Division Information

Engineer:	Stephanie Chaousy, PE
Control Engineer:	Chris Laplante
Review Date:	09/03/2014
Application Date:	06/23/2014

Attainment Status

PM10	Attainment
PM2.5	Attainment
SOx	Attainment
NOx	Attainment
VOC	Attainment
CO	Attainment

Facility Information

Permit No.		14JA1201			
AIRs	County #	057	Jackson		
	Facility #	0038			
	Point #	001			
Facility Equipment ID					
Company Name:		EE3, LLC			
Source Name:		Hebron 3-12H & 2-7H			
Source Location:		NENE Section 12, T7N, R81W			
SIC:		1311			
Elevation (feet)		8133			
X	**New Permit (CP1)**		Modification (Issuance #)		APEN Required/Permit Exempt
			Transfer of Ownership		APEN Exempt/Permit Exempt
Notes					

Equipment Description

This source vents natural gas from:	a well head separator
Emissions from this source are:	routed to an open-flame flare

Natural gas venting from a well head separator. Emissions from this source are routed to an open-flame flare.

Emission Calculation Method

EPA Emission Inventory Improvement Program Publication: Volume II, Chapter 10 - Displacement Equation (10.4-3)

Ex = Q * MW * Xx / C

Ex = emissions of pollutant x
Q = Volumetric flow rate/volume of gas processed
MW = Molecular weight of gas = SG of gas * MW of air
Xx = mass fraction of x in gas
C = molar volume of ideal gas (379 scf/lb-mol) at 60F and 1 atm

Throughput (Q)	148	MMscf/yr	16895.0	scf/hr	12.57 MMscf/mo
MW	19.400	lb/lb-mol	0.004	MMscf/d	

	mole %	MW	lbx/lbmol	mass fraction	E	lb/hr	lb/yr	tpy
Helium	0.3	4.0026	0.012	0.001	Helium	0.5	4689	2.34
CO2	1.52	44.01	0.669	0.034	CO2	29.8	261227	130.61
N2	3.53	28.013	0.989	0.051	N2	44.1	386151	193.08
methane	86.6246	16.041	13.895	0.716	methane	619.4	5426192	2713.10
ethane	2.8567	30.063	0.859	0.044	ethane	38.3	335366	167.68
propane	2.4141	44.092	1.0644	0.055	propane	47.4	415659	207.83
isobutane	0.307	58.118	0.1784	0.009	isobutane	8.0	69674	34.84
n-butane	1.1169	58.118	0.6491	0.033	n-butane	28.9	253482	126.74
isopentane	0.3076	72.114	0.2218	0.011	isopentane	9.9	86622	43.31
n-pentane	0.3426	72.114	0.2471	0.013	n-pentane	11.0	96478	48.24
cyclopentane	0.0417	70.13	0.0292	0.002	cyclopentane	1.3	11420	5.71
n-Hexane	0.0890	86.18	0.0767	0.004	n-Hexane	3.4	29952	14.98
cyclohexane	0.0256	84.16	0.0215	0.001	cyclohexane	1.0	8413	4.21
Other hexanes	0.2033	86.18	0.1752	0.009	Other hexanes	7.8	68417	34.21
heptanes	0.1049	100.21	0.1051	0.005	heptanes	4.7	41050	20.52
methylcyclohexane	0.0231	98.19	0.0227	0.001	methylcyclohexane	1.0	8857	4.43
224-TMP	0.0001	114.23	0.0001	0.000	224-TMP	0.0	45	0.02
Benzene	0.0082	78.12	0.0064	0.000	Benzene	0.3	2501	1.25
Toluene	0.0058	92.15	0.0053	0.000	Toluene	0.2	2087	1.04
Ethylbenzene	0.0006	106.17	0.0006	0.000	Ethylbenzene	0.0	249	0.12
Xylenes	0.002	106.17	0.0021	0.000	Xylenes	0.1	829	0.41
C8+ Heavies	0.046	369.449	0.1699	0.009	C8+ Heavies	7.6	66364	33.18
			VOC mass fraction:	0.1534	Total VOC Emissions (Uncontrolled)			581.1
			19.400		annual limit assuming 95% control			29.1
					monthly limit assuming 95% control (lb/mo.)			4934.9

Notes
Mole %, MW, and mass fractions from Damfino 2-6H gas analysis.
Emissions are based on 8760 hours of operation per year.
I calculated the average MW of C8+ based on the average MW on the analysis for the gas.

