DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Minor Permit: AQ1503MSS01 **Public Notice - September 30, 2020**

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ1503MSS01 to the Permittee listed below.

Permittee:	ConocoPhillips Alaska, Inc.
	700 G St., Anchorage, AK 99501
Stationary Source:	Greater Mooses Tooth 2/Mooses Tooth 7 (GMT2/MT7)
Location:	Latitude 70.173156 North; Longitude 151.694428 West
Project:	Construction and Operation of GMT2/MT7
Permit Contact:	Laura K. Perry, 907-265-6937

This permit is classified under 18 AAC 50.502(c)(1) for a new minor stationary source with potential nitrogen oxides (NOx) emissions greater than 40 tons per year (tpy) and 18 AAC 50.508(5) to establish owner requested limits (ORLs) to avoid classifications under 18 AAC 50.326 and 18 AAC 50.306.

This permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50. As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this permit.

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Jim Plosay, Manager
Air Permits Program

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Section 1 Emissions Unit Inventory

Emissions Unit (EU) Authorization. The Permittee is authorized to install and operate the EUs listed in Table 1 in accordance with the terms and conditions of this permit and the minor permit application. The information in Table 1 is for identification purposes only. The specific EU descriptions do not restrict the Permittee from replacing an EU identified in Table 1.

Table 1 – EU Inventory

EU	EU Name	EU Description	Total Rating/Size
1	Stationary Power Generators	Diesel-Fired RICE Units	3,600 bhp (total)
2	Permanent Production Heater	Fuel Gas	30 MMBtu/hr (LHV)
3	Well Venting	Well venting/flowbacks	12,000 bbl/yr, 48 wells
4	Gas Flaring	Fuel Gas	130 MMscf/yr

Table Notes:

1. The generator-sets operated as EU 1 are considered stationary engines for purposes of this permit since they could be at a single location for more than 12 months at a time.

1. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement EU, including any applicable minor or construction permit requirements.

2. **Verification of Equipment Specifications and Maintenance of Equipment.** The Permittee shall install and maintain the equipment listed in Table 1 according to the manufacturer's or operator's maintenance procedures. Keep a copy of the manufacturer's or operator's maintenance procedure onsite and make records available to the Department personnel upon request. The records may be kept in electronic format.

Section 2 Fee Requirements

3. **Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400 - 499.

4. **Assessable Emissions**. The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of

   4.1 the stationary source's assessable potential to emit of 212 tpy; or

   4.2 the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon credible evidence of actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the Department, when demonstrated by the most representative of one or more of the following methods:

      a. an enforceable test method described in 18 AAC 50.220;

      b. material balance calculations;

      c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035;

      d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.

5. **Assessable Emission Estimates.** Emission fees will be assessed as follows:

   5.1 no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Avenue, Ste 303, P.O. Box 111800, Juneau, Alaska 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or

   5.2 if no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 4.1.

6. **Annual Compliance Fee.** For a stationary source not classified as needing a Title V permit, the Permittee shall pay an annual compliance fee as set out in 18 AAC 50.400(d), to be paid for each period from July 1 through the following June 30.

Section 3 State Emission Standards

7. **Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from all fuel-burning equipment[1] listed in Table 1, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

7.1 For each generator-set operated as EU 1, conduct visible emissions observations following 40 C.F.R. 60, Appendix A-4, Method 9, for 18 minutes to obtain 72 consecutive 15-second opacity observations, at least once in each calendar year that the unit operates under the terms and conditions of this permit.

a. Report the results of the Method 9 observations required under Condition 7.1 in the first operating report due after the observations were performed in the operating report required in Condition 20.

7.2 For each flare operated as EU 4, while it is onsite, observe one daylight flare event[2] annually, on a calendar year basis. If there is no qualifying flare event within the 12-month period, then the Permittee shall observe the next daylight flare event for that flare when it is operated onsite.

a. Monitor the flare for VE for 18 minutes during flare events using Method 9.

b. Record the following information for observed events:

(i) the flare's EU number;

(ii) results of the Method-9 observations;

(iii) reason(s) for flaring;

(iv) date, beginning and ending time of event; and

(v) volume of gas flared.

c. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. If monitoring of a flare event is postponed for any of the reasons described in this condition, the Permittee shall include in the next operating report required by Condition 20 an explanation of the reason the event was not monitored.

d. Include copies of the records required by Condition 7.2b in the first operating report submitted under Condition 20 for the period that covers the 30th day after the observation was conducted.

