you provide applicable checklists.)				
Did you demonstrate that the general requirements in 30 TAC § 106.4 are met?	X	Yes		No
Did you demonstrate that the individual requirements of the specific PBR are met?	X	Yes		No
B. Confidential Information (All pages properly marked "CONFIDENTIAL")		Yes	X	No
C. Process Flow Diagram	X	Yes		No
D. Process Description	X	Yes		No
E. Maximum Emissions Data and Calculations	X	Yes		No
Note: *If the facilities listed in this registration are subject to the Mass Emissions Cap & Trade program under* ***30 TAC Chapter 101, Subchapter H, Division 3*** *, the owner/operator of these facilities must possess NOx allowances equivalent to the actual NOx, emissions from these facilities.*				

IV. Technical Information Including State And Federal Regulatory Requirements (continued)

Place a check next to the appropriate box to indicate what is included in your submittal.

NOTE: *Any technical or essential information needed to confirm that facilities are meeting the requirements of the PBR must be provided. Not providing key information could result in an automatic deficiency and voiding of the project.*

F. F. Is this certification being submitted to certify the emissions for the entire site?	X	Yes		No
If "NO," include a summary of the specific facilities and emissions being certified.				
G. Table 1(a) (Form 10153) Emission Point Summary	X	Yes		No
H. H. Distances from Property Line and Nearest Off-Property Structure				
Distance from this facility's emission release point to the nearest property line:	20.000		feet	
Distance from this facility's emission release point to the nearest off-property structure:	>3,000		feet	
I. Project Status				
Has the company implemented the project or waiting on a response from TCEQ?		Implemented	X	Waiting
J. Projected Start of Construction and Projected Start of Operation Dates				
Projected Start of Construction (provide date):	PENDING			
Projected Start of Operation (provide date):	PENDING			

V. DELINQUENT FEES

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ is paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ Web site at: www.tceq.texas.gov/agency/delin/index.html.

VI. SIGNATURE FOR CERTIFICATION AND REGISTRATION

The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which this application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA); the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.

Name (printed): Jase Perry SHE-R Programs Manager

Signature (original signature required):

Date:

VII. Submitting Copies of the Certification and Registration		
Copies must be sent as listed below: **Processing delays may occur if copies are not sent as noted.**		
Who	**Where**	**What**
Air Permits Initial Review Team (APIRT)	Regular, Certified, Priority Mail MC161, P.O. Box 13087 Austin, Texas 78711-3087 Hand Delivery, Overnight Mail MC 161, 12100 Park 35 Circle, Building C, Third Floor Austin, Texas 78753	Originals Form PI-7, Core Data Form and all attachments. Not required if using ePermits[1]
Revenue Section, TCEQ	Regular, Certified, Priority Mail MC 214, P.O. Box 13088 Austin, Texas 78711-3088 Hand Delivery, Overnight Mail MC 214, 12100 Park 35 Circle, Building A, Third Floor Austin, Texas 78753	Original Money Order or Check, Copy of Form PI-7 and Core Data Form Not required if fee was paid using ePay[2]
Appropriate TCEQ Regional Office	To find your Regional Office address, go to the TCEQ Web site at www.tceq.texas.gov/publications/gi/gi-002.html, or call (512) 239-125	Copy of Form PI-7, Core Data Form and all attachments. Not required if using ePermits1
Appropriate Local Air Pollution Control Program(s)	To Find your local or Regional Air Pollution Control Programs go to the TCEQ, APD Website at www.tceq.texas.gov/permitting/air/local_progr or call (512) 239-1250	Copy of Form PI-7, Core Data Form and all attachments.

[1] ePermits located at www3.tceq.texas.gov/steers/
[2] ePay located at www.tceq.texas.gov/epay

2 TECHNICAL SECTION

2.1 Introduction

The applicant:	Ineos USA Oil & Gas LLC
Address:	1164 FM 2367 Carrizo Springs, Texas 78834
Phone No.:	512-917-2685
Responsible official:	Jase Perry SHE-R Programs Manager 512-917-2685 jase.perry@ineos.com
Technical contact:	Micheal K Harris, P.E. Senior Air Project Manager 936-443-5332 mike.harris@entechservice.com
The facility:	Mckenzie-Foley Unit B MCM Pad
TCEQ CN:	CN605746593
TCEQ RN:	RN106552607
Current registration no(s).:	106961 Description: PI-7-CERT Registration
Registrations claimed in this document:	106.352(l) 106.359
Physical location:	From the intx of Hwy 72 & Hwy 16 go W on Hwy 72 for 5.1 mi to Pertle Rd turn R go 1.6 mi to lease entrance w/cattle guard entrance has game-proof 8 ft gate go thru gate NW for 0.8 mi to site on R

Latitude/Longitude:	28 30 08 N		-98 38 39 W
UTM:	Zone:	Easting:	Northing:
	14R	534,829.570	3,152,876.220
Facility type:	Oil production well		

2.2 Process Description

This is a sour production facility, with natural gas H2S content of 30 ppm, and crude production of 35 bbls/d. The following activities occur on-site:

- Inlet separation
- Heater-treater processing
- Product storage (tanks)
- Product flash generation
- Product loading activities
- Blowdown/MSS activities
- Fugitive component emissions
- Other activities/sources: 1 gasoline powered pump engine.

2.2 Process Description (continued)

A detailed description of all on-site process acrtivities is provided below:

- Inlet separation
  Natural gas is directed to the sales pipeline and crude/liquids are directed to either the heater-treater (if present on-site) for vapor pressure reduction or are sent directly into storage tanks.

- Crude is directed into the heater-treater for vapor pressure reduction/stabilization.

FIN	RATING		OPERATION	
HT1	1.000	mmbtu/hr	8,760.00	hrs/yr

- The following product storage tanks exist or are proposed at the facility:

FIN	PRODUCT	SIZE		THROUGPUT		VENTS TO
TANK1	stabilized crude	400.00	bbls ea. in size	11.67	bbls/d-ea.	to air
TANK2	stabilized crude	400.00	bbls ea. in size	11.67	bbls/d-ea.	to air
TANK5	produced water	400.00	bbls ea. in size	17.50	bbls/d-ea.	to air
TANK3	stabilized crude	400.00	bbls ea. in size	11.67	bbls/d-ea.	to air

- The following crude/produced-water related flash vapors will be generated at the facillity:

FIN	PRODUCT	THROUGHPUT		OPERATING PRESSURE				
HT1-FLASH	crude/natural gas	35	bbls/d	flashing from:	111.4	to:	14.27	psig

- The following activities occur at the facillity:

FIN	PRODUCT	THROUGHPUT		LOADING TYPE	CONTROL TYPE
C LOAD 1	stabilized crude	35.00	bbls/d	submerged loading	to air
PW LOAD 1	produced water	17.50	bbls/d	submerged loading	to air

- The following fugitve component emissions will occur at the facility:

FIN	DESCRIPTION
FUG	light-liquid components
FUG	natural gas components

- The following blowdowns/MSS activities will occur at the facility:

FIN	DESCRIPTION	THROUGHPUT		VENTS TO
MSS 1	natural gas	0.00750	mmscf/yr	to atmosphere
MSS 2	natural gas	0.00562	mmscf/yr	to atmosphere
MSS 3	blasting/coating vapors	0.11520	mmscf/yr	to atmosphere
VENTING 1	natural gas	0.00493	mmscf/yr	to atmosphere

- Other activities/sources: 1 gasoline powered pump engine.

FIN	MAKE	MODEL	HP RATING	CONTROL	DESCRIPTION
ENG2	HONDA	GX160	4.8	none	gasoline powered pump engine

2.2 Process Description (continued)

Table 2.2.1 provides a list/description and operating parameters of emission sources at the facility. Table 2.2.2 provides FIN descriptions. Table 2.2.3 provides a summary of revisions associated with this submittal. Figure 2.2.1 provides a simplified process description. This registration is submitted to certify emissions from all on-site sources. The following is a brief process description for this site.

Crude, produced water and natural gas from the wellheads pass through on-site separation. Natural gas is then directed to the sales pipeline, and liquids are directed to the heater-treaters for further vapor- pressure reduction. The heater-treaters vent flash vapors to atmosphere. From the heater-treaters, crude and produced water are directed into the on-site storage tanks. The storage tank working/breathing vapors are vented to atmosphere. Crude and produced water are periodically trucked off-site to sales/disposal. The trucks are in dedicated normal service.

The following MSS activities will occur at this facility (authorized under 30 TAC 106.359):

- EPNs MSS-01, blowdown activities during equipment maintenance; vented to atmosphere;
- EPN MSS-02, tank de-gassing operations; and,
- EPN MSS-03, periodic maintenance blasting/painting of equipment.

COMPANY: Ineos USA Oil & Gas LLC
SITE NAME: Mckenzie-Foley Unit B MCM Pad
DESCRIPTION: PI-7-CERT Registration
DATE: 02/26/24

TABLE 2.2.1 (SOURCE OPERATING DATA)

SOURCE DESCRIPTION		OPERATING PARAMETERS										SOURCE CONTROLS		DESCRIPTIONS/COMMENTS		
FIN / EPN	TYPE	VALUE	UNITS	VALUE	UNITS	VALUE	UNITS	VALUE	UNITS	VALUE	UNITS	CONTROLS	CONTROLS			
COMBUSTION CONTROL DEVICES		CONTROL EFF.		HEAT INPUT		WASTE VAPOR FLOW		OPERATING TIME				PRIMARY CONTROL	SECONDARY CONTROL	WASTE VAPORS CONTROLLED		
FLARE1 / FLARE1	FLARE		DRE		MMBTU/HR		ACFM		HRS/YR					REMOVED FROM SERVICE		
ENGINES (COMPRESSION IGNITED)		RATING		RUN-TIME		FUEL USEAGE						PRIMARY CONTROL	SECONDARY CONTROL	MAKE	MODEL	USAGE
ENG2 / ENG2	GASOLINE POWERED PUMP ENGINE	4.800	BHP	8,760.000	HRS/YR	0.255	GAL/HR	267.435	G/HP-HR	6.600	G/HP-HR	4S-RB	NONE	HONDA	GX160	
BOILERS/HEATERS		RATING		RUN-TIME		NOX		CO		VOC		PRIMARY CONTROL	SECONDARY CONTROL	MAKE	MODEL	
HT1 / HT1	BOILERS (<100 MMBTU/HR)	1.000	MMBTU/HR	8,760.000	HRS/YR	129.216	LBS/MMSCF	108.541	LBS/MMSCF	7.107	LBS/MMSCF	UNCONTROLLED		UNKNOWN	UNKNOWN	
TANKS		SIZE		TYPE		THROUGHPUT		VOC CONTENT		VOC THROUGHPUT		PRIMARY CONTROL	SECONDARY CONTROL	CONTENTS		
TANK1 / TANK1	STORAGE TANKS	400.000	BBLS/EA.	VFR		11.667	BBLS/D-EA.	100.00%	%	11.667	BBLS/D	TO AIR	TO AIR	STABILIZED CRUDE		
TANK2 / TANK2	STORAGE TANKS	400.000	BBLS/EA.	VFR		11.667	BBLS/D-EA.	100.00%	%	11.667	BBLS/D	TO AIR	TO AIR	STABILIZED CRUDE		
TANK5 / TANK5	STORAGE TANKS	400.000	BBLS/EA.	VFR		17.500	BBLS/D-EA.	1.00%	%	0.175	BBLS/D	TO AIR	TO AIR	PRODUCED WATER		
TANK3 / TANK3	STORAGE TANKS	400.000	BBLS/EA.	VFR		11.667	BBLS/D-EA.	100.00%	%	11.667	BBLS/D	TO AIR	TO AIR	STABILIZED CRUDE		
LOADING		THROUGHPUT		VOC CONTENT		VOC THROUGHPUT						PRIMARY CONTROL	SECONDARY CONTROL	LIQUIDS LOADED		LOADING TYPE
C LOAD 1 / C LOAD 1	LOADING	35.000	BBLS/D	100.00%	%	35.000	BBLS/D					TO AIR	TO AIR	STABILIZED CRUDE		SUBMERGED
PW LOAD 1 / PW LOAD 1	LOADING	17.500	BBLS/D	1.00%	%	0.175	BBLS/D					TO AIR	TO AIR	PRODUCED WATER		SUBMERGED
FLASH		THROUGHPUT		VOC CONTENT		VOC THROUGHPUT		PSIG RANGE		GOR		PRIMARY CONTROL	SECONDARY CONTROL	LIQUID		
HT1-FLASH / HT1-FLASH	FLASH	35.175	BBLS/D	100.00%	%	35.175	BBLS/D	111.4 - 14.27	PSIG		SCF/BBL	TO ATMOSPHERE	TO ATMOSPHERE	CRUDE/NATURAL GAS		
FUGITIVE COMPONENTS		OPERATING TIME		EMISSIONS (VOC)		EMISSIONS (VOC)						PRIMARY CONTROL	SECONDARY CONTROL			
FUG / FUG	FUGITIVES	8,760.000	HRS/YR	0.682	PPH	2.985	TPY							SITE FUGITIVE EMISSIONS; 106.352(l)		
MSS ACTIVITIES/BLOWDOWNS		OPERATING TIME		RATE		RATE		EMISSIONS (VOC)		HEAT CONTENT		PRIMARY CONTROL	SECONDARY CONTROL	VAPOR DESCRIPTION		
MSS 1 / MSS 1	BLOW DOWNS	300.000	HRS/YR	25.000	SCF/HR	0.008	MMSCF/YR	0.074	PPH	1,318.000	BTU/SCF	TO ATMOSPHERE	TO ATMOSPHERE	MSS ACTIVITY; VAPORS VENTED TO ATMOSPHERE DURING MSS ACTIVITIES; 106.359		
MSS 2 / MSS 2	BLOW DOWNS	1.000	HRS/YR	5,620.000	SCF/HR	0.006	MMSCF/YR	16.676	PPH	1,318.000	BTU/SCF	TO ATMOSPHERE	TO ATMOSPHERE	MSS ACTIVITY; STORAGE TANK DE-GASSING DURING MAINTENANCE ACTIVITY; ASSUME DE-GASSING 1 TANK/YEAR; VENTS TO ATMOSPHERE; 106.359		
MSS 3 / MSS 3	BLOW DOWNS	96.000	HRS/YR	1,200.000	SCF/HR	0.115	MMSCF/YR	2.989	PPH	3,071.000	BTU/SCF	TO ATMOSPHERE	TO ATMOSPHERE	MSS ACTIVITIES; MISC. ABRASIVE BLASTING/COATING ACTIVITIES; VENTS TO ATMOSPHERE; AREA SOURCE; 106.359		
VENTING 1 / VENTING 1	BLOW DOWNS	2,190.000	HRS/YR	2.250	SCF/HR	0.005	MMSCF/YR	0.007	PPH	1,318.000	BTU/SCF	TO ATMOSPHERE	TO ATMOSPHERE	NATURAL GAS		

COMPANY: Ineos USA Oil & Gas LLC
SITE NAME: Mckenzie-Foley Unit B MCM Pad
DESCRIPTION: PI-7-CERT Registration
DATE: 02/26/24

TABLE 2.2.2 (SOURCE DESCRIPTIONS)

SOURCE DESCRIPTION				
FIN / EPN	**EPN**	**TYPE**	**DESCRIPTIONS/COMMENTS**	
COMBUSTION CONTROL DEVICES				
FLARE1	FLARE1	FLARE	REMOVED FROM SERVICE	
ENGINES (COMPRESSION IGNITED)			MAKE	MODEL
ENG2	ENG2	GASOLINE POWERED PUMP ENGINE	HONDA	GX160
BOILERS/HEATERS			MAKE	MODEL
HT1	HT1	BOILERS (<100 MMBTU/HR)	UNKNOWN	UNKNOWN
TANKS			CONTENTS	
TANK1	TANK1	STORAGE TANKS	CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	
TANK2	TANK2	STORAGE TANKS	CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	
TANK5	TANK5	STORAGE TANKS	PRODUCED WATER TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	
TANK3	TANK3	STORAGE TANKS	CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	
LOADING			LIQUIDS LOADED	
C LOAD 1	C LOAD 1	LOADING	CRUDE LOADING; VENTING TO ATMOSPHERE; 106.352(L)	
PW LOAD 1	PW LOAD 1	LOADING	PRODUCED WATER LOADING; ASSUMED 1% CRUDE BY VOLUME; VENTING TO ATMOSPHERE; 106.352(L)	

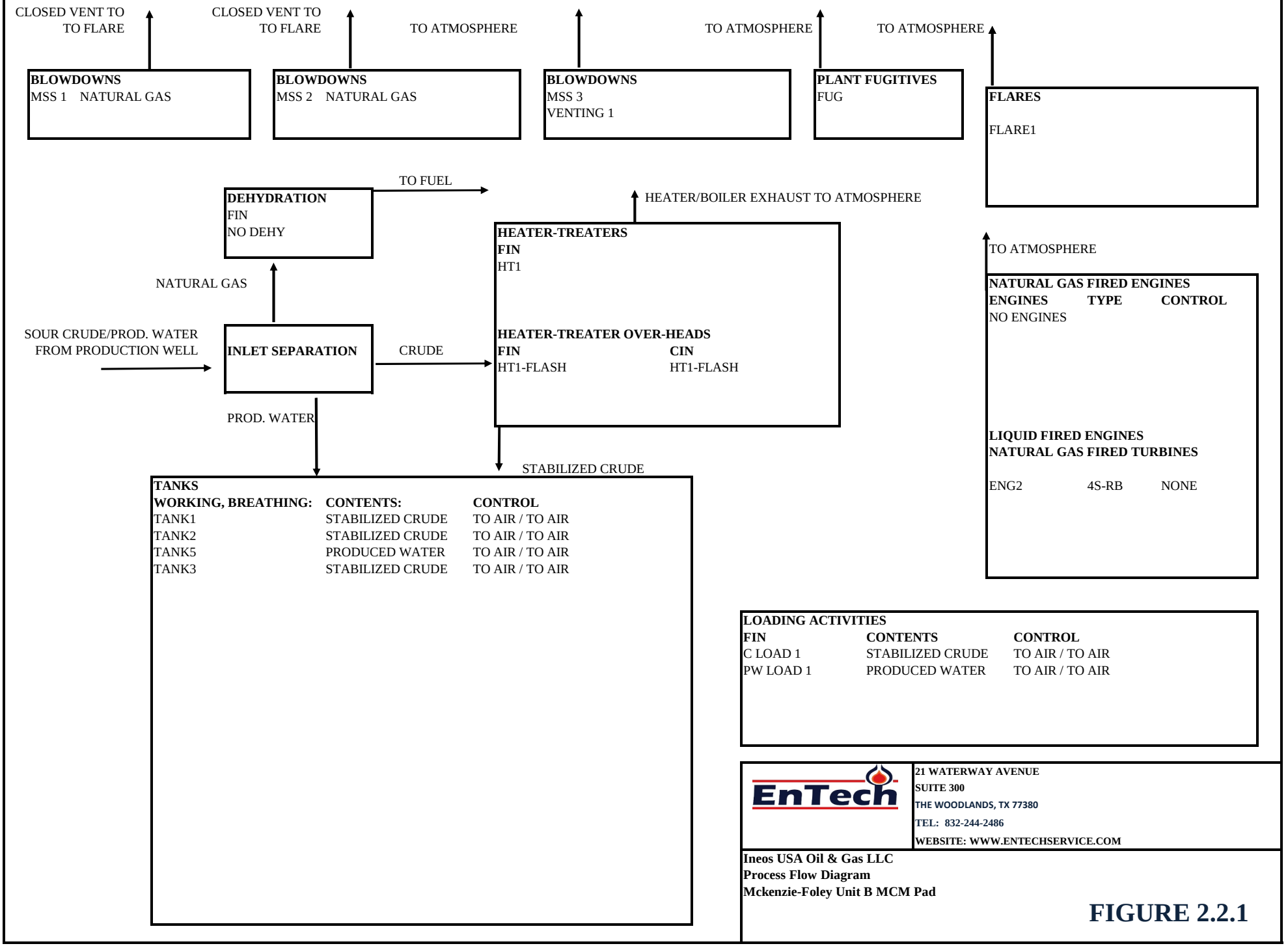
COMPANY: Ineos USA Oil & Gas LLC
SITE NAME: Mckenzie-Foley Unit B MCM Pad
DESCRIPTION: PI-7-CERT Registration
DATE: 02/26/24

TABLE 2.2.2 (SOURCE DESCRIPTIONS)

SOURCE DESCRIPTION			**DESCRIPTIONS/COMMENTS**	
FIN / EPN	**EPN**	**TYPE**		
FLASH			LIQUID	COMMENTS
HT1-FLASH	HT1-FLASH	FLASH	CRUDE/NATURAL GAS	HEATER-TREATER CRUDE FLASH VAPORS; VENTING TO ATMOSPHERE; 106.352(l)
FUGITIVE COMPONENTS				
FUG	FUG	FUGITIVES	SITE FUGITIVE EMISSIONS; 106.352(l)	
MSS ACTIVITIES/BLOWDOWNS				
MSS 1	MSS 1	BLOW DOWNS	MSS ACTIVITY; VAPORS VENTED TO ATMOSPHERE DURING MSS ACTIVITIES; 106.359	
MSS 2	MSS 2	BLOW DOWNS	MSS ACTIVITY; STORAGE TANK DE-GASSING DURING MAINTENANCE ACTIVITY; ASSUME DE-GASSING 1 TANK/YEAR; VENTS TO ATMOSPHERE; 106.359	
MSS 3	MSS 3	BLOW DOWNS	MSS ACTIVITIES; MISC. ABRASIVE BLASTING/COATING ACTIVITIES; VENTS TO ATMOSPHERE; AREA SOURCE; 106.359	
VENTING 1	VENTING 1	BLOW DOWNS	PNEUMATIC DEVICE; VENTING TO ATMOSPHERE; 106.352(l)	