Flaring Information

Equipment Description
Flare to combust produced gas until pipeline is available at this wellhead facility.

Manufacturer	Leed	
Model	EF 4"x25'	
Serial Number	21165	
Gas Heating Value	984	Btu/scf
Throughput	145632	MMBtu/yr

Combustion emission factor source: AP-42: Chapter 13.5

0.068	lb NOX/MMBtu	0.37	lb CO/MMBtu
4.95	tpy NOX	26.94	tpy CO

Emissions Summary

Uncontrolled/PTE	4.95	tpy NOX
	26.94	tpy CO
	581.050	tpy VOC
Controlled	29.053	tpy VOC

	Uncontrolled Total (lb/yr)	Uncontrolled Total (TPY)	Scenario A Reportable?	Controlled Total (lb/yr)	Controlled (TPY)
Benzene	2501	1.25	Yes	125	0.063
Toluene	2087	1.04	Yes	104	0.052
Ethylbenzene	249	0.12	No	12	0.006
Xylenes	829	0.41	No	41	0.021
n-hexane	29952	14.98	Yes	1498	0.749
224-TMP	45	0.02	No	2	0.001

Operator emissions are slightly off from what I calculated. I believe this is due to rounding issues within the calculations. Controlled are pretty much ide
I will accept Operator's emissions.

Regulatory Applicability

AQCC Regulation 1

This source is subject to the opacity requirements for flares in Section II.A.5:'No owner or operator of a smokeless flare or other flare for the combustion of waste gases shall allow or cause emissions into the atmosphere of any air pollutant which is in excess of 30% opacity.'

AQCC Regulation 2

Section I.A applies to all emission sources. "No person, wherever located, shall cause or allow the emission of odorous air contaminants from any single source such as to result in detectable odors which are measured in excess of the following limits: For areas used predominantly for residential or commercial purposes it is a violation if odors are detected after the odorous air has been diluted with seven (7) or more volumes of odor free air."

AQCC Regulation 3

Part A:	An APEN is required for this source because uncontrolled VOC emissions exceed two tons per year in an attainment area.
Part B:	A permit is required for this source because uncontrolled VOC emissions from this facility exceed five tons per year in an attainment area.
	This source is not subject to Section III.D.2 (Minor Source RACT) because it is not located in a nonattainment area.
Is public comment required?	Public Comment Required

Construction Permit Application
Preliminary Analysis Summary

Section 1 – Applicant Information	
Company Name:	**EE3, LLC**
Permit Number:	**14JA1202**
Source Name:	**Hebron 3-12H & 2-7H Tank Battery**
Source Location:	**NENE Section 12, T7N, R81W, Jackson County (attainment)**
Equipment Description:	**Truck loadout**
AIRS ID:	**057-0038-002**
Review Date:	**October 16, 2014**
Review Engineer:	**Stephanie Chaousy, PE**

Section 2 – Action Completed					
	CP1		Modification	**X**	**APEN Required/Permit Exempt**
	Final Approval		Transfer of Ownership		APEN Exempt/Permit Exempt

Section 3 – Applicant Completeness Review				
Was the correct APEN submitted for this source type?	**X**	**Yes**		No
Is the APEN signed with an original signature?	**X**	**Yes**		No
Was the APEN filled out completely?	**X**	**Yes**		No
Did the applicant submit all required paperwork?	**X**	**Yes**		No
Did the applicant provide ample information to determine emission rates?	**X**	**Yes**		No
If you answered "no" to any of the above, when did you mail an Information Request letter to the source?				
On what date was this application complete?	**June 23, 2014**			

Section 4 – Source Description	
AIRS Point	**Equipment Description**
002	**Truck Crude Oil Loadout**

Is this a portable source?		Yes	**X**	**No**			
Is this location in a non-attainment area for any criteria pollutant?	**X**	Yes	**X**	**No**			
If "yes", for what pollutant?		PM_{10}		CO		Ozone	
Is this location in an *attainment maintenance* area for any criteria pollutant?		Yes	**X**	**No**			
If "yes", for what pollutant? **(Note: These pollutants are subject to minor source RACT per Regulation 3, Part B, Section III.D.2)**		PM_{10}		CO		Ozone	
Is this source located in the 8-hour ozone non-attainment region? **(Note: If "yes" the provisions of Regulation 7, Sections XII and XVII.C may apply)**		Yes	**X**	**No**			
Is this source located at an oil and gas exploration site?	**X**	**Yes**		No			

