

**Alaska Department of Environmental Conservation
Air Permits Program**

**Public Comment Draft - November 9, 2009
Union Oil Company of California
Grayling Platform**

**STATEMENT OF BASIS
of the terms and conditions for
Permit No. AQ0069TVP02**

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INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0069TVP02.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ0069TVP02 contains information on this stationary source (**Grayling Platform**) as provided in the Title V permit application.

This stationary source (**Grayling Platform**) is owned and operated by Union Oil Company of California, and Union Oil Company of California (UOCC) is the Permittee for the stationary source's operating permit. The SIC code for this stationary source is 1311 - Crude Oil and Natural Gas.

The **Grayling Platform** is an offshore oil production platform.

EMISSION UNIT INVENTORY AND DESCRIPTION

Under 18 AAC 50.326(a), the Department requires operating permit applications to include identification of all emissions-related information, as described under 40 CFR 71.5(c)(3).

The emission units at the Grayling Platform that are classified and that have specific monitoring, recordkeeping, and reporting requirements are listed in Table A of Operating Permit No. AQ0069TVP02.

Table A of Operating Permit No. AQ0069TVP02 contains information on the emission units regulated by this permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the emission unit rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

A summary of the potential to emit (PTE)¹² and assessable PTE as indicated in the application and as calculated by the Department from the Grayling Platform is shown in the table below.

Table D - Emissions Summary, in Tons Per Year (TPY)

Pollutant	NO _x	CO	PM-10	SO ₂	VOC	HAPs	Total
PTE	992	401	39.7	168	55.3	2.3 *	1,656
Assessable PTE	992	401	39.7	168	55.3	0 *	1,656

* All HAPs are also VOCs and are not counted towards total PTE or total assessable PTE.

The assessable PTE listed under Condition 30.1 is the sum of the emissions of each individual regulated air pollutant for which the stationary source has the potential to emit quantities greater than 10 TPY. The emissions listed in Table D are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit to the stationary source.

¹² *Potential to Emit or PTE means the maximum capacity of a stationary source to emit a pollutant under its physical or operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source, as defined in AS 46.14.990(23), effective 7/25/08.*

For criteria pollutants, emissions are as provided in the application, as follows. The potential SO₂ emissions from the gas-fired turbines, engines, flares, boilers, and heaters are calculated using mass balance calculations and the sulfur content (250 ppmv H₂S) of the natural gas and fuel oil maximum sulfur content of 0.5% available for combustion. AP 42 emission factors and emission unit tests are used for calculating emissions of criteria pollutants. GLY-Calc was used to calculate HAP emissions from the glycol regenerator. HAP emission factors for flares come from the Ventura County Air Pollution Control District document "AB 2588 Combustion Emission Factors". AP 42 was used to calculate HAP emissions from the turbines, engines, boilers and heaters. The Department verified the emission calculations submitted by UOCC in their application.

BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with AS 46.14.130(b), an owner or operator of a Title V source¹³ must obtain a Title V permit consistent with 40 C.F.R. Part 71, as adopted by reference in 18 AAC 50.040.

Except for stationary sources exempted or deferred by AS 46.14.120(e) or (f), AS 46.14.130(b) lists three categories of stationary sources that require an operating permit:

- (1) A major source;
- (2) A stationary source including an area source subject to federal new source performance standards under Section 111 of the Clean Air Act or national emission standards under Section 112 of the Clean Air Act;
- (3) Another stationary source designated by the federal administrator by regulation.

This stationary source requires an operating permit because it is classified under 18 AAC 50.326(a) and 40 C.F.R. 71.3(a) as directly emitting, or has the potential to emit, 100 tpy or more of any regulated air pollutant.

AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The stationary source was issued an Air Quality Permit to Operate 9423-AA012 on January 18, 1997.

Title I (Construction and Minor) Permits

No construction permit or minor permit has been issued for this stationary source after March 25, 2003.

Title V Operating Permit Application, Revisions and Renewal History

The Union Oil Company of California was issued Operating Permit No. AQ0069TVP01 on March 25, 2003. The operating permit included all construction authorizations issued through March 25, 2003. All stationary source-specific requirements established in this permit are included in the new operating permit as described in Table E.

The Department revised this permit on July 23, 2007 to incorporate an Administrative Amendment.

The owner or operator submitted a permit renewal application on September 21, 2007.