TABLE 2.2.3 (PERMIT REVISIONS)

FIN	EPN	REVISIONS
FLARE1	FLARE1	REMOVED FROM SERVICE
HT1	HT1	LOWER EMISSIONS, DUE TO LOWER PRODUCTION/DEPLETION; HEAT INPUT RATING INCREASED TO 1.0 MMBTU/HR; VENTING TO ATMOSPHERE; REVISED FUEL COMPOSITION/HEAT INPUT; UPDATED EMISSION FACTORS DUE TO UPDATED FUEL HEAT CONTENT; 106.352(l).
TANK1	TANK1	LOWER EMISSIONS DUE TO REVISED PRODUCTION/DEPLETION; VENTING TO ATMOSPHERE; REVISED/LOWERED PRODUCTION; REVISED VAPOR SPECIATION; VOC CONTENT CONSERVATIVELY ASSUMED AT 75 WT%.
TANK2	TANK2	LOWER EMISSIONS DUE TO REVISED PRODUCTION/DEPLETION; VENTING TO ATMOSPHERE; REVISED/LOWERED PRODUCTION; REVISED VAPOR SPECIATION; VOC CONTENT CONSERVATIVELY ASSUMED AT 75 WT%.
TANK5	TANK5	LOWER EMISSIONS DUE TO REVISED PRODUCTION/DEPLETION; VENTING TO ATMOSPHERE; REVISED/LOWERED PRODUCTION; REVISED VAPOR SPECIATION; VOC CONTENT CONSERVATIVELY ASSUMED AT 75 WT%.
TANK3	TANK3	LOWER EMISSIONS DUE TO REVISED PRODUCTION/DEPLETION; VENTING TO ATMOSPHERE; REVISED/LOWERED PRODUCTION; REVISED VAPOR SPECIATION; VOC CONTENT CONSERVATIVELY ASSUMED AT 75 WT%.
C LOAD 1	C LOAD 1	MODIFIED EMISSIONS DUE TO LOWER PRODUCTION/DEPLETION; REVISED/LOWERED PRODUCTION; REVISED VAPOR SPECIATION.
PW LOAD 1	PW LOAD 1	MODIFIED EMISSIONS DUE TO LOWER PRODUCTION/DEPLETION; REVISED/LOWERED PRODUCTION; REVISED VAPOR SPECIATION.
HT1-FLASH	HT1-FLASH	NEW SOURCE; HEATER-TREATER CRUDE FLASH VAPORS; FLASH VAPOR VENTING TO ATMOSPHERE.
FUG	FUG	UPDATED COMPONENT COUNT/VAPOR ANALYSIS.
MSS 1	MSS 1	EPN MSS-1 REPLACES EPN MSS; REVISED VAPOR COMPOSITION/REVISED BLOWDOWN RATE/REVISED DURATION.
MSS 2	MSS 2	NEW SOURCE
MSS 3	MSS 3	NEW SOURCE
VENTING 1	VENTING 1	NEW SOURCE
ENG2	ENG2	NO REVISIONS



EnTech
21 WATERWAY AVENUE
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TEL: 832-244-2486
WEBSITE: WWW.ENTECHSERVICE.COM

Ineos USA Oil & Gas LLC
Process Flow Diagram
Mckenzie-Foley Unit B MCM Pad

FIGURE 2.2.1

2.3 Emissions Summary (MAERT)

Ineos USA Oil & Gas
Mckenzie-Foley Unit B
MCM Pad
PI-7-CERT Registration
DATE: 2/26/2024

MAERT

POTENTIAL TO EMIT (PTE)																			
EMISSION SOURCE		**VOC**		**NOX**		**CO**		**PM10**		**PM 2.5**		**SO2**		**H2S**		**BENZENE**		**TOTAL HAP**	
FIN	**EPN**	**PPH**	**TPY**	**PPH**	**TPY**	**PPH**	**TPY**	**PPH**	**TPY**	**PPH**	**TPY**	**PPH**	**TPY**	**PPH**	**TPY**	**PPH**	**TPY**	**PPH**	**TPY**
FLARE1	FLARE1																		
HT1	HT1	0.005	0.024	0.098	0.429	0.082	0.361	0.007	0.033	0.007	0.033	0.001	0.003	0.000	0.000	0.000	0.000	0.002	0.008
TANK1	TANK1	0.126	0.554											0.000	0.000	0.000	0.001	0.003	0.014
TANK2	TANK2	0.126	0.554											0.000	0.000	0.000	0.001	0.003	0.014
TANK5	TANK5	0.175	0.765											0.000	0.001	0.000	0.002	0.004	0.020
TANK3	TANK3	0.126	0.554											0.000	0.000	0.000	0.001	0.003	0.014
C LOAD 1	C LOAD 1	34.272	1.216											0.000	0.000	0.001	0.000	0.012	0.000
PW LOAD 1	PW LOAD 1	0.343	0.006											0.000	0.000	0.000	0.000	0.000	0.000
HT1-FLASH	HT1-FLASH	4.070	17.827											0.004	0.016	0.009	0.042	0.104	0.456
FUG	FUG	0.682	2.985											0.000	0.000	0.000	0.000	0.000	0.001
MSS 1	MSS 1	0.074	0.011											0.000	0.000	0.000	0.000	0.002	0.000
MSS 2	MSS 2	16.676	0.008											0.000	0.000	0.039	0.000	0.426	0.000
MSS 3	MSS 3	2.989	0.143					0.062	0.003	0.062	0.003			0.000	0.000	0.467	0.022	2.335	0.112
VENTING 1	VENTING 1	0.007	0.007											0.000	0.000	0.000	0.000	0.000	0.000
ENG2	ENG2	0.070	0.306	0.070	0.307	2.830	12.395	0.003	0.015			0.003	0.012	0.000	0.000	0.000	0.000	0.020	0.088
TOTAL EMISSIONS (TPY):		59.741	24.961	0.168	0.736	2.912	12.756	0.073	0.050	0.070	0.036	0.003	0.015	0.005	0.018	0.518	0.070	2.915	0.728
MAXIMUM OPERATING SCHEDULE:		HOURS/DAY:		24.00		DAYS/WEEK:		7.00		WEEKS/YR:		52.00		HOURS/YR		8,760.00			
TOTAL EMISSIONS:	ALL STORAGE TANKS		2.426	FOR OOOOa & OOOOb APPLICABILITY															

2.4 Emission Calculations

Emission calculations have been provided based on the following (if located on-site; and, as applicable):

- Boiler emissions were calculated using factors provided in the EPA publication AP-42, Compilation of Air Pollution Emission Factors;
- Tank emissions were calculated using factors provided in the EPA publications AP-42, Compilation of Air Pollution Emission Factors; and, the formulas presented in Section 7;
- Loading fugitive emissions were calculated using factors provided in the EPA publication AP-42, Compilation of Air Pollution Emission Factors;
- Crude flash emissions were calculated using the laboratory data. The crude properties used for this application were selected from the site with the highest emissions potential within the same geographical area of this site;
- Produced water flash emissions were calculated assuming 1% crude by volume, using the above referenced crude properties;
- Plant fugitive emissions were calculated using factors provided in the EPA publication API Publication No. 4615, Emission Factors For Oil And Gas Production Operations;
- Engine emissions (if applicable/included) were calculated using factors provided in the EPA publication AP-42, Compilation of Air Pollution Emission Factors; and/or, manufacturer factors.
- Flare emissions (if applicable/included) were calculated using factors provided in the TCEQ "Air Permit Technical Guidance for Chemical Sources, Flares and Vapor Oxidizers".
- Dehydration plant emissions (if applicable/included) were calculated using GRI-GLYCalc software and inlet natural gas flow rate/vapor speciation.
- Amine plant emissions (if applicable/included) were calculated using AMINE-Calc software and inlet natural gas flow rate/vapor speciation.

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: Fuel Gas 1

FUEL VAPOR PROPERTIES			
ITEM	UNITS	VALUE	
HEAT CONTENT	BTU/SCF	1,318.000	
MOLECULAR WT.	LBS/LB-MOLE	40.244	
CRITERIA POLLUTANTS WT. % COMPOSITION		MOLE %	WT %
NOx	%		
CO	%		
SO2	%		
PM10	%		
PM2.5	%		
H2S	%	0.0030%	0.005%
VOC	%	10.689%	25.611%
HAP POLLUTANTS			
BENZENE	%	0.017%	0.060%
ETHYLBENZENE	%	0.001%	0.005%
FORMALDEHYDE	%		
HEXANE-N	%	0.131%	0.509%
METHANOL	%		
TOLUENE	%	0.014%	0.058%
XYLENE-M	%	0.005%	0.024%
XYLENE-O	%		
XYLENE-P	%		
	%		
	%		
	%		
VOC(HAP)-u	%		
GHG POLLUTANTS			
METHANE	%	74.756%	54.111%
CO2	%	0.864%	1.716%
N2O	%		
	%		
	%		
TOTAL	%	100.000%	100.000%

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: BOILERS/HEATERS 1 (<100 MMBTU/HR)

SOURCE DESCRIPTION		
FIN	EPN	DESCRIPTION
HT1	HT1	HEATER-TREATER; VENTING TO ATMOSPHERE; 106.352(L)

SOURCE OPERATING PARAMETERS					
FIN	EPN	MAKE	MODEL	CONTROL TYPE	FUEL TYPE
HT1	HT1	UNKNOWN	UNKNOWN	UNCONTROLLED	NATURAL GAS

SOURCE OPERATING PARAMETERS									
FIN	EPN	RUN-TIME HRS/YR	HEAT INPUT MMBTU/HR	EXH. TEMP DEG. F	EXH. VEL. FPS	FUEL MMSCF/HR	FUEL MMSCF/YR	FUEL MMBTU/YR	
HT1	HT1	8,760.0	1.000	850.0	8.94	0.001	6.646	8,760.000	

SOURCE STACK PARAMETERS									
FIN	EPN	ZONE	UTM E	UTM N	STACK DIA. FT.	STACK HT. FT.			
HT1	HT1	14R	534,829.6	3,152,876.2	1.000	20.000			

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: BOILERS/HEATERS 1 (<100 MMBTU/HR)

EMISSION FACTORS	UNITS	TOTAL	HT1					
NOx	LBS/MMSCF		129.216					
CO	LBS/MMSCF		108.541					
SO2	LBS/MMSCF		0.779					
PM10	LBS/MMSCF		9.820					
PM2.5	LBS/MMSCF		9.820					
Pb	LBS/MMSCF		0.001					
VOC	LBS/MMSCF		7.107					
HAP POLLUTANTS								
BENZENE	LBS/MMSCF		0.003					
ETHYLBENZENE	LBS/MMSCF							
FORMALDEHYDE	LBS/MMSCF		0.097					
HEXANE-N	LBS/MMSCF		2.326					
METHANOL	LBS/MMSCF							
TOLUENE	LBS/MMSCF		0.004					
XYLENE-M	LBS/MMSCF							
XYLENE-O	LBS/MMSCF		0.001					
XYLENE-P	LBS/MMSCF							
	LBS/MMSCF							
	LBS/MMSCF							
H2S (CALCULATED)	LBS/MMSCF		0.000					
VOC(HAP)-u	LBS/MMSCF							
GHG POLLUTANTS								
METHANE	LBS/MMSCF		2.972					
CO2	LBS/MMSCF		155,058.824					
N2O	LBS/MMSCF		2.843					
	LBS/MMSCF							
	LBS/MMSCF							

NOTES:
1. AP-42 EMISSION FACTORS ADJUSTED FOR FUEL/VAPOR HEAT CONTENT.

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: BOILERS/HEATERS 1 (<100 MMBTU/HR)

EMISSIONS TO ATMOSPHERE								
EMISSIONS	UNITS	TOTAL	HT1					
NOx	PPH	0.098	0.098					
CO	PPH	0.082	0.082					
SO2	PPH	0.001	0.001					
PM10	PPH	0.007	0.007					
PM2.5	PPH	0.007	0.007					
Pb	PPH	0.000	0.000					
VOC	PPH	0.005	0.005					
HAP POLLUTANTS								
BENZENE	PPH	0.000	0.000					
ETHYLBENZENE	PPH							
FORMALDEHYDE	PPH	0.000	0.000					
HEXANE-N	PPH	0.002	0.002					
METHANOL	PPH							
TOLUENE	PPH	0.000	0.000					
XYLENE-M	PPH							
XYLENE-O	PPH	0.000	0.000					
XYLENE-P	PPH							
	PPH							
	PPH							
H2S	PPH	0.000	0.000					
VOC(HAP)-u	PPH							
GHG POLLUTANTS								
METHANE	PPH	0.002	0.002					
CO2	PPH	117.647	117.647					
N2O	PPH	0.002	0.002					
	PPH							
	PPH							
TOTAL	PPH	749.152	749.152					
EMISSIONS	UNITS	TOTAL	HT1					
NOx	TPY	0.429	0.429					
CO	TPY	0.361	0.361					
SO2	TPY	0.003	0.003					
PM10	TPY	0.033	0.033					
PM2.5	TPY	0.033	0.033					
Pb	TPY	0.000	0.000					
VOC	TPY	0.024	0.024					
HAP POLLUTANTS								
BENZENE	TPY	0.000	0.000					
ETHYLBENZENE	TPY							
FORMALDEHYDE	TPY	0.000	0.000					
HEXANE-N	TPY	0.008	0.008					
METHANOL	TPY							
TOLUENE	TPY	0.000	0.000					
XYLENE-M	TPY							
XYLENE-O	TPY	0.000	0.000					
XYLENE-P	TPY							
	TPY							
	TPY							
H2S	TPY	0.000	0.000					
VOC(HAP)-u	TPY							
GHG POLLUTANTS								
METHANE	TPY	0.010	0.010					
CO2	TPY	515.294	515.294					
N2O	TPY	0.009	0.009					
	TPY							
	TPY							
TOTAL	TPY	3,281.285	3,281.285					

COMPANY:	Ineos USA Oil & Gas LLC
SITE:	Mckenzie-Foley Unit B MCM Pad
ACTION:	PI-7-CERT Registration
DATE:	2/26/2024
WORKSHEET:	BOILERS/HEATERS 1 (<100 MMBTU/HR)

EXAMPLE CALCULATIONS:
CALCULATE NOX EMISSIONS:

EPN		HT1	
HEAT INPUT	MMBTU/HR	1.000	
FUEL HEAT CONTENT	BTU/SCF	1,318.000	
RUN TIME	HRS/YR	8,760.000	
FUEL CONSUMPTION=	MMSCF/HR	HEAT INPUT, MMBTU/HR / HEAT CONTENT, BTU/SCF	
FUEL CONSUMPTION=	MMSCF/HR	0.00076	
NOX E.F.	LBS/MMSCF	100.000	AT 1020 BTU/SCF
NOX E.F.	LBS/MMSCF	129.216	CORRECTED FOR FUEL HEAT CONTENT
NOX EMISSIONS=	PPH	FUEL CONSUMPTION, MMSCF/HR X NOX E.F., LBS/MMSCF	
NOX EMISSIONS=	PPH	0.098	
NOX EMISSIONS=	TPY	NOX EMISSIONS, PPH X RUN TIME, HRS/YR / 2,000 LBS/TON	
NOX EMISSIONS=	TPY	0.429	

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: Tanks 1-SWF

SOURCE DESCRIPTION		
FIN	EPN	DESCRIPTION
TANK1	TANK1	CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)
TANK2	TANK2	CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)
TANK5	TANK5	PRODUCED WATER TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)
TANK3	TANK3	CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)

SOURCE OPERATING PARAMETERS									
FIN	EPN	TYPE	CONTENTS	SIZE GALLONS	SIZE BBLS	THROUGHPUT BBLS/D	FILL RATE GPH	TEMP. DEDG. F	RUN-TIME HRS/YR
TANK1	TANK1	VFR	STABILIZED CRUDI	16,800.0	400.0	11.67	20.417	90.108	8,760.0
TANK2	TANK2	VFR	STABILIZED CRUDI	16,800.0	400.0	11.67	20.417	90.108	8,760.0
TANK5	TANK5	VFR	PRODUCED WATER	16,800.0	400.0	17.50	30.625	90.108	8,760.0
TANK3	TANK3	VFR	STABILIZED CRUDI	16,800.0	400.0	11.67	20.417	90.108	8,760.0

SOURCE STACK PARAMETERS									
FIN	EPN	ZONE	UTM E	UTM N	STACK DIA. FT.	STACK HT. FT.	EXH. TEMP DEG. F	EXH. VEL. FPS	
TANK1	TANK1	14R	534,829.6	3,152,876.2	0.500	21.000	90.1	0.00	
TANK2	TANK2	14R	534,829.6	3,152,876.2	0.500	21.000	90.1	0.00	
TANK5	TANK5	14R	534,829.6	3,152,876.2	0.500	21.000	90.1	0.00	
TANK3	TANK3	14R	534,829.6	3,152,876.2	0.500	21.000	90.1	0.00	

UN-CONTROLLED VAPORS									
FIN	EPN	LBS/YR	MAX. LBS/MO.	LBS/OZ. SEA.	PRIMARY CONTROL	P. C. DRE %	SECONDARY CONTROL	S.C. DRE %	
TANK1	TANK1	1,477.275	369.319	615.531	TO AIR		TO AIR		
TANK2	TANK2	1,477.275	369.319	615.531	TO AIR		TO AIR		
TANK5	TANK5	2,038.746	509.687	849.478	TO AIR		TO AIR		
TANK3	TANK3	1,477.275	369.319	615.531	TO AIR		TO AIR		

EMISSIONS TO ATMOSPHERE									
FIN	EPN	EMISSIONS MAX. PPH	EMISSIONS AVE. PPH	EMISSIONS TPY					
TANK1	TANK1	0.506	0.169	0.739					
TANK2	TANK2	0.506	0.169	0.739					
TANK5	TANK5	69.820	0.233	1.019					
TANK3	TANK3	0.506	0.169	0.739					

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: Tanks 1-SWF

VAPOR PROPERTIES						
EPN	TANK1	TANK2	TANK5	TANK3		
CRITERIA POLLUTANTS	WT%	WT%	WT%	WT%	WT%	WT%
NOx						
CO						
SO2						
PM10						
PM2.5						
Pb						
VOC	74.9999%	74.9999%	74.9999%	74.9999%		
HAP POLLUTANTS						
BENZENE	0.1750%	0.1750%	0.1750%	0.1750%		
ETHYLBENZENE	0.0140%	0.0140%	0.0140%	0.0140%		
FORMALDEHYDE						
HEXANE-N	1.4880%	1.4880%	1.4880%	1.4880%		
METHANOL						
TOLUENE	0.1700%	0.1700%	0.1700%	0.1700%		
XYLENE-M	0.0700%	0.0700%	0.0700%	0.0700%		
XYLENE-O						
XYLENE-P						
H2S	0.0670%	0.0670%	0.0670%	0.0670%		
VOC(HAP)-u						
GHG POLLUTANTS						
METHANE						
CO2	24.9331%	24.9331%	24.9331%	24.9331%		
N2O						
TOTAL	100.0000%	100.0000%	100.0000%	100.0000%		

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: Tanks 1-SWF

EMISSIONS TO ATMOSPHERE								
EMISSIONS	UNITS	TOTAL	TANK1	TANK2	TANK5	TANK3		
NOx	PPH							
CO	PPH							
SO2	PPH							
PM10	PPH							
PM2.5	PPH							
Pb	PPH							
VOC	PPH	0.554	0.126	0.126	0.175	0.126		
HAP POLLUTANTS								
BENZENE	PPH	0.001	0.000	0.000	0.000	0.000		
ETHYLBENZENE	PPH	0.000	0.000	0.000	0.000	0.000		
FORMALDEHYDE	PPH							
HEXANE-N	PPH	0.011	0.003	0.003	0.003	0.003		
METHANOL	PPH							
TOLUENE	PPH	0.001	0.000	0.000	0.000	0.000		
XYLENE-M	PPH	0.001	0.000	0.000	0.000	0.000		
XYLENE-O	PPH							
XYLENE-P	PPH							
	PPH							
	PPH							
H2S	PPH	0.000	0.000	0.000	0.000	0.000		
VOC(HAP)-u	PPH							
GHG POLLUTANTS								
METHANE	PPH							
CO2	PPH	0.184	0.042	0.042	0.058	0.042		
N2O	PPH							
	PPH							
	PPH							
TOTAL	PPH	0.739	0.169	0.169	0.233	0.169		
EMISSIONS	UNITS	TOTAL	TANK1	TANK2	TANK5	TANK3		
NOx	TPY							
CO	TPY							
SO2	TPY							
PM10	TPY							
PM2.5	TPY							
Pb	TPY							
VOC	TPY	2.426	0.554	0.554	0.765	0.554		
HAP POLLUTANTS								
BENZENE	TPY	0.006	0.001	0.001	0.002	0.001		
ETHYLBENZENE	TPY	0.000	0.000	0.000	0.000	0.000		
FORMALDEHYDE	TPY							
HEXANE-N	TPY	0.048	0.011	0.011	0.015	0.011		
METHANOL	TPY							
TOLUENE	TPY	0.006	0.001	0.001	0.002	0.001		
XYLENE-M	TPY	0.002	0.001	0.001	0.001	0.001		
XYLENE-O	TPY							
XYLENE-P	TPY							
	TPY							
	TPY							
H2S	TPY	0.002	0.000	0.000	0.001	0.000		
VOC(HAP)-u	TPY							
GHG POLLUTANTS								
METHANE	TPY							
CO2	TPY	0.807	0.184	0.184	0.254	0.184		
N2O	TPY							
	TPY							
	TPY							
TOTAL	TPY	3.235	0.739	0.739	1.019	0.739		