7.3 Report as a permit deviation under Condition 19 if any of Conditions 7.1 through 7.2 are not met.

[1] "Fuel-burning equipment" does not include equipment operated as a nonroad engine, per 18 AAC 50.990(39).
[2] For purposes of this permit, a "*flare event*" is flaring of gas for greater than one hour as a result of scheduled release operations, i.e. maintenance or well testing activities. It does not include non-scheduled release operations, i.e. process upsets, emergency flaring, or de-minimis venting of gas incidental to normal operations.

7.4 If the results of Method 9 observations completed under Condition 7 exceed the standard in Condition 7, report as excess emissions in accordance with Condition 19, take corrective actions, and conduct follow-up Method 9 observations until the standard in Condition 7 is met.

8. **Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow PM emitted from all fuel-burning equipment listed in Table 1 to exceed 0.05 grains per dry standard cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

9. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from all fuel-burning equipment listed in Table 1, to exceed 500 ppm averaged over three hours.

Section 4 Ambient Air Quality Protection Requirements

10. To protect the annual NO_2 AAAQS, the Permittee shall:

    10.1 Limit the combined amount of gas consumed by all flares operated as EU 4 to no more than 130 MMscf per year. Monitor, record, and report in accordance with Condition 12.2.

    10.2 For EUs 1, 2, and 4, construct and maintain a minimum stack height of 3.05 meters (m) for EU 1, 10 m for EU2, and 22.3 m for EU 4.

        a. Confirm in each operating report required under Condition 20 that the exhaust stack for each unit identified as EU 1, 2, or 4 complies with Condition 10.2; or, if applicable, state that no unit was operated as EU 1, 2, or 4 during the reporting period.

        b. Report as described in Condition 19 if a requirement under Condition 10.3 was not met.

    10.3 Construct and maintain a vertical, uncapped exhaust stack on: EU 2 and each generator-set/engine operated as EU 1. This condition does not preclude the use of flapper-style rain covers, or other similar designs, that do not hinder the vertical momentum of the exhaust plume.

        a. Confirm in each operating report required under Condition 20 that the exhaust stack for each unit identified as EU 1 and 2 complies with Condition 10.3; or, if applicable, state that no unit was operated as EU 1 or 2 during the reporting period.

        b. Report as described in Condition 19 if a requirement under Condition 10.3 was not met.

11. To protect the annual NO_2 AAAQS, the Permittee shall limit the combined work output of the generator-set engines operated as EU 1 to no more than 7,244,500 bhp-hr during any 12-month rolling period. Monitor, record, and report as described in Condition 12.1.

Section 5 ORLs to Avoid Title V and PSD Permit Classifications

Avoidance Limit for Oxides of Nitrogen (NOx):

12. The Permittee shall limit total NOx emissions from EUs 1 and 4 to no more than 67.9 tons per 12-month rolling period as follows:

    12.1 For all generator-set engines operated as EU 1, limit the combined work output to no more than 7,244,500 bhp-hr during any 12-month rolling period. Ensure all generator-set engines operated as EU 1 are EPA NRE Tier 2 or newer and are 600 bhp or greater. Monitor, record, and report as follows:

    a. Install, maintain, and operate an hour meter on each generator-set engine operated as EU 1.

    b. Record the hour meter reading of each generator-set engine operated as EU 1 on the last day that EU 1 operated each month.

    c. Record the make, model, EPA NRE tier diesel engine classification, and rated bhp of every generator-set engine that operates as EU 1.

    d. By the 15th day of each month, calculate and record:

    (i) The number of hours each generator-set engine operated during the previous month – if the meter is not operational, assume continuous operation for that period;

