

# DEPARTMENT OF ENVIRONMENTAL CONSERVATION OWNER REQUESTED LIMIT

**Owner Requested Limit:** AQ1845ORL01

**Draft Date – October 27, 2023**

**Owner:** ConocoPhillips Alaska, Inc.  
700 G Street Anchorage, AK 99501

**Operator:** ConocoPhillips Alaska, Inc.  
P.O. Box 100360 Anchorage, AK 99510-0360

**Stationary Source:** DS3T Well Pad

**Location:** 70°25'9.61"N 150°16'14.59"W

**Project:** DS3T Power Generation Project ORL

**ORL Contact:** Matthew Kale/Jamie Brewer  
907-659-7242  
n1037@conocophillips.com

The above-named owner/operator has submitted a complete request for an owner requested limit (ORL) under 18 AAC 50.225(b) for the DS3T Well Pad. The Alaska Department of Environmental Conservation (Department) approves the ORL to restrict the stationary source's potential to emit (PTE). The ORL allows ConocoPhillips Alaska, Inc. to avoid the requirements for a Minor Permit. The Department certifies that the ORL is effective as of the date noted below.

In accordance with 18 AAC 50.225(f), the owner/operator has agreed to the conditions listed in this ORL.

The owner/operator may revise the terms or conditions of this approval under 18 AAC 50.225 (h)(1) by submitting a request under 18 AAC 50.225(b). The owner/operator may request the Department revoke the limit in accordance with 18 AAC 50.225(h)(2). This limit remains in effect until the Department approves a new limit or revokes it.

I understand and agree to the terms and conditions of this approval.

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**Owner or Operator**

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**Printed Name**

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**Title**

**Department approval:**

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**James R. Plosay, Program Manager**  
**Air Permit Program**

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**Owner Requested Limit Effective Date**

## CONDITIONS:

1. **Owner Requested Limit to keep nitrogen oxide (NO<sub>x</sub>) emissions below 40 tons per year (tpy).** The owner/operator shall limit fuel consumption for the emissions unit (EU) listed in Table 1 (EU ID 1) to no more than 320,000 gallons of fuel for any consecutive 12-month period. Monitor, record, and report using at least one of the methods as follows:
  - 1.1 **Fuel Flow Meters.** Monitor, record, and report fuel consumption for EU ID 1 as follows:
    - a. Install, maintain, and operate a fuel flow meter(s), accurate to within  $\pm 5$  percent, for monitoring the amount of fuel consumed in EU ID 1.
    - b. Monitor and record the total fuel consumption in EU ID 1 by the end of each calendar month for the previous month.
    - c. Calculate and record, for each EU listed in Condition 1.1b, the sum of the last 12 consecutive records obtained in accordance with Condition 1.1b, by the end of each calendar month.
    - d. Report in the operating report as described in Condition 2 the records obtained in accordance with Condition 1.1c.
    - e. If total fuel consumption exceed any of the limits in Condition 1, report as excess emissions and deviation as specified in Condition 4.
  - 1.2 **Tank Strapping.** Monitor, record, and report fuel consumption for EU ID 1 as follows:
    - a. At a consistent time each day, record the fuel height in the fuel tank of EU ID 1.
    - b. For each fuel delivery to EU 1, record the fuel tank's:
      - (i) Initial fuel height;
      - (ii) Final fuel height;
      - (iii) Tank identification; and
      - (iv) Method of volume calculation (chart, site glass, mathematical equation, etc.)
    - c. Maintain a copy of the manufacturer's height to volume calculation chart for the fuel tank.
    - d. Monitor and record the total fuel consumption in EU ID 1 by the end of each calendar month for the previous month.
    - e. Calculate and record, for each EU listed in Condition 1.2d the sum of the last 12 consecutive records obtained in accordance with Condition 1.2d, by the end of each calendar month.