COMPANY:	Ineos USA Oil & Gas LLC
SITE:	Mckenzie-Foley Unit B MCM Pad
ACTION:	PI-7-CERT Registration
DATE:	2/26/2024
WORKSHEET:	Tanks 1-SWF

EXAMPLE CALCULATIONS:
CALCULATE VOC EMISSIONS:

EPN		TANK1				
AP-42, CHP. 7 EMISSIONS	LBS/YR	1,477.275	AVE. ANNUAL EMISSION RATE			
AP-42, CHP. 7 EMISSIONS	LBS	369.319	MAX. EMISSION RATE			
RUN TIME	HRS/YR	8,760.000				
TANK FILLING RATE:	GPH	20.417				
TANK CAPACITY:	GALLONS	16,800.000				
TANK THROUGPHUT	GALLONS/YR	178,850.000				
TURN-OVERS:	NO./YR	TANK THROUGHPUT, GAL/YR / TANK SIZE, GALLONS				
TURN-OVERS:	NO./YR	10.646				
CONTROL DRE:	%					
VAPOR VOC WT %	%	75.00%				
UN-CONTROLLED MAX. EMISSIONS	PPH	EMISSIONS, LBS / HRS/YR	X	VOC WT. %		
UN-CONTROLLED MAX. EMISSIONS	PPH	0.126				
UN-CONTROLLED MAX. EMISSIONS	PPH	HOURLY RATE X (1 - DRE)			=	0.126
UN-CONTROLLED ANNUAL EMISSIONS	LBS/YR	1,477.275	X	VOC WT. %	=	1,107.954
UN-CONTROLLED ANNUAL EMISSIONS	TPY	0.554			=	
CONTROLLED ANNUAL EMISSIONS	TPY	ANNUAL RATE X (1 - DRE)			=	0.554

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: LOADING 1

SOURCE DESCRIPTION		
FIN	EPN	DESCRIPTION
C LOAD 1	C LOAD 1	CRUDE LOADING; VENTING TO ATMOSPHERE; 106.352(L)
PW LOAD 1	PW LOAD 1	PRODUCED WATER LOADING; ASSUMED 1% CRUDE BY VOLUME; VENTING TO ATMOSPHERE; 106.352(L)

SOURCE OPERATING PARAMETERS									
FIN	EPN	CONTENTS	THROUGHPUT BBLS/D	THROUGHPUT GAL/YR	VOC FRACTION	VOC FRACTION GAL/YR	LOADING RATE GPM	OPERATING TIME HRS/YR	MAX. TEMP, DEG. F
C LOAD 1	C LOAD 1	STABILIZED CRUDE	35.00	536,550.00	1.00	536,550.00	126.000	70.972	90.1
PW LOAD 1	PW LOAD 1	PRODUCED WATER	17.50	268,275.00	0.01	2,682.75	126.000	35.486	90.1

SOURCE OPERATING PARAMETERS									
FIN	EPN	V.P. @ MAX. TEMP PSIA	VAPOR MOLE. WT. LBS/LB-MOLE	SATURATION FACTOR	UN-CONTROLLED EMISSION RATE LBS/MGAL	PRIMARY CONTROL	P. C. DRE %	SECONDARY CONTROL	S.C. DRE %
C LOAD 1	C LOAD 1	8.746	38.143	0.6	4.53	TO AIR		TO AIR	
PW LOAD 1	PW LOAD 1	8.746	38.143	0.6	4.53	TO AIR		TO AIR	

SOURCE STACK PARAMETERS									
FIN	EPN	ZONE	UTM E	UTM N	STACK DIA. FT.	STACK HT. FT.	EXH. TEMP DEG. F	EXH. VEL. FPS	
C LOAD 1	C LOAD 1	14R	534,830	3,152,876	0.500	8.000	90.1	0.23	
PW LOAD 1	PW LOAD 1	14R	534,830	3,152,876	0.500	8.000	90.1	0.00	

EMISSIONS TO ATMOSPHERE									
FIN	EPN	EMISSIONS MAX. LBS/YR	EMISSIONS MAX. PPH	EMISSIONS TPY					
C LOAD 1	C LOAD 1	2,432.355	34.272	1.216					
PW LOAD 1	PW LOAD 1	12.162	0.343	0.006					

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: LOADING 1

VAPOR PROPERTIES						
EPN	C LOAD 1	PW LOAD 1				
CRITERIA POLLUTANTS	WT%	WT%	WT%	WT%	WT%	WT%
NOx						
CO						
SO2						
PM10						
PM2.5						
Pb						
VOC	99.9988%	99.9988%				
HAP POLLUTANTS						
BENZENE	0.0031%	0.0031%				
ETHYLBENZENE	0.0002%	0.0002%				
FORMALDEHYDE						
HEXANE-N	0.0266%	0.0266%				
METHANOL						
TOLUENE	0.0030%	0.0030%				
XYLENE-M	0.0012%	0.0012%				
XYLENE-O						
XYLENE-P						
H2S	0.0012%	0.0012%				
VOC(HAP)-u						
GHG POLLUTANTS						
METHANE						
CO2						
N2O						
TOTAL	100.0000%	100.0000%				

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: LOADING 1

EMISSIONS TO ATMOSPHERE								
EMISSIONS	UNITS	TOTAL	C LOAD 1	PW LOAD 1				
NOx	PPH							
CO	PPH							
SO2	PPH							
PM10	PPH							
PM2.5	PPH							
Pb	PPH							
VOC	PPH	34.614	34.272	0.343				
HAP POLLUTANTS								
BENZENE	PPH	0.001	0.001	0.000				
ETHYLBENZENE	PPH	0.000	0.000	0.000				
FORMALDEHYDE	PPH							
HEXANE-N	PPH	0.009	0.009	0.000				
METHANOL	PPH							
TOLUENE	PPH	0.001	0.001	0.000				
XYLENE-M	PPH	0.000	0.000	0.000				
XYLENE-O	PPH							
XYLENE-P	PPH							
	PPH							
	PPH							
H2S	PPH	0.000	0.000	0.000				
VOC(HAP)-u	PPH							
GHG POLLUTANTS								
METHANE	PPH							
CO2	PPH							
N2O	PPH							
	PPH							
	PPH							
TOTAL	PPH	34.615	34.272	0.343				
EMISSIONS	UNITS	TOTAL	C LOAD 1	PW LOAD 1				
NOx	TPY							
CO	TPY							
SO2	TPY							
PM10	TPY							
PM2.5	TPY							
Pb	TPY							
VOC	TPY	1.222	1.216	0.006				
HAP POLLUTANTS								
BENZENE	TPY	0.000	0.000	0.000				
ETHYLBENZENE	TPY	0.000	0.000	0.000				
FORMALDEHYDE	TPY							
HEXANE-N	TPY	0.000	0.000	0.000				
METHANOL	TPY							
TOLUENE	TPY	0.000	0.000	0.000				
XYLENE-M	TPY	0.000	0.000	0.000				
XYLENE-O	TPY							
XYLENE-P	TPY							
	TPY							
	TPY							
H2S	TPY	0.000	0.000	0.000				
VOC(HAP)-u	TPY							
GHG POLLUTANTS								
METHANE	TPY							
CO2	TPY							
N2O	TPY							
	TPY							
	TPY							
TOTAL	TPY	1.222	1.216	0.006				

COMPANY:	Ineos USA Oil & Gas LLC
SITE:	Mckenzie-Foley Unit B MCM Pad
ACTION:	PI-7-CERT Registration
DATE:	2/26/2024
WORKSHEET:	LOADING 1

EXAMPLE CALCULATIONS:
CALCULATE VOC EMISSIONS:

EPN		C LOAD 1		
COMOUND NAME		STABILIZED CRUDE		
VOC FRACTION		1.000		
OPERATION	HRS/YR	70.972		
THROUGHPUT	GALLONS/YR	536,550.000		
THROUGHPUT (VOC FRACTION)	GALLONS/YR	536,550.000		
MAX. ANNUAL TEMPERATURE (T1)	DEG. F	90.108		
MAX. ANNUAL TEMPERATURE (T1)	DEG. R	550.108		
LIQ. V. P. @ MAX. TEMP.	PSIA	8.746		
SATURATION FACTOR (S, FROM AP-42, TABLE 5.2-1)		0.600		
VAPOR VOC WT%	%	99.9988%		
VAPOR MOL. WT. (FROM AP-42, TABLE 7.1-2, OR TANKS OUTPUT)	LBS/LB-MOLE	38.143		
TO AIR CONTROL DRE	%			
UNCONTROLLED LOADING EMISSIONS	LBS/MGAL	$\frac{12.46 \text{ X SAT. FAC. X MOL. WT. X MAX. V.P.}}{\text{MAX. TEMP.}}$		
UN-CONTROLLED LOADING EMISSIONS	LBS/MGAL	4.533		
UN-CONTROLLED LOADING EMISSIONS	LBS/YR	LBS/MGAL X THROUGHPUT, MGAL/YR X VOC FRACT.	=	2,432.355
UN-CONTROLLED LOADING EMISSIONS	PPH	[MAX. LBS/YR / HRS/YR] X VOC WT.%	=	34.272
UN-CONTROLLED LOADING EMISSIONS	TPY	$\frac{\text{MAX. PPH X OPERATION, HRS/YR}}{\text{2,000 LBS/TON}}$	=	1.216
CONTROLLED LOADING EMISSIONS	PPH	MAX. PPH X (1 - DRE)	=	34.272
CONTROLLED LOADING EMISSIONS	TPY	MAX. TPY X (1 - DRE)	=	1.216

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: FLASH 1

SOURCE DESCRIPTION		
FIN	EPN	DESCRIPTION
HT1-FLASH	HT1-FLASH	HEATER-TREATER CRUDE FLASH VAPORS; VENTING TO ATMOSPHERE; 106.352(l)

SOURCE OPERATING PARAMETERS									
FIN	EPN	CONTENTS	THROUGHPUT BBLS/D	VOC CONTENT %	VOC FRACTION BBLS/YR	OPERATING TIME HRS/YR	MAX. ANNUAL TEMP. DEG. F	OZONE SEA. MAX. TEMP. DEG. F	
HT1-FLASH	HT1-FLASH	CRUDE/NATURAL (	35.18	100.00%	12,838.88	8,760.00	79.800	104.200	

SOURCE OPERATING PARAMETERS									
FIN	EPN	DOWN STREAM PSIG	UPSTREAM PSIG	ESTIMATION METHOD	STOCK TANK API GRAVITY	FLASH VAPOR S.G.	VAPOR MOLE. WT. LBS/LB-MOLE	GOR SCF/BBL	
HT1-FLASH	HT1-FLASH	14.270	111.400	VASQUEZ-BEGGS	48.26	0.79	38.14		

SOURCE OPERATING PARAMETERS									
FIN	EPN	UN-CONTROLLED EMISSION RATE LBS/YR	UN-CONTROLLED EMISSION RATE PPH	EMISSIONS TO ATMOSPHERE PPH	PRIMARY CONTROL	P. C. DRE %	SECONDARY CONTROL	S.C. DRE %	
HT1-FLASH	HT1-FLASH	47,539.48	5.427	5	TO ATMOSPHERE		TO ATMOSPHERE		

SOURCE STACK PARAMETERS									
FIN	EPN	ZONE	UTM E	UTM N	STACK DIA. FT.	STACK HT. FT.	EXH. TEMP DEG. F	EXH. VEL. FPS	
HT1-FLASH	HT1-FLASH	14R	534,830	3,152,876	1.000	30.000	79.800	1.54E-02	

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: FLASH 1

VAPOR PROPERTIES						
EPN	HT1-FLASH					
CRITERIA POLLUTANTS	WT%	WT%	WT%	WT%	WT%	WT%
NOx						
CO						
SO2						
PM10						
PM2.5						
Pb						
VOC	74.9999%					
HAP POLLUTANTS						
BENZENE	0.1750%					
ETHYLBENZENE	0.0140%					
FORMALDEHYDE						
HEXANE-N	1.4880%					
METHANOL						
TOLUENE	0.1700%					
XYLENE-M	0.0700%					
XYLENE-O						
XYLENE-P						
H2S	0.0670%					
VOC(HAP)-u						
GHG POLLUTANTS						
METHANE						
CO2	24.9331%					
N2O						
TOTAL	100.0000%					

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: FLASH 1

EMISSIONS TO ATMOSPHERE								
EMISSIONS	UNITS	TOTAL	HT1-FLASH					
NOx	PPH							
CO	PPH							
SO2	PPH							
PM10	PPH							
PM2.5	PPH							
Pb	PPH							
VOC	PPH	4.070	4.070					
HAP POLLUTANTS								
BENZENE	PPH	0.009	0.009					
ETHYLBENZENE	PPH	0.001	0.001					
FORMALDEHYDE	PPH							
HEXANE-N	PPH	0.081	0.081					
METHANOL	PPH							
TOLUENE	PPH	0.009	0.009					
XYLENE-M	PPH	0.004	0.004					
XYLENE-O	PPH							
XYLENE-P	PPH							
	PPH							
	PPH							
H2S	PPH	0.004	0.004					
VOC(HAP)-u	PPH							
GHG POLLUTANTS								
METHANE	PPH							
CO2	PPH	1.353	1.353					
N2O	PPH							
	PPH							
	PPH							
TOTAL	PPH	5.427	5.427					
EMISSIONS	UNITS	TOTAL	HT1-FLASH					
NOx	TPY							
CO	TPY							
SO2	TPY							
PM10	TPY							
PM2.5	TPY							
Pb	TPY							
VOC	TPY	17.827	17.827					
HAP POLLUTANTS								
BENZENE	TPY	0.042	0.042					
ETHYLBENZENE	TPY	0.003	0.003					
FORMALDEHYDE	TPY							
HEXANE-N	TPY	0.354	0.354					
METHANOL	TPY							
TOLUENE	TPY	0.040	0.040					
XYLENE-M	TPY	0.017	0.017					
XYLENE-O	TPY							
XYLENE-P	TPY							
	TPY							
	TPY							
H2S	TPY	0.016	0.016					
VOC(HAP)-u	TPY							
GHG POLLUTANTS								
METHANE	TPY							
CO2	TPY	5.927	5.927					
N2O	TPY							
	TPY							
	TPY							
TOTAL	TPY	23.770	23.770					

COMPANY:	Ineos USA Oil & Gas LLC
SITE:	Mckenzie-Foley Unit B MCM Pad
ACTION:	PI-7-CERT Registration
DATE:	2/26/2024
WORKSHEET:	FLASH 1

EXAMPLE CALCULATIONS:

CALCULATE VOC EMISSIONS:

EPN		HT1-FLASH			
COMOUND NAME		CRUDE/NATURAL GAS			
VOC CONTENT	%	100.0000%			
OPERATION	HRS/YR	8,760.000			
THROUGHPUT	BBLS/YR	12,838.875			
THROUGHPUT (VOC FRACTION)	BBLS/YR	THROUGHPUT, BBLS/YR X VOC CONTENT %	=	12,838.875	
VAPOR VOC WT%	%	74.9999%			
MOLAR VOLUME	SCF/MOLE	385.462			
VAPOR MOL. WT. (FROM AP-42, TABLE 7.1-2, OR TANKS OUTPUT)	LBS/LB-MOLE	38.143			
GOR	SCF/BBL				
TO ATMOSPHERE CONTROL DRE	%				

UNCONTROLLED EMISSIONS	LBS/YR	$\frac{\text{GOR, SCF/BBL X THROUGHPUT, BBLS/YR X MOL. WT., LSB/LB-MOLE X VOC WT.\%}}{\text{MOLAR VOLUME, SCF/MOLE}}$	=		
UNCONTROLLED EMISSIONS	PPH	LBS/YR / OPERATION, HRS/YR	=		
UNCONTROLLED EMISSIONS	TPY	LBS/YR / 2,000 LBS/TON	=		
			=		
CONTROLLED EMISSIONS	PPH	MAX. PPH X (1 - DRE)	=	0.00	
CONTROLLED EMISSIONS	TPY	MAX. TPY X (1 - DRE)	=	0.00	

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: BLOWDOWNS / MSS

SOURCE DESCRIPTION		
FIN	EPN	DESCRIPTION
MSS 1	MSS 1	MSS ACTIVITY; VAPORS VENTED TO ATMOSPHERE DURING MSS ACTIVITIES; 106.359
MSS 2	MSS 2	MSS ACTIVITY; STORAGE TANK DE-GASSING DURING MAINTENANCE ACTIVITY; ASSUME DE-GASSING 1 TANK/YEAR; VENTS TO ATMOSPHERE; 106.359
MSS 3	MSS 3	MSS ACTIVITIES; MISC. ABRASIVE BLASTING/COATING ACTIVITIES; VENTS TO ATMOSPHERE; AREA SOURCE; 106.359
VENTING 1	VENTING 1	PNEUMATIC DEVICE; VENTING TO ATMOSPHERE; 106.352(l)

SOURCE OPERATING PARAMETERS									
FIN	EPN	CONTENTS	HEAT CONTENT BTU/SCF	RATE SCF/HR	RATE MMSCF/YR	DURATION HRS/YR	VAPOR MOLE. WT. LBS/LB-MOLE		
MSS 1	MSS 1	NATURAL GAS	1,318.00	25.00	0.0075	300.00	1.53		
MSS 2	MSS 2	NATURAL GAS	1,318.00	5,620.00	0.0056	1.00	1.53		
MSS 3	MSS 3	BLASTING/COATIN	3,071.00	1,200.00	0.1152	96.00	88.41		
VENTING 1	VENTING 1	NATURAL GAS	1,318.00	2.25	0.0049	2,190.00	1.53		

SOURCE OPERATING PARAMETERS									
FIN	EPN	UN-CONTROLLED EMISSION RATE PPH	EMISSIONS TO ATMOSPHERE PPH	PRIMARY CONTROL	P. C. DRE %	SECONDARY CONTROL			
MSS 1	MSS 1	0.099	0.099	TO ATMOSPHERE	NONE	TO ATMOSPHERE			
MSS 2	MSS 2	22.235	22.221	TO ATMOSPHERE	NONE	TO ATMOSPHERE			
MSS 3	MSS 3	275.224	2.989	TO ATMOSPHERE	NONE	TO ATMOSPHERE			
VENTING 1	VENTING 1	0.009	0.009	TO ATMOSPHERE	NONE	TO ATMOSPHERE			

SOURCE STACK PARAMETERS									
FIN	EPN	ZONE	UTM E	UTM N	STACK DIA. FT.	STACK HT. FT.	EXH. TEMP DEG. F	EXH. VEL. FPS	
MSS 1	MSS 1	14R	534,830	3,152,876	0.500	20.00	90.11	0.001	
MSS 2	MSS 2	14R	534,830	3,152,876	0.500	20.00	90.11	0.257	
MSS 3	MSS 3	14R	534,830	3,152,876	0.250	3.00	90.11	0.077	
VENTING 1	VENTING 1	14R	534,830	3,152,876	0.250	3.00	90.11	0.000	

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: BLOWDOWNS / MSS

VAPOR PROPERTIES						
EPN	MSS 1	MSS 2	MSS 3	VENTING 1		
CRITERIA POLLUTANTS	WT%	WT%	WT%	WT%	WT%	WT%
NOx						
CO						
SO2						
PM10			4.6874%			
PM2.5			4.6874%			
Pb						
VOC	74.9999%	74.9999%	99.9991%	74.9999%		
HAP POLLUTANTS						
BENZENE	0.1750%	0.1750%	13.2529%	0.1750%		
ETHYLBENZENE	0.0140%	0.0140%	18.0122%	0.0140%		
FORMALDEHYDE						
HEXANE-N	1.4880%	1.4880%	14.6218%	1.4880%		
METHANOL						
TOLUENE	0.1700%	0.1700%	15.6317%	0.1700%		
XYLENE-M	0.0700%	0.0700%	18.0122%	0.0700%		
XYLENE-O						
XYLENE-P						
H2S	0.0670%	0.0670%	0.0009%	0.0670%		
VOC(HAP)-u						
GHG POLLUTANTS						
METHANE						
CO2						
N2O						
TOTAL	75.0669%	75.0669%	100.0000%	75.0669%		