    (ii) The work output of each generator-set engine for the previous month by multiplying the operating hours determined under Condition 12.1d(i) for the previous month by the rated bhp of the generator-set engine; and

    (iii) The combined work output in bhp-hr during the preceding 12 consecutive months for all generator-set engines operated as EU 1 during the preceding 12 consecutive months.

    e. Report in each operating report required by Condition 20, for each month covered by that report, the items recorded in Conditions 12.1c and 12.1d(i)-(iii).

    f. Report as described in Condition 19, anytime the rolling 12-month combined work output of EU 1 exceeds 7,244,500 bhp-hr, or if Conditions 12.1a through 12.1e are not met.

    12.2 For all flares operated as EU 4, limit the combined amount of gas flared to no more than 130 MMscf per year.

    Monitor, record, and report as follows:

    a. Maintain, and operate totaling gas flow meters that are accurate to within ± 5 percent.

b. Record the gas flow meter reading on the last day that EU 4 operated each month.

c. By the 15th day of each month, calculate and record:

(i) The volume of gas flared during the previous month – if the fuel flow meter is not operational assume design flare rate for that period; and

(ii) The total volume of gas flared during the previous 12 consecutive months.

d. Report in each operating report required by Condition 20, the amount of gas flared during the preceding consecutive 12 months for each month in the reporting period.

e. Report as described in Condition 19, if the amount of gas flared during the preceding consecutive 12 months exceeds the limit in Condition 12.2, or if Conditions 12.2a through 12.2d are not met.

Avoidance Limit for Carbon Monoxide (CO):

13. The Permittee shall limit total CO emissions from EUs 1 and 4 to no more than 65.8 tons per 12-month rolling period by complying with Conditions 12.1 and 12.2. Report as described in Condition 19, if the limits in Condition 12.1 or 12.2 are exceeded.

Avoidance Limit for Volatile Organic Compounds (VOC):

14. The Permittee shall limit total VOC emissions from EU 4 to no more than 77.6 tons per 12-month rolling period by complying with Condition 12.2. Report as described in Condition 19, if the limits in Condition 12.1 or 12.2 are exceeded.

Section 6 Recordkeeping, Reporting, and Certification Requirements

15. **Certification.** The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the 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." Excess emissions reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

    15.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if

        a. A certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and

        b. The person providing the electronic signature has made an agreement with the certifying authority described in Condition 15.1a that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

16. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send an original version of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with Condition 15.

17. **Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke, reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

18. **Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five-years after the date of collection, including:

    18.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

    18.2 records of all monitoring required by this permit, and information about the monitoring including (if applicable):

        a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

        b. sampling dates and times of sampling or measurements;

c. the operating conditions that existed at the time of sampling or measurement;

d. the date analyses were performed;

e. the location where samples were taken;

f. the company or entity that performed the sampling and analyses;

g. the analytical techniques or methods used in the analyses; and

h. the results of the analyses.

19. **Excess Emissions and Permit Deviation Reports.**

19.1 Except as provided in Condition 22, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. In accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that caused emissions in excess of a technology based emissions standard;

c. report all other excess emissions and permit deviations

(i) within 30 days after the end of the month during which the emissions or deviation occured, except as provided in Condition 19.1c(iii); or

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 19.1c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

19.2 When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department's on-line form, which can be found at http://dec.alaska.gov/applications/air/airtoolsweb, or, if the Permittee prefers, the form contained in Attachment 2 of this permit. The Permittee must provide all information called for by the form that is used.

19.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

20. **Operating Reports.** Submit to the Department an operating report by August 1 for the period January 1 through June 30 of the current year and by February 1 for the period July 1 through December 31 of the previous year. The report shall be submitted under a cover letter certified in accordance with Condition 15.

    20.1 The operating report must include all information required to be in operating reports by other conditions of this permit, for the period covered by the report.

    20.2 When excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 20.1, the Permittee shall identify

        a. the date of the deviation;

        b. the equipment involved;

        c. the permit condition affected;

        d. a description of the excess emissions or permit deviation; and

        e. any corrective action or preventative measures taken and the date of such actions; or

    20.3 When excess emissions or permit deviations have already been reported under Condition 19, the Permittee shall cite the date or dates of those reports.