- f. Report in the operating report as described in Condition 2 the records obtained in accordance with Condition 1.2e.
    - g. If total fuel consumption exceed any of the limits in Condition 1, report as excess emissions and deviation as specified in Condition 4.
  - 1.3 **Delivery Truck Fuel Dispensing Meters.** Monitor, record, and report fuel consumption for EU ID 1 as follows:
    - a. Monitor and record the diesel fuel dispensed to EU ID 1 to the unit.
    - b. Monitor and record the total fuel consumption in EU ID 1 by the end of each calendar month for the previous month.
    - c. Calculate and record, for each EU listed in Condition 1.3b, the sum of the last 12 consecutive records obtained in accordance with Condition 1.3b, by the end of each calendar month.
    - d. Report in the operating report as described in Condition 2 the records obtained in accordance with Condition 1.3c.
    - e. If total fuel consumption exceed any of the limits in Condition 1, report as excess emissions and deviation as specified in Condition 4.
  - 1.4 **Runtime and Full Load Calculations.** Monitor, record, and report fuel consumption for EU ID 1 as follows:
    - a. Use a non-resettable hour meter to determine the runtime of EU ID 1;
    - b. Record the hours of operation; and
    - c. Calculate and record the unit fuel consumption using the hours of operation recorded and the manufacturer's full load fuel consumption rate or back-calculation from the rated capacity using standard engineering techniques and thermal efficiencies.
    - d. Monitor and record the total fuel consumption in EU ID 1 by the end of each calendar month for the previous month.
    - e. Calculate and record, for each EU listed in Condition 1.4d the, sum of the last 12 consecutive records obtained in accordance with Condition 1.4d, by the end of each calendar month.
    - f. Report in the operating report as described in Condition 2 the records obtained in accordance with Condition 1.4e.
    - g. If total fuel consumption exceed any of the limits in Condition 1, report as excess emissions and deviation as specified in Condition 4.
- 2. **Recordkeeping Requirements.** Unless otherwise specified in this authorization, keep all records required by this ORL for at least five years from the date of collection.

3. **Annual Operating Reports.** Submit one certified copy, of an **annual operating report** for the stationary source to the Department, in accordance with the submission instructions on the Department's Standard Permit Conditions web page <https://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-xvii-submission-instructions/> by February 1 for the preceding calendar year. Certify the report as specified in 18 AAC 50.205 by having the responsible official sign after the following statement, "*Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.*" Attach copies of all excess emission and deviation forms submitted to Department during the reporting period pursuant to Condition 4.
4. **Excess Emissions and Deviation Reports.** Report excess emissions and deviations as follows:
  - 4.1 **Excess Emissions Reporting.** Report all emissions or operations that exceed emissions limits of this ORL as follows:
    - a. In accordance with 18 AAC 50.240(c), as soon as possible report:
      - (i) excess emissions that present a potential threat to human health or safety; and
      - (ii) excess emissions believed to be unavoidable.
    - b. If a continuous or recurring excess emission is not corrected within 48 hours of discovery, report within 72 hours of discovery unless the Department provides written permission to report under Condition 4.1c.
    - c. Report all other excess emissions not described in Conditions 4.1a and 4.1b within 30 days after the end of the month during which the excess emissions occurred or as part of the next annual operating report in Condition 3, whichever is sooner.
    - d. If requested by the Department, provide a more detailed written report as requested to follow up an excess emissions report.
  - 4.2 **Deviations Reporting.** For deviations that are not "excess emissions," as defined in 18 AAC 50.990, report within 30 days after the end of the month during which the deviation occurred or as part of the next annual operating report in Condition 3, whichever is sooner.