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: BLOWDOWNS / MSS

EMISSIONS TO ATMOSPHERE								
EMISSIONS	UNITS	TOTAL	MSS 1	MSS 2	MSS 3	VENTING 1		
NOx	PPH							
CO	PPH							
SO2	PPH							
PM10	PPH	0.062			0.062			
PM2.5	PPH	0.062			0.062			
Pb	PPH							
VOC	PPH	19.746	0.074	16.676	2.989	0.007		
HAP POLLUTANTS								
BENZENE	PPH	0.506	0.000	0.039	0.467	0.000		
ETHYLBENZENE	PPH	0.470	0.000	0.003	0.467	0.000		
FORMALDEHYDE	PPH							
HEXANE-N	PPH	0.799	0.001	0.331	0.467	0.000		
METHANOL	PPH							
TOLUENE	PPH	0.505	0.000	0.038	0.467	0.000		
XYLENE-M	PPH	0.483	0.000	0.016	0.467	0.000		
XYLENE-O	PPH							
XYLENE-P	PPH							
	PPH							
	PPH							
H2S	PPH	0.001	0.000	0.000	0.000	0.000		
VOC(HAP)-u	PPH							
GHG POLLUTANTS								
METHANE	PPH							
CO2	PPH	5.571	0.025	5.544		0.002		
N2O	PPH							
	PPH							
	PPH							
TOTAL	PPH	25.317	0.099	22.221	2.989	0.009		
EMISSIONS	UNITS	TOTAL	MSS 1	MSS 2	MSS 3	VENTING 1		
NOx	TPY							
CO	TPY							
SO2	TPY							
PM10	TPY	0.003			0.003			
PM2.5	TPY	0.003			0.003			
Pb	TPY							
VOC	TPY	0.170	0.011	0.008	0.143	0.007		
HAP POLLUTANTS								
BENZENE	TPY	0.022	0.000	0.000	0.022	0.000		
ETHYLBENZENE	TPY	0.022	0.000	0.000	0.022	0.000		
FORMALDEHYDE	TPY							
HEXANE-N	TPY	0.023	0.000	0.000	0.022	0.000		
METHANOL	TPY							
TOLUENE	TPY	0.022	0.000	0.000	0.022	0.000		
XYLENE-M	TPY	0.022	0.000	0.000	0.022	0.000		
XYLENE-O	TPY							
XYLENE-P	TPY							
	TPY							
	TPY							
H2S	TPY	0.000	0.000	0.000	0.000	0.000		
VOC(HAP)-u	TPY							
GHG POLLUTANTS								
METHANE	TPY							
CO2	TPY	0.009	0.004	0.003		0.002		
N2O	TPY							
	TPY							
	TPY							
TOTAL	TPY	0.179	0.015	0.011	0.143	0.010		

COMPANY:	Ineos USA Oil & Gas LLC
SITE:	Mckenzie-Foley Unit B MCM Pad
ACTION:	PI-7-CERT Registration
DATE:	2/26/2024
WORKSHEET:	BLOWDOWNS / MSS

EXAMPLE CALCULATIONS:
CALCULATE VOC EMISSIONS:

EPN		MSS 1		
BLOWDOWN RATE	SCF/HR	25.000		
BLOWDOWN RATE	MMSCF/YR	0.008		
DURATION	HRS/YR	300.000		
VAPOR MOLE. WT.	LBS/LB-MOLE	1.525		
MOLAR VOLUME	SCF/MOLE	385.462		
VAPOR VOC CONTENT	WT%	75.000%		
PRIMARY CONTROL DRE	%	NONE		
UN-CONTROLLED EMISSIONS	PPH	(BLOWDOWN RATE, SCF/HR X MOL. WT, LBS/LB-MOLE X VOC WT%) / MOLAR VOLUME, SCF/MOLE	=	0.074
UN-CONTROLLED EMISSIONS	TPY	(PPH X OPERATION, HRS/YR) / 2,000 LBS/TON	=	0.011
CONTROLLED EMISSIONS	PPH	MAX. PPH X (1 - DRE)	=	#VALUE!
CONTROLLED EMISSIONS	TPY	MAX. TPY X (1 - DRE)	=	#VALUE!

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: FUGITIVES 1 - 3

SOURCE DESCRIPTION / OPERATING PARAMETERS						
FIN	EPN	DESCRIPTION	SOURCE TYPE	AVE. ANNUAL TEMP. DEG. F	DURATION HRS/YR	
FUG	FUG	SITE FUGITIVE EMISSIONS; 106.352(l)	OIL & GAS	90.11	8,760.00	

SOURCE STACK PARAMETERS									
FIN	EPN	ZONE	UTM E	UTM N	FUG. LENGTH FT	FUG. WIDTH FT	FUG. HEIGHT FT		
FUG	FUG	14R	534,830	3,152,876	300.00	300.00	3.00		

EPN	SERVICE	LDAR PROGRAM	EPN	SERVICE	LDAR PROGRAM	EPN	SERVICE	LDAR PROGRAM
FUG	LIGHT-LIQUID COMPONENTS	NONE			NONE			NONE
COMPONENT TYPE	COUNT	EMISS. FACTOR PPH/UNIT	COMPONENT TYPE	COUNT	EMISS. FACTOR PPH/UNIT	COMPONENT TYPE	COUNT	EMISS. FACTOR PPH/UNIT
CONNECTORS-LIGHT LIQUID	23	0.000463						
FLANGES-LIGHT LIQUID	15	0.000243						
PUMPS-LIGHT LIQUID	4	0.028660						
RELIEF VALVES-LIGHT LIQUID	4	0.016500						
VALVES-LIGHT LIQUID	15	0.005500						
EPN	EMISSIONS PPH	EMISSIONS TPY	EPN	EMISSIONS PPH	EMISSIONS TPY	EPN	EMISSIONS PPH	EMISSIONS TPY
FUG	0.277	1.214						

EPN	SERVICE	LDAR PROGRAM	EPN	SERVICE	LDAR PROGRAM	EPN	SERVICE	LDAR PROGRAM
FUG	NATURAL GAS COMPONENTS	NONE		LIGHT-LIQUID COM	NONE		LIGHT-LIQUID COM	NONE
COMPONENT TYPE	COUNT	EMISS. FACTOR PPH/UNIT	COMPONENT TYPE	COUNT	EMISS. FACTOR PPH/UNIT	COMPONENT TYPE	COUNT	EMISS. FACTOR PPH/UNIT
CONNECTORS-GAS	23	0.000440						
FLANGES-GAS	15	0.000860						
RELIEF VALVES-GAS	12	0.019400						
VALVES -GAS	15	0.009920						
COMPRESSORS-GAS		0.019400						
EPN	EMISSIONS PPH	EMISSIONS TPY	EPN	EMISSIONS PPH	EMISSIONS TPY	EPN	EMISSIONS PPH	EMISSIONS TPY
FUG	0.404	1.771						

EPN	SERVICE	LDAR PROGRAM	EPN	SERVICE	LDAR PROGRAM	EPN	SERVICE	LDAR PROGRAM
FUG		NONE			NONE			NONE
COMPONENT TYPE	COUNT	EMISS. FACTOR PPH/UNIT	COMPONENT TYPE	COUNT	EMISS. FACTOR PPH/UNIT	COMPONENT TYPE	COUNT	EMISS. FACTOR PPH/UNIT
EPN	EMISSIONS PPH	EMISSIONS TPY	EPN	EMISSIONS PPH	EMISSIONS TPY	EPN	EMISSIONS PPH	EMISSIONS TPY
FUG								

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: FUGITIVES 1

VAPOR PROPERTIES / EMISSIONS									
EPN	FUG								
SERVICE	LIGHT-LIQUID COMPONENTS			NATURAL GAS COMPONENTS					
CRITERIA POLLUTANTS	WT%	EMISSIONS PPH	EMISSIONS TPY	WT%	EMISSIONS PPH	EMISSIONS TPY	WT%	EMISSIONS PPH	EMISSIONS TPY
NOx									
CO									
SO2									
PM10									
PM2.5									
Pb									
VOC	99.9988%		0.277	99.9988%	0.404	1.771			
HAP POLLUTANTS									
BENZENE	0.0031%		0.000	0.0031%	0.000	0.000			
ETHYLBENZENE	0.0002%		0.000	0.0002%	0.000	0.000			
FORMALDEHYDE									
HEXANE-N	0.0266%		0.000	0.0266%	0.000	0.000			
METHANOL									
TOLUENE	0.0030%		0.000	0.0030%	0.000	0.000			
XYLENE-M	0.0012%		0.000	0.0012%	0.000	0.000			
XYLENE-O									
XYLENE-P									
H2S	0.0012%		0.000	0.0012%	0.000	0.000			
VOC(HAP)-u									
GHG POLLUTANTS									
METHANE									
CO2									
N2O									
TOTALS	100.0000%		0.277	100.0000%	0.404	1.771			

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: FUGITIVES 1

TOTAL EMISSIONS (ALL COMPONENT SERVICE)			
EPN	FUG	PPH	TPY
NOx			
CO			
SO2			
PM10			
PM2.5			
Pb			
VOC		0.404	2.048
HAP POLLUTANTS			
BENZENE		0.000	0.000
ETHYLBENZENE		0.000	0.000
FORMALDEHYDE			
HEXANE-N		0.000	0.001
METHANOL			
TOLUENE		0.000	0.000
XYLENE-M		0.000	0.000
XYLENE-O			
XYLENE-P			
H2S		0.000	0.000
VOC(HAP)-u			
GHG POLLUTANTS			
METHANE			
CO2			
N2O			
		0.404	2.048
TOTAL		0.405	2.049

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: DIESEL ENGINES 1

SOURCE DESCRIPTION		
FIN	EPN	DESCRIPTION
ENG2	ENG2	GASOLINE POWERED PUMP ENGINE

SOURCE OPERATING PARAMETERS					
FIN	EPN	MAKE	MODEL	ENGINE TYPE	FUEL TYPE
ENG2	ENG2	HONDA	GX160	4S-RB	GASOLINE

SOURCE OPERATING PARAMETERS									
FIN	EPN	RATING BHP	RUN-TIME HRS/YR	FUEL USE BTU/HP-HR	FUEL HEAT BTU/GAL	FUEL USE GAL/HR	FUEL USE GAL/YR	HEAT INPUT MMBTU/HR	HEAT INPUT MMBTU/YR
ENG2	ENG2	4.800	8,760.0	7,000.000	132,000.000	0.255	2,229.818	0.034	294.336

SOURCE STACK PARAMETERS									
FIN	EPN	ZONE	UTM E	UTM N	STACK DIA. FT.	STACK HT. FT.	EXH. TEMP DEG. F	EXH. VEL. FPS	
ENG2	ENG2	14R	534,829.6	3,152,876.2	0.083	2.000	1,200.000	3,080.361	

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: DIESEL ENGINES 1

EMISSION FACTORS	UNITS	TOTAL	ENG2					
NOx	G/HP-HR		6.615					
CO	G/HP-HR		267.435					
SO2	G/HP-HR		0.267					
PM10	G/HP-HR		0.318					
PM2.5	G/HP-HR							
Pb	G/HP-HR							
VOC	G/HP-HR		6.600					
HAP POLLUTANTS								
BENZENE	G/HP-HR		0.003					
ETHYLBENZENE	G/HP-HR							
FORMALDEHYDE	G/HP-HR		1.890					
HEXANE-N	G/HP-HR							
METHANOL	G/HP-HR							
TOLUENE	G/HP-HR		0.001					
XYLENE-M	G/HP-HR		0.001					
XYLENE-O	G/HP-HR							
XYLENE-P	G/HP-HR							
	G/HP-HR							
	G/HP-HR							
	G/HP-HR							
VOC(HAP)-u	G/HP-HR							
GHG POLLUTANTS								
METHANE	G/HP-HR		0.000					
CO2	G/HP-HR		488.981					
N2O	G/HP-HR							
	G/HP-HR							
	G/HP-HR							

NOTES:

1. AP-42 EMISSION FACTORS IN LBS/MMBTU CONVERTED TO GRAMS/HP-HR AS FOLLOWS (USING NOX AS AN EXAMPLE):
   NOTE: THIS IS AN EXAMPLE CALCULATION; THE ACTUAL NOX E.F. USED MAY HAVE BEEN PROVIDED BY THE MANUFACTURER IN GRAMS/HP-HR,

ENGINE TYPE		4S-RB			
CONTROL DRE	%	0.00%			
AP-42 NOX E.F.	LBS/MMBTU	1.630		PRE-CONTROL	
AP-42 NOX E.F.	LBS/MMBTU	1.630		POST-CONTROL	
ENGINE FUEL USE	BTU/HP-HR	7,000.000			
LBS TO GRAMS CONVERSION	GRAMS/LB	453.600			
AP-42 NOX E.F.	GRAMS/HP-HR		=	AP-42 E.F., LBS/MMBTU X ENGINE FUEL USE, BTU/HP-HR X 453.6 GRAMS/LB / 1,000,000 BTU/MMBTU	
AP-42 NOX E.F.	GRAMS/HP-HR		=	5.176	PRE-CONTROL
AP-42 NOX E.F. SUPPLIED BY MANUFACTURER	GRAMS/HP-HR		=	6.615	PRE-CONTROL
AP-42 NOX E.F.	GRAMS/HP-HR		=	5.176	POST-CONTROL
AP-42 NOX E.F. SUPPLIED BY MANUFACTURER	GRAMS/HP-HR		=	6.615	POST-CONTROL

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: DIESEL ENGINES 1

EMISSIONS TO ATMOSPHERE								
EMISSIONS	UNITS	TOTAL	ENG2					
NOx	PPH	0.070	0.070					
CO	PPH	2.830	2.830					
SO2	PPH	0.003	0.003					
PM10	PPH	0.003	0.003					
PM2.5	PPH							
Pb	PPH							
VOC	PPH	0.070	0.070					
HAP POLLUTANTS								
BENZENE	PPH	0.000	0.000					
ETHYLBENZENE	PPH							
FORMALDEHYDE	PPH	0.020	0.020					
HEXANE-N	PPH							
METHANOL	PPH							
TOLUENE	PPH	0.000	0.000					
XYLENE-M	PPH	0.000	0.000					
XYLENE-O	PPH							
XYLENE-P	PPH							
	PPH							
	PPH							
	PPH							
VOC(HAP)-u	PPH							
GHG POLLUTANTS								
METHANE	PPH	0.000	0.000					
CO2	PPH	5.174	5.174					
N2O	PPH							
	PPH							
	PPH							
TOTALS	PPH	1,000.000	1,000.000					
EMISSIONS	UNITS	TOTAL	ENG2					
NOx	TPY	0.307	0.307					
CO	TPY	12.395	12.395					
SO2	TPY	0.012	0.012					
PM10	TPY	0.015	0.015					
PM2.5	TPY							
Pb	TPY							
VOC	TPY	0.306	0.306					
HAP POLLUTANTS								
BENZENE	TPY	0.000	0.000					
ETHYLBENZENE	TPY							
FORMALDEHYDE	TPY	0.088	0.088					
HEXANE-N	TPY							
METHANOL	TPY							
TOLUENE	TPY	0.000	0.000					
XYLENE-M	TPY	0.000	0.000					
XYLENE-O	TPY							
XYLENE-P	TPY							
	TPY							
	TPY							
	TPY							
VOC(HAP)-u	TPY							
GHG POLLUTANTS								
METHANE	TPY	0.000	0.000					
CO2	TPY	22.664	22.664					
N2O	TPY							
	TPY							
	TPY							
TOTALS	TPY	157.080	157.080					

COMPANY:	Ineos USA Oil & Gas LLC
SITE:	Mckenzie-Foley Unit B MCM Pad
ACTION:	PI-7-CERT Registration
DATE:	2/26/2024
WORKSHEET:	DIESEL ENGINES 1

EXAMPLE CALCULATIONS:
CALCULATE NOX EMISSIONS:

EPN		ENG2
HP RATING	BHP	4.800
FUEL USE	BTU/HP-HR	7,000.000
FUEL HEAT CONTENT	BTU/SCF	132,000.000
RUN TIME	HRS/YR	8,760.000
LBS TO GRAMS CONVERSION	GRAMS/LB	453.600
NOX E.F.	GRAMS/HP-HR	6.615

NOX EMISSIONS= PPH $\frac{\text{ENGINE RATING, HP X NOX E.F., GRAMS/HP-HR}}{\text{453.6 GRAMS/LB}}$

NOX EMISSIONS= PPH 0.070

NOX EMISSIONS= TPY $\frac{\text{NOX EMISSIONS, PPH X RUN TIME, HRS/YR}}{\text{2,000 LBS/TON}}$

NOX EMISSIONS= TPY 0.307

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: COMBUSTION CONTROL 1 - 6

SOURCE DESCRIPTION		
FIN	EPN	DESCRIPTION
FLARE1	FLARE1	REMOVED FROM SERVICE

SOURCE OPERATING PARAMETERS									
FIN	EPN	TYPE	DRE C1 - C3	DRE C4+	DRE H2S	ASSIST FUEL HEAT INPUT MMBTU/HR	PILOT FUEL HEAT INPUT MMBTU/HR	WASTE GAS HEAT INPUT MMBTU/HR	TOTAL HEAT INPUT MMBTU/HR
FLARE1	FLARE1	FLARE							

SOURCE OPERATING PARAMETERS									
FIN	EPN	RUN-TIME HRS/YR	WASTE GAS HEAT CONTENT BTU/SCF	FUEL/ASSIST GAS HEAT CONTENT BTU/SCF	COMBINED HEAT CONTENT BTU/SCF				
FLARE1	FLARE1								

SOURCE STACK PARAMETERS									
FIN	EPN	ZONE	UTM E	UTM N	STACK DIA. FT.	STACK HT. FT.	EXHST. TEMP. DEG. F	VELOCITY FPS	
FLARE1	FLARE1								

EMISSION FACTORS	UNITS		FLARE1					
NOx	LBS/MMBTU		0.064					
CO	LBS/MMBTU		0.550					
SO2	LBS/MMBTU							
PM10	LBS/MMBTU							
PM2.5	LBS/MMBTU							

NOTES:
1. AP-42 EMISSION FACTORS ADJUSTED FOR FUEL/VAPOR HEAT CONTENT.

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: COMBUSTION CONTROL 1 - 6

COMBINED ASSIST/FUEL/WASTE GAS INPUT								
VAPOR INPUT	UNITS	TOTAL	FLARE1					
NOx	PPH							
CO	PPH							
SO2	PPH							
PM10	PPH							
PM2.5	PPH							
H2S	PPH							
VOC	PPH							
HAP POLLUTANTS								
BENZENE	PPH							
ETHYLBENZENE	PPH							
FORMALDEHYDE	PPH							
HEXANE-N	PPH							
METHANOL	PPH							
TOLUENE	PPH							
XYLENE-M	PPH							
XYLENE-O	PPH							
XYLENE-P	PPH							
	PPH							
	PPH							
H2S	PPH							
VOC(HAP)-u	PPH							
GHG POLLUTANTS								
METHANE	PPH							
CO2	PPH							
N2O	PPH							
	PPH							
	PPH							
TOTALS	PPH							

COMPANY: Ineos USA Oil & Gas LLC
SITE: Mckenzie-Foley Unit B MCM Pad
ACTION: PI-7-CERT Registration
DATE: 2/26/2024
WORKSHEET: COMBUSTION CONTROL 1 - 6

EMISSIONS TO ATMOSPHERE	UNITS	TOTAL	FLARE1					
NOx	PPH							
CO	PPH							
SO2	PPH							
PM10	PPH							
PM2.5	PPH							
H2S	PPH							
VOC	PPH							
HAP POLLUTANTS								
BENZENE	PPH							
ETHYLBENZENE	PPH							
FORMALDEHYDE	PPH							
HEXANE-N	PPH							
METHANOL	PPH							
TOLUENE	PPH							
XYLENE-M	PPH							
XYLENE-O	PPH							
XYLENE-P	PPH							
	PPH							
	PPH							
	PPH							
VOC(HAP)-u	PPH							
GHG POLLUTANTS								
METHANE	PPH							
CO2	PPH							
N2O	PPH							
	PPH							
	PPH							
TOTALS	PPH							
EMISSIONS TO ATMOSPHERE	UNITS	TOTAL	FLARE1					
NOx	TPY							
CO	TPY							
SO2	TPY							
PM10	TPY							
PM2.5	TPY							
H2S	TPY							
VOC	TPY							
HAP POLLUTANTS								
BENZENE	TPY							
ETHYLBENZENE	TPY							
FORMALDEHYDE	TPY							
HEXANE-N	TPY							
METHANOL	TPY							
TOLUENE	TPY							
XYLENE-M	TPY							
XYLENE-O	TPY							
XYLENE-P	TPY							
	TPY							
	TPY							
	TPY							
VOC(HAP)-u	TPY							
GHG POLLUTANTS								
METHANE	TPY							
CO2	TPY							
N2O	TPY							
	TPY							
	TPY							
TOTALS	TPY							

COMPANY:	Ineos USA Oil & Gas LLC
SITE:	Mckenzie-Foley Unit B MCM Pad
ACTION:	PI-7-CERT Registration
DATE:	2/26/2024
WORKSHEET:	COMBUSTION CONTROL 1 - 6

EXAMPLE CALCULATIONS:
AS AN EXAMPLE, CALCULATE THE NOX EMISSIONS FROM THE COMBUSTION OF THE COMBINED GAS STREAM.
USE THE AP-42 NOX EMISSION FACTOR FOR NATURAL GAS COMBUSTION

EPN		FLARE1
NOX EMISSION FACTOR	LBS/MMBTU	0.064
HEAT INPUT	MMBTU/HR	
OPERATION	HRS/YR	
NOX EMISSIONS	PPH	NOX E.F., LBS/MMBTU X HEAT INPUT, MMBTU/HR
NOX EMISSIONS	PPH	
NOX EMISSIONS	TPY	NOX EMISSIONS, PPH X OPERATION, HRS/YR / 2,000 LBS/TON
NOX EMISSIONS	TPY	

AS AN EXAMPLE, CALCULATE BENZENE EMISSIONS FROM THE COMBUSTION OF THE COMBINED GAS STREAM:

EPN		FLARE1
BENZENE INPUT	PPH	
CONTROL DRE	%	
BENZENE EMISSIONS	PPH	BENZENE INPUT, PPH X (1 - DRE,%)
BENZENE EMISSIONS	PPH	
BENZENE EMISSIONS	TPY	BENZENE EMISSIONS, PPH X OPERATION, HRS/YR / 2,000 LBS/TON
BENZENE EMISSIONS	TPY	

2.5 NAAQS Review

NAAQS modeling not required

2.6 Regulatory Analysis

The Mckenzie-Foley Unit B MCM Pad facility as presented in this documentation meets the TCEQ requirements for each PBR referenced in **Section 2.1.** Checklists have been provided in **Section 2.9**.

