



Crestone Peak Resources Operating LLC

Site Specific Air Quality Plan Addendum

For Aspen 3-65 15-14 South

(Aspen South Facility)

Please add: Application Number: DA-2394-00
Case Numbers: 2024-6036-00

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1. Purpose

- The purpose of this plan is to provide the necessary information for meeting Air Quality requirements as required by the Oil and Gas Operator Agreement between Crestone Peak Resources Operating LLC (CPRO) and the City of Aurora, a municipal corporation.
- This plan addendum is intended to address site specific items. Each location presents unique challenges related to topography, surrounding land uses, proximity to other sources of emissions, and conditions driven by the Operator Agreement.

2. Scope

- The Field-wide Air Quality Plan (FW AQP) addresses all air quality requirements subject to the Aurora Operator that are common to all locations. This site-specific plan addendum is intended to address only the aspects that are unique to the Aspen South location and will not repeat general terms outlined in the FW AQP.

3. Objectives

The following objectives are applied to the site-specific addendum.

- Identification of background sources of emissions and potential causes of interference.
- Location specific considerations such as topography, unique site designs and multi-well pads in different stages of production.
- Monitoring strategies that will be employed and monitor locations.

4. Monitoring Strategy

4.1. Monitoring Timetable

CPRO will utilize the Canary S monitoring system as provided by Project Canary. The FW AQP outlines the monitoring strategy employed fieldwide.

- Signed contract with Canary – December 21, 2019
- Establish alert levels/thresholds and data feed to the City – June 25, 2020
- Identify monitor locations in field with Canary – October 2023
- Begin pre-construction baseline air monitoring – June 5, 2024

** Any timelines listed above may be subject to change based on City requirements and O&G location specific issues which may be outside of CPRO's control.*

4.2. Pre-activity information

- List of possible sources of outside interference:
 - CPRO Battery Aspen 3-65 15-14 North: 1,750 feet North
 - CPRO Battery Bear 3-65: 4,750 feet South
 - CPRO Battery Schuh 3-65: 5,000 feet South
 - CPRO Bijou 3-65 19-24 North (proposed): 5,300 feet Southwest
 - Commercial distribution centers: 8,600 feet Northwest
 - Denver International Airport: 10,500 feet North
 - Agriculture field: Surrounds the facility (farm equipment operations)

There are no buildings or structures near the location that will create any monitoring obstructions.

Location Specific Considerations

- Topography: Flat with minimal slopes
- Identification of site design / structures of concern:
 - Sound walls will be used during pre-production operations. The sound walls will be installed prior to moving in the drilling rig and remain on location through completions operations. The sound walls will be removed after first date of production through the permanent equipment.
 - The site is close to the road and high traffic or idling vehicles could impact the monitors. During all activity's sensor placement will be evaluated and monitored. Sensor placement will be adjusted to ensure the best location for monitoring. (see section 4.3)
- All monitoring locations will include the ability to pull summa canisters.
- Section 6.3.5 Continuous Monitoring Plan of the FWAQP provides a description for evaluation criteria. The three monitors and canister samplers will be placed a triangular pattern around the location with a focus on placing monitors downwind of activities that may be the source of an emissions event.
- Describe site activity, stages, and timeline
 - Initial Pad Construction: Estimated Start June 15, 2024
 - Drilling Phase: Estimated Start August 15, 2024
 - Completions: Estimated start February 15, 2025
 - Facility Construction: Estimated start May 6, 2025
 - Projected First date of production: September 15, 2025

** Any timelines listed above may be subject to change based on City requirements and O&G location specific issues which may be outside of CPRO's control.*