- 4.3 **Reporting Instructions.** When reporting either excess emissions or deviations, the Permittee shall report using the Department's online form for all such submittals, beginning no later than September 7, 2023. The form can be found at the Division of Air Quality's Air Online Services (AOS) system webpage <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option. Alternatively, upon written Department approval, the Permittee may submit the form contained in Attachment A to this permit. The Permittee must provide all information called for by the form that is used. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage found at <http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/>

### **Statement of Avoided Requirement:**

The Department received a request on September 28, 2023 from ConocoPhillips Alaska, Inc. to issue an ORL for the DS3T Power Generation Project. The DS3T Power Generation Project will add an emissions unit (EU ID 1) to the DS3T well pad. The DS3T stationary source is an existing oil and gas production pad located near Nuiqsut. The potential to emit (PTE) of the existing EU inventory is less than the amounts listed in 18 ACC 50.502(c)(1) and the source is not currently subject to a minor permit.

A minor permit is required before beginning a physical change to an existing source, with PTE less than the amounts listed in 18 AAC 50.502(c)(1), that will cause an increase of the source's PTE greater than the amounts listed in 18 AAC 50.502(c)(4)(A). The uncontrolled NO<sub>x</sub> PTE of EU ID 1 is greater than the amount listed in 18 AAC 50.502(c)(4)(A)(iii), i.e. 40 tpy. The request proposes a 320,000 gal/yr fuel consumption limit on EU ID 1 to restrict the NO<sub>x</sub> PTE to less than 40 tpy.

The applicant provided an Excel spreadsheet (Appendix C) containing the calculations of potential emissions from the DS3T stationary source with the written ORL request. The calculations demonstrate that EU ID 1, with a fuel consumption limit of 320,000 gal/yr, will emit approximately 39.7 tpy of NO<sub>x</sub>. The applicant selected a NO<sub>x</sub> emission factor from 40 C.F.R. Part 1039 Appendix I, Table 2, assuming a >751bhp Tier 2 engine specification for EU ID 1. The applicant multiplied the emission factor by a factor of 1.25 to ensure that the emissions rate used represents an adequately conservative upper bound. The applicant selected an average brake-specific fuel consumption rate from AP-42 Section 3.4, Table 3.4-1, assuming a 7,000 Btu/hp-hr specification for EU ID 1.

Consistent with the definition of "potential to emit" listed in AS 46.14.990(22), the capacity of the stationary source to emit an air pollutant is verifiable through the monitoring, recordkeeping, and reporting contained in this approval. By limiting the potential to emit of EU ID 1 the owner/operator is avoiding the requirement to obtain a minor permit under AS 46.14.130(c) and 18 AAC 50.502.

**Table 1 – EU inventory subject to limits**

<b>EU ID</b>	<b>Unit Name And Description</b>	<b>Model Date</b>	<b>Nominal Rating/Size</b>
1	Large Compression-Ignition RICE, Tier 4 Final in Power Generation Service	2006 or newer	>751 bhp

Table 2 presents details of the EUs, their characteristics, and emissions. Potential emissions are estimated using maximum annual operation for all fuel burning equipment as defined in 18 AAC 50.990(39) subject to any operating limits.

**Table 2 – Emissions Summary, in Tons per Year (tpy)**

EU ID	Unit ID/ Description	Maximum Rating or Capacity	Operating Limits	NO <sub>x</sub>		CO		VOC		PM-2.5 / PM-10		SO <sub>2</sub>
				EF	PTE (tpy)	EF	PTE (tpy)	EF	PTE (tpy)	EF	PTE (tpy)	PTE (tpy)
1	Stationary RICE	>751 bhp	320,000 gal/yr	0.013 lb/bhp-hr	39.7	0.007 lb/bhp-hr	21.7	0.000642 lb/bhp-hr	1.94	0.0004 lb/bhp-hr	1.242	0.0324
2*	Production Heater	30 MMBtu/hr (LHV)	Unrestricted	100 lb/MMscf	14.2	85 lb/MMscf	11.9	5.5 lb/MMscf	0.782	7.6 lb/MMscf	1.08	10.2
3*	Well Venting	12 wells per year	Unrestricted	-	-	-	-	-	43.4	-	-	-
<b>Change to PTE</b>					<b>39.7</b>		<b>21.7</b>		<b>1.94</b>		<b>1.24</b>	<b>0.03</b>
<b>Total Potential to Emit</b>					<b>53.9</b>		<b>33.7</b>		<b>46.1</b>		<b>2.32</b>	<b>10.2</b>