- The site will comply with all rules and regulations of the TCEQ and with the intent of the Texas Clean Air Act (TCAA), including protection of public health and property. All emissions control equipment will be maintained in good condition and properly operated during plant operation; and,

The following state/federal regulations are applicable:

Regulation	Description	Applicable	Reason
TITLE V APPLICABILITY			
30 TAC 122	Title V Site	NO	Not applicable. Emissions below Title V major source status.
APPLICABLE NSPS (40 CFR 60)			
NSPS 60.18	Flares	NO	Not applicable. No on-site flares.
NSPS GG	Turbines	NO	Not applicable. No on-site turbines.
NSPS JJJJ	Engines	YES	Applicable. Engines will comply with MACT ZZZZ.
NSPS KKKK	Turbines	NO	Not applicable. No on-site turbines.
NSPS OOOOa	Tanks	YES	Applicable. VOC <6.0 tpy; comply with record-keeping.
APPLICABLE MACT (40 CFR 63)			
MACT HH	TEG Unit	NO	Not applicable. No on-site TEG units
MACT ZZZZ	Engines	YES	Applicable. Engines located at HAP area source.

2.7 Analytical Data

Representative analytical sampling was used to evaluate emissions in this document. Analytiucal samples were taken from the same area and geological formation as this facility.

LAB ANALYSES

SPL

Certificate of Analysis
Number: 1030-23070954-002A

Houston Laboratories
8820 Interchange Drive
Houston, TX 77054
Phone 713-660-0901

Aug. 03, 2023

Eric Knape
INEOS USA Oil & Gas LLC
1164 FM 2361
Carrizo Springs, TX 78834

Station Name: Snowmass HC1 DIM A 2H
Sample Point: Gas Meter
Cylinder No: 4030-003659
Analyzed: 07/31/2023 20:47:08 by EKK

Sampled By:
Sample Of: Gas Spot
Sample Date: 07/27/2023 11:00
Sample Conditions: 134 psig, @ 94.1 °F
Method: GPA 2286

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.696 psia		
Nitrogen	0.178	0.225		GPM TOTAL C2+	6.854
Methane	74.756	54.155		GPM TOTAL C3+	3.235
Carbon Dioxide	0.864	1.717		GPM TOTAL iC5+	0.588
Ethane	13.513	18.348	3.619		
Propane	6.393	12.730	1.764		
Iso-Butane	0.843	2.213	0.276		
n-Butane	1.923	5.047	0.607		
Iso-Pentane	0.424	1.381	0.155		
n-Pentane	0.458	1.492	0.166		
Hexanes	0.337	1.325	0.139		
Heptanes Plus	0.311	1.367	0.128		
	100.000	100.000	6.854		

Calculated Physical Properties	Total	C7+
Relative Density Real Gas	0.7673	3.4074
Calculated Molecular Weight	22.15	98.69
Compressibility Factor	0.9960	
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.696 psia & 60°F		
Real Gas Dry BTU	1318	5254
Water Sat. Gas Base BTU	1295	5162

Comments: Hydrogen Sulfide Field Analysis by Stain Tube = 12 ppm(v).

Data reviewed by: Patrick Weber, Analyst

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

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Page 5 of 8

LAB ANALYSES (CONTINUED)

SPL

Certificate of Analysis
Number: 1030-23070954-002A

Houston Laboratories
8820 Interchange Drive
Houston, TX 77054
Phone 713-660-0901

Aug. 03, 2023

Eric Knape
INEOS USA Oil & Gas LLC
1164 FM 2361
Carrizo Springs, TX 78834

Station Name: Snowmass HC1 DIM A 2H
Sample Point: Gas Meter
Cylinder No: 4030-003659
Analyzed: 07/31/2023 20:47:08 by EKK

Sampled By:
Sample Of: Gas Spot
Sample Date: 07/27/2023 11:00
Sample Conditions: 134 psig, @ 94.1 °F
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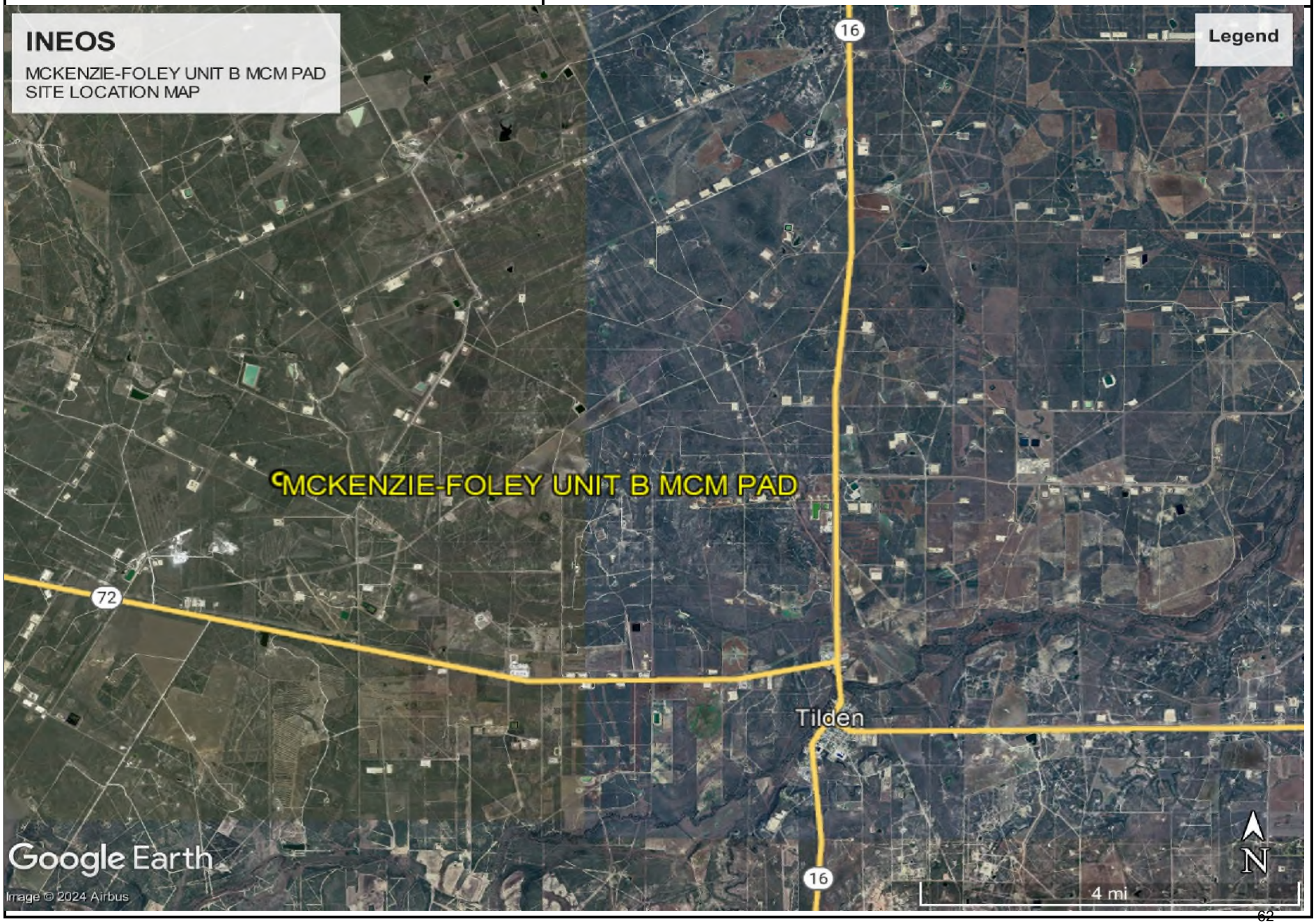
Iso-Butane	0.843	2.213	0.276		
n-Butane	1.923	5.047	0.607		
Iso-Pentane	0.424	1.381	0.155		
n-Pentane	0.458	1.492	0.166		
i-Hexanes	0.206	0.795	0.084		
n-Hexane	0.131	0.530	0.055		
Benzene	0.017	0.060	0.005		
Cyclohexane	0.028	0.106	0.010		
i-Heptanes	0.115	0.480	0.047		
n-Heptane	0.035	0.158	0.016		
Toluene	0.014	0.059	0.005		
i-Octanes	0.062	0.287	0.027		
n-Octane	0.008	0.043	0.004		
Ethylbenzene	0.001	0.007	NIL		
Xylenes	0.005	0.030	0.002		
i-Nonanes	0.014	0.067	0.006		
n-Nonane	0.002	0.014	0.001		
i-Decanes	0.007	0.036	0.003		
n-Decane	0.001	0.004	NIL		
Undecanes	0.002	0.016	0.002		
Dodecanes	NIL	NIL	NIL		
Tridecanes	NIL	NIL	NIL		
Tetradecanes Plus	NIL	NIL	NIL		
	100.000	100.000	6.854		

Powered By SURECHEM

2.8 Maps

EnTech
21 WATERWAY AVENUE
SUITE 300
THE WOODLANDS, TX 77380
TEL: 832-244-2486
WEBSITE: WWW.ENTECHSERVICE.COM

Ineos USA Oil & Gas LLC
Mckenzie-Foley Unit B MCM Pad
PI-7-CERT Registration
DATE: 2/26/2024
SITE LOCATION MAP



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SITE PLOT PLAN

2.9 Checklists/Tables

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code 106.4
Mckenzie-Foley Unit B MCM Pad

The following checklist was developed by the Texas Commission on Environmental Quality (TCEQ), **Air Permits Division**, to assist applicants in determining whether or not a facility meets all of the applicable requirements. Before claiming a specific Permit by Rule (PBR), a facility must first meet all of the requirements of **Title 30 Texas Administrative Code § 106.4** (30 TAC § 106.4), "Requirements for Permitting by Rule." Only then can the applicant proceed with addressing requirements of the specific Permit by Rule being claimed.

The use of this checklist is not mandatory; however, it is the responsibility of each applicant to show how a facility being claimed under a PBR meets the general requirements of 30 TAC § 106.4 and also the specific requirements of the PBR being claimed. If all PBR requirements cannot be met, a facility will not be allowed to operate under the PBR and an application for a construction permit may be required under 30 TAC § 116.110(a).

Registration of a facility under a PBR can be performed by completing **Form PI-7** (Registration for Permits by Rule) or **Form PI-7-CERT** (Certification and Registration for Permits by Rule). The appropriate checklist should accompany the registration form. Check the most appropriate answer and include any additional information in the spaces provided. If additional space is needed, please include an extra page and reference the question number. The PBR forms, tables, checklists, and guidance documents are available from the TCEQ, Air Permits Division Web site at: www.tceq.texas.gov/permitting/air/nav/air_pbr.html.

1. 30 TAC 106.4(a)(1) & (4): Emission Limits

List emissions in TPY for each facility (add additional pages or table if needed.

NOTE 1	SO2=	0.015	PM10=	0.050	VOC=	24.961	NOX=	0.736	CO=	12.756	HAP=	0.728
NOTE 2	SO2=		PM10=		VOC=		NOX=		CO=		HAP=	
	SO2=		PM10=		VOC=		NOX=		CO=		HAP=	
TOTAL		0.015		0.050		24.961		0.736		12.756		0.728

NOTE 1: THIS 106.512 REGISTRATION NOTE 2: OTHER NON-REGISTERED 106.352 SOURCES

● Are the SO2, PM10, VOC, or other air contaminant emissions claimed for **each** facility in this PBR submittal less than 25 tpy?	X	YES		NO
Are the NOx and CO emissions claimed for each facility in this PBR submittal less than 250 tpy?	X	YES		NO
● If the answer to both is "Yes," continue to the question below. If the answer to either question is "No," a **PBR cannot be claimed**.				
Has any facility at the property had public notice and opportunity for comment under 30 TAC Section 116 for a regular permit or permit renewal? (This does not include public notice for voluntary emission reduction permits, grandfathered existing facility permits, or federal operating permits.)		YES	X	NO
If "Yes," skip to Section 2. If "No," continue to the questions below.				
If the site has had no public notice, please answer the following;				
● Are the SO2, PM10, VOC, or other emissions claimed for **all** facilities in this PBR submittal less than 25 tpy?	X	YES		NO
● Are the NOx and CO emissions claimed for all facilities in this PBR submittal less than 250 tpy?	X	YES		NO
If the answer to both questions is "Yes", continue to Section 2.				
*If the answer to either questions is "No", **a PBR cannot be claimed**. A permit will be required under Chapter 116.*				

2. 30 TAC 106.4(a)(2): Nonattainment check

● Are the facilities to be claimed under this PBR located in a designated ozone nonattainment county? *If "Yes", please indicate which county by checking the appropriate box to the right.*		YES	X	NO
(Moderate) - Brazoria, Chamabers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller counties.		HGB		
(Moderate) - Collin, Dalla, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant and Wise counties.		DFW		

If "Yes" to any of the above, continue to the next question. If "No", continue to Section 3.

● Does this project trigger a nonattainment review? To determine the answer, review the information below:		YES		NO	
● Is the project's potential to emit (PTE) for emissions of VOC or NOx increasing by 100 tpy or more? *PTE is the maximum capacity of a stationary source to emit any air pollutant under its worst-case physical and operational design unless limited by a permit, rule, or made federally enforceable by a certification.*		YES		NO	
● Is the site an existing major nonattainment site and are the emissions of VOC or NOx increasing by 40 tpy or more?		YES		NO	

If needed, attach contemporaneous netting calculations per nonattainment guidance.

Additional information can be found at:

www.tceq.state.tx.us/permitting/air/forms/newsourcereview/tables/nsr_table8.html
www.tceq.state.tx.us/permitting/air/nav/air_docs_newsource.html

If "Yes," to any of the above, the project is a major source or a major modification and ***a PBR may not be used****. A Nonattainment Permit review must be completed to authorize this project. If "No," continue to Section 3.*

3. 30 TAC 106.4(a)(3): Prevention of Significant Deterioration (PSD) check

Does this project trigger a review under PSD? To determine the answer, review the information below:

● Are emissions of any regulated criteria pollutant increasing by 100 tpy of any criteria pollutant at a named source?		YES	X	NO	
● Are emissions of any criteria pollutant increasing by 250 tpy of any criteria pollutant at an unnamed source?		YES	X	NO	
● Are emissions increasing above significance levels at an existing major site?		YES	X	NO	

PSD information can be found at:

www.tceq.state.tx.us/permitting/air/forms/newsourcereview/tables/nsr_table9.html

www.tceq.state.tx.us/permitting/air/nav/air_docs_newsource.html

If "Yes," to any of the above, ***a PBR may not be used****. A PSD Permit review must be completed to authorize this project.*
If "No," continue to Section 4.

4. 30 TAC 106.4(a)(6): Federal Requirements

● Will all facilities under this PBR meet applicable requirements of Title 40 Code of Federal Regulations (40 CFR) Part 60, New Source Performance Standards (NSPS)? If "Yes," which Subparts are applicable?:												X	YES		NO		N/A
NSPS:		NSPS 60.18		NSPS GG	X	NSPS JJJJ		NSPS KKKK	X	NSPS OOOOa	REFER TO TEXT FOR APPLICABILITY DESCRIPTION.						
● Will all facilities under this PBR meet applicable requirements of 40 CFR Part 63, Hazardous Air Pollutants Maximum Achievable Control Technology (MACT)? If "Yes," which Subparts are applicable?:												X	YES		NO		N/A
MACT:		MACT HH	X	MACT ZZZZ	REFER TO TEXT FOR APPLICABILITY DESCRIPTION.												
● Will all facilities under this PBR meet applicable requirements of 40 CFR Part 61, National Emissions Standards fokr Hazardous Air Pollutants (NESHAP)? If "Yes," which Subparts are applicable?:													YES		NO	X	N/A
NESHAP:																	

If "Yes" to any of the above, please attach a discussion of how the facilities will meet any applicable standards.

5. 30 TAC 106.4(a)(7): PBR prohibition check

● Are there any permits at the site containing conditions which prohibit or restric the use of PBRs?		YES	X	NO	

If "Yes", PBRs may not be used or their use must meet th restrictions of the permit. A new permit or permit amendment may be required.

List permit number(s):

6. 30 TAC 106.4(a)(8): NOX Cap and Trade				
● Is the facility located in Harris, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?		YES	X	NO
If "Yes," answer the question below. If "No," continue to Section 7.				
● Will the proposed facility or group of facilities obtain required allowances for NOx if they are subject to 30 TAC Chapter 101, Subchapter H, Division 3 (relating to the Mass Emissions Cap and Trade Program)?		YES		NO
7. Highly Reactive Volatile Organic Compounds (HRVOC) check				
● Is the facility located in Harris County? *If "Yes," answer the next question. If "No," skip to the box below.*		YES	X	NO
● Will the project be constructed after June 1, 2006? *If "Yes," answer the next question. If "No," skip to the box below.*		YES		NO
● Will one or more of the following HRVOC be emiteed as a part of thhis project?		YES		NO
If "Yes," complete the information below:				

	lbs/hr	tpy
- 1,3 -butadiene		
- all isomers kof butene (eg. Isobutene [2-methylpropene or isobutylene])		
- alpha-butylene (ehtylethylene)		
- beta-butylene (dimethylene, including both cis- and trans-isomers)		
- ethylene		
- propylene		

● Is the facility located in Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County? *If "Yes," answer the next question. If "No," the checklist is complete.*		YES	X	NO
● Will the project be constructed after June 1, 2006? *If "Yes," answer the next question. If "No," the checklist is complete.*		YES		NO
● Will one or more of the following HRVOC be emitted as a part of this project?		YES		NO
If "Yes", complete the information below:				

	lbs/hr	tpy
- ethylene		
- propylene		

Oil and Gas Handling and Production Facilities
Title 30 Texas Administrative Code 106.352(l)
www.TexasOilandGasHelp.org

Check the most appropriate answer and include any technical information in the spaces provided. If additional space is needed, please include an extra page that references this checklist. The forms, checklists, and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ), Air Permits Division Web site at: www.tceq.texas.gov/permitting/air/permitbyrule/subchapter-o/oil_and_gas.html.
If you have any questions, or need additional assistance, please contact the Air Permits Division at (512) 239-1250.

The facility can register by submitting this application and any supporting documentation. Below is a checklist to ensure you have provided all appropriate documentation. For sites that require registration or if the company chooses to register the site with the TCEQ, a Core Data Form (TCEQ – 10400) is required with this checklist.

This checklist is for use by the operator to ensure a complete application.	
Have you included each of the following items in the application?	
X	Process description
X	Plot plan or area map.
X	TCEQ Oil and Gas Emission Calculation Spreadsheet (or equivalent).
X	Detailed summary of maximum emissions estimates with supporting reports from any emission estimation computer program.
X	Gas and Liquid analyses. If a site-specific a representative site was used.
X	Technical documents (manufacturer's specification sheet, operational design sheets)
X	State and Federal applicability
X	Core Data Form (for new sites that have never been registered with TCEQ).

