

7 September 2021

Submitted Electronically

Brittany Crutchfield  
Alaska Department of Environmental Conservation  
Air Permits Program  
555 Cordova Street  
Anchorage, Alaska 99501

**RE: Comments Addressing Preliminary Air Quality Minor Permit No. AQ1651MSS01 for the Oil Search (Alaska), LLC Seawater Treatment Plant**

Dear Ms. Crutchfield,

Oil Search (Alaska), LLC (OSA) is submitting to the Alaska Department of Environmental Conservation the enclosed comments addressing Air Quality Minor Permit No. AQ1651MSS01 and associated preliminary Technical Analysis Report during the public notice period.

If you have any questions or require additional information concerning the comments, please contact me at (907) 570-6562 or by email at [greg.horner@oilsearch.com](mailto:greg.horner@oilsearch.com).

Sincerely,

*Greg Horner*

**Greg Horner**  
Permitting Manager  
[greg.horner@oilsearch.com](mailto:greg.horner@oilsearch.com)

Enclosure

cc: Brittany Crutchfield, ADEC (electronic)  
Isaac Bertschi, Boreal Environmental Services

**Oil Search (Alaska), LLC  
Seawater Treatment Plant (STP)**

**Comments Regarding Preliminary Minor Air Quality Permit No. AQ1651MSS01  
and the Associated Preliminary Technical Analysis Report (TAR)**

Suggested language to be included is underlined and suggested language to be removed is crossed out. Please note that condition numbers may need to be updated for proposed edits that affect numbering within the permit.

**Comments Regarding Preliminary Minor Air Quality Permit No. AQ1651MSS01**

1. Permit Cover Page, Stationary Source Location - Please amend the stationary source location as follows to clarify that the Northing and Easting coordinates for the STP stationary source are referenced to the Universal Transverse Mercator (UTM) coordinate system.

**Location:** Northing: 7,825 km; Easting: 393 km; UTM Zone: 6

2. Permit Cover Page, Paragraph 1 – Please revise the first sentence in this paragraph to correct a typographical error by removing the extra comma after “(NO<sub>x</sub>)” as follows.

The Permittee submitted an application for Minor Permit AQ1651MSS01 under 18 AAC 50.508(c)(1) for a new or relocated stationary source with potential emissions greater than 40 tons per year (tpy) for oxides of nitrogen (NO<sub>x</sub>), and 40 tpy for sulfur dioxide (SO<sub>2</sub>).

3. Condition 10.1.d, Page 5 – Please amend Condition 10.1d as follows to clarify that filing an excess emissions and permit deviation report will be required if any of the monitoring, recordkeeping, and reporting requirements in Condition 10.1a through 10.1c are not met.

10.1.d Report as excess emissions and permit deviation as described in Condition 20 if any fuel combusted in EUs 5 through 7 exceeds the fuel sulfur content limit required by Condition 10.1, or if Conditions 10.1a ~~and~~ through 10.1c are not met.

4. Conditions 10.2 and 10.3, Pages 5 and 6 – Please amend Conditions 10.2 and 10.3 as follows to correct certain condition references and to allow for additional monitoring and recordkeeping methods for demonstrating compliance with the fuel gas sulfur content limits. In addition, references to fuel gas hydrogen sulfide (H<sub>2</sub>S) content limits should be replaced with fuel gas sulfur content limits for consistency with applicable federal and state standards. For example, EUs 1 and 2 will be required to meet the sulfur dioxide emission limits in Title 40 Code of Federal Regulation (40 CFR) Part 60 Subpart KKKK, which will require periodic monitoring of the total sulfur content of the fuel gas fired in EUs 1 and 2. Please note that the recommended revisions are consistent with fuel sulfur monitoring, recordkeeping, and reporting requirements in other Oil Search (Alaska), LLC air quality minor permits, such as Condition 10.2 in Permit No. AQ1564MSS01.

10.2 Limit the ~~hydrogen sulfide (H<sub>2</sub>S)-sulfur~~ content of the fuel gas fired in EUs 1 and 2 to no more than 338 ppmv at any time.

- a. Determine compliance no less than once a month with the fuel gas ~~H<sub>2</sub>S-sulfur~~ content limit as follows:
  - (i) If burning only pipeline quality natural gas, keep receipts that specify the fuel fired is pipeline quality natural gas; or
  - (ii) Obtain a statement from the fuel supplier that the sulfur content was less than 338 ppmv; or
  - ~~(i)-(iii)~~ (iii) Determine the fuel gas H<sub>2</sub>S-sulfur content of a representative sample of the fuel using ASTM D 4084, D 5504, D 6228, D 4810-88, ASTM D 4913-89, Gas Producer's Association method 2377-86, or a listed method approved in 18 AAC 50.035(b)-(c) and 40 CFR 60.17 incorporated by reference in 18 AAC 50.040(a)(1), or an alternative analytical method approved by the Administrator.

~~(ii)(A)~~ (A) The fuel gas ~~H<sub>2</sub>S-sulfur~~ analysis ~~required~~ under this condition may be performed by the owner or operator, a service contractor retained by the owner or operator, or the fuel vendor.
- b. Keep records of the ~~analysis conducted as required~~ information specified in Condition 10.2a(i).
- c. Report in each operating report required by Condition 21, the monthly fuel gas ~~H<sub>2</sub>S-sulfur~~ concentration, for each month of the reporting period.
- d. Report as excess emissions and permit deviation as described in Condition 20, should the fuel gas ~~H<sub>2</sub>S-sulfur~~ concentration exceed the limit in Condition 10.2, or if Conditions 10.2a through 10.2c are not met.