¹³ "Title V source" means a stationary source classified as needing a permit under AS 14.130(b) [ref. 18 AAC 50.990(111)].

The owner or operator submitted a supplement on April 28, 2008 describing the glycol system on Grayling Platform.

COMPLIANCE HISTORY

The **Grayling Platform** has operated at its current location since 1967. Review of the permit files for this stationary source, which includes the past inspection reports indicate a stationary source generally operating in compliance with its operating permit.

APPLICABLE REQUIREMENTS FROM PRE-CONSTRUCTION PERMITS

Incorporated by reference at 18 AAC 50.326(j), 40 C.F.R. Part 71.6 defines “applicable requirement” to include the terms and conditions of any pre-construction permit issued under rules approved in Alaska’s State Implementation plan.

Alaska’s State Implementation Plan included the following types of pre-construction permits:

- Permit-to-operate issued before January 18, 1997 (these permits cover both construction and operations);
- Construction Permits issued after January 17, 1997; and
- Minor permits issued after October 1, 2004.

On August 4, 1989, the Department completed review of UOCC’s Prevention of Significant Deterioration (PSD) application to install three new turbines and to upgrade nine turbines and issued Air Quality Control Permit to Operate No. 8723-AA008. This modification triggered pre-construction review for NOx emission increases. UOCC accepted owner requested limits for fuel sulfur content of natural gas fuel and fuel oils to avoid PSD review.

UOCC requested changes to the fuel sulfur limits through Air Quality Control Permit No. 9423-AA006, Amendment 3 issued September 11, 1996. This permit rescinded and replaced Air Quality Control Permit to Operate No. 8723-AA008.

Pre-construction permit terms and conditions include both source-specific conditions and conditions derived from regulatory applicable requirements such as standard conditions, generally applicable conditions and conditions that quote or paraphrase requirements in regulation.

These requirements include, but not limited to, each source-specific requirement established in these permits issued under 18 AAC 50 that are still in effect at the time of this operating permit issuance. Table E below lists the requirements carried over from Operating Permit No. AQ0069TVP01 into Operating Permit No. AQ0069TVP02.

Table E - Comparison of Previous Operating Permit No. AQ0069TVP01 Conditions to Operating Permit No. AQ0069TVP02 Conditions¹⁴

Permit No. AQ0069TVP01 Condition number	Description of Requirement	Permit No. AQ0069TVP02 Condition Number	How condition was revised
Table 1	EU ID 30	Table A	Added EU ID 30. This Glycol Regenerator has been onsite since 1967. With the promulgation of 40 CFR 63, Subpart HH, this TEG dehydration unit will become subject to the requirements of 40 CFR 63, Subpart HH beginning January 5, 2009.
Conditions 3.2 and 4.2	Required the Permittee to limit hours of operation for EU IDs 26 and 27 in order to remain insignificant emission units.	None	Upon further review, ADEC has removed this requirement. EU IDs 26 and 27 are emergency equipment. EU IDs 26 and 27 are subject to limits on hours of operation in Condition 10. Visible emissions standards and monitoring, recordkeeping and reporting requirements for EU IDs 26 and 27 are now included in Conditions 1, 3, 4, and 5. Particulate emissions standards and monitoring, recordkeeping and reporting requirements for EU IDs 26 and 27 are now included in Conditions 7, 8, and 9.
Condition 12	EPA approved fuel nitrogen monitoring waiver	None	The Permittee requested that this condition be removed. EPA modified Subpart GG on July 8, 2004 to require monitoring only if UOCC claims an allowance for fuel bound nitrogen. Nitrogen monitoring under 40 CFR 60.334(h)(2) is not required because UOCC chose not to claim an allowance for fuel bound nitrogen. Therefore, the EPA waiver is no longer required.
Conditions 15 and 16	Requires monitoring of hours of operation for EU IDs 1 -23	None	The Permittee requested that the requirements to monitor hours of operation for EU IDs 1 - 23 be removed. This requirement was added in Operating Permit No. 9423-AA006-Amendment #3, issued on September 11, 1996. Because EU ID 1-24 has no operating hour limits, ADEC has removed this requirement. Units 24-27 now are covered under Condition 10.
Conditions 17 and 18	Limited hours of operation for EU IDs 24 - 27	Condition 10	This requirement was added in Operating Permit No. 9423-AA006-Amendment #3, issued on September 11, 1996. These conditions have been revised to include monitoring, recording and reporting requirements. These requirements were formerly included in Conditions 15 and 16 of permit AQ0069TVP01.
Condition 19	BACT requirements for EU IDs 3, 5, and 7	Condition 11	This requirement was listed in Operating Permit No. 9423-AA006 - Amendment #3 issued September 11, 1996. This requirement is carried forward without revisions.
Condition 20-22	Fuel gas sulfur content limit for entire stationary source	Condition 12	This requirement was listed in Operating Permit No. 9423-AA006 - Amendment #3 issued September 11, 1996. This requirement is carried forward without revisions.