General Information and Questions/Descriptions	
1. Is the project located in one of the Barnett Shale counties and did the start of construction or modification begins on or after April 1, 2011? **Note**: Counties included in the Barnett Shale area: Cooke, Dallas, Denton, Ellis, Erath, Hill, Hood, Jack, Johnson, Montague, Palo Pinto, Parker, Somervell, Tarrant, and Wise counties. For what is considered start of construction see: www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/factsheet-const.pdf **If "Yes," do not complete this checklist. The project is subject to the requirements of §106.352(a)-(k). Additional information for Barnett Shale area projects can be found:** www.tceq.texas.gov/permitting/air/permitbyrule/subchaptero/oil_and_gas.html.	[ ] Yes [X] No

General Information and Questions/Descriptions (continued)					
2.	Are the total site-wide emissions from all facilities claimed under §106.352 less than 25 tpy VOC, 250 tpy NOX , 250 tpy CO, 25 tpy SO2 , 25 tpy PM, 15 tpy PM10 , 10 tpy PM2.5 , and 25 tpy of any other air contaminant?	X	Yes		No
3.	Are there flares, engines, or turbines at the site? *If "* ***Yes*** *," attach supporting documentation to demonstrate compliance with the requirements.* ***Additional information and checklists can be found at:*** *§106.492 Flares:* www.tceq.texas.gov/permitting/air/permitbyrule/subchapter-v/flares.html *§106.512 Stationary Engines and turbines:* www.tceq.texas.gov/permitting/air/permitbyrule/subchapterw/stationary_eng_turb.html	X	Yes		No
4.	Does any facility at the site handle a stream with more than 24 ppm hydrogen sulfide (H_2S)? ***If "Yes," proceed to question (4)(a) and (4)(b) and then proceed to questions 5 and 6.*** *If "* ***No*** *," skip questions 5 through 6.*	X	Yes		No
4a.	What is the actual H2S content of the stream?	30.000		ppm	
4b.	Indicate the actual distance from the nearest emissions point to the nearest offsite receptor:	>3,000		ft.	
Note: An offsite receptor includes any recreational area, residence, or other structure not occupied or used solely by the owner or operator of the facility. A facility handling sour gas must be located at least 1/4 mile from the nearest offsite receptor.					
5.	Indicate the total actual emission rate of sulfur compounds, excluding sulfur oxides, from all vents	0.01		lb/hr	
6.	Does the height of all vents at the site emitting sulfur compounds meet the minimum required height based on the H2S emission rate in 106.352(l)(4)?	20.00		feet	
Note: Truck loading and fugitive sources are not considered vents.					

Recordkeeping: To demonstrate compliance with the requirements of the PBR, sufficient records must be maintained at all times. The records must be made available immediately upon request to the commission or any air pollution control program having jurisdiction. If you have any questions about the recordkeeping requirements, contact the Air Permits Division or the Air Program in the TCEQ Regional Office for the region in which the site is located.

Stationary Engines and Turbines
Air Permits by Rule (PBR) Checklist
Title 30 Texas Administrative Code § 106.512

Ineos USA Oil & Gas LLC
Mckenzie-Foley Unit B MCM Pad
RN NO.: RN106552607
DATE: 02/26/2024

Check the most appropriate answer and include any additional information in the spaces provided. If additional space is needed, please include an extra page and reference the question number. The PBR forms, tables, checklists, and guidance documents are available from the TCEQ, Air Permits Division Web site at: www.tceq.state.tx.us/permitting/air/nav/air_pbr.html.

This PBR (§ 106.512) requires registration with the commission's Office of Permitting, Remediation, and Registration in Austin before construction if the horsepower (hp) of the facility is greater than 240 hp. Registration of the facility can be performed by completing a Form PI-7, "Registration for Permits by Rule," or Form PI-7-CERT, "Certification and Registration for Permits by Rule." This checklist should accompany the registration form.

Definitions:

The following words and terms, when used in this section, shall have the following meanings, unless the context clearly indicates otherwise.

A. Rich-burn Engine: A rich-burn engine is a gas-fired, spark-ignited engine that is operated with an exhaust oxygen content less than four percent by volume.

B. Lean-burn Engine: A lean-burn engine is a gas-fired, spark-ignited engine that is operated with an exhaust oxygen content of four percent by volume, or greater.

C. Rated Engine Horsepower: Engine rated horsepower shall be based on the engine manufacturer's maximum continuous load rating at the lesser of the engine or driven equipment's maximum published continuous speed.

D. Turbine Horsepower: Turbine rated horsepower shall be based on turbine base load, fuel power heating value, and International Standards Organization Standard Day Conditions of 59 degrees Fahrenheit, 1.0 atmosphere pressure, and 60 percent relative humidity.

CHECK THE MOST APPROPRIATE ANSWERS AND FILL IN THE BLANKS			
Rule	**Questions/Descriptions**	**Information**	**Response**
	Will the engine or turbine be used as a replacement at an oil and gas site and does it meet all the requirements of the policy memo entitled, "Replacement of All Engine and Turbine Components for Oil and Gas Production?" *If "YES," registration is not required for like-kind replacements of engine or turbine components.* *If "NO," please continue .*	EPN ENG2	YES ☐ NO ☒
(1)	Is the engine or turbine rated less than 240 hp? *If "YES," then registration is not required, but the facility must comply with conditions (5) and (6) of this rule.* *If "NO," then registration is required and the facility must be registered by submitting a completed Form PI-7 and Table 29 or Table 31 , as applicable, within 10 days after construction begins .*	EPN ENG2	YES ☒ NO ☐
(1)	Indicate the type of equipment (pick one): *If an engine, go to Question (2).* *If a turbine, go to Question (3).*	EPN ENG2 ENGINE ☐ TURBINE ☐	YES ☐ NO ☐

Ineos USA Oil & Gas LLC
Mckenzie-Foley Unit B MCM Pad
RN NO.: RN106552607
DATE: 02/26/2024

Stationary Engines and Turbines
Air Permits by Rule (PBR) Checklist
Title 30 Texas Administrative Code § 106.512

CHECK THE MOST APPROPRIATE ANSWERS AND FILL IN THE BLANKS			
Rule	**Questions/Descriptions**	**Information**	**Response**
(2)	Is the engine rated at 500 hp or greater? If "NO," the engine is between 240 hp and 500 hp. The engine must be registered by submitting a completed Form PI-7 and a Table 29 within 10 days after construction begins and must comply with conditions (5) and (6) of this rule. If "YES," in addition to registration, the engine must operate in compliance with the following nitrogen (NOx) emission limit(s). Check the limit(s) applicable to this engine by answering the following:	EPN ENG2	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(2)(A)(i)	The engine is a gas-fired, rich-burn engine and will not exceed 2.0 grams per horsepower hour (g/hp-hr) under all operating conditions.	EPN NO_X G/HP-HR ENG2	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(2)(A)(ii)	The engine is a spark-ignited, gas-fired, lean-burn engine or any compression-ignited, dual fuel-fired engine manufactured new after June 18, 1992, and will not exceed 2.0 g/hp-hr NOx at manufacturer's rated full load and speed at all times; except, the engine will not exceed 5.0 g/hp-hr NOx under reduced speed and 80% and 100% of full torque conditions.	EPN NO_X G/HP-HR ENG2	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(2)(A)(iii)	The engine is any spark-ignited, lean-burn two-cycle or four-cycle engine or any compression-ignited, dual fuel-fired engine rated 825 hp or greater and manufactured between September 23, 1982 and June 18, 1992, and will not exceed 5.0 g/hp-hr NOx under all operating conditions.	EPN NO_X G/HP-HR ENG2	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(2)(A)(iv)	The engine is any spark-ignited, gas-fired, lean-burn, four-cycle engine or compression-ignited, dual-fuel-fired engine that was manufactured before June 18, 1992, and is rated less than 825 hp, or was manufactured before September 23, 1982, and will not exceed 5.0 g/hp-hr NOx at manufacturer's rated full load and speed at all times; except, the engine will not exceed 8.0 g/hp-hr NOx under reduced speed and 80% and 100% of full torque conditions.	EPN NO_X G/HP-HR ENG2	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(2)(A)(v)	The engine is any spark-ignited, gas-fired, two-cycle, lean-burn engine that was manufactured before June 18, 1992, and is rated less than 825 hp, or was manufactured before September 23, 1982, and will not exceed 8.0 g/hp-hr NOx under all operating conditions.	EPN NO_X G/HP-HR ENG2	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(2)(A)(vi)	The engine is any compression-ignited, liquid-fired engine and will not exceed 11.0 g/hp-hr NOx under all operating conditions.	EPN NO_X G/HP-HR ENG2	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(2)(B)	Does the engine require an automatic air-fuel ratio controller to meet the NOx limit(s) above?	EPN ENG2	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(2)(B)	For spark-ignited gas-fired or compression-ignited dual fuel-fired engines, is the engine required to have an automatic air-fuel ratio controller under condition (2)(B) of the PBR?	EPN ENG2	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO

Ineos USA Oil & Gas LLC
Mckenzie-Foley Unit B MCM Pad
RN NO.: RN106552607
DATE: 02/26/2024

Stationary Engines and Turbines
Air Permits by Rule (PBR) Checklist
Title 30 Texas Administrative Code § 106.512

CHECK THE MOST APPROPRIATE ANSWERS AND FILL IN THE BLANKS			
Rule	**Questions/Descriptions**	**Information**	**Response**
(2)(C)	Are you aware of and accept responsibility for the record and testing requirements as specified in (2)(C) of the PBR?		[X] YES [ ] NO
(3)	Is the turbine rated 500 hp or more? *If "NO," the turbine is between 240 hp and 500 hp. The engine only needs to be registered by submitting a completed Form PI-7 and a Table 31 within 10 days after construction begins.* *If "YES," in addition to registration, the turbine must operate in compliance with the following emission limit(s).*	EPN	[ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(3)(A)	Will the emissions of NOx exceed 3.0 g/hp-hr for gas-firing?	EPN	[ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(3)(B)	Will the turbine meet all applicable NOx and sulfur dioxide (or fuel sulfur) emission limitations, monitoring requirements, and reporting requirements of 40 CFR Part 60, NSPS Subpart GG?	EPN	[ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(4)	Is the engine or turbine rated less than 500 hp or used for temporary replacement purposes? *If "NO," go to Question (5).* *If "YES," the equipment does not have to meet the emission limits of (2) and (3). However, the temporary replacement equipment can only remain in service for a maximum of 90 days.*	EPN ENG2	[X] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(5)	What type of fuel will be used and will the fuel meet the requirements of the PBR? *Indicate the fuel(s) used.*	EPN FUEL ENG2 GASOLINE	[X] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
(6)	Does the installation comply with the National Ambient Air Quality Standards (NAAQS)? *Note: Indicate which method is used and attach the modeling report and/or calculations and diagrams to support the selected method.*	[X] MODELING [ ] STACK HEIGHT [ ] FACILITY EMISSIONS & PROPERTY LINE DISTANCE	[X] YES [ ] NO
(6)	Have you included a modeling report and/or calculations and diagrams to support the selected NAAQS compliance determination method?		[X] YES [ ] NO
	For the following questions, please refer to the Electric Generators under Permit by Rule policy memo from October 2006.		
(7)	Is the engine or turbine used to generate electricity? *If "NO," the following do not apply.*	EPN ENG2	[ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO

Ineos USA Oil & Gas LLC
Mckenzie-Foley Unit B MCM Pad
RN NO.: RN106552607
DATE: 02/26/2024

Stationary Engines and Turbines
Air Permits by Rule (PBR) Checklist
Title 30 Texas Administrative Code § 106.512

CHECK THE MOST APPROPRIATE ANSWERS AND FILL IN THE BLANKS			
Rule	**Questions/Descriptions**	**Information**	**Response**
(7)	Will the engine or turbine be used to generate electricity to operate facilities authorized by a New Source Review Permit? *If "YES," the engine or turbine does not qualify for this PBR and authorization must be obtained through a permit amendment.*	EPN ENG2	☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
(7)	If the engine or turbine is used to generate electricity, will it be exclusively for on-site use at locations which cannot be connected to an electric grid? REFER TO PROCESS DESCRIPTION IN APPLICATION. *If "YES," describe why access to the electric grid is not available.* *If "NO," the engine or turbine does not qualify for this PBR.*	EPN ENG2	☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
(7)	Has an Electric Generating Unit Standard Permit been issued for one of the following activities for which the engine or turbine will only be used to generate electricity? ☐ Engines or turbines used to provide power for the operation of facilities registered under the Air Quality Standard Permit for Concrete Batch Plants. ☐ Engines or turbines satisfying the conditions for facilities permitted by rule under 30 TAC 106, Subchapter E (relating to Aggregate and Pavement). ☐ Engines or turbines used exclusively to provide power to electric pumps used for irrigating crops. *If "NO," the engine or turbine does not qualify for this PBR.*	EPN ENG2	☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
Rule	**Other Applicable Rules and Regulations**	**Why or Why Not?**	**Response**
	If the engine or turbine is located in the Houston/Galveston nonattainment area, is the site subject to the Mass Emission Cap and Trade Program? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	☐ YES ☒ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
	Is the facility subject to 30 TAC Chapter 115? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	☐ YES ☒ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
	Is the facility subject to 30 TAC Chapter §§ 117.201-223? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	☐ YES ☒ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
	Is the facility subject to 40 CFR Part 60, NSPS Subpart D? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	☐ YES ☒ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO
	Is the facility subject to 40 CFR Part 60, NSPS Subpart Da? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	☐ YES ☒ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO ☐ YES ☐ NO

Ineos USA Oil & Gas LLC
Mckenzie-Foley Unit B MCM Pad
RN NO.: RN106552607
DATE: 02/26/2024

Stationary Engines and Turbines
Air Permits by Rule (PBR) Checklist
Title 30 Texas Administrative Code § 106.512

CHECK THE MOST APPROPRIATE ANSWERS AND FILL IN THE BLANKS			
Rule	**Other Applicable Rules and Regulations**	**Why or Why Not?**	**Response**
	Is the facility subject to 40 CFR Part 60, NSPS Subpart Db? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
	Is the facility subject to 40 CFR Part 60, NSPS Subpart Dc? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
	Is the facility subject to 40 CFR Part 60, NSPS Subpart GG? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
	Is the facility subject to 40 CFR Part 60, NSPS Subpart IIII? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
	Is the facility subject to 40 CFR Part 60, NSPS Subpart JJJJ? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	[X] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
	Is the facility subject to 40 CFR Part 63, MACT Subpart YYYY? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
	Is the facility subject to 40 CFR Part 63, MACT Subpart ZZZZ? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	[X] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO
	Is the facility subject to 40 CFR Part 63, MACT Subpart PPPPP? NOTE: REFER TO APPLICATION TEXT/DISCUSSION	EPN ENG2 SEE NOTE	[ ] YES [X] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO [ ] YES [ ] NO

Record Keeping: In order to demonstrate compliance with the general and specific requirements of this PBR, sufficient records must be maintained to demonstrate that all requirements are met at all times. If the engine or turbine is rated greater than 500 horsepower, all records must be maintained as required by 30 TAC § 106.512(2)(C). The registrant should also become familiar with the additional record keeping requirements in 30 TAC § 106.8. The records must be made available immediately upon request to the commission or any air pollution control program having jurisdiction. If you have any questions about the type of records that should be maintained or testing requirements, contact the Air Program in the TCEQ Regional Office for the region in which the site is located.

Recommended Calculation Method: In order to demonstrate compliance with this PBR, emission factors for each air contaminant from the EPA Compilation of Air Pollutant Emission Factors (AP-42), Fifth Edition, Volume 1, Section 3.1: Stationary Gas Turbines for Electricity Generation at: www.epa.gov/ttn/chief/ap42/index.html should be used, including, the specific air contaminant's emission limit listed on the table below.

Stationary Engines and Turbines
Air Permits by Rule (PBR) Checklist
Title 30 Texas Administrative Code § 106.512

TCEQ Exemption 30 TAC 106.512 General Guidelines										
NO x g/hp-hr Emission Limits										
Date Original Manufacture		NA	NA	Before 9/23/82		9/23/82 to 6/18/92			After 6/18/92	
Mfg. Rate Horsepower		<240	>240 <500	>500*		500-824*		>825	>500*	
Operating Speed Operating Torque		NA	NA	Full NA	Reduced 80-100%	Full NA	Reduced 80-100%	NA	Full NA	Reduced 80-100%
Ignition Type	*Engine Combustion Design*									
Spark	Rich Burn ++ Lean Burn** 2-Cycle	NA NA NA	NA NA NA	2.0 5.0 8.0	2.0 8.0 8.0	2.0 5.0 8.0	2.0 8.0 8.0	2.0 5.0 5.0	2.0 2.0 2.0	2.0 5.0 5.0
Compression	Dual Fuel Liquid Fuel	NA NA NA	NA NA NA	5.0 11.0	8.0 11.0	5.0 11.0	8.0 11.0	5.0 11.0	2.0 11.0	5.0 11.0
	Turbines+	NA	NA	3.0	3.0	3.0	3.0	3.0	3.0	3.0
PI-7 Registration Emission Testing		No No	Yes Biennial	Yes Biennial	Yes Biennial	Yes Biennial	Yes Biennial	Yes Biennial	Yes Biennial	Yes Biennial

Notes:

* Lower emission rates apply to lean-burn engine operationg: Full Speed & Any Torque or Any Speed & <80% or >100% Torque

+ Turbine emissions are also regulated by EPA NSPS Standards for NOx and SO2

** Lean-Burn > 4% exhaust O_2

++ Rich-Burn <= 4% exhaust O2

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
HT1	HT1	; MAKE: UNKNOWN; MODEL: UNKNOWN; NATURAL GAS; 1.000 MMBTU/HR; 8,760.000 HRS/YR; UNCONTROLLED; HEATER-TREATER; VENTING TO ATMOSPHERE; 106.352(L)	NOX	0.098	0.429
			CO	0.082	0.361
			SO2	0.001	0.003
			PM10	0.007	0.033
			PM2.5	0.007	0.033
			H2S	0.000	0.000
			Lead	0.000	0.000
			VOC-total	0.005	0.024
			VOC-u		
			VOC-HAP-total	0.002	0.008
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.000	0.000
			DICHLOROBENZENE	0.000	0.000
			ETHYLBENZENE		
			FORMALDEHYDE	0.000	0.000
			HEXANE-N	0.002	0.008
			METHANOL		
			TOLUENE	0.000	0.000
			XYLENE-M		
			XYLENE-O	0.000	0.000
			XYLENE-P		
			VOC(HAP)-u		
			METHANE	0.002	0.010
			ETHANE	0.003	0.013
			CO2	117.647	515.294
EPN = Emission Point Number; FIN = Facility Identification Number				117.857	516.215

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
TANK1	TANK1	: STABILIZED CRUDE @ 9.610 PSIA; SERIAL NO.: UNKNOWN; TYPE/SIZE: VFR; 16,800.000 GALLONS; THROUGHPUT: 10.646 TURN-OVERS/YR; 11.667 BBLS/D; 8,760.000 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; STATUS: EXISTING; COMMENTS: CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	0.126	0.554
			VOC-u	0.002	0.008
			VOC-HAP-total	0.003	0.014
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.000	0.001
			DICHLOROBENZENE		
			ETHYLBENZENE	0.000	0.000
			FORMALDEHYDE		
			HEXANE-N	0.003	0.011
			METHANOL		
			TOLUENE	0.000	0.001
			XYLENE-M	0.000	0.001
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2	0.042	0.184
EPN = Emission Point Number; FIN = Facility Identification Number				0.177	0.775

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
TANK2	TANK2	: STABILIZED CRUDE @ 9.610 PSIA; SERIAL NO.: UNKNOWN; TYPE/SIZE: VFR; 16,800.000 GALLONS; THROUGHPUT: 10.646 TURN-OVERS/YR; 11.667 BBLS/D; 8,760.000 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; STATUS: EXISTING; COMMENTS: CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	0.126	0.554
			VOC-u	0.002	0.008
			VOC-HAP-total	0.003	0.014
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.000	0.001
			DICHLOROBENZENE		
			ETHYLBENZENE	0.000	0.000
			FORMALDEHYDE		
			HEXANE-N	0.003	0.011
			METHANOL		
			TOLUENE	0.000	0.001
			XYLENE-M	0.000	0.001
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2	0.042	0.184
EPN = Emission Point Number; FIN = Facility Identification Number				0.177	0.775

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
TANK5	TANK5	: PRODUCED WATER @ 9.610 PSIA; SERIAL NO.: UNKNOWN; TYPE/SIZE: VFR; 16,800.000 GALLONS; THROUGHPUT: 0.160 TURN-OVERS/YR; 0.175 BBLS/D; 8,760.000 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; STATUS: EXISTING; COMMENTS: PRODUCED WATER TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.001
			Lead		
			VOC-total	0.175	0.765
			VOC-u	0.002	0.011
			VOC-HAP-total	0.004	0.020
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.000	0.002
			DICHLOROBENZENE		
			ETHYLBENZENE	0.000	0.000
			FORMALDEHYDE		
			HEXANE-N	0.003	0.015
			METHANOL		
			TOLUENE	0.000	0.002
			XYLENE-M	0.000	0.001
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2	0.058	0.254
EPN = Emission Point Number; FIN = Facility Identification Number				0.244	1.069

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
TANK3	TANK3	: STABILIZED CRUDE @ 9.610 PSIA; SERIAL NO.: UNKNOWN; TYPE/SIZE: VFR; 16,800.000 GALLONS; THROUGHPUT: 10.646 TURN-OVERS/YR; 11.667 BBLS/D; 8,760.000 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; STATUS: EXISTING; COMMENTS: CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	0.126	0.554
			VOC-u	0.002	0.008
			VOC-HAP-total	0.003	0.014
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.000	0.001
			DICHLOROBENZENE		
			ETHYLBENZENE	0.000	0.000
			FORMALDEHYDE		
			HEXANE-N	0.003	0.011
			METHANOL		
			TOLUENE	0.000	0.001
			XYLENE-M	0.000	0.001
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2	0.042	0.184
EPN = Emission Point Number; FIN = Facility Identification Number				0.177	0.775