If yes, does this source load less than 10,000 gallons of crude oil per day on an annual average, splash fill less than 6750 bbl of condensate (hydrocarbons that have an API gravity of 40 degrees or greater) per year or submerged fill less than 16,308 bbl of condensate per year?		Yes	**X**	**No**	
Is this source located at a facility that is considered a major source of hazardous air pollutant (HAP) emissions?		Yes	**X**	**No**	
Will this equipment be operated in any NAAQS nonattainment area?		Yes	**X**	**No**	
Does this source load gasoline into transport vehicles?		Yes	**X**	**No**	

Section 5 – Emission Estimate Information

AIRS Point	**Emission Factor Source**
002	**CDPHE Memo 14-02 State emission factors**

Did the applicant provide actual process data for the emission inventory?		Yes	**X**	**No**

Basis for Potential to Emit (PTE)

AIRS Point	**Process Consumption/Throughput/Production**
002	**218,124 BBL per year crude oil loaded**

Basis for Actual Emissions Reported During this APEN Filing (Reported to Inventory)

AIRS Point	**Process Consumption/Throughput/Production**
002	**181,770 BBL per year crude oil loaded**

Basis for Permitted Emissions (Permit Limits)

AIRS Point	**Process Consumption/Throughput/Production**
002	**218,124 BBL per year crude oil loaded**

Does this source use a control device?		Yes	**X**	**No**

Section 6 – Emission Summary (tons per year)

	Point	**NO_x**	**VOC**	**CO**	**Single HAP**	**HAP**
PTE:	**002**	---	11.3	---	0.2 (Hexane)	0.2
Uncontrolled point source emission rate:	**002**	---	11.3	---	0.2 (Hexane)	0.2

Section 7 – Non-Criteria / Hazardous Air Pollutants

Pollutant	**CAS #**	**BIN**	**Uncontrolled Emission Rate (lb/yr)**	**Are the emissions reportable?**	**Controlled Emission Rate (lb/yr)**
Benzene	71432	A	33	No	N/A
n-Hexane	110543	C	291	Yes	N/A

Note: Regulation 3, Part A, Section II.B.3.b APEN emission reporting requirements for non-criteria air pollutants are based on potential emissions without credit for reductions achieved by control devices used by the operator.

Section 8 –Testing Requirements

Will testing be required to show compliance with any emission rate or regulatory standard?		Yes	**X**	**No**

Section 9 – Source Classification										
Is this a new previously un-permitted source?		**X**	**Yes**			No				
What is this facility classification?			True Minor		**X**	**Synthetic Minor**				Major
Classification relates to what programs?	**X**	**Title V**	X	**PSD**		NA NSR				MACT
Is this a modification to an existing permit?			Yes		**X**	**No**				
If "yes" what kind of modification?			Minor			Synthetic Minor				Major

Section 10 – Public Comment				
Does this permit require public comment per CAQCC Regulation 3?		Yes	**X**	**No**
If "yes", for which pollutants? Why?				
For Reg. 3, Part B, III.C.1.a (emissions increase > 25/50 tpy)?		Yes	**X**	**No**
For Reg. 3, Part B, III.C.1.c.iii (subject to MACT)?		Yes	**X**	**No**
For Reg. 3, Part B, III.C.1.d (synthetic minor emission limits)?		Yes	**X**	**No**

Section 11 – Modeling				
Is modeling required to demonstrate compliance with National Ambient Air Quality Standards (NAAQS)?		Yes	**X**	**No**

AIRS Point	Section 12 – Regulatory Review
	Regulation 1 - Particulate, Smoke, Carbon Monoxide and Sulfur Dioxide
002	Visible emissions shall not exceed twenty percent (20%) opacity during normal operation of the source. During periods of startup, process modification, or adjustment of control equipment visible emissions shall not exceed 30% opacity for more than six minutes in any sixty consecutive minutes. (Reference: Regulation No. 1, Section II.A.1. & 4.)
	Regulation 2 – Odor
002	Section I.A - No person, wherever located, shall cause or allow the emission of odorous air contaminants from any single source such as to result in detectable odors which are measured in excess of the following limits: For areas used predominantly for residential or commercial purposes it is a violation if odors are detected after the odorous air has been diluted with seven (7) or more volumes of odor free air.
	Regulation 3 - APENs, Construction Permits, Operating Permits, PSD
002	**Criteria Pollutants**: For criteria pollutants, Air Pollutant Emission Notices are required for: each individual emission point in an attainment area with uncontrolled actual emissions of two tons per year or more of any individual criteria pollutant (pollutants are not summed) for which the area is attainment. (Applicant is required to file an APEN since emissions exceed 2 tons per year VOC) **Part B – Construction Permit Exemptions** Applicant is required to obtain a permit for this emission source since total facility uncontrolled VOC emissions are greater than 5 TPY **Part B, III.D.2** - RACT requirements for new or modified minor sources This section of Regulation 3 requires RACT for new or modified minor sources located in nonattainment or attainment/maintenance areas. This source is/is not located in the 8-hour ozone nonattainment area, but not the 1-hour ozone area. Since source is in attainment, RACT is not required. However, operator is using 0.6 saturation factor, which does satisfy RACT requirements.
	Regulation 6 - New Source Performance Standards
002	No applicable subpart. This facility is not a bulk gasoline terminal.