**Table Notes:**

\* Existing emissions unit



## ***Attachment A. Notification Form<sup>1</sup>***

**DS3T Well Pad**

**Stationary Source Name**

**ConocoPhillips Alaska, Inc.**

**Company Name**

**AQ1845ORL01**

**Air Quality ORL Number.**

### **When did you discover the Excess Emissions/ORL Deviation?**

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Time: \_\_\_\_ : \_\_\_\_

### **When did the event/deviation occur?**

Begin: Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Time: \_\_\_\_ : \_\_\_\_ (please use 24-hr clock)

End: Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Time: \_\_\_\_ : \_\_\_\_ (please use 24-hr clock)

**What was the duration of the event/deviation?** \_\_\_\_ : \_\_\_\_ (hrs:min) or \_\_\_\_ days

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

**Reason for Notification** (Please check only 1 box and go to the corresponding section.):

☐ Excess Emissions - Complete Section 1 and Certify

Note: All “excess emissions” are also “ORL deviations.” However, use only Section 1 for events that involve excess emissions.

☐ Deviation from ORL Conditions - Complete Section 2 and Certify

Note: Use only Section 2 for ORL deviations that do not involve excess emissions.

☐ Deviation from COBC<sup>2</sup>, CO<sup>3</sup>, or Settlement Agreement - Complete Section 2 and Certify

<sup>1</sup> Form based on SPC IV (revised as of July 22, 2020).

<sup>2</sup> Compliance Order By Consent

<sup>3</sup> Compliance Order

(a) **Was the exceedance** ☐ Intermittent or ☐ Continuous

- ☐ Start Up/Shut Down
- ☐ Control Equipment Failure
- ☐ Bad fuel/coal/gas
- ☐ Other
- ☐ Natural Cause (weather/earthquake/flood)
- ☐ Scheduled Maintenance/Equipment Adjustments
- ☐ Upset Condition

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance. Attach supporting information if necessary.

[illegible]

Identify the emissions units involved in the event, using the same identification number and name as in the ORL. Identify each emission standard potentially exceeded during the event and the exceedance.

[illegible]

(e) **Type of Incident:** (Please check all that apply and provide the value requested, if any):

☐ Opacity \_\_\_\_\_%

☐ Venting \_\_\_\_\_(gas/scf)

☐ Control Equipment Down

☐ Fugitive Emissions

☐ Emission Limit Exceeded

☐ Marine Vessel Opacity

☐ Flaring

☐ Other: \_\_\_\_\_

(f) **Corrective Actions:**

Describe actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence. Attach supporting information if necessary.

(g) **Unavoidable Emissions:**

Do you intend to assert that these excess emissions were unavoidable? ☐ YES ☐ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ YES ☐ NO

**Certify Report (go to end of form)**

## Section 2. ORL Deviations

(a) **ORL Deviation Type:** (Check all boxes that apply per event. Complete a separate form for each event, as applicable.)

- ☐ Emissions Unit-Specific Requirements
- ☐ Stationary Source-Wide Specific Requirements
- ☐ Monitoring/Recordkeeping/Reporting Requirements
- ☐ General Source Test Requirements
- ☐ Compliance Certification Requirements
- ☐ Standard/Generally Applicable Requirements
- ☐ Other: \_\_\_\_\_

(b) **Emissions Units (EU) Involved:**

Identify the emissions units involved in the event, using the same identification number and name as in the ORL. List the corresponding ORL condition and the deviation.

EU ID	EU Name	ORL Condition /Potential Deviation

(c) **Description of Potential Deviation:**

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation. Attach supporting information if necessary.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence. Attach supporting information if necessary.

**Certification:**

**Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.**

Printed Name: \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

Signature: \_\_\_\_\_ Phone number \_\_\_\_\_