10.3 Limit the ~~hydrogen sulfide (H<sub>2</sub>S)-sulfur~~ content of the fuel gas fired in EUs 3 and 4 to no more than 500 ppmv at any time.

- a. Determine compliance no less than once a month with the fuel gas ~~H<sub>2</sub>S-sulfur~~ content limit as follows:
  - (i) If burning only pipeline quality natural gas, keep receipts that specify the fuel fired is pipeline quality natural gas; or
  - (ii) Obtain a statement from the fuel supplier that the sulfur content was less than 500 ppmv; or
  - ~~(i)-(iii)~~ (iii) Determine the fuel gas H<sub>2</sub>S-sulfur content of a representative sample of the fuel using ASTM D 4084, D 5504, D 6228, D 4810-88, ASTM D 4913-89, Gas Producer's Association method 2377-86, or a listed method approved in 18 AAC 50.035(b)-(c) and 40

CFR 60.17 incorporated by reference in 18 AAC 50.040(a)(1), or an alternative analytical method approved by the Administrator.

(ii)(A) The fuel gas H<sub>2</sub>S-sulfur analysis ~~required~~ under this condition may be performed by the owner or operator, a service contractor retained by the owner or operator, or the fuel vendor.

- b. Keep records of the analysis conducted as required in Condition ~~40.2a(i)~~10.3a.
  - c. Report in each operating report required by Condition 21, the monthly fuel gas H<sub>2</sub>S-sulfur concentration, for each month of the reporting period.
  - d. Report as excess emissions and permit deviation as described in Condition 20, should the fuel gas H<sub>2</sub>S-sulfur concentration exceed the limit in Condition ~~40.2~~10.3, or if Conditions ~~40.2a~~10.3a through ~~40.2e~~10.3c are not met.
5. Condition 11, Page 6 – Please correct a typographical error in Condition 11 as follows.
11. To protect the annual NO<sub>2</sub> AAAQS, and the annual SO<sub>2</sub> AAAQS, the Permittee shall limit the combined operation of EUs 1 and 2 at loads less than 40 percent of the maximum operating load to ~~not~~no more than 460 hours per consecutive 12-month period.
6. Condition 11.1, Page 6 – Please remove Condition 11.1. This condition requires installing, maintaining, and operating a non-resettable hour meter on each of EUs 1 and 2 (Power Generation Turbine Nos. 1 and 2). A non-resettable hour meter is not a suitable device for monitoring the time periods when the combustion turbine generators will operate at less than 40 percent load. This is because non-resettable hour meters are designed to monitor only equipment operating hours and do not collect information about the emissions unit's operating load. Like many other combustion turbines located at Alaska North Slope facilities, EUs 1 and 2 will include a computer-based control system to electronically monitor and record each turbine operating period and concurrent operating load.
7. Condition 11.3a, Page 6 – Please revise Condition 11.3a as follows to clarify that the number of hours each of EUs 1 and 2 will operate at loads less than 40 percent of the maximum operating load will need to be recorded for the previous calendar month.
- 11.3 By the 15th day of each month, calculate and record:
- a. the number of hours each of EUs 1 and 2 operated at loads less than 40 percent of the maximum operating load for the previous calendar month.
8. Condition 12, Page 7 – Please correct Condition 12 as follows to correct a typographical error and to specify that the required fuel type burned in EU 5 is ULSD and not fuel gas.

12. To protect the annual NO<sub>2</sub> and annual SO<sub>2</sub> AAQS, the Permittee shall limit the ULSD fuel gas consumption of EUs 5 to no more than 810,380 gallons per 12 month period.
9. Condition 12, Page 7 – Please revise Condition 12 as follows to correct a typographical error and to allow for the use of additional methods for demonstrating compliance with the applicable fuel use limit. Please note that the proposed monitoring options are consistent with specific monitoring methods included in other air quality permits, such as Minor General Permit 2 (MG2) for portable oil and gas operations.
  - 12.1 Monitor the fuel consumption of EU 5 using one of the following methods:
    - ~~12.1a.~~ Install, maintain, and operate a fuel flow meter capable of recording the total fuel use accurate to within ± 5 percent; or
    - b. Install, maintain, and operate a non-resettable hour meter.
  - 12.2 Record the monthly fuel consumption in gallons per month using one of the following methods:
    - a. record the fuel flow meter reading for EU 5 on the last day of each month; or
    - b. record the runtime (hours) and full load fuel consumption rate in gallons per hour provided by the manufacturer or back-calculation from the rated capacity using standard engineering techniques.
  - 12.3 By the 15th day of each month, calculate and record:
    - a. the number of gallons fired in EU 5 during the previous month,
      - (i) if the monitoring devices in Condition 12.1 fuel flow meter is ~~are~~ not operational assume design fuel consumption for that period; and
    - b. the total ~~combined~~ fuel consumption in gallons for EU 5 during the previous 12 consecutive month period.
10. Condition 21.1, Page 11 – Please renumber the second occurrence of Condition 21.1 to Condition 21.3 for clarity.
11. Attachment 1, Visible Emissions Form, Page 17 – Please revise the form entry titled “Stationary Source ID Number” to correctly reference that the “Emissions Unit ID Number” is the correct data to be recorded in the Visible Emissions Form.

### **Comments Regarding the Associated Preliminary TAR – Appendix B**

12. Appendix B, Pages 1 through 11. Please correct the facility name referenced in the header from “Seawater Treatment Plant Project” to “Seawater Treatment Plant” in the ambient demonstration review report for clarity.