	Regulation 7 – Volatile Organic Compounds
002	No sections apply. Per Regulation 7, Section VI.C, a terminal is defined as a petroleum liquid storage and distribution facility that has a daily average throughput of more than 76,000 liters of gasoline (20,000 gallons), which is loaded directly into transport vehicles. This facility is neither a terminal, nor a bulk plant per definitions in Reg 7, Section VI.C.
	Regulation 8 – Hazardous Air Pollutants
002	None

Section 13 – Aerometric Information Retrieval System Coding Information

Point	Process	Process Description	Process/ throughput Limit	Emission Factor	Pollutant / CAS #	Fugitive (Y/N)	Emission Factor Source	Control (%)
002	**01**	Truck Condensate Loadout	218124 BBL/yr	0.104 lb/bbl	VOC	No	PS Memo 14-02	0
				0.00018 lb/bbl	Benzene	No	PS Memo 14-02	0
				0.0016 lb/bbl	n-hexane	No	PS Memo 14-02	0
	SCC	**40600132: Crude Oil: Submerged Loading (Normal Service)**						

Section 14 – Miscellaneous Application Notes

AIRS Point	**002**	Truck Condensate Loadout

State-Developed Emission factors in lb/bbl from PS Memo 14-02:

County	***Condensate Tank Default Emission Factors (lb/bbl)***		
	VOC	***Benzene***	***n-Hexane***
Condensate – API gravity > 40	*0.236*	*0.00041*	*0.0036*
Crude oil – API gravity < 40	*0.104*	*0.00018*	*0.0016*

Verifying that operator does not meet the categorical exemption of less than 10,000 gallons of crude oil per day:

218124 bbl	1 year	42 gal	= 25,099 gal/day
year	365 days	1 bbl	

AConstruction Permit Application
Preliminary Analysis Summary

Section 1 – Applicant Information	
Company Name:	**EE3, LLC**
Permit Number:	**14JA1203**
Source Location:	**Hebron 3-12H & 2-7H Tank Battery** **NENE Section 12, T7N, R81W, Jackson County (attainment)**
Equipment Description:	**Produced water tanks**
AIRS ID:	**057-0038-003**
Date:	**October 16, 2014**
Review Engineer:	**Stephanie Chaousy, PE**
Control Engineer:	**Chris Laplante**

Section 2 – Action Completed					
	Grandfathered		Modification		APEN Required/Permit Exempt
X	**CP1**		Transfer of Ownership		APEN Exempt/Permit Exempt

Section 3 – Applicant Completeness Review				
Was the correct APEN submitted for this source type?	**X**	**Yes**		No
Is the APEN signed with an original signature?	**X**	**Yes**		No
Was the APEN filled out completely?	**X**	**Yes**		No
Did the applicant submit all required paperwork?	**X**	**Yes**		No
Did the applicant provide ample information to determine emission rates?	**X**	**Yes**		No
If you answered "no" to any of the above, when did you mail an Information Request letter to the source?				
On what date was this application complete?	**June 23, 2014**			

Section 4 – Source Description	
AIRS Point	**Equipment Description**
003	**Two (2) above ground 400 bbl atmospheric produced water storage tanks. Emissions from these tanks are controlled by an enclosed combustor.**

Are "flash" emissions anticipated from these tanks?		Yes	**X**	**No**		
Is this tank located at an E&P site?	**X**	**Yes**		No		
Is this tank located at a non-E&P, midstream or downstream site?		Yes	**X**	**No**		
Is this a portable source?		Yes	**X**	**No**		
Is this location in a non-attainment area for any criteria pollutant?		Yes	**X**	**No**		
If "yes", for what pollutant?		PM_{10}		CO		Ozone
Is this location in an *attainment maintenance* area for any criteria pollutant?		Yes	**X**	**No**		
If "yes", for what pollutant? **(Note: These pollutants are subject to minor source RACT per Regulation 3, Part B, Section III.D.2)**		PM_{10}		CO		Ozone