¹⁴ This table does not include all standard and general conditions. The fuel sulfur condition has been streamlined because the source is already subject to a stricter fuel oil sulfur content limit.

Permit No. AQ0069TVP01 Condition number	Description of Requirement	Permit No. AQ0069TVP02 Condition Number	How condition was revised
Condition 20.1	Requires fuel gas H ₂ S sampling on a monthly basis	Condition 12	Union Oil Company reported fuel gas H ₂ S levels of 500 ppm in their 2 nd half 2008 stationary source operating report for measurements. Therefore, the Department will require weekly testing and for UOCC to use a time-weighted average approach for compliance with the monthly average value.
Condition 23	Fuel oil sulfur content limit for entire stationary source	Condition 13	This requirement was carried forward from Operating Permit No. 9423-AA006 - Amendment #3 issued September 11, 1996 without revisions.
Table 3	Permit Shield for units subject to 40 CFR 60, Subpart GG	Table C, EU IDs 1-5 and 7	A permit shield was added for EU IDs 1-5 and 7 for 40 CFR 60.334(a) and (b). These requirements apply only to turbines using water injection for NOx control. Turbines 1-5 and 7 do not use water injection for NOx control.
Table 3	Permit Shield for units subject to 40 CFR 60, Subpart GG	Table C, EU IDs 1-5 and 7	A permit shield was added for EU IDs 1-5 and 7 for 40 CFR 60.334(c) - (g). These requirements specify optional monitoring methods that Union Oil Company of California chooses not to conduct.
Table 3	Permit Shield for units subject to 40 CFR 60, Subpart GG	Table C, EU IDs 1-5 and 7	A permit shield was added for EU IDs 1-5 and 7 for 40 CFR 60.334(h)(2). As of July 8, 2004, NSPS Subpart GG requires Permittees who claim an allowance for fuel bound nitrogen to monitor the nitrogen content of the fuel combusted in the turbines. Union Oil Company of California has chosen not to claim an allowance for fuel bound nitrogen.
None	Requirements for EU ID 30 under 40 CFR 63, Subpart HH	Condition 25	This Glycol Regenerator (EU ID 30) has been onsite prior to 1996. The Glycol Dehydrator (EU ID 30) is a triethylene glycol (TEG) dehydration unit. The glycol regenerator (EU ID 30) is subject to area source requirements under 40 CFR 63, Subpart HH, National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. Subpart HH was revised January 3, 2007 to include requirements for area sources of HAPs.
Table 3	Permit Shields	Table C	Permit shields have been added for 40 CFR 60 Subparts, 40 CFR 61 Subparts and 40 CFR 63 HAP major Subparts that do not apply to emission units at this stationary source.

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in Operating Permit No. AQ0069TVP02. The Statement of Basis provides the legal and factual basis for each term and condition as set forth in 40 C.F.R. 71.6(a)(1)(i).

Conditions 1 and 2 - 4 and 5, Visible Emissions Standard and MR&R

Legal Basis: These conditions ensure compliance with the applicable requirements in 18 AAC 50.050(a) and 18 AAC 50.055(a).

- 18 AAC 50.055(a) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 1-30 are fuel burning equipment or industrial processes.

Factual Basis: Condition 1 requires the Permittee to comply with the visible emission standard applicable to fuel-burning equipment. The Permittee shall not cause or allow the equipment to violate this standard.

The Permittee must monitor, record-keep and report emissions in accordance with Conditions 2 through 5 of the permit.

Conditions 2 - 4 MR&R conditions are standard conditions adopted into regulation pursuant to AS 46.14.010(e) effective on November 9, 2008.

No initial or periodic visible emissions monitoring is required for any unit that is classified as insignificant under 18 AAC 50.326(e), for these units the Permittee shall meet the requirements under Condition 12.

