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John Noto
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

RE: Ridge State 33-17
Location # 473149
Air Monitoring Report June 30 – July 31, 2020

Mr. Noto:

Per a COGCC Condition of Approval dated May 13, 2020 on the Ridge State 33-17 Pad, PDC has completed the first month of air monitoring. Baseline monitoring began on June 30, 2020 and ran through July 2, 2020. The drilling phase began on July 3rd and is still ongoing. The attached appendices include the following information in accordance with PDC's approved monitoring plan. There were no Action Level events or monitoring outages greater than 4 hours during the reporting period.

Appendix A: Summary of VOC and benzene monitoring and sampling results, including:

- a. Maximum, average and standard deviations of the concentrations of VOCs for each monitoring location during the reporting period, reported by operational phase
- b. Maximum, average and standard deviations of the concentrations of benzene for each sampling location during the reporting period, reported by operational phase

Appendix B: Summary of the meteorological data during the reporting period, including:

- a. Average temperature, pressure, and relative humidity
- b. Predominant wind direction(s) and associated average wind speed

Appendix C: Summary of PID bump test results, including:

- a. Date and time of each test performed during the reporting period
- b. Standard concentrations for each test
- c. Measured concentrations for each test
- d. Whether corrective action was required (result > $\pm 30\%$ of standard)

Appendix D: Sampling Locations Map, including:

- a. Location of each Monitoring Set

Please feel free to contact me with any questions or concerns at matthew.lilly@pdce.com or (970) 673-3474.

Thank you,

Matthew Lilly
Air Quality Representative – Wattenberg

CC: Greg Deranleau; Doug Andrews; Brian Cocchiere; Meredith Knauf; Susan Gomez



Appendix A:
VOC and Benzene Monitoring
and Sampling Results

Facility Name: Ridge
Reporting Period Start: 6/30/2020
Reporting Period End: 7/31/2020
Operational Phase(s): Baseline and Drilling

Monitor Name		Actual Location	
1)	Northeast Corner	-104.81047	40.397722
2)	East Side	-104.80886	40.395532
3)	Southeast Corner	-104.8133	40.394478
4)	Southwest Corner	-104.81332	40.394040
5)	West Side	-104.81306	40.395408
6)	Northwest Corner	-104.81245	40.398210

Baseline Monitoring:

Monitor Name	VOC Concentrations (ppm)			Benzene Concentrations (ppb)		
	Max	Average	Standard Deviation	Max	Average	Standard Deviation
1) Northeast Corner	0.11	0.02	0.03	ND (0.2)	ND (0.2)	N/A
2) East Side	0.42	0.05	0.04	ND (0.2)	ND (0.2)	N/A
3) Southeast Corner	0.48	0.04	0.03	0.23	0.23	N/A
4) Southwest Corner	0.46	0.09	0.07	ND (0.22)	ND (0.22)	N/A
5) West Side	0.17	0.04	0.05	ND (0.2)	ND (0.2)	N/A
6) Northwest Corner	0.23	0.09	0.06	ND (0.2)	ND (0.2)	N/A

Drilling:

Monitor Name	VOC Concentrations (ppm)			Benzene Concentrations (ppb)		
	Max	Average	Standard Deviation	Max	Average	Standard Deviation
1) Northeast Corner	0.72	0.02	0.02	0.12	0.12	0.00
2) East Side	0.63	0.04	0.03	0.11	0.11	0.00
3) Southeast Corner	0.68	0.06	0.04	0.13	0.13	0.00
4) Southwest Corner	1.00	0.13	0.07	0.15	0.14	0.02
5) West Side	0.54	0.03	0.04	0.13	0.13	0.01
6) Northwest Corner	0.80	0.13	0.05	0.13	0.13	0.01

Notes: PDC uses SGS Galson's FL2 Smart Sense PIDs for VOC monitoring and sorbent tube samples to monitor benzene concentrations. SGS Galson utilized their modified EPA Method 325b for laboratory analysis. Sorbent Tubes were collected July 5th, 17th and 31st for laboratory testing.



Appendix B:

Meteorological Data

Facility Name: Ridge
Reporting Period Start: 6/30/2020
Reporting Period End: 7/31/2020
Operational Phase(s): Baseline and Drilling