Is this source claiming exempt status for this source based on the fraction of oil in the stored water (less than 1% by volume crude oil on an average annual basis)?	**X**	**Yes**		No	
Are these produced water tanks located at a commercial facility that accepts oil production wastewater for processing?		Yes	**X**	**No**	
Are these produced water tanks subject to Colorado Oil and Gas Conservation Commission (COGCC) 805 Rule?		Yes	**X**	**No**	

Section 5 – Emission Estimate Information

AIRS Point	Emission Factor Source
003	**CDPHE Produced Water Storage Tank Emission Factors; CDPHE Memo 09-02**

Did the applicant provide actual process data for the emission inventory?		Yes	**X**	**No**

Basis for Potential to Emit (PTE)

AIRS Point	Process Consumption/Throughput/Production
003	**291,708 BBL per year (243,090*1.2) wastewater**

Basis for Actual Emissions Reported During this APEN Filing (Reported to Inventory)

AIRS Point	Process Consumption/Throughput/Production	Data Year
003	**243,090 BBL per year wastewater**	

Basis for Permitted Emissions (Permit Limits)

AIRS Point	Process Consumption/Throughput/Production
003	**291,708 BBL per year wastewater**

Does this source use a control device?	**X**	**Yes**		No

AIRS Point	Process	Control Device Description	% Reduction Granted
003	**01**	**Enclosed combustor**	**95**

Section 6 – Emission Summary (tons per year)

	Point	NO_x	VOC	CO	Single HAP	Total HAP
PTE:	**003**	---	38.2	---	3.2 (Hexane)	4.2
Uncontrolled point source emission rate:	**003**	---	38.2	---	3.2 (Hexane)	4.2
Controlled point source emission rate:	**003**	---	1.9	---	0.2 (Hexane)	0.2

Section 7 – Non-Criteria / Hazardous Air Pollutants

Pollutant	CAS #	BIN	Uncontrolled Emission Rate (lb/yr)	Are the emissions reportable?	Controlled Emission Rate (lb/yr)
Benzene	71432	A	2042	**Yes**	102
n-Hexane	110543	C	6418	**Yes**	321

Note: Regulation 3, Part A, Section II.B.3.b APEN emission reporting requirements for non-criteria air pollutants are based on actual emissions without credit for reductions achieved by control devices used by the operator.

Section 8 –Testing Requirements				
Will testing be required to show compliance with any emission rate or regulatory standard?		Yes	**X**	**No**

Section 9 – Source Classification											
Is this a new previously un-permitted source?	**X**	**Yes**		No							
What is this facility classification?		True Minor	**X**	**Synthetic Minor**		Major					
Classification relates to what programs?	**X**	**Title V**	**X**	**PSD**		NA NSR	**X**	**MACT**			
Is this a modification to an existing permit?		Yes	**X**	**No**							
If "yes" what kind of modification?		Minor		Synthetic Minor		Major					

Section 10 – Public Comment				
Does this permit require public comment per CAQCC Regulation 3?	X	**Yes**		No
If "yes", for which pollutants? Why?				
For Reg. 3, Part B, III.C.1.a (emissions increase > 25/50 tpy)?		Yes	**X**	**No**
For Reg. 3, Part B, III.C.1.c.iii (subject to MACT)?		Yes	**X**	**No**
For Reg. 3, Part B, III.C.1.d (synthetic minor emission limits)?	**X**	**Yes**		No

Section 11 – Modeling				
Is modeling required to demonstrate compliance with National Ambient Air Quality Standards (NAAQS)?		Yes	**X**	**No**
If "yes", for which pollutants? Why?				