As requested by the Permittee, the following changes were made to the permit during this review:

- 1) Language was added to Condition 2.1d for units that do not operate on a consistent basis to indicate that the annual method 9 observations must be taken between 10 and 13 months after the previous observations **or during the next month the unit operates, whichever is later**. Also Condition 2.1d. was revised to indicate that for units that operate intermittently the Permittee is required to perform 18-minute observations annually and Conditions 2.1a- 2.1c do not apply.
- 2) Condition 3.1a(ii) was revised to add "if known" as follows:

the time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate, **if known**) on the sheet at the time opacity observations are initiated and completed;

The qualifier "if known" was added to Condition 3.1a(ii) because the Permittee is not required to install fuel or load meters specifically to comply with this condition. However, the Permittee is required to record the **exact** operating rate (fuel or load consumption rate) on the data sheet, at the time opacity observation is initiated and completed, if this information is available for an individual unit from a fuel or load meter (or other means). As such, for a unit subject to this requirement that does not have an individual fuel or load meter the Permittee shall estimate the operating rate and record it on the data sheet at the time opacity observation is initiated and completed.

The standard operating condition for some equipment (e.g., fire water pumps and cranes) is not steady state and therefore likely to be variable during the observation. For such

equipment, the Permittee may refer to the estimated load recorded under Condition 3.1a(ii) as "online" or "idle".

Beyond as noted above, the Department has previously determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate the unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard conditions meet the requirements of 40 C.F.R. 71.6(a)(3).

The Department developed Condition 5 to provide a standardized version of flare monitoring that is not dependent upon the type or design of upstream equipment. It has been claimed that gas-fired flares normally burn without emitting visible emissions, but actual field data demonstrating this assumption is not available. However, gas-fired flares have been shown to smoke when a control device, i.e. a knockout drum, flare scrubber, gas or steam assist, or vapor recovery system malfunctions. Thus, the condition sets out a protocol to collect actual field data to determine compliance with the 20 percent opacity standard for flares.

A Department analysis of industry flaring operations indicates that 49 percent of the gas flared (by volume) is for pilot/purge, 25 percent is for flaring less than one hour, and 26 percent is for flaring that lasts more than one hour. Pilot/purge flaring constitutes half of all flaring by volume and is continuous in nature and can be observed at any time. This type of flaring has not caused violations of the opacity standard in the past and can be checked at any time by agency inspectors. The remaining half of the flaring volume is split evenly between less than and greater than one-hour duration. Therefore, the monitoring scheme in this condition addresses the half of the non-continuous flaring operations that are scheduled and for which a certified observer can reasonably be located onsite.

Since it is impractical to require a stationary source to have a certified Method-9 opacity reader on site for unpredictable emergency flaring, the monitoring protocol requires Method-9 readings only during scheduled flare events. Scheduled events such as those generated by maintenance activities and well testing of greater than one-hour in duration will be observed. These one-hour events are currently quantified and reported to the Alaska Oil and Gas Conservation Commission for other reasons and thus provides a confirming information record of the occurrence of these events. Only those events as defined in the condition need to be monitored. The Department requires a flare event each 12-months to be monitored in order to monitor flare performance during the life of the permit, not to have all flare events grouped within a short time-frame which does not indicate sustained performance of the control device.

Since only flaring that is scheduled and exceeds one hour is required to be observed, operators will have time to provide certified Method-9 readers onsite. Most oil and gas production plants in Alaska are located at remote sites, so it is not reasonable to self-monitor all or even a large sample of the flaring that occurs. Data collected from planned events will help the Department refine this monitoring scheme during future permit cycles. Process upsets and emergency events that may or may not exceed one hour occur randomly and do not lend themselves easily to periodic monitoring. At this time, the Department will rely on stationary source excess emission reports, citizen complaints, and agency inspections for information concerning these short term and emergency events.

Gas-Fired Fuel Burning equipment:

Monitoring – The monitoring of gas-fired emission units for visible emissions is waived, i.e. no periodic surveillance will be required. The Department has found that natural gas-fired

equipment inherently has negligible PM emissions. However, the Department can request a emission unit test for PM emissions from any smoking equipment.

Reporting – As provided for in Condition 1, the Permittee must annually certify that only gaseous fuels are used in the equipment.

Liquid Fired Fuel Burning Equipment:

Monitoring – The visible emissions may be observed by either Method-9 or the Smoke/No Smoke plans as detailed in Condition 2. Corrective actions such as maintenance procedures and either more frequent or less frequent testing may be required depending on the results of the observations.