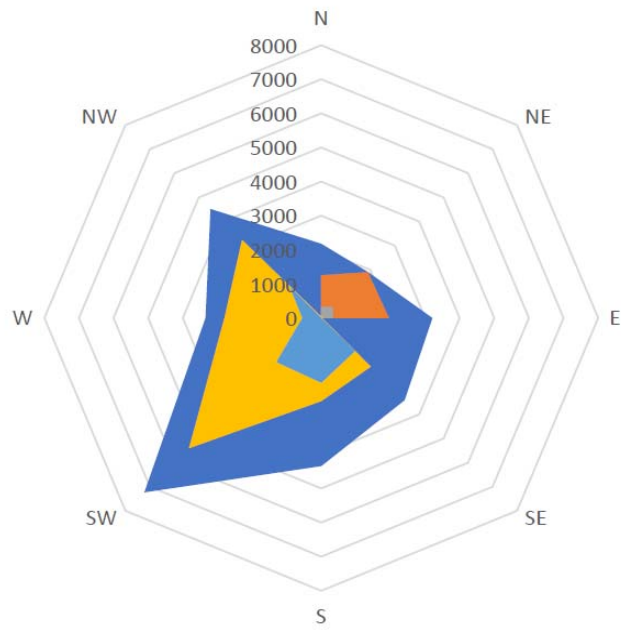
Baseline: 6/30 - 7/2		Average Meteorological Data				Predominant Wind Direction(s)
Monitor Name		Temperature (°F)	Pressure (mbar)	Relative Humidity (%)	Wind Speed	
1)	Northeast Corner	74	847	39	N/A	N/A
2)	East Side	74	846	41	5.2	E
3)	Southeast Corner	74	845	38	N/A	N/A
4)	Southwest Corner	75	845	41	N/A	N/A
5)	West Side	74	846	43	N/A	N/A
6)	Northwest Corner	75	846	41	N/A	N/A

Drilling: 7/3 - 7/31		Average Meteorological Data				Predominant Wind Direction(s)
Monitor Name		Temperature (°F)	Pressure (mbar)	Relative Humidity (%)	Wind Speed	
1)	Northeast Corner	76	850	45	N/A	N/A
2)	East Side	75	849	47	4.4	SE
3)	Southeast Corner	75	849	46	N/A	N/A
4)	Southwest Corner	76	849	47	N/A	N/A
5)	West Side	75	849	48	N/A	N/A
6)	Northwest Corner	76	849	46	N/A	N/A

Notes: PDC used the National Oceanic and Atmospheric Administration Website for the Temperature, Pressure and Relative Humidity information. PDC utilized the anemometer that is located on one of the Monitoring sets around the Ridge facility.

6/30-7/31/20 Wind Rose

■ 0-5 ■ 5-10 ■ 10-15 ■ 15-20 ■ 20-25





Appendix C:
SmartSense PID
Bump Test Results

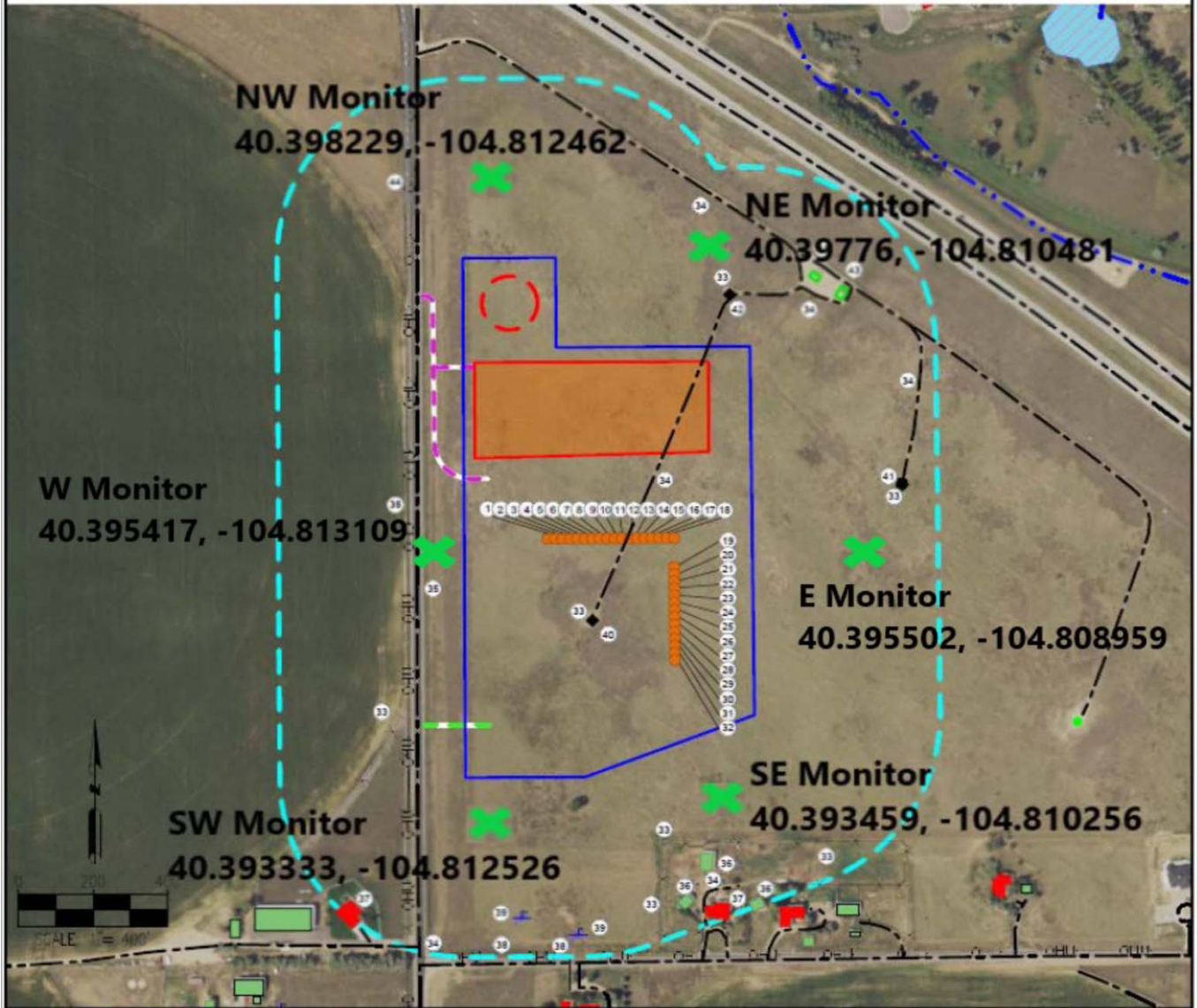
Operational Phase(s): Baseline and Drilling