AIRS Point	Section 12 – Regulatory Review
	Regulation 1 - Particulate, Smoke, Carbon Monoxide and Sulfur Dioxide
003	**Section II.A.1 -** Except as provided in paragraphs 2 through 6 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity. This standard is based on 24 consecutive opacity readings taken at 15-second intervals for six minutes. The approved reference test method for visible emissions measurement is EPA Method 9 (40 CFR, Part 60, Appendix A (July, 1992)) in all subsections of Section II. A and B of this regulation.
	Regulation 2 – Odor
003	**Section I.A** - No person, wherever located, shall cause or allow the emission of odorous air contaminants from any single source such as to result in detectable odors which are measured in excess of the following limits: For areas used predominantly for residential or commercial purposes it is a violation if odors are detected after the odorous air has been diluted with seven (7) or more volumes of odor free air.
	Regulation 3 - APENs, Construction Permits, Operating Permits, PSD
003	**Part A-APEN Requirements** **Criteria Pollutants**: For criteria pollutants, Air Pollutant Emission Notices are required for: each individual emission point in an attainment area with uncontrolled actual emissions of two tons per year or more of any individual criteria pollutant (pollutants are not summed) for which the area is attainment. ***(Applicant is required to file an APEN since emissions exceed 2 tons per year VOC)***
003	**Part B – Construction Permit Exemptions** ***Applicant is required to obtain a permit since uncontrolled VOC emissions from this facility are greater than the 5.0 TPY threshold (Reg. 3, Part B, Section II.D.3.a)***
	Regulation 6 - New Source Performance Standards
003	**None**

	Regulation 7 – Volatile Organic Compounds
003	**None**
	Regulation 8 – Hazardous Air Pollutants
003	**None**

Section 13 – Aerometric Information Retrieval System Coding Information

Point	Process	Process Description	Emission Factor	Pollutant / CAS #	Fugitive (Y/N)	Emission Factor Source	Control (%)
003	**01**	Produced Water Storage Tanks	6.2381 lb/1000 gal	VOC	No	CDPHE PS Memo 09-02	95
			0.1667 lb/1000 gal	Benzene	No	CDPHE PS Memo 09-02	95
			0.5238 lb/1000 gal	n-Hexane	No	CDPHE PS Memo 09-02	95
	SCC	**40400315 – Fixed Roof Tank, Produced Water, working+breathing+flashing losses**					

Section 14 – Miscellaneous Application Notes

AIRS Point	**003**	**Produced Water Storage Tanks**

A permit will be issued because the uncontrolled VOC emissions are greater than 5 TPY (permit threshold). Even though it meets the categorical exemption of less than 1% of crude oil on an annual basis, this facility would be major if the operator did not account for the control device on the produced water tanks (which makes the facility synthetic minor).

State-Developed Emission factors in **lb/1000 gal** are:

County	**Produced Water Tank Default Emission Factors (lb/1000 gal)**		
	VOC	**Benzene**	**n-Hexane**
Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer and Weld	6.2381	0.1667	0.5238
Garfield, Mesa, Rio Blanco and Moffat	4.2381	0.0952	0.2381
Remainder of Colorado	6.2381	0.1667	0.5238

Construction Permit Application
Preliminary Analysis Summary

Section 1 – Applicant Information	
Company Name:	**EE3, LLC**
Permit Number:	**14JA1204**
Source Location:	**Hebron 3-12H & 2-7H** **NENE Section 12, T7N, R81W, Jackson County (attainment)**
Equipment Description:	**Crude oil tanks**
AIRS ID:	**057-0038-004**
Date:	**November 14, 2014**
Review Engineer:	**Stephanie Chaousy, PE**
Control Engineer:	**Chris Laplante**

Section 2 – Action Completed					
	Grandfathered		Modification		APEN Required/Permit Exempt
X	**CP1**		Transfer of Ownership		APEN Exempt/Permit Exempt

Section 3 – Applicant Completeness Review				
Was the correct APEN submitted for this source type?	**X**	**Yes**		No
Is the APEN signed with an original signature?	**X**	**Yes**		No
Was the APEN filled out completely?	**X**	**Yes**		No
Did the applicant submit all required paperwork?	**X**	**Yes**		No
Did the applicant provide ample information to determine emission rates?	**X**	**Yes**		No
If you answered "no" to any of the above, when did you mail an Information Request letter to the source?				
On what date was this application complete?	**June 23, 2014**			

Section 4 – Source Description	
AIRS Point	**Equipment Description**
004	**Eight (8) above ground 400 bbl atmospheric crude oil storage tanks. Emissions from these tanks are controlled by an enclosed combustor.**

Is this a portable source?		Yes	**X**	**No**		
Is this location in a non-attainment area for any criteria pollutant?		Yes	**X**	**No**		
If "yes", for what pollutant?		PM_{10}		CO		Ozone
Is this location in an *attainment maintenance* area for any criteria pollutant?		Yes	**X**	**No**		
If "yes", for what pollutant? **(Note: These pollutants are subject to minor source RACT per Regulation 3, Part B, Section III.D.2)**		PM_{10}		CO		Ozone
Is this source located in the 8-hour ozone non-attainment region? **(Note: If "yes" the provisions of Regulation 7, Sections XII and XVII.C may apply)**		Yes	**X**	**No**		

