



Facility and Project Information Submittal Form for Modeling Requirements Determination Form APCD-114

Please answer all questions on this form. If requested information does not apply to your project then insert N/A. Form completion and submission of all associated documentation is required to obtain a Permit Modeling Unit (PMU) Determination. All information must be consistent with what is ultimately submitted in a permit application. If it is not, the PMU Determination and/or Modeling Analysis will need to be redone. Please submit this form and all attachments to cdphe_apcd_modelingdeterminations@state.co.us

- 1) Date: 10/14/2022
- 2) Company Name: Navex Resources LLC
- 3) Company contact information
Name: Conrad Mirochna
Email: cmirochna@trekresources.com
Phone number: 214-382-3223
- 4) Applicant contact information (If different than company contact)
Name: Kelli Cox
Email: kcox@quandaryconsultants.com
Phone number: 970-566-3529
- 5) Facility name: Pfaffly 1-12
- 6) Is this a new facility or modification to an existing facility? New facility ☒ Modification ☐

If existing, list description of modified emission points (including APEN and Permit exempt sources), AIRS ID number, and location (LAT/LONG or UTM)

Description	AIRS ID Number	LAT/LONG or UTM
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>

If modification, provide a detailed description of the modification (Units moving? Operational changes?)

- 7) Does the proposed project include a new General Permit Registration to GP01, GP02, GP05, GP06, GP07, GP08, GP09, GP10, and/or GP11? If so, please identify the applicable General Permit for each applicable Source ID:

Source ID	General Permit Number
Oil and Gas Well Production Facilities	GP09

- 8) Please provide a topographical map with the modified or new emissions point(s), structures and site boundary shown.
- 9) Attach facility criteria pollutant (NOX, SO2, CO, PM10 and PM2.5) potential to emit (PTE) emission estimates for modified or new sources, including fugitive and APEN and Permit exempt emission sources. Include facility emissions totals, as well as release parameters for each emissions point (as provided in tables below) and include Form APCD-102. If this is a modification application, provide the total change in emissions directly attributable to the modification.

Point Sources (e.g. stacks and isolated vents) with a vertical release (not a flare)								
Pollutant:								
Source ID	Description of source	Emission rate (tpy)	Emission rate (lb/hr)	Source release height above ground (m)	Stack gas exit temperature (K)	Stack gas exit velocity (m/s)	Stack inside diameter (m)	Capped, J-tube, or Horizontal release?

Flares/Enclosed Combustion Devices (ECDs)							
Pollutant:							
Source ID	Description of source	Emission rate (tpy)	Emission rate (lb/hr)	Effective Stack Height	Stack gas exit temperature	Stack gas exit velocity	Effective Stack inside Diameter
				Value (m)	Value (K)	Value (m/s)	Value (m)

Calculate the effective stack parameters for flares as discussed in the AERSCREEN User's Guide. For ECDs provide source release height and stack inside diameter.

Volume Sources (releases at an elevation e.g. multiple vents, conveyor belts)						
Pollutant:						
Source ID	Description of source	Emission rate (tpy)	Emission rate (lb/hr)	Release height	Initial lateral dimension σ_y	Initial vertical dimension σ_z
				Value (m)	Value (m)	Value (m)

Use procedures in Table 3-1 of the AERMOD User's Guide to calculate vertical and lateral dimensions.

Area Sources (low level releases e.g. storage piles, slag dumps, lagoons)						
Pollutant:						
Source ID	Description of source	Emission rate (tpy)	Emission rate (lb/hr)	Release height	Length of side X- and Y- dimension	Initial vertical dimension σ_z
				Value (m)	Values (m)	Value (m)

Use this table to include Areacircle and Areapoly sources as well.

Openpit Sources						
Pollutant:						
Source ID	Description of source	Emission rate (tpy)	Emission rate (lb/hr)	Release height above base of pit	Length of side X- and Y- dimension	Pit Volume
				Value (m)	Values (m)	Value (m ³)

- 10) If emissions points are located adjacent to buildings or other structures, please provide structure dimensions.

Building Description	Height (m)	Length (m)	Width (m)

- 11) Has this facility been modeled before? Yes ☐ No ☐

If yes, provide any records of previous modeling demonstrations that the facility will not cause or contribute to a violation of the NAAQS.

- 12) If you do not believe modeling should be required, please provide clear justification for this along with the information requested above.

- Total facility wide Nox emissions are estimated at 1.9 TPY or 0.44 lb/hr
- 19hp pumping unit engine is APEN required, but permit exempt
- Facility is located in an Attainment Area (Kit Carson County)
- The surrounding area is primarily flat, rural, and unoccupied ranchland
- The closest building unit is greater than 1 mile away

- 1) Modeling determination identification number APCD MD_242
- 2) Existing Source Facility ID and AIRS number TBD
- 3) Date modeling determination was completed 10/21/2022
- 4) Based on the application information submitted, is modeling needed to complete the required NAAQS analysis?

Yes ☐

No ☒

- 5) Justification for Modeling Determination (e.g., previous NAAQS modeling demonstration has been made).

This determination is for a new facility for which compliance with the National Ambient Air Quality Standards ("NAAQS") has not historically been evaluated as required by Colorado Air Quality Control Commission Regulation 3, Part B. This permitting action must be evaluated on its own merit and site-specific/case-specific facts.