4.3. Equipment Siting and Site-Specific Monitoring

- Pre-construction monitoring will consist of a single monitor.
 - A single monitor is sufficient since the purpose is to develop baseline air pollutant levels and there will be no activity occurring on the location.
- During all phases of development **three** monitors and canister samplers will be placed a triangular pattern around the location with a focus on placing monitors downwind of activities that may be the source of an emissions event.
- During all pre-production activities, the Canary sensors will remain inside the sound walls unless the sound wall prevents adequate sunlight to the sensor's solar panel. In that case, the sensor will be placed just outside the sound wall.
- Anticipated timing for re-locations
 - Drilling → locations will be re-evaluated after sound walls constructed and drilling equipment is set on location
 - Completions → locations will be re-evaluated after completions equipment set on location.
 - Production → monitors will be re-evaluated after permanent equipment constructed
- The City of Aurora will be consulted with any pending changes to monitoring locations as warranted by site specific meteorological data. The City of Aurora during this consultation can approve the monitor placement changes or provide alternatives to be evaluated. Consultation will be limited to 5 business days and if no comments is received from the City of Aurora the placement changes will be considered approved
- Canary and Summa Can Height – approximately 5 ft.
- Rationale for Placement of Canaries. The initial rationale for monitoring placement is to use prevailing wind patterns and site equipment layouts to capture potential emissions sources using downwind monitors and a single upwind monitor to determine if off location sources are impacting the site.
- Monitor Locations: Figures 1 and 2 show the proposed configuration of monitors during the pre-production and production phases.

- Estimated location of sensors during drilling and completion phases:
 - Receptor 1 (SSE), GPS 39.786425/ -104.656988
 - Receptor 2 (W), GPS 39.787267/ -104.658382
 - Receptor 3 (NE), GPS 39.788329/ -104.656414
- Estimated location of sensors during production phase:
 - Receptor 1 (NE), GPS 39.788275/ -104.657053
 - Receptor 2 (S), GPS 39.786929/ -104.657570
 - Receptor 3 (WNW), GPS 39.787854/ -104.658348
- After the permanent facility has been constructed and partial reclamation has been completed, permanent posts are installed around the perimeter of the site in accordance with Figure 2. These posts will be utilized if it is determined that any of three Canary monitors will need to be moved based upon meteorological data and consultation with the City of Aurora.
- At the completion of 30 days of monitoring at the permanent facility, wind rose information will be analyzed to determine if units need to be moved to the most effective posts according to the prevailing wind direction.
- CPRO will maintain a log of the date, reasoning and record of consultation with Aurora for changes to sensor movement decisions.

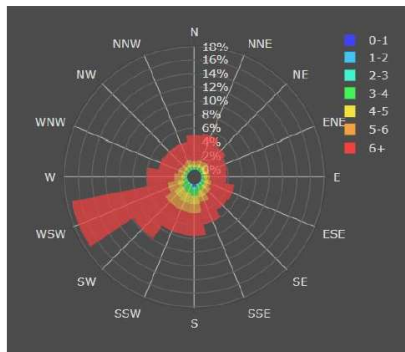
Figure 1

Aspen South Pad

Drilling & Completion

- 3 Canary S units proposed; 3 Summa Canisters
- Locations approximate (pad edge, at least 50' from any ignition sources)
- Predominant wind direction in all speeds is from the WSW.

Schuh Pad Wind Data [Nov 2022 - Nov 2023]