Section 5 – Emission Estimate Information						
AIRS Point	**Emission Factor Source**					
004	**Source provided site-specific emission factors using gas sample and E&P Tanks. See Section 14 for calculations.**					
Did the applicant provide actual process data for the emission inventory?		**X**	**Yes**		No	
Basis for Potential to Emit (PTE)						
AIRS Point	**Process Consumption/Throughput/Production**					
004	**218124 BBL per year (181770 x 1.2)**					
Basis for Actual Emissions Reported During this APEN Filing (Reported to Inventory)						
AIRS Point	**Process Consumption/Throughput/Production**					**Data Year**
004	**181770 BBL per year**					**2013**
Basis for Permitted Emissions (Permit Limits)						
AIRS Point	**Process Consumption/Throughput/Production**					
004	**218124 BBL per year**					
Does this source use a control device?		**X**	**Yes**		No	

AIRS Point	Process	Control Device Description	% Reduction Granted
004	**01**	**Enclosed combustor**	**95**

Section 6 – Emission Summary (tons per year)						
	Point	**NO_x**	**VOC**	**CO**	**Single HAP**	**Total HAP**
PTE:	**004**	--	519.0	--	43.1 (Hexane)	58.2
Uncontrolled point source emission rate:	**004**	--	519.0	--	43.1 (Hexane)	58.2
Controlled point source emission rate:	**004**	--	26.0	--	2.2 (Hexane)	2.9

Section 7 – Non-Criteria / Hazardous Air Pollutants					
Pollutant	**CAS #**	**BIN**	**Uncontrolled Emission Rate (lb/yr)**	**Are the emissions reportable?**	**Controlled Emission Rate (lb/yr)**
Benzene	71432	A	9846	**Yes**	492
Toluene	108883	C	9438	**Yes**	472
Ethylbenzene	100414	C	520	**Yes**	26
Xylenes	1330207	C	3844	**Yes**	192
n-Hexane	110543	C	86122	**Yes**	4306
2,2,4-TMP	540841	C	6718	**Yes**	336
Note: Regulation 3, Part A, Section II.B.3.b APEN emission reporting requirements for non-criteria air pollutants are based on potential emissions without credit for reductions achieved by control devices used by the operator.					

Section 8 –Testing Requirements						
Will testing be required to show compliance with any emission rate or regulatory standard?				**X**	**Yes**	No
If "yes", complete the information listed below						
AIRS Point	**Process**	**Pollutant**	**Regulatory Basis**		**Test Method**	

004	**01**	**VOC, HAPS**	**PS Memo 05-01**	**Liquids Analyses according to PS Memo 05-01**
004	**01**	**Opacity**	**Regulation No. 7 Section XVII.AII**	**Method 22**

Section 9 – Source Classification										
Is this a new previously un-permitted source?		**X**	**Yes**			No				
What is this facility classification?			True Minor		**X**	Synthetic Minor				Major
Classification relates to what programs?	**X**	**Title V**		**X**	**PSD**			NA NSR		MACT
Is this a modification to an existing permit?			Yes		**X**	**No**				
If "yes" what kind of modification?			Minor			Synthetic Minor				Major

Section 10 – Public Comment				
Does this permit require public comment per CAQCC Regulation 3?	X	**Yes**		No
If "yes", for which pollutants? Why?				
For Reg. 3, Part B, III.C.1.a (emissions increase > 25/50 tpy)?	**X**	**Yes**		No
For Reg. 3, Part B, III.C.1.c.ii (subject to MACT)?		Yes	**X**	**No**
For Reg. 3, Part B, III.C.1.d (synthetic minor emission limits)?	**X**	**Yes**		No

Section 11 – Modeling				
Is modeling required to demonstrate compliance with National Ambient Air Quality Standards (NAAQS)?		Yes	**X**	**No**
If "yes", for which pollutants? Why?				