In this current permit application, Navex Resources LLC is requesting to permit an oil & gas production facility, the Pfaffly 1-12 facility, consisting of storage tanks, associated loadout and venting, combustion control, and a pumping unit engine under Colorado General Permit GP09. The emissions are represented to be 1.92 tpy (0.44 lb/hr) NOx and 6.52 tpy (1.49 lb/hr) CO. The proposed emission rates are below the corresponding thresholds in Table 1 of the Interim Colorado Modeling Guideline for Air Quality Permits (October 2021). The threshold amounts in Table 1 are considered de minimis emissions, which have a low probability of causing or contributing to an exceedance of any NAAQS. PMU has concluded that the proposed source or activity which is the basis for this permit application will not cause an exceedance of any NAAQS and modeling is not required, or justified, to conduct the NAAQS analysis.

- 6) If modeling is required, which criteria pollutants and averaging periods need to be modeled to demonstrate compliance with the National Ambient Air Quality Standards and Colorado Ambient Air Quality Standards?

n/a

- 7) If modeling is needed, provide modeling procedure guidance.

n/a

- 8) Date modeling decision provided to Applicant and CDPHE Permitting Representative

10/21/2022

- 9) Number of hours spent on modeling determination

0.5

APPROVED

Form APCD-102

Colorado Department of Public Health and Environment
Air Pollution Control Division

Facility Wide Emissions Inventory Form

Ver. April, 2015



Company Name: Navex Resources, LLC

Source Name: Piffaffly 1-12

Source AIRS ID: TBD

		Uncontrolled Potential to Emit (PTE)																Controlled Potential to Emit (PTE)																			
		Criteria (TPY)								HAPs (lb/yr)								Criteria (TPY)								HAPs (lb/yr)											
AIRS ID	Equipment Description	TSP	PM10	PM2.5	SO2	NOx	VOC	CO	HCHO	Acetal	Acro	BZ	Tol	EB	Xyl	n-Hex	Meth	224-TMP	TSP	PM10	PM2.5	SO2	NOx	VOC	CO	HCHO	Acetal	Acro	BZ	Tol	EB	Xyl	n-Hex	Meth	224-TMP		
TBD	3 - 300 MB Crude Oil Tanks	0.0	0.0	0.0	0.0	0.2	117.1	1.0	0	0	0	3,367	0	0	0	17,934	0	0	0.0	0.0	0.0	0.0	0.21	5.87	0.96	0	0	0	168	0	0	0	897	0	0		
TBD	1 - 300 MB Produced Water Tank	0.0	0.0	0.0	0.0	0.3	1.9	1.2	0	0	0	101	0	0	0	317	0	0	0.0	0.0	0.0	0.0	0.27	0.09	1.23	0	0	0	5	0	0	0	16	0	0		
TBD	Crude Oil Loadout	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0	0	0	16	0	0	0	140	0	0	0.0	0.0	0.0	0.0	0.01	0.23	0.04	0	0	0	1	0	0	0	7	0	0		
TBD	ROPE	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0	0	0	0	0	0	0	1	0	0	0.0	0.0	0.0	0.0	0.00	3.64	0.00	0	0	0	0	0	0	1	0	0			
Permitted Sources Subtotal =		0.0	0.0	0.0	0.0	0.5	127.2	2.2	0	0	0	3,484	0	0	0	18,392	0	0	0.0	0.0	0.0	0.0	0.49	9.83	2.22	0	0	0	174	0	0	0	921	0	0		
APEN Only - Permit Exempt Sources																																					
TBD	10hp Pumping Unit Engine	0.0	0.0	0.0	0.0	1.1	0.4	4.0	44	6	6	3	0	1	0	0	7	1	0.0	0.0	0.0	0.0	1.10	0.39	4.02	44	6	6	3	0	1	0	0	7	1		
APEN Only Subtotal =		0.0	0.0	0.0	0.0	1.1	0.4	4.0	44	6	6	3	0	1	0	0	7	1	0.0	0.0	0.0	0.0	1.1	0.39	4.02	44	6	6	3	0	1	0	0	7	1		
APEN Exempt / Insignificant sources																																					
TBD	Fugitives	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.00	0.23	0.00	0	0	0	0	0	0	0	0	0	0		
TBD	1 - 6.1 MMlb/hr Heater	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.33	0.02	0.28	0	0	0	0	0	0	0	0	0	0		
Insignificant Subtotal =		0.0	0.0	0.0	0.0	0.3	0.2	0.3	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.33	0.25	0.28	0	0	0	0	0	0	0	0	0	0		
Total, All Sources =		0.0	0.0	0.0	0.0	1.9	127.8	6.5	45	6	6	3,488	0	1	1	18,393	7	2	0.0	0.0	0.0	0.0	1.92	10.46	6.52	45	6	6	178	0	1	1	921	7	1		
		0.44 =Nav Bchr																																			
Uncontrolled HAPs Summary (TPY) =																		Controlled HAPs Summary (TPY) =																			
0.0																		0.0																			
Uncontrolled Total, All HAPs (TPY) =																		Controlled Total, All HAPs (TPY) =																			
11.0																		0.6																			

Footnotes:

- This form should be completed to include both existing sources and all proposed new or modifications to existing emissions sources
- If the emissions source is new then enter "proposed" under the Permit No. and AIRS ID data columns
- HAP abbreviations include:
BZ = Benzene
Tol = Toluene
EB = Ethylbenzene
Xyl = Xylene
HCHO = Formaldehyde
224-TMP = 2,2,4-Trimethylpentane
Acetal = Acetaldehyde
Acro = Acrolein
n-Hex = n-Hexane
Meth = Methanol
- APEN Exempt/Insignificant Sources should be included when warranted.