39.787382, -104.656081

- A Canary Unit with anemometer
- Canary Unit

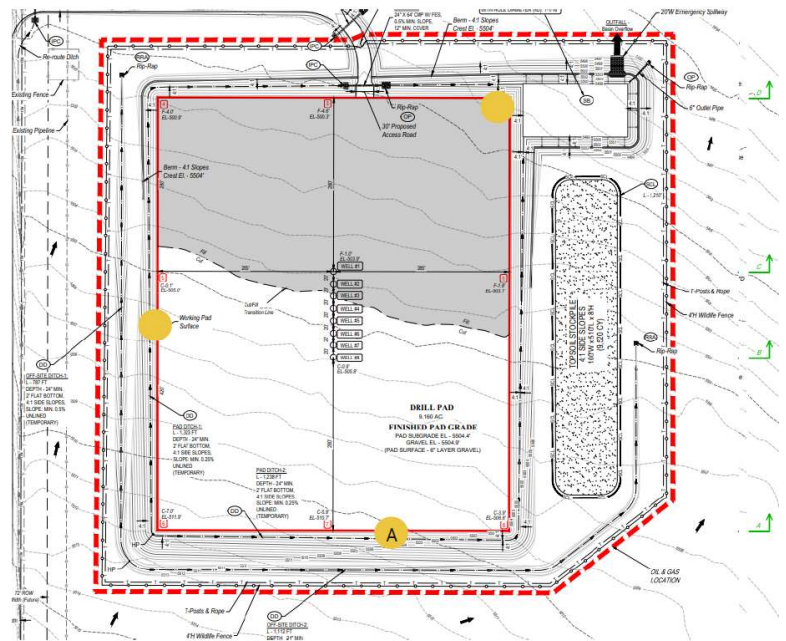


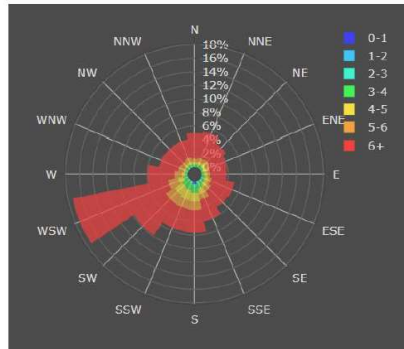
Figure 2

Aspen South Pad

Production

- 3 Canary S units proposed; 3 Summa Canisters
- Locations approximate (pad edge, at least 50' from any ignition sources)
- Predominant wind direction in all speeds is from the WSW.

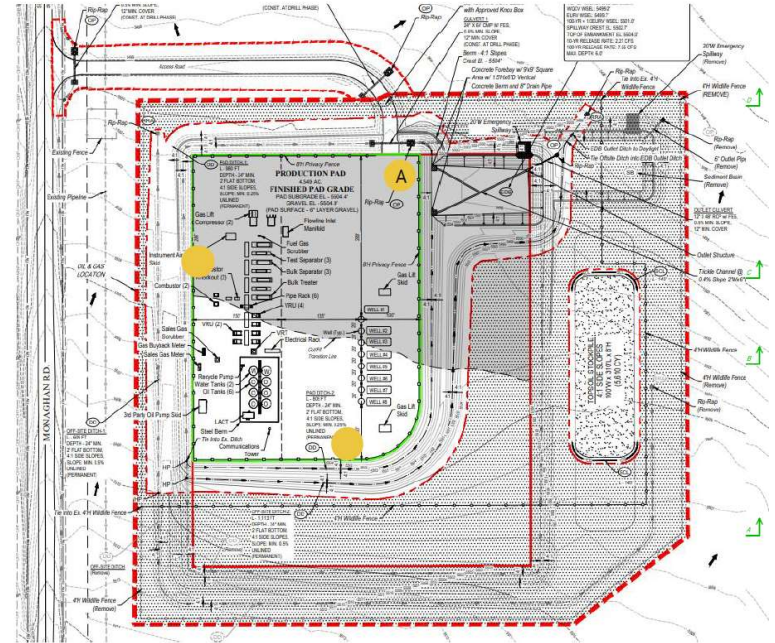
Schuh Pad Wind Data
[Nov 2022 - Nov 2023]



39.787382, -104.656081

A Canary Unit with anemometer

Canary Unit



5. Location Data plan

- Frequency of collection
 - Canary sensors will operate continuously upon installation.
 - Continuous monitoring will follow the procedures outlined in the FW AQP.
 - CPRO personnel will follow the CEM Data Evaluation and Response Procedure provided in the FW AQP.
- Report out matrix
 - The regular report will follow the submittal frequency defined in the FW AQP. It will also include a log of sensor locations in the event that a sensor needs relocated as defined in section 4.4

6. Minimization of Emissions

- Equipment:
 - Electric drilling rig will be utilized, however in the event power is not available then diesel rig will be used.
 - Tier 4 engines will be utilized during completions, however if they are unavailable then Tier 2 engines will be used.
 - The permanent facility will utilize instrument air for all pneumatic devices.
 - Emissions from storage tanks and truck loadout operations will be controlled by an enclosed combustor.
 - All equipment and emissions will be in compliance with CDPHE regulations and air permit compliance.

7. References

- Fieldwide Air Quality Plan