21. **Annual Affirmation.** The Permittee shall submit to the Department by March 31 of each year an affirmation certified according to Condition 15 of whether the stationary source is still accurately described by the application and this permit, and whether any changes have been made to the stationary source that would trigger the requirement for a new permit under 18 AAC 50.

22. **Air Pollution Prohibited.** No person may permit any emissions which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

    22.1 If emissions present a potential threat to health or safety, the Permittee shall report any such emissions according to Condition 19.

    22.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 22.

    22.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

        a. after investigation because of complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 22; or

        b. the Department notifies the Permittee that it has found a violation of Condition 22.

22.4 The Permittee shall keep records of

a. the date and time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 22; and

d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

22.5 With each operating report under Condition 20, the Permittee shall include a brief summary report which must include

a. the number of complaints received;

b. the number of times the Permittee or the Department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

22.6 The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

Section 7 Standard Permit Conditions

23. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

    23.1 an enforcement action; or

    23.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.

24. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

25. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

26. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

27. The permit does not convey any property rights of any sort, nor any exclusive privilege.

28. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

    28.1 enter upon the premises where an emissions unit subject to this permit is located or where records required by the permit are kept;

    28.2 have access to and copy any records required by this permit;

    28.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

    28.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

Section 8 General Source Test Requirements

29. **Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

30. **Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

    30.1 at a point or points that characterize the actual discharge into the ambient air; and

    30.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.

31. **Reference Test Methods.** The Permittee shall use the following references for test methods when conducting source testing for compliance with this permit:

    31.1 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in 40 C.F.R. 60, Appendix A, Reference Method 9. The Permittee may use the form in Attachment 1 of this permit to record data.

    31.2 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

    31.3 Source testing for emissions of PM_{10} must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

    31.4 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

32. **Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

33. **Test Plans.** Before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the emissions unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete test plan at least 30-days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

34. **Test Notification.** At least 10-days before conducting a source test, the Permittee shall give the Department written notice of the date and time the source test will begin.

35. **Test Reports.** Within 60-days after completing a source test, the Permittee shall submit one certified copy of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results as set out in Condition 15. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

36. **Test Exemption.** The Permittee is not required to comply with Conditions 33, 34 and 35 when the exhaust is observed for VE by Method 9 Plan or Smoke/No Smoke Plan.

Section 9 Permit Documentation

Date	Document Details
March 24, 2020	CPAI submitts a minor permit application for Greater Mooses Tooth 2/Mooses Tooth 7 Drill Site (AQ1503MSS01).

Attachment 1 – Visible Emissions Form

VISIBLE EMISSION OBSERVATION FORM

This form is designed to be used in conjunction with EPA Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources." Temporal changes in emission color, plume water droplet content, background color, sky conditions, observer position, etc. should be noted in the comments section adjacent to each minute of readings. Any information not dealt with elsewhere on the form should be noted under additional information. Following are brief descriptions of the type of information that needs to be entered on the form: for a more detailed discussion of each part of the form, refer to "Instructions for Use of Visible Emission Observation Form" (available at https://www3.epa.gov/ttnemc01/methods/webinar8.pdf)

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where visible emissions observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Stationary Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clinometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check "yes" if visible water vapor is present.
- If plume is present, note in the Comments section "attached" if water droplet plume forms prior to exiting stack, and "detached" if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky Conditions: indicate cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.
- Wet Bulb Temperature: can be measured using a sling psychrometer
- RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.
- Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.
- Sun's Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen's shadow crosses the observer's position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.
- Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.
- Range of Opacity: note highest and lowest opacity number.
- Observer's Name: print in full.
- Observer's Signature, Date: sign and date after performing VE observation.
- Organization: observer's employer.
- Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR PERMITS PROGRAM - VISIBLE EMISSIONS OBSERVATION FORM