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
C LOAD 1	C LOAD 1	LOADING 1: STABILIZED CRUDE @ 8.74553752 PSIA; THROUGHPUT: 536,550.000 GALLONS/YR; 35.000 BBLS/D; 70.972 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; COMMENTS: CRUDE LOADING; VENTING TO ATMOSPHERE; 106.352(L)	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	34.272	1.216
			VOC-u	0.006	0.000
			VOC-HAP-total	0.012	0.000
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.001	0.000
			DICHLOROBENZENE		
			ETHYLBENZENE	0.000	0.000
			FORMALDEHYDE		
			HEXANE-N	0.009	0.000
			METHANOL		
			TOLUENE	0.001	0.000
			XYLENE-M	0.000	0.000
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2		
EPN = Emission Point Number; FIN = Facility Identification Number				34.302	1.217

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
PW LOAD 1	PW LOAD 1	LOADING 2: PRODUCED WATER @ 8.74553752 PSIA; THROUGHPUT: 268,275.000 GALLONS/YR; 17.500 BBLS/D; 35.486 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; COMMENTS: PRODUCED WATER LOADING; ASSUMED 1% CRUDE BY VOLUME; VENTING TO ATMOSPHERE; 106.352(L)	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	0.343	0.006
			VOC-u	0.000	0.000
			VOC-HAP-total	0.000	0.000
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.000	0.000
			DICHLOROBENZENE		
			ETHYLBENZENE	0.000	0.000
			FORMALDEHYDE		
			HEXANE-N	0.000	0.000
			METHANOL		
			TOLUENE	0.000	0.000
			XYLENE-M	0.000	0.000
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2		
EPN = Emission Point Number; FIN = Facility Identification Number				0.343	0.006

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
HT1-FLASH	HT1-FLASH	FLASH 1: CRUDE/NATURAL GAS; THROUGHPUT: 12,838.875 BBLS/YR; 35.175 BBLS/D; FLASHING FROM 111.400 PSIG TO 14.270 PSIG; PRIMARY/SECONDARY CONTROLS: TO ATMOSPHERE / TO ATMOSPHERE; COMMENTS: HEATER-TREATER CRUDE FLASH VAPORS; VENTING TO ATMOSPHERE; 106.352(l)	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.004	0.016
			Lead		
			VOC-total	4.070	17.827
			VOC-u	0.057	0.251
			VOC-HAP-total	0.104	0.456
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.009	0.042
			DICHLOROBENZENE		
			ETHYLBENZENE	0.001	0.003
			FORMALDEHYDE		
			HEXANE-N	0.081	0.354
			METHANOL		
			TOLUENE	0.009	0.040
			XYLENE-M	0.004	0.017
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2	1.353	5.927
EPN = Emission Point Number; FIN = Facility Identification Number				5.692	24.932

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
FUG	FUG	FUGITIVES 1; LIGHT-LIQUID COMPONENTS / NATURAL GAS COMPONENTS / : 8,760.000 HRS/YR; MONITORING PROGRAM: / / / ; COMMENTS: SITE FUGITIVE EMISSIONS; 106.352(l)	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	0.682	2.985
			VOC-u	0.000	0.001
			VOC-HAP-total	0.000	0.001
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.000	0.000
			DICHLOROBENZENE		
			ETHYLBENZENE	0.000	0.000
			FORMALDEHYDE		
			HEXANE-N	0.000	0.001
			METHANOL		
			TOLUENE	0.000	0.000
			XYLENE-M	0.000	0.000
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2		
EPN = Emission Point Number; FIN = Facility Identification Number				0.682	2.988

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
MSS 1	MSS 1	BLOW DOWNS 1: THROUGHPUT: 25.000 SCF/BLOWDOWN @ 25.00 BLOWDOWNS/MONTH; 0.008 MMSCF/YR; 300.000 HRS/YR; COMMENTS: MSS ACTIVITY; VAPORS VENTED TO ATMOSPHERE DURING MSS ACTIVITIES; 106.359	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	0.074	0.011
			VOC-u	0.001	0.000
			VOC-HAP-total	0.002	0.000
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.000	0.000
			DICHLOROBENZENE		
			ETHYLBENZENE	0.000	0.000
			FORMALDEHYDE		
			HEXANE-N	0.001	0.000
			METHANOL		
			TOLUENE	0.000	0.000
			XYLENE-M	0.000	0.000
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2	0.025	0.004
EPN = Emission Point Number; FIN = Facility Identification Number				0.104	0.016

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
MSS 2	MSS 2	BLOW DOWNS 2: THROUGHPUT: 5,620.000 SCF/BLOWDOWN @ 0.08 BLOWDOWNS/MONTH; 0.006 MMSCF/YR; 1.000 HRS/YR; COMMENTS: MSS ACTIVITY; STORAGE TANK DE-GASSING DURING MAINTENANCE ACTIVITY; ASSUME DE-GASSING 1 TANK/YEAR; VENTS TO ATMOSPHERE; 106.359	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	16.676	0.008
			VOC-u	0.234	0.000
			VOC-HAP-total	0.426	0.000
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.039	0.000
			DICHLOROBENZENE		
			ETHYLBENZENE	0.003	0.000
			FORMALDEHYDE		
			HEXANE-N	0.331	0.000
			METHANOL		
			TOLUENE	0.038	0.000
			XYLENE-M	0.016	0.000
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2	5.544	0.003
EPN = Emission Point Number; FIN = Facility Identification Number				23.308	0.012

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
MSS 3	MSS 3	BLOW DOWNS 3: THROUGHPUT: 1,200.000 SCF/BLOWDOWN @ 1.00 BLOWDOWNS/MONTH; 0.115 MMSCF/YR; 96.000 HRS/YR; COMMENTS: MSS ACTIVITIES; MISC. ABRASIVE BLASTING/COATING ACTIVITIES; VENTS TO ATMOSPHERE; AREA SOURCE; 106.359	NOX		
			CO		
			SO2		
			PM10	0.062	0.003
			PM2.5	0.062	0.003
			H2S	0.000	0.000
			Lead		
			VOC-total	2.989	0.143
			VOC-u		
			VOC-HAP-total	2.335	0.112
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.467	0.022
			DICHLOROBENZENE		
			ETHYLBENZENE	0.467	0.022
			FORMALDEHYDE		
			HEXANE-N	0.467	0.022
			METHANOL		
			TOLUENE	0.467	0.022
			XYLENE-M	0.467	0.022
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2		
EPN = Emission Point Number; FIN = Facility Identification Number				7.783	0.374

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
VENTING 1	VENTING 1	BLOW DOWNS 4: THROUGHPUT: 2.250 SCF/BLOWDOWN @ 182.50 BLOWDOWNS/MONTH; 0.005 MMSCF/YR; 2,190.000 HRS/YR; COMMENTS: PNEUMATIC DEVICE; VENTING TO ATMOSPHERE; 106.352(l)	NOX		
			CO		
			SO2		
			PM10		
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	0.007	0.007
			VOC-u	0.000	0.000
			VOC-HAP-total	0.000	0.000
			ACETALDEHYDE		
			ACROLEIN		
			BENZENE	0.000	0.000
			DICHLOROBENZENE		
			ETHYLBENZENE	0.000	0.000
			FORMALDEHYDE		
			HEXANE-N	0.000	0.000
			METHANOL		
			TOLUENE	0.000	0.000
			XYLENE-M	0.000	0.000
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE		
			ETHANE		
			CO2	0.002	0.002
EPN = Emission Point Number; FIN = Facility Identification Number				0.009	0.010

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
ENG2	ENG2	LQUID FUEL ENGINE 1: HONDA GX160; SERIAL NO.: GCBPT-1482867; 4.8 HP; FUEL: GASOLINE; 4S-RB; CONTROL: NONE; 8,760.000 HRS/YR; PERMIT STATUS: UN-MODIFIED; COMMENTS: GASOLINE POWERED PUMP ENGINE	NOX	0.070	0.307
			CO	2.830	12.395
			SO2	0.003	0.012
			PM10	0.003	0.015
			PM2.5		
			H2S	0.000	0.000
			Lead		
			VOC-total	0.070	0.306
			VOC-u		
			VOC-HAP-total	0.020	0.088
			ACETALDEHYDE	0.000	0.000
			ACROLEIN	0.000	0.000
			BENZENE	0.000	0.000
			DICHLOROBENZENE		
			ETHYLBENZENE		
			FORMALDEHYDE	0.020	0.088
			HEXANE-N		
			METHANOL		
			TOLUENE	0.000	0.000
			XYLENE-M	0.000	0.000
			XYLENE-O		
			XYLENE-P		
			VOC(HAP)-u		
			METHANE	0.000	0.000
			ETHANE	0.000	0.000
			CO2	5.174	22.664
EPN = Emission Point Number; FIN = Facility Identification Number				8.191	35.875

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
EPN	FIN	NAME		PPH	TPY
(A)	(B)	(C)		(A)	(B)
SITE-WIDE TOTAL	SITE-WIDE TOTAL	SITE-WIDE TOTAL	NOX	0.168	0.736
			CO	2.912	12.756
			SO2	0.003	0.015
			PM10	0.073	0.050
			PM2.5	0.070	0.036
			H2S	0.005	0.018
			Lead	0.000	0.000
			VOC-total	59.741	24.961
			VOC-u	0.307	0.286
			VOC-HAP-total	2.915	0.728
			ACETALDEHYDE	0.000	0.000
			ACROLEIN	0.000	0.000
			BENZENE	0.518	0.070
			DICHLOROBENZENE	0.000	0.000
			ETHYLBENZENE	0.471	0.026
			FORMALDEHYDE	0.020	0.088
			HEXANE-N	0.902	0.434
			METHANOL		
			TOLUENE	0.517	0.069
			XYLENE-M	0.487	0.041
			XYLENE-O	0.000	0.000
			XYLENE-P		
			VOC(HAP)-u		
			METHANE	0.002	0.010
			ETHANE	0.003	0.013
			CO2	129.930	544.700
EPN = Emission Point Number; FIN = Facility Identification Number				199.045	585.037

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Table 1(a) Emission Point Summary

Note:
1 A VALUE OF 0.000 INDICATES VALUE IS <0.0005

Permit Number:	PI-7-CERT Registration	**RN Number:**	RN106552607	**Date:**	2/26/2024
Company Name:	Ineos USA Oil & Gas LLC				

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA			**EMISSION POINT DISCHARGE PARAMETERS**									
1. Emission Point			**4. UTM Coordinates of Emission Point**			**Source**						
						5.	**6. Stack Exit Data**			**7. Fugitives**		
EPN (A)	**FIN (B)**	**NAME (C)**	**Zone**	**East (Meters)**	**North (Meters)**	**Ht. AGL (Feet)**	**Dia. (Feet) (A)**	**Velocity (fps) (B)**	**Temp. (f) (C)**	**Len. (ft.) (A)**	**Wid. (ft.) (B)**	**Axis Degrees (C)**
HT1	HT1	; MAKE: UNKNOWN; MODEL: UNKNOWN; NATURAL GAS; 1.000 MMBTU/HR; 8,760.000 HRS/YR; UNCONTROLLED; HEATER-TREATER; VENTING TO ATMOSPHERE; 106.352(L)	14R	534,830	3,152,876	20.00	1.00	8.94	850			
TANK1	TANK1	: STABILIZED CRUDE @ 9.610 PSIA; SERIAL NO.: UNKNOWN; TYPE/SIZE: VFR; 16,800.000 GALLONS; THROUGHPUT: 10.646 TURN-OVERS/YR; 11.667 BBLS/D; 8,760.000 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; STATUS: EXISTING; COMMENTS: CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	14R	534,830	3,152,876	21.00	0.50	0.00	90			
TANK2	TANK2	: STABILIZED CRUDE @ 9.610 PSIA; SERIAL NO.: UNKNOWN; TYPE/SIZE: VFR; 16,800.000 GALLONS; THROUGHPUT: 10.646 TURN-OVERS/YR; 11.667 BBLS/D; 8,760.000 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; STATUS: EXISTING; COMMENTS: CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	14R	534,830	3,152,876	21.00	0.50	0.00	90			

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Table 1(a) Emission Point Summary

Note:
1 A VALUE OF 0.000 INDICATES VALUE IS <0.0005

Permit Number:	PI-7-CERT Registration	**RN Number:**	RN106552607	**Date:**	2/26/2024
Company Name:	Ineos USA Oil & Gas LLC				

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA			**EMISSION POINT DISCHARGE PARAMETERS**									
1. Emission Point			**4. UTM Coordinates of Emission Point**			**Source**						
						5.	**6. Stack Exit Data**			**7. Fugitives**		
EPN (A)	**FIN (B)**	**NAME (C)**	**Zone**	**East (Meters)**	**North (Meters)**	**Ht. AGL (Feet)**	**Dia. (Feet) (A)**	**Velocity (fps) (B)**	**Temp. (f) (C)**	**Len. (ft.) (A)**	**Wid. (ft.) (B)**	**Axis Degrees (C)**
TANK5	TANK5	: PRODUCED WATER @ 9.610 PSIA; SERIAL NO.: UNKNOWN; TYPE/SIZE: VFR; 16,800.000 GALLONS; THROUGHPUT: 0.160 TURN-OVERS/YR; 0.175 BBLS/D; 8,760.000 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; STATUS: EXISTING; COMMENTS: PRODUCED WATER TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	14R	534,830	3,152,876	21.00	0.50	0.00	90			
TANK3	TANK3	: STABILIZED CRUDE @ 9.610 PSIA; SERIAL NO.: UNKNOWN; TYPE/SIZE: VFR; 16,800.000 GALLONS; THROUGHPUT: 10.646 TURN-OVERS/YR; 11.667 BBLS/D; 8,760.000 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; STATUS: EXISTING; COMMENTS: CRUDE TANK; 400 BBL; VENTING TO ATMOSPHERE; 106.352(l)	14R	534,830	3,152,876	21.00	0.50	0.00	90			
C LOAD 1	C LOAD 1	LOADING 1: STABILIZED CRUDE @ 8.74553752 PSIA; THROUGHPUT: 536,550.000 GALLONS/YR; 35.000 BBLS/D; 70.972 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; COMMENTS: CRUDE LOADING; VENTING TO ATMOSPHERE; 106.352(L)	14R	534,830	3,152,876	8.00	0.50	0.23	90			

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Table 1(a) Emission Point Summary

Note:
1 A VALUE OF 0.000 INDICATES VALUE IS <0.0005

Permit Number:	PI-7-CERT Registration	**RN Number:**	RN106552607	**Date:**	2/26/2024
Company Name:	Ineos USA Oil & Gas LLC				

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA			**EMISSION POINT DISCHARGE PARAMETERS**									
1. Emission Point			**4. UTM Coordinates of Emission Point**			**Source**						
						5.	**6. Stack Exit Data**			**7. Fugitives**		
EPN (A)	**FIN (B)**	**NAME (C)**	**Zone**	**East (Meters)**	**North (Meters)**	**Ht. AGL (Feet)**	**Dia. (Feet) (A)**	**Velocity (fps) (B)**	**Temp. (f) (C)**	**Len. (ft.) (A)**	**Wid. (ft.) (B)**	**Axis Degrees (C)**
PW LOAD 1	PW LOAD 1	LOADING 2: PRODUCED WATER @ 8.74553752 PSIA; THROUGHPUT: 268,275.000 GALLONS/YR; 17.500 BBLS/D; 35.486 HRS/YR; PRIMARY/SECONDARY CONTROLS: TO AIR / TO AIR; COMMENTS: PRODUCED WATER LOADING; ASSUMED 1% CRUDE BY VOLUME; VENTING TO ATMOSPHERE; 106.352(L)	14R	534,830	3,152,876	8.00	0.50	0.00	90			
HT1-FLASH	HT1-FLASH	FLASH 1: CRUDE/NATURAL GAS; THROUGHPUT: 12,838.875 BBLS/YR; 35.175 BBLS/D; FLASHING FROM 111.400 PSIG TO 14.270 PSIG; PRIMARY/SECONDARY CONTROLS: TO ATMOSPHERE / TO ATMOSPHERE; COMMENTS: HEATER-TREATER CRUDE FLASH VAPORS; VENTING TO ATMOSPHERE; 106.352(l)	14R	534,830	3,152,876	30.00	1.00	0.02	80			
FUG	FUG	FUGITIVES 1; LIGHT-LIQUID COMPONENTS / NATURAL GAS COMPONENTS / : 8,760.000 HRS/YR; MONITORING PROGRAM: / / / ; COMMENTS: SITE FUGITIVE EMISSIONS; 106.352(l)	14R	534,830	3,152,876	3.00	0.01	0.01	90			

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Table 1(a) Emission Point Summary

Note:
1 A VALUE OF 0.000 INDICATES VALUE IS <0.0005

Permit Number:	PI-7-CERT Registration	**RN Number:**	RN106552607	**Date:**	2/26/2024
Company Name:	Ineos USA Oil & Gas LLC				

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA			**EMISSION POINT DISCHARGE PARAMETERS**									
1. Emission Point			**4. UTM Coordinates of Emission Point**			**Source**						
						5.	**6. Stack Exit Data**			**7. Fugitives**		
EPN (A)	**FIN (B)**	**NAME (C)**	**Zone**	**East (Meters)**	**North (Meters)**	**Ht. AGL (Feet)**	**Dia. (Feet) (A)**	**Velocity (fps) (B)**	**Temp. (f) (C)**	**Len. (ft.) (A)**	**Wid. (ft.) (B)**	**Axis Degrees (C)**
MSS 1	MSS 1	BLOW DOWNS 1: THROUGHPUT: 25.000 SCF/BLOWDOWN @ 25.00 BLOWDOWNS/MONTH; 0.008 MMSCF/YR; 300.000 HRS/YR; COMMENTS: MSS ACTIVITY; VAPORS VENTED TO ATMOSPHERE DURING MSS ACTIVITIES; 106.359	14R	534,830	3,152,876	20.00	0.50	0.00	90			
MSS 2	MSS 2	BLOW DOWNS 2: THROUGHPUT: 5,620.000 SCF/BLOWDOWN @ 0.08 BLOWDOWNS/MONTH; 0.006 MMSCF/YR; 1.000 HRS/YR; COMMENTS: MSS ACTIVITY; STORAGE TANK DE-GASSING DURING MAINTENANCE ACTIVITY; ASSUME DE-GASSING 1 TANK/YEAR; VENTS TO ATMOSPHERE; 106.359	14R	534,830	3,152,876	20.00	0.50	0.26	90			
MSS 3	MSS 3	BLOW DOWNS 3: THROUGHPUT: 1,200.000 SCF/BLOWDOWN @ 1.00 BLOWDOWNS/MONTH; 0.115 MMSCF/YR; 96.000 HRS/YR; COMMENTS: MSS ACTIVITIES; MISC. ABRASIVE BLASTING/COATING ACTIVITIES; VENTS TO ATMOSPHERE; AREA SOURCE; 106.359	14R	534,830	3,152,876	3.00	0.25	0.08	90			

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Table 1(a) Emission Point Summary

Note:
1 A VALUE OF 0.000 INDICATES VALUE IS <0.0005

Permit Number:	PI-7-CERT Registration	**RN Number:**	RN106552607	**Date:**	2/26/2024
Company Name:	Ineos USA Oil & Gas LLC				

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA			**EMISSION POINT DISCHARGE PARAMETERS**									
1. Emission Point			**4. UTM Coordinates of Emission Point**			**Source**						
						5.	**6. Stack Exit Data**			**7. Fugitives**		
EPN (A)	**FIN (B)**	**NAME (C)**	**Zone**	**East (Meters)**	**North (Meters)**	**Ht. AGL (Feet)**	**Dia. (Feet) (A)**	**Velocity (fps) (B)**	**Temp. (f) (C)**	**Len. (ft.) (A)**	**Wid. (ft.) (B)**	**Axis Degrees (C)**
VENTING 1	VENTING 1	BLOW DOWNS 4: THROUGHPUT: 2.250 SCF/BLOWDOWN @ 182.50 BLOWDOWNS/MONTH; 0.005 MMSCF/YR; 2,190.000 HRS/YR; COMMENTS: PNEUMATIC DEVICE; VENTING TO ATMOSPHERE; 106.352(l)	14R	534,830	3,152,876	3.00	0.25	0.00	90			
ENG2	ENG2	LQUID FUEL ENGINE 1: HONDA GX160; SERIAL NO.: GCBPT-1482867; 4.8 HP; FUEL: GASOLINE; 4S-RB; CONTROL: NONE; 8,760.000 HRS/YR; PERMIT STATUS: UN-MODIFIED; COMMENTS: GASOLINE POWERED PUMP ENGINE	14R	534,830	3,152,876	2.00	0.08	3,080.36	1,200			

Texas Commission on Environmental Quality
Table 29 Reciprocating Engines

I. Engine Data																			
Manufacturer: HONDA			**Model No.:** GX160			**Serial No.:** GCBPT-1482867			**Manufacture Date:** 3/1/2013										
Rebuild Date: NA			**No. of Cylinders:** 1			**Compression Ratio:** 9.01:1			**EPN:** ENG2										
Application:		Gas Compression			Electric Generation			Refrigeration			Emergency/Stand-by								
X	4 Stroke Cycle		2 Stroke Cycle	X	Carbureted	X	Spark Ignited		Dual Fuel		Fuel Injected								
	Diesel	X	Naturally Aspirated		Blower/Pump Scavenged		Turbo Chared and I.C.		Turbo Charged										
	Intercooled		I.C. Water Temperature				Lean Burn	X	Rich Burn										
Ignition/Injection Timing:		Fixed: Yes				Variable:													
Manufacture Horsepower Rating: 4.8					Proposed Horsepower Rating: 4.80														
Discharge Parameters																			
Stack Height (Feet)		**Stack Diameter (Feet)**			**Stack Temperature (deg. F)**			**Exit Velocity (FPS)**											
2.00		0.08			1,200.00			3,080.361											
II. Fuel Data																			
Type of Fuel:		Field Gas		Landfill Gas		LP Gas		Natural Gas		Digester Gas		Diesel							
Fuel Use (BTU/bhp-hr): ####			Heat Value 132,000.00 (HHV)				132,000.00 (LHV)												
Sulfur Content (grains/100 scf - weight %):																			
III. Emission Factors (Before Control)																			
NO x		**CO**		**SO2**		**VOC**		**F-aldehyde**		**PM10**									
g/hp-hr	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**								
6.62		267.44		2.667E-01		6.60		1.890		0.318									
Source of Emission Factors:		X	Manufacturer Data	X	AP-42		Other (specify):												
IV. Emission Factors (Post Control)																			
NO x		**CO**		**SO2**		**VOC**		**F-aldehyde**		**PM10**									
g/hp-hr	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**	**g/hp-hr**	**ppmv**								
6.62		267.44		2.667E-01		6.60		1.890		0.318									
Method of Emissions Control:		NSCR Catalyst		Lean Operation		Parameter Adjustment													
	Stratified Charge		JLCC Catalyst		Other (specify):														
Note : *Must submit a copy of any manufacturer control information that demonstrates control efficiency.*																			
Is Formaldehyde included in VOC?									X	Yes		No							
V. Federal and State Standards (check all that apply)																			
X	NSPS JJJ	X	MACT ZZZZ		NSPS IIII		Title 30 Chapter 117 - List County: Mc Mullen												
VI. Additional Information																			

1. Submit a copy of the engine manufacturer's site rating or general rating specification data.
2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gasaeous fuels, provide mole percent of constituents.
3. Submit description of air/fuel ratio control system (manufacturer information is acceptable).