Recordkeeping - The Permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting - The Permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard and 2) deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the stationary source operating report.

Flares:

Monitoring for flares (EU IDs 28 and 29) requires Method-9 observations of scheduled flaring events lasting greater than one hour. The Permittee must report the results of these observations to the Department.

TEG Dehydration Unit:

EU ID 30 (TEG Dehydration Unit) is a semi-closed operation with a rupture disk that allows venting to the atmosphere only if over pressure occurs. In the event of atmospheric venting, the vapors emitted are composed of water and VOC, and are not expected to be a significant source of opacity (the opacity standard specifically exempts water vapor). Therefore, ADEC proposes no MR&R requirements for EU ID 30.

Conditions 6, 7 and 8, Particulate Matter (PM) Standard

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.055(b). This requirement applies to operation of all industrial processes and fuel burning equipment in Alaska.

- EU IDs 1-29 are fuel-burning equipment and EU ID 30 is an industrial process.

These PM standards also apply because they are contained in the federally approved SIP effective September 13, 2007.

Factual Basis: Condition 6 prohibits emissions in excess of the state PM (also called grain loading) standard applicable to fuel-burning equipment and industrial processes. The Permittee shall not cause or allow fuel-burning equipment nor industrial processes to violate this standard.

MR&R requirements are listed in Conditions 7 and 8 of the permit.

The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Operation and Maintenance Program, that the emission unit is in continuous compliance with the State's emission standards for particulate matter.

For liquid fuel units the MR&R conditions are Standard Condition IX adopted into regulation pursuant to AS 46.14.010(d). The Department determined that these standard conditions

adequately meet the requirements of 40 CFR 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of 40 CFR 71.6(a)(3).

Gas Fired:

For gas fired emission units, MR&R conditions are Standard Condition VIII adopted into regulation pursuant to AS 46.14.010(d). The Department determined that these standard conditions adequately meet the requirements of 40 CFR 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of 40 CFR 71.6(a)(3).

Although periodic PM monitoring of gas-fired units is waived, the Department has the discretion to request an emission unit test for PM emissions from any fuel burning equipment under 18 AAC 50.220(a) and 345(l).

Liquid Fired:

For liquid fuel units the MR&R conditions are Standard Condition IX adopted into regulation pursuant to AS 46.14.010(d). The Department determined that these standard conditions adequately meet the requirements of 40 CFR 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of 40 CFR 71.6(a)(3).

Flares:

PM Monitoring of gas-fired flares for particulate matter is waived, i.e. no emission unit testing will be required, because of the State Implementation Plan approved test method for particulate matter measurements cannot be used on fugitive emission activities. The Department has recognized this fact by incorporating the waiver in the State Air Quality Control Plan as adopted in November 1984. This plan was approved as part of the September 13, 2007 State Implementation Plan approval. No recordkeeping or reporting is required.

TEG Dehydration Unit:

EU ID 30 (TEG Dehydration Unit) is a semi-closed operation with a rupture disk that only allows venting to the atmosphere if over pressure occurs. In the event of atmospheric venting, the vapors emitted are composed of water and VOC, and are not expected to be a significant source of particulate matter. Therefore, there are no MR&R requirements for EU ID 30.

Condition 9, Sulfur Compound Emissions

Legal Basis: This condition requires the Permittee to comply with the sulfur compound emission standard for all fuel-burning equipment and industrial processes in the State of Alaska.

- EU IDs 1-30 are fuel-burning equipment and industrial processes.

These sulfur compound standards also apply because they are contained in the federally approved SIP effective September 13, 2007.

Factual Basis: The condition requires the Permittee to comply with the sulfur compound emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow the affected equipment to violate this standard.

Sulfur dioxide comes from the sulfur in the fuel (e.g. coal, natural gas, fuel oils).

Liquid Fuels: For oil fired fuel-burning equipment the standard MR&R Conditions XI and XII were adopted into regulation pursuant to AS 46.14.010(d). The Department determined that these standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3).

However, during this review, for EU IDs 21-27 (fuel oil) the requirement to calculate SO₂ emissions in ppm (according to a material balance calculation worksheet) if a load of fuel contains more than 0.75% by weight was removed from the permit (including the material balance calculation worksheet) because these units are subject to more stringent fuel sulfur content limits in Condition 13. Therefore, the stationary source would not receive a fuel oil shipment that would trigger this requirement and thus it was removed.

