



REGION 8

DENVER, CO 80202

**EOG Resources, Inc. – Various Well Pads and Facilities
Partial Compliance Evaluation (PCE)
On-Site Clean Air Act (CAA) Inspections**

Inspection Date(s): October 24, 2024

Inspection Report Date: December 27, 2024

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Tribal Representatives: Dwight Bruce, MHA Energy

Company Representatives: None

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Inspection Report Reviewed By: Scott Patefield, Manager, Enforcement and Compliance Assurance Division, Air and Toxics Enforcement Branch

Applicable Rules: 40 C.F.R Part 49, Subpart K – Federal Implementation Plan for Oil and Natural Gas Well Production Facilities; Fort Berthold Indian Reservation (Mandan, Hidatsa and Arikara Nation), North Dakota (Fort Berthold FIP)

40 C.F.R Part 60, Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022 (NSPS OOOOb)

Compliance Assistance

None

Enforcement History

EOG Resources, Inc. (EOG) was issued a Notice of Violation (NOV) on July 15, 2024, under Docket Number CAA-08-2024-0007.

Areas of Concern

1. The EPA detected hydrocarbon emissions from the storage tanks at the well pad co-located with the following well:
 - Mandaree SEC 10 NENW
2. The EPA detected hydrocarbon emissions from an unlit flare co-located with the following well:
 - Mandaree 17 NWNW 1 Pad
3. The EPA observed smoke from the heater treater at the well pad co-located with the Mandaree SEC 10 NENW well. Operator Dean Newman was on-site during the inspection and adjusted the air-to-fuel ratio on the burner, at which point the smoke stopped. Additionally, the EPA observed yellow smoke from the stack of one of the compressors co-located on the well pad. Mr. Newman contacted EOG's mid-stream operator for the site and was informed that a new catalyst was installed on the engine two days ago which may be the cause of the yellow smoke. EOG personnel noted that they would further investigate the matter.

See Table 1 below for more details regarding inspected locations and Tables 2 and 3 for inspection observation details for all pads. A log of images and videos captured during the inspections is provided in Appendix A.

General Inspection Information

Unannounced well pad inspections were conducted jointly by U.S. EPA and Fort Berthold Indian Reservation (FBIR) Tribal inspectors on October 24, 2024, at multiple EOG facilities located on the FBIR.

The EPA inspectors evaluated each well site listed in Table 1 using audio, visual, and olfactory (AVO) inspection methods including the use of an optical gas imaging (OGI) camera and EPA Reference Method 22 if necessary. At each facility, inspectors scanned the crude and/or water storage tanks, closed vent system and flares onsite for any detectable emissions. Specifically, inspectors scanned storage tank covers and closed vent systems for hydrocarbon emissions to determine compliance with the Clean Air Act, including the Fort Berthold FIP and NSPS OOOOb.

Each well pad inspection followed the approach below:

1. Record the entry sign of the well pad when available. Survey the entire well pad with OGI camera.
2. Record the number and type of site process equipment such as well heads, tanks, and emission control devices.
3. Record AVO indications of emissions from the storage tanks, closed vent system to the control devices and control devices.
4. Using the OGI camera, survey each process in infrared modes (auto, manual, and/or high-sensitivity modes). Record any uncontrolled emissions with the OGI camera and describe the frequency and magnitude of emissions in the field notebook.
5. Observe control devices (enclosed combustor or utility flare) for visible emissions. If there is visible emissions present, conduct Method 22 and record the observations.
6. Using another OGI camera, if available, confirm any observations of uncontrolled emissions with another inspector.
7. If there are operators present onsite, share any Areas of Concern.

Table 1 lists general inspection and well pad details for each inspected well pad. The well pad information located in Table 1 is from the North Dakota Industrial Commission (NDIC) well index located online at <https://www.dmr.nd.gov/oilgas/>.

Table 1: Inspection and Facility Details of Facilities Inspected						
Date	Arrival Time	Departure Time	Well Pad Name	API Number	Latitude	Longitude
10/24/24	9:20	9:31	Mandaree 17 NWNW 1 Pad	3305303098	47.7310972	-102.74885
10/24/24	9:40	10:00	Mandaree SEC 10 NENW 1	3305310012 3305310013 3305310014 3305310015	47.745876	-102.70059

Observations and Regulatory Applicability

Fort Berthold FIP and NSPS OOOOb regulations which are potentially relevant to the Areas of Concern observed during inspections are summarized in this section.