2.10 Supporting Documentation/Simulations

COMPANY	Ineos USA Oil & Gas LLC
SITE NAME	Mckenzie-Foley Unit B MCM Pad
DATE	02/26/24
TANK TYPE	VERTICLE FIXED ROOF
TANK TYPE	UN-INSULATED
TANK TYPE	CONE ROOF
FILL TYPE	SUBMERGED LOADING
CITY/STATE	SAN ANTONIO, TEXAS
TANK PAINT	BLACK
TANK CONDITION	AGED
TANK CONTENTS	CRUDE (RVP 10.5)
EPN	TANK1: STABILIZED CRUDE

SYMBOL	EPN	UNITS	VALUE	AP-42 EQUATION REFERENCE	COMMENTS
Q		BBLS/YR	4,258.333		FILLING RATE
D_{VERT}		FT	12.000		DIAMETER (VERTICLE TANKS)
H_S		FT	19.860		SHELL HEIGHT
H_L		FT	9.930		LIQUID HEIGHT (1/2 OF SHELL HEIGHT)
K_P		DIMENSIONLESS	0.750		PRODUCT FACTOR (0.75 FOR CRUDE, 1.0 FOR ALL OTHER PRODUCTS)
CALCULATE TOTAL TANK LOSS					
L_T	LT = LS + LW	LBS/YR	1,477.275	1-1	TOTAL ROUTINE LOSSES
L_S	$365*V_V*W_V*K_E*K_S$	LBS/YR	354.332	1-2	STANDING LOSSES
L_W	$V_Q*K_N*K_P*W_V*K_B$	LBS/YR	1,122.943	1-35	WORKING LOSSES
CALCULATE STANDING LOSS					
V_V	$[(PI*D^2)/4]*H_{VO}$	CF	1,137.194	1-3	VAPOR SPACE VOLUME
W_V	$(M_V*P_{VA}/(R*T_V)$	LBS/CF	0.063		STOCK VAPOR DENSITY
K_E	DELTA T_V/T_{LA}+(DELTA P_V-DELTA I	PER DAY	0.338	1-5	VAPOR SPACE EXAPNSION FACTOR
K_E	$0.0018*[0.7*(T_{AX}-T_{AN})+0.02*a*I]$	PER DAY	0.077	1-12	VAPOR SPACE EXAPNSION FACTOR (IF TANK LOCATION, COLOR & CO
K_S	$1/(1+0.053*P_{VA}*H_{VO})$	DIMENSIONLESS	0.177	1-21	VENTED VAPOR SATURATION FACTOR
$H_{VO-VERT}$	$H_S-H_L+H_{RO}$	FT	10.055	1-16	VAPOR SPACE OUTAGE (VERTICLE TANKS)
T_{AX}		DEG. R	539.500		AVERAGE DAILY MAXIMUM AMBIENT TEMPERATURE
T_{AN}		DEG. R	519.200		AVERAGE DAILY MINIMUM AMBIENT TEMPERATURE
a		NONE	0.970		TANK SURFACE SOLAR ABSORBANCE
I		BTU/FT^2-DAY	1,477.000		AVE. DAILY TOTAL INSOLATION ON HORIZONTAL SURFACE
M_V		LBS/LB-MOLE	41.770		VAPOR MOLECULAR WT.
$H_{RO-CONE}$	$1/3*0.0625*R_S$	FT	0.125	1-17	ROOF OUTAGE (CONE ROOF)
R_S		FT	6.000		TANK SHELL RADIUS
K_S	$[1/(1+0.053*P_{VA}*H_{VO})]$	DIMENSIONLESS	0.177	1-21	VENTED VAPOR SATURATION FACTOR
P_{VA}		PSIA	8.746		V.P. @ AVE. DAILY LIQUID SURFACE TEMPERATURE
W_V	$M_V*P_{VA}/(R*T_V)$	LBS/CF	0.063		STOCK VAPOR DENSITY
R		PSIA*CF/(LB-MOLE*I	10.731		IDEAL GAS CONSTANT
T_V	$0.7*T_{AA}+0.30*T_B+0.009*a*I$	DEG. R	543.534		AVERAGE VAPOR TEMPERATURE
T_{AA}	$(T_{AX}+T_{AN})/2$	DEG. R	529.350		AVE. DAILY AMBIENT TEMP.
T_B	$T_{AA}+0.003*a*I$	DEG. R	533.648	1-31	LIQUID BULK TEMP.
T_{LA}	$0.4*T_{AA}+0.6*T_B+0.005*a*I$	DEG. R	539.092	1-28	AVE. DAILY LIQUID SURFACE TEMP
DELTA T_V	0.7*DELTA T_A+0.02*a*I	DEG. R	42.864	1-7	AVE. DAILY VAPOR TEMP. RANGE
DELTA T_A	$T_{AX}-T_{AN}$	DEG. R	20.300	1-7	AVE. DAILY AMBIENT TEMP. RANGE
P_{VX}		PSIA	9.610	1-9	AVE. DAILY MAXIMUM VAPOR PRESSURE
P_{VN}		PSIA	8.121	1-9	AVE. DAILY MINIMUM VAPOR PRESSURE
P_{BP}		PSIA	0.030		BREATHER VENT PRESSURE SETTING
P_{BV}		PSIA	(0.030)		BREATHER VENT VACUUM SETTING
DELTA P_V	$P_{VX}-P_{VN}$	PSIA	1.489	1-9	AVE. DAILY VAPOR PRESSURE RANGE
DELTA P_B	$P_{BP}-P_{BV}$		0.060	1-10	BREATHER VENT PRESSURE SETTING RANGE
P_A		PSIA	14.270		ATMOSPHERIC PRESSURE
T_{LX}	T_{LA}+0.25*DELTA T_V	DEG. R	549.808		MAXIMUM LIQUID TEMPERATURE
T_{LN}	T_{LA}-0.25*DELTA T_V	DEG. R	528.376		MINIMUM LIQUID TEMPERATURE
T_{LX}		DEG. F	90.108		MAXIMUM LIQUID TEMPERATURE
T_{LN}		DEG. F	68.676		MINIMUM LIQUID TEMPERATURE

COMPANY	Ineos USA Oil & Gas LLC
SITE NAME	Mckenzie-Foley Unit B MCM Pad
DATE	02/26/24
TANK TYPE	VERTICLE FIXED ROOF
TANK TYPE	UN-INSULATED
TANK TYPE	CONE ROOF
FILL TYPE	SUBMERGED LOADING
CITY/STATE	SAN ANTONIO, TEXAS
TANK PAINT	BLACK
TANK CONDITION	AGED
TANK CONTENTS	CRUDE (RVP 10.5)
EPN	TANK1: STABILIZED CRUDE

CALCULATE WORKING LOSS

L_W	$V_Q*K_N*K_P*W_V*K_B$	LBS/YR	1,123	1-35	WORKING LOSSES
V_Q	5.614*Q	CF/YR	23,906		NET WORKING LOSS THROUGHPUT
K_N		DIMENSIONLESS	1.00		WORKING LOSS TURNOVER SATURATION FACTOR (FOR FLASHING TA
K_B		DIMENSIONLESS	1.00		VENT SETTING CORRECTION FACTOR; FOR OPEN VENTS & +/-0.03 PSIG
K_P		DIMENSIONLESS	0.750		PRODUCT FACTOR (1.0 FOR CRUDE, 0.75 FOR ALL OTHER PRODUCTS)
W_V	$(M_V*P_{VA}/(R*T_V)$	LBS/CF	0.063		STOCK VAPOR DENSITY

VAPOR PRESSURE CALCULATIONS AT MAX. LIQUID TEMPERATURE

T_{LX}		DEG. F	90.000	MAXIMUM LIQUID TEMPERATURE LOWER LIMIT
T_{LX}		DEG. F	100.000	MAXIMUM LIQUID TEMPERATURE UPPER LIMIT
T_{LN}		DEG. F	60.000	MINIMUM LIQUID TEMPERATURE LOWER LIMIT
T_{LN}		DEG. F	70.000	MINIMUM LIQUID TEMPERATURE UPPER LIMIT

DEG. F	PSIA
40.000	6.600
50.000	7.100
60.000	7.600
70.000	8.200
80.000	8.800
90.000	9.600
100.000	10.500

	DEG. F (LOWER LIMIT)	DEG. F (UPPER LIMIT	VP @ T_{LX}	P_{VX}
T_{LX}	90.000	100.000	9.6000	9.6097

			VP @ T_{LN}	P_{VN}
T_{LN}	60.000	70.000	7.6000	8.12058

VAPOR PRESSURE CALCULATIONS AT AVE. LIQUID TEMPERATURE

T_{LA}	$0.4*T_{AA}+0.6*T_B+0.005*a*I$	DEG. F	79.0923	AVE. DAILY LIQUID SURFACE TEMP
T_{LX}		DEG. F	70.000	AVE. DAILY LIQUID SURFACE TEMP LOWER LIMIT
T_{LX}		DEG. F	80.000	AVE. DAILY LIQUID SURFACE TEMP UPPER LIMIT

DEG. F	PSIA
40.000	6.600
50.000	7.100
60.000	7.600
70.000	8.200
80.000	8.800
90.000	9.600
100.000	10.500

	DEG. F (LOWER LIMIT)	DEG. F (UPPER LIMIT	VP @ T_{LA}	P_{VA}
T_{LA}	70.000	80.000	8.2000	8.7455

COMPANY	Ineos USA Oil & Gas LLC
SITE NAME	Mckenzie-Foley Unit B MCM Pad
DATE	02/26/24
TANK TYPE	VERTICLE FIXED ROOF
TANK TYPE	UN-INSULATED
TANK TYPE	CONE ROOF
FILL TYPE	SUBMERGED LOADING
CITY/STATE	SAN ANTONIO, TEXAS
TANK PAINT	BLACK
TANK CONDITION	AGED
TANK CONTENTS	CRUDE (RVP 10.5)
EPN	TANK5: PRODUCED WATER

SYMBOL	EPN	UNITS	VALUE	AP-42 EQUATION REFERENCE	COMMENTS
Q		BBLS/YR	6,387.500		FILLING RATE
D_{VERT}		FT	12.000		DIAMETER (VERTICLE TANKS)
H_S		FT	19.860		SHELL HEIGHT
H_L		FT	9.930		LIQUID HEIGHT (1/2 OF SHELL HEIGHT)
K_P		DIMENSIONLESS	0.750		PRODUCT FACTOR (0.75 FOR CRUDE, 1.0 FOR ALL OTHER PRODUCTS)
CALCULATE TOTAL TANK LOSS					
L_T	LT = LS + LW	LBS/YR	2,038.746	1-1	TOTAL ROUTINE LOSSES
L_S	$365*V_V*W_V*K_E*K_S$	LBS/YR	354.332	1-2	STANDING LOSSES
L_W	$V_Q*K_N*K_P*W_V*K_B$	LBS/YR	1,684.414	1-35	WORKING LOSSES
CALCULATE STANDING LOSS					
V_V	$[(PI*D^2)/4]*H_{VO}$	CF	1,137.194	1-3	VAPOR SPACE VOLUME
W_V	$(M_V*P_{VA}/(R*T_V)$	LBS/CF	0.063		STOCK VAPOR DENSITY
K_E	DELTA T_V/T_{LA}+(DELTA P_V-DELTA I	PER DAY	0.338	1-5	VAPOR SPACE EXAPNSION FACTOR
K_E	$0.0018*[0.7*(T_{AX}-T_{AN})+0.02*a*I]$	PER DAY	0.077	1-12	VAPOR SPACE EXAPNSION FACTOR (IF TANK LOCATION, COLOR & CO
K_S	$1/(1+0.053*P_{VA}*H_{VO})$	DIMENSIONLESS	0.177	1-21	VENTED VAPOR SATURATION FACTOR
$H_{VO-VERT}$	$H_S-H_L+H_{RO}$	FT	10.055	1-16	VAPOR SPACE OUTAGE (VERTICLE TANKS)
T_{AX}		DEG. R	539.500		AVERAGE DAILY MAXIMUM AMBIENT TEMPERATURE
T_{AN}		DEG. R	519.200		AVERAGE DAILY MINIMUM AMBIENT TEMPERATURE
a		NONE	0.970		TANK SURFACE SOLAR ABSORBANCE
I		BTU/FT^2-DAY	1,477.000		AVE. DAILY TOTAL INSOLATION ON HORIZONTAL SURFACE
M_V		LBS/LB-MOLE	41.770		VAPOR MOLECULAR WT.
$H_{RO-CONE}$	$1/3*0.0625*R_S$	FT	0.125	1-17	ROOF OUTAGE (CONE ROOF)
R_S		FT	6.000		TANK SHELL RADIUS
K_S	$[1/(1+0.053*P_{VA}*H_{VO})]$	DIMENSIONLESS	0.177	1-21	VENTED VAPOR SATURATION FACTOR
P_{VA}		PSIA	8.746		V.P. @ AVE. DAILY LIQUID SURFACE TEMPERATURE
W_V	$M_V*P_{VA}/(R*T_V)$	LBS/CF	0.063		STOCK VAPOR DENSITY
R		PSIA*CF/(LB-MOLE*I	10.731		IDEAL GAS CONSTANT
T_V	$0.7*T_{AA}+0.30*T_B+0.009*a*I$	DEG. R	543.534		AVERAGE VAPOR TEMPERATURE
T_{AA}	$(T_{AX}+T_{AN})/2$	DEG. R	529.350		AVE. DAILY AMBIENT TEMP.
T_B	$T_{AA}+0.003*a*I$	DEG. R	533.648	1-31	LIQUID BULK TEMP.
T_{LA}	$0.4*T_{AA}+0.6*T_B+0.005*a*I$	DEG. R	539.092	1-28	AVE. DAILY LIQUID SURFACE TEMP
DELTA T_V	$0.7*$DELTA $T_A+0.02*a*I$	DEG. R	42.864	1-7	AVE. DAILY VAPOR TEMP. RANGE
DELTA T_A	$T_{AX}-T_{AN}$	DEG. R	20.300	1-7	AVE. DAILY AMBIENT TEMP. RANGE
P_{VX}		PSIA	9.610	1-9	AVE. DAILY MAXIMUM VAPOR PRESSURE
P_{VN}		PSIA	8.121	1-9	AVE. DAILY MINIMUM VAPOR PRESSURE
P_{BP}		PSIA	0.030		BREATHER VENT PRESSURE SETTING
P_{BV}		PSIA	(0.030)		BREATHER VENT VACUUM SETTING
DELTA P_V	$P_{VX}-P_{VN}$	PSIA	1.489	1-9	AVE. DAILY VAPOR PRESSURE RANGE
DELTA P_B	$P_{BP}-P_{BV}$		0.060	1-10	BREATHER VENT PRESSURE SETTING RANGE
P_A		PSIA	14.270		ATMOSPHERIC PRESSURE
T_{LX}	$T_{LA}+0.25*$DELTA T_V	DEG. R	549.808		MAXIMUM LIQUID TEMPERATURE
T_{LN}	$T_{LA}-0.25*$DELTA T_V	DEG. R	528.376		MINIMUM LIQUID TEMPERATURE
T_{LX}		DEG. F	90.108		MAXIMUM LIQUID TEMPERATURE
T_{LN}		DEG. F	68.676		MINIMUM LIQUID TEMPERATURE

COMPANY	Ineos USA Oil & Gas LLC
SITE NAME	Mckenzie-Foley Unit B MCM Pad
DATE	02/26/24
TANK TYPE	VERTICLE FIXED ROOF
TANK TYPE	UN-INSULATED
TANK TYPE	CONE ROOF
FILL TYPE	SUBMERGED LOADING
CITY/STATE	SAN ANTONIO, TEXAS
TANK PAINT	BLACK
TANK CONDITION	AGED
TANK CONTENTS	CRUDE (RVP 10.5)
EPN	TANK5: PRODUCED WATER

CALCULATE WORKING LOSS

L_W	$V_Q*K_N*K_P*W_V*K_B$	LBS/YR	1,684	1-35	WORKING LOSSES
V_Q	5.614*Q	CF/YR	35,859		NET WORKING LOSS THROUGHPUT
K_N		DIMENSIONLESS	1.00		WORKING LOSS TURNOVER SATURATION FACTOR (FOR FLASHING TA
K_B		DIMENSIONLESS	1.00		VENT SETTING CORRECTION FACTOR; FOR OPEN VENTS & +/-0.03 PSIG
K_P		DIMENSIONLESS	0.750		PRODUCT FACTOR (1.0 FOR CRUDE, 0.75 FOR ALL OTHER PRODUCTS)
W_V	$(M_V*P_{VA}/(R*T_V)$	LBS/CF	0.063		STOCK VAPOR DENSITY

VAPOR PRESSURE CALCULATIONS AT MAX. LIQUID TEMPERATURE

T_{LX}		DEG. F	90.000	MAXIMUM LIQUID TEMPERATURE LOWER LIMIT
T_{LX}		DEG. F	100.000	MAXIMUM LIQUID TEMPERATURE UPPER LIMIT
T_{LN}		DEG. F	60.000	MINIMUM LIQUID TEMPERATURE LOWER LIMIT
T_{LN}		DEG. F	70.000	MINIMUM LIQUID TEMPERATURE UPPER LIMIT

DEG. F	PSIA
40.000	6.600
50.000	7.100
60.000	7.600
70.000	8.200
80.000	8.800
90.000	9.600
100.000	10.500

	DEG. F (LOWER LIMIT)	DEG. F (UPPER LIMIT	VP @ T_{LX}	P_{VX}
T_{LX}	90.000	100.000	9.6000	9.6097

			VP @ T_{LN}	P_{VN}
T_{LN}	60.000	70.000	7.6000	8.12058

VAPOR PRESSURE CALCULATIONS AT AVE. LIQUID TEMPERATURE

T_{LA}	$0.4*T_{AA}+0.6*T_B+0.005*a*I$	DEG. F	79.0923		AVE. DAILY LIQUID SURFACE TEMP
T_{LX}		DEG. F	70.000		AVE. DAILY LIQUID SURFACE TEMP LOWER LIMIT
T_{LX}		DEG. F	80.000		AVE. DAILY LIQUID SURFACE TEMP UPPER LIMIT

DEG. F	PSIA
40.000	6.600
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70.000	8.200
80.000	8.800
90.000	9.600
100.000	10.500

	DEG. F (LOWER LIMIT)	DEG. F (UPPER LIMIT	VP @ T_{LA}	P_{VA}
T_{LA}	70.000	80.000	8.2000	8.7455