The Department concluded that this stationary-source specific condition meets the requirements of 40 C.F.R. 71.6(a)(3).

Gaseous Fuels: Fuel gas sulfur is measured as hydrogen sulfide (H₂S) concentration in ppm by volume (ppmv). Calculations¹⁵ show that fuel gas containing no more than 4000 ppm H₂S will comply with this emission standard at stoichiometric or excess air combustion conditions. This is true for all fuel gases. The unit-specific fuel sulfur content limits of Condition 12 to avoid PSD for sulfur dioxide also have been referenced in order to streamline the permit.

Equations to calculate the exhaust gas SO₂ concentrations resulting from the combustion of fuel gas were not included in this permit. The Permittee is required to record the H₂S concentration of the fuel gas. The Permittee is required to report as State excess emissions whenever the fuel properties exceed the fuel limits within this condition. The Permittee is required to include copies of the records mentioned in the previous paragraph with the stationary source operating report.

TEG Dehydration Unit:

EU ID 30 (TEG Dehydration Unit) is a semi-closed operation with a rupture disk that only allows venting to the atmosphere if over pressure occurs. In the event of atmospheric venting, the vapors emitted are composed of water and VOC, and are not expected to be a significant source of sulfur compounds as Glycol has a low affinity for hydrogen sulfide. Therefore, there are no MR&R requirements for EU ID 30.

Condition 10, Operating Hours Limits - EU IDs 24 - 27

Legal Basis: Specifically for EU IDs 24-27, the applicable condition in Operating Permit 9423-AA006, Amendment #3 is carried forward to this Title V renewal permit.

Factual Basis: This condition contains limits on operating hours and requirements to monitor and record operating hours providing an adequate basis for limits on potential emissions and emissions estimates. This condition limits the hours of operation of EU IDs 24 - 27 so that emission levels are capped to less than PSD thresholds for units that were not previously permitted.

¹⁵ See ADEC Air Permits Web Site at <http://www.dec.state.ak.us/air/ap/docs/sulfgas.pdf>, under "Stoichiometric Mass Balance Calculations of Exhaust Gas SO₂ Concentration."

Condition 11, BACT Emission Limits - EU IDs 3, 5, and 7

Legal Basis: Specifically for EU IDs 3, 5, and 7, the applicable condition in Air Quality Control Permit No. 9423-AA006, Amendment 3 issued September 11, 1996 is carried forward to this Title V renewal permit for EU IDs 3, 5, and 7.

Factual Basis: A review by the construction permit staff in September 2002 of the BACT limits contained in the August 4, 1989 permit found that only the three new turbines permitted in 1989--Emission Unit IDs 3, 5 and 7 are subject to NO_x BACT emission limits. The original project documents also included nine upgraded turbines referenced in that permit action and technical analysis report. However, the Department found in the transmittal letter and technical analysis report that these nine upgraded turbine units were not part of the modification.

Results of emission unit testing conducted on August 24, 2005 and August 25, 2005 found that the Permittee is in compliance with these NO_x limits for turbines 3 and 7 and representative for turbine 5. The measured values were 106 ppm and 29.15 ppm respectively for units 3 and 7. Results for EU ID 3 are based on testing of a similar unit. The Department removed the full-load note from the Condition 11 table as it is not part of the BACT decision from the 1996 permit. The BACT limits of 130 PPM for EU ID 3 and 115 PPM for EU ID 5 and 7 are more stringent than the applicable NSPS NO_x limits given for EU IDs 3 and 5 in Condition 22. Therefore, tiered monitoring, record keeping and reporting is based upon compliance with the more stringent BACT standard.

In addition, the Department added terms to require UOCC to determine compliance with the BACT emission rate limits listed within Table B. These emission rate limits are not comparable with the NSPS Subpart GG NO_x standard and its monitoring, record keeping and reporting obligations.

Conditions 12 and 13, Fuel Gas Sulfur Content Limit and Fuel Oil Sulfur Content Limit

Legal Basis: The latest Permit to Operate 9423-AA006 revision 3 contained source-wide conditions to protect ambient air quality that must be carried forward to this Title V renewal permit.