Page No.___________

Stationary Source Name	Type of Emission Unit	
Emission Unit Location		
City	State	Zip
Phone # (Key Contact)	Stationary Source ID Number	
Process Equipment	Operating Mode	
Control Equipment	Operating Mode	
Describe Emission Point/Location		
Height above ground level	Height relative to observer	Clinometer Reading
Distance From Observer Start End	Direction From Observer Start End	
Describe Emissions & Color Start	End	
Visible Water Vapor Present? If yes, determine approximate distance from the stack exit to where the plume was read No Yes		
Point in Plume at Which Opacity Was Determined		
Describe Plume Background Start End	Background Color Start End	
Sky Conditions: Start	End	
Wind Speed Start End	Wind Direction From Start End	
Ambient Temperature	Wet Bulb Temp	RH percent

SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From 3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks

Observation Date		Start Time			End Time
Sec / Min	0	15	30	45	Comments
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Range of Opacity	
Minimum	Maximum

I have received a copy of these opacity observations Print Name:		Print Observer's Name	
Signature:		Observer's Signature	Date Observer's Affiliation:
Title	Date	Certifying Organization Certified By:	Date

Data Reduction:

Duration of Observation Period (minutes):	Duration Required by Permit (minutes):
Number of Observations:	Highest Six–Minute Average Opacity (%):
Number of Observations exceeding 20%:	
In compliance with six-minute opacity limit? (Yes or No)	Highest 18-Consecutive –Minute Average Opacity (%)(engines and turbines only)

Average Opacity Summary:

Set Number	Time			Opacity		Comments
	Start	End		Sum	Average	

Attachment 2 - Notification Form

Greater Mooses Tooth 2/Mooses Tooth 7	**AQ1503MSS01**
Stationary Source Name	**Air Quality Permit No.**
ConocoPhillips Alaska, Inc.	
Company Name	**Date**

When did you discover the Excess Emissions/Permit Deviation?
Date: _____ / _____ / _____ Time: _____ :/ _____

When did the event/deviation?
Begin Date: _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)
End Date _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)
: (hrs:min) or days

What was the duration of the event/deviation? ____ ____ _____
(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
☐ Deviation from permit conditions complete Section 2 and certify
☐ Deviation from COBC, CO, or Settlement Agreement Complete Section 2 and certify

Section 1. Excess Emissions

(a) Was the exceedance ☐ Intermittent or ☐ Continuous

(b) Cause of Event (Check one that applies)**:**

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

(c) Description

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emission unit(s) Involved:

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

EU ID	Emission Unit Name	Permit Condition Exceeded/Limit/Potential Exceedance

(e) Type of Incident (please check only one):

☐ Opacity % ☐ Venting (gas/scf) ☐ Control Equipment Down
☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Record Keeping Failure
☐ Marine Vessel Opacity ☐ Failure to monitor/report ☐ Flaring
☐ Other:

(f) 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. Permit Deviations

(a) Permit Deviation Type (check one only) (check boxes correspond with sections in permit)
☐ Emission Unit Specific
☐ General Source Test/Monitoring Requirements
☐ Recordkeeping/Reporting/Compliance Certification
☐ Standard Conditions Not Included in Permit
☐ Generally Applicable Requirements
☐ Reporting/Monitoring for Diesel Engines
☐ Insignificant Emission Unit
☐ Stationary Source-Wide
☐ Other Section: (title of section and section # of your permit)

(b) Emission unit(s) Involved:
Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding Permit condition and the deviation.

EU ID	Emission Unit Name	Permit Condition /Potential Deviation

(c) Description of Potential Deviation: Describe briefly, what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions: Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

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: _____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To submit this report:

1. Using the Department's Air Online Services website:
http://dec.alaska.gov/Applications/Air/airtoolsweb/
If submitted online, report must be submitted by an authorized E-Signer for the stationary source
Or
2. Fax this form to: 907-451-2187
Or
3. Email to: DEC.AQ.Airreports@alaska.gov
if faxed or emailed,
Or
4. Mail to: ADEC
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643
Or
5. Phone notifications: 907-451-5173
Phone notifications require written follow up report.