AIRS Point	Section 12 – Regulatory Review
	Regulation 1 - Particulate, Smoke, Carbon Monoxide and Sulfur Dioxide
004	**Section II.A.1 -** Except as provided in paragraphs 2 through 6 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity. This standard is based on 24 consecutive opacity readings taken at 15-second intervals for six minutes. The approved reference test method for visible emissions measurement is EPA Method 9 (40 CFR, Part 60, Appendix A (July, 1992)) in all subsections of Section II. A and B of this regulation.
	Regulation 2 – Odor
004	**Section I.A** - No person, wherever located, shall cause or allow the emission of odorous air contaminants from any single source such as to result in detectable odors which are measured in excess of the following limits: For areas used predominantly for residential or commercial purposes it is a violation if odors are detected after the odorous air has been diluted with seven (7) or more volumes of odor free air.
	Regulation 3 - APENs, Construction Permits, Operating Permits, PSD
004	**Part A-APEN Requirements** **Criteria Pollutants**: For criteria pollutants, Air Pollutant Emission Notices are required for: each individual emission point in an attainment area with uncontrolled actual emissions of two tons per year or more of any individual criteria pollutant (pollutants are not summed) for which the area is attainment. ***(Applicant is required to file an APEN since emissions exceed 1 ton per year VOC)***
004	**Part B – Construction Permit Exemptions** ***Applicant is required to obtain a permit since uncontrolled VOC emissions from this facility are greater than the 5.0 TPY threshold (Reg. 3, Part B, Section II.D.3.a)***
	Regulation 6 - New Source Performance Standards

004	**NSPS Kb: for storage vessels greater than 19,800 gallons after 7/23/84.** Is this source greater than 19,800 gallons (471 bbl)? No Is this source subject to NSPS Kb? No WHY? Tanks do not meet the criteria of this subpart (less than 471 bbl); therefore, not subject to this subpart.
	Regulation 7 – Volatile Organic Compounds
004	**XII**. VOLATILE ORGANIC COMPOUND EMISSIONS FROM OIL AND GAS OPERATIONS ***(Applicant is not subject to the emission control requirements for condensate tanks since it is located in an attainment area.)*** **XVII.C** STATEWIDE CONTROLS FOR OIL AND GAS OPERATIONS… ***(Applicant is currently subject to this since actual uncontrolled emissions are greater than 6 tpy of VOC.)***
	Regulation 8 – Hazardous Air Pollutants
004	**MACT EEEE: Organic Liquids Distribution** This source is not subject to MACT EEEE because it is not located at a major source of HAP.
004	**MACT HH** This source is not subject to MACT HH because it is not located at a major source of HAP.

Section 13 – Aerometric Information Retrieval System Coding Information

Point	Process	Process Description	Emission Factor	Pollutant / CAS #	Fugitive (Y/N)	Emission Factor Source	Control (%)
004	**01**	E&P Crude oil Storage Tanks	113.3761 lb/1000 gal	VOC	No	E&P Tanks	95
			1.0747 lb/1000 gal	Benzene / 71432	No	E&P Tanks	95
			1.0302 lb/1000 gal	Toluene / 108883	No	E&P Tanks	95
			0.0568 lb/1000 gal	Ethylbenzene /100414	No	E&P Tanks	95
			0.4196 lb/1000 gal	Xylenes /1330207	No	E&P Tanks	95
			9.4007 lb/1000 gal	n-Hexane / 110543	No	E&P Tanks	95
			0.7333 lb/1000 gal	2,2,4-TMP/ 540841	No	E&P Tanks	95
	SCC	**40400312 – Fixed Roof Tank, Crude oil, working+breathing+flashing losses**					

Section 14 – Miscellaneous Application Notes

AIRS Point	**004**	**Crude oil Storage Tanks**

A permit will be issued because the uncontrolled VOC emissions are greater than 5 TPY (permit threshold).

Operator used a gas analysis sampled 12/10/13 and E&P Tanks to determine emissions and emission factors.

Uncontrolled emission factors:
VOC = (519.331 * 2000)/ 218124 = 4.7618lb/bbl * 1000/42 = 113.3761 lb/1000 gal
Benzene = (4.923 * 2000)/ 218124 = 0.04514 lb/bbl * 1000/42 = 1.0747 lb/1000 gal
Toluene = (4.719 * 2000)/ 218124 = 0.0433 lb/bbl * 1000/42 = 1.0302 lb/1000 gal
Ethylbenzene = (0.260 * 2000)/ 218124 = 0.0024 lb/bbl * 1000/42 = 0.0568 lb/1000 gal
Xylenes = (1.922 * 2000)/ 218124 = 0.0176 lb/bbl * 1000/42 = 0.4196 lb/1000 gal
n-hexane = (43.061 * 2000)/ 218124 = 0.3948 lb/bbl * 1000/42 = 9.4007 lb/1000 gal
2,2,4-TMP = (3.659 * 2000)/ 218124 = 0.0308 lb/bbl * 1000/42 = 0.7333 lb/1000 gal