Bump Test #3		7/31/2020				
Sample Station - Sensor ID	Start Time	End Time	Cal. Conc. (ppm)	Measured Conc. (ppm)	% of Standard	Action Required?
Shelter NE - SGS0168	12:27	12:29	5	5.23	105%	No
Shelter E - SGS0136	14:12	14:16	5	5.78	116%	No
Shelter SE - SGS0031	14:01	14:05	5	4.77	95%	No
Shelter SW - SGS0204	13:20	13:22	5	4.89	98%	No
Shelter W - SGS0176	11:06	11:10	5	5.09	102%	No
Shelter NW - SGS0068	11:41	11:47	5	4.53	91%	No
Notes:						



Appendix D: Sampling Locations Map

RIDGE STATE 33-17 PAD LOCATION DRAWING (A)



MEASURED FROM REFERENCE LOCATION

- | | | | | | |
|--------------------------|---------------------------|---------------------------|---------------------------|---|---|
| 1. RIDGE STATE 26N-168-M | 9. RIDGE STATE 41N-168-M | 17. RIDGE STATE 40N-168-M | 25. RIDGE STATE 39N-168-M | 33. FENCED ARE s243' NW, s511' S, s633' DE, s673' S, s743' SW, s774' NE, s1329' N | 39. WATER WELLS ARE s511' SW, s527' SW |
| 2. RIDGE STATE 26C-16-M | 10. RIDGE STATE 8C-16-M | 18. RIDGE STATE 3C-16-M | 26. RIDGE STATE 16C-16-M | 34. PRIVATE ROADS ARE s255' NW, s649' S, s791' NE, s1055' SW, s1129' NE | 40. EAPOUTID 17-33 IS s248' NW |
| 3. RIDGE STATE 25N-16A-M | 11. RIDGE STATE 8N-16A-M | 19. RIDGE STATE 3N-16A-M | 27. RIDGE STATE 16N-16A-M | 35. WELD COUNTY ROAD 27 IS s681' W | 41. EHRUCH 17-35 IS s784' NE |
| 4. RIDGE STATE 1N-16C-M | 12. RIDGE STATE 8N-16C-M | 20. RIDGE STATE 5N-16C-M | 28. RIDGE STATE 16N-16C-M | 36. BUILDINGS ARE s543' S, s653' S, s700' SE | 42. EAPOUTID 17-32 IS s1030' N |
| 5. RIDGE STATE 1N-16B-M | 13. RIDGE STATE 8N-16B-M | 21. RIDGE STATE 5N-16B-M | 29. RIDGE STATE 38N-16B-M | 37. BUILDING UNITS ARE s685' S, s1095' SW | 43. EXISTING FACILITY BERM ARE s1099' NE, s1122' NE |
| 6. RIDGE STATE 1C-16-M | 14. RIDGE STATE 40C-16-M | 22. RIDGE STATE 3C-16-M | 30. RIDGE STATE 38C-16-M | 38. OVERHEAD UTILITIES ARE s718' W, s825' S, s874' SW | 44. CONCRETE DITCH IS s1468' NW |
| 7. RIDGE STATE 1N-16A-M | 15. RIDGE STATE 40N-16A-M | 23. RIDGE STATE 39N-16A-M | 31. RIDGE STATE 38N-16A-M | | |
| 8. RIDGE STATE 41N-16C-M | 16. RIDGE STATE 40N-16C-M | 24. RIDGE STATE 39N-16C-M | 32. RIDGE STATE 38N-16C-M | | |