Tables 2 and 3 at the end of this report summarize inspection observations and findings. Table 2 summarizes storage tank observations. Table 3 includes details of control devices and related observations. See Appendix A for a log of images and videos taken during the inspections.

Fort Berthold FIP Applicability

Based on drilling information reported to the NDIC well index by EOG, the facilities listed in Table 1 were completed after the August 12, 2007, applicability date (per 40 C.F.R. § 49.4161) and are producing from the Bakken Pool (per 40 C.F.R § 49.4163(a)(1)) and are thus subject to the Fort Berthold FIP.

Closed Vent System Equipment Requirements [§ 49.4165(b)]

Per § 49.4165(b)(1), “Each closed-vent system must route all produced natural gas and natural gas emissions from production and storage operations to the natural gas sales pipeline or the control devices...”. The EPA, using an OGI camera, detected natural gas emissions from production and storage tanks at the Mandaree SEC 10 NENW well pad. See Area of Concern #1 above.

Utility Flare Requirements [§ 49.4165(c)]

Per § 49.4165(c)(6)(vi), “The owner or operators must ensure that each enclosed combustor and utility flare is maintained in a leak-free condition.” The EPA, using an OGI camera, detected emissions from an unlit flare at the Mandaree 17 NWNW 1 Pad. See Area of Concern #2 above.

NSPS OOOOb Applicability

Based on well production information reported by EOG to the NDIC; and the date of construction, reconstruction, or modification of the storage vessels; the EPA believes that storage vessels and associated emissions control equipment at the Mandaree SEC 10 NENW well pad are potentially subject to requirements for storage vessel affected facilities in NSPS OOOOb.

Closed Vent System Equipment Requirements [§ 60.5411b(a)]

Per § 60.5411b(a)(2), owners and operators must “design the closed vent system to capture and route all gases, vapors, and fumes to a process or a control device that meets the requirements specified in § 60.5412b(a) through (d)...” Furthermore, § 60.5411b(a)(3) requires that the closed vent system be designed and operated “with no identifiable emissions.” The EPA, using an OGI camera, observed emissions from the closed vent system at the Mandaree SEC 10 NENW well pad. See Area of Concern #1 above.

Table 2: Inspection Details: Storage Tank Observations				
Well Pad Name	Number of Storage Tanks	AVO (Audio, visual, olfactory) Observations	Emissions Description	Media File Name
Mandaree 17 NWNW 1 Pad	17	—	—	—
Mandaree SEC 10 NENW 1	8	None	Continuous emissions from a PRV on the top of the tanks.	MOV_3554.mp4 MOV_3555.mp4

Table 3: Inspection Details: Control Devices and AVO/OGI Observations								
Well Pad Name	Number of Control Device	Control Device Type	Visible Pilot Flame (Y/N)	Active Flaring (Y/N)	Method 22 Observations	Emission Description	Media File Name	Slope to K/O Drum
Mandaree 17 NWNW 1 Pad	2	Low Pressure	Y	Y	None	The southern-most LP flare appears to have pilot gas leaking near the flare tip without combustion occurring. The emissions were observed to be continuous. The "Low pilot gas alarm" was also on.	MOV_3553.mp4	Downward
		Low Pressure	N	N	None			
Mandaree SEC 10 NENW 1	1	High Pressure 2-Prong	Y	N	None	—	None	Downward
	1	Air Assisted Steffes	Y	N	None			

APPENDIX A: Photograph and Video Log

Media File	Description	Well Pad Name
MOV_3553.mp4*	The southern-most LP flare appears to have pilot gas leaking near the flare tip without combustion occurring. The emissions were observed to be continuous.	Mandaree 17 NWNW 1 Pad
IMG_1675.jpg	"Low pilot gas alarm" indicator on for the LP flare which was observed to be leaking.	Mandaree 17 NWNW 1 Pad
MOV_3554.mp4*	Continuous emissions from a PRV on the top of the tanks.	Mandaree SEC 10 NENW 1
MOV_3555.mp4*	Continuous emissions from a PRV on the top of the tanks.	Mandaree SEC 10 NENW 1
entrysign-20241024-142703.jpg	Entry Sign	Mandaree 17 NWNW 1 Pad
entrysign-20241024-144446.jpg	Entry Sign	Mandaree SEC 10 NENW 1

*In addition to recording metadata through the OGI camera's system, EPA collected metadata for the media files recorded during the inspections, including the date, time, and location of the recorded media, in the Survey123 ArcGIS application at the time of the inspections. Due to a technical issue experienced with the OGI camera's metadata captured for the .mp4-type files, the Survey123 metadata was used as the primary reference for verifying inspection media file data.