Factual Basis: These conditions contain requirements to operate fuel burning emission units with restrictions to not cause or contribute to a violation of any ambient standard or increment for sulfur dioxide emissions. For NSPS Subpart GG, EPA Region X approved a custom fuel monitoring schedule for analytical testing of fuel gas sulfur content on July 30, 2002 for UOCC Cook Inlet platforms. EPA changed the testing and reporting for sulfur in the fuel gas for NSPS combustion turbine affected facilities to semi-annually. However, UOCC has reported elevated H₂S concentrations up to 500 ppm in the 2nd half 2009 stationary source operating report. Because of this, the Department is proposing to require weekly H₂S testing and calculations to determine the monthly average H₂S values. Although this more frequent monitoring appears to conflict with the NSPS Subpart GG alternative monitoring protocol, the fuel gas standard listed within this condition is more stringent than that representative of the State Air Quality Control sulfur compound standard and that of the NSPS Subpart GG. The testing protocols match those contained in the fuel gas sulfur monitoring for NSPS emission units since the same fuel gas is used for the entire source.

Liquid Fuels: For oil fired fuel burning equipment the MR&R conditions are Standard Condition XI and XII adopted into regulation pursuant to AS 46.14.010(d). The Department determined that these standard conditions adequately meet the requirements of 40 CFR 71.6(a)(3). The MR&R language in Condition 9 was modified and streamlined to reflect the

0.5% fuel oil sulfur content limit from the PSD limit in this permit (Condition 13). The requirements for reporting sulfur content in excess of 0.75% fuel oil sulfur content have been removed. Therefore, the Department concluded that the streamlined version of the standard conditions meet the requirements of 40 CFR 71.6(a)(3).

Condition 14, Insignificant Emission Units

Legal Basis: The Permittee is required to meet state emission standards set out in 18 AAC 50.055 for all industrial processes fuel-burning equipment, and incinerators regardless of size.

Factual Basis: The conditions re-iterate the emission standards and require compliance for insignificant emission units. The Permittee may not cause or allow their equipment to violate these standards. Insignificant emission units are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The Department finds that the insignificant units at this stationary source do not require specific monitoring, recordkeeping and reporting to ensure compliance under these conditions.

Condition 14.4a requires certification that the emission units did not exceed state emission standards during the previous year and did not emit any prohibited air pollution.

Conditions 15 – 22, NSPS Subpart A Requirements

Legal Basis: The Permittee must comply with those New Source Performance Standard (NSPS) provisions incorporated by reference the NSPS effective July 1, 2007 for specific industrial activities, as listed in 18 AAC 50.040¹⁶.

Most (with the exception of some storage tanks) affected facilities subject to an NSPS are subject to Subpart A. At this stationary source, EU IDs 1-5 and 7 are subject to NSPS Subpart GG and therefore subject to Subpart A. EU IDs (turbines) 6 and 8 - 18 are not subject to NSPS Subpart GG because these stationary natural gas-fired turbines commenced construction, modification, or reconstruction prior to October 3, 1977 and have not been modified since that time. The storage tanks are not subject to NSPS, Subparts K, Ka, or Kb because these tanks were constructed prior to June 11, 1973.

Condition 15 - The Permittee is subject to this requirement in the event of reconstruction of one of these affected facilities. Although the initial notification requirements have been performed, the text remains to make the condition enforceable in the event of modification or reconstruction of an existing emission unit.

Condition 15.2 - The requirements to notify the EPA and the Department of any proposed replacement of an affected facility (40 CFR 60.15) applies to EU IDs 1-5 and 7 in the event of a proposed replacement of these affected facilities.

Condition 16 - Start-up, shutdown, or malfunction record maintenance requirements in 40 C.F.R. 60.7(b) are applicable to all NSPS affected facilities subject to Subpart A.

Recordkeeping requirements in 40 C.F.R. 60.7(f) are applicable to all NSPS affected facilities. (Satisfied by Condition 53)

Conditions 17 and 18 - NSPS excess emission reporting requirements and summary report form in 40 C.F.R. 60.7(c) & (d) are applicable to EU ID(s) 1 - 5 and 7.

¹⁶ EPA has not delegated to the Department the authority to administer the NSPS program as of the issue date of this permit.

Recordkeeping requirements in 40 C.F.R. 60.7(f) are applicable to all NSPS affected facilities. (Satisfied by Condition 53)

Condition 19 - The Permittee has already complied with the initial performance test requirements in 40 C.F.R. 60.8 for EU ID(s) 1 - 5 and 7. However, the Permittee is still subject to these requirements in the event of a new NSPS affected facility, in the event of a modification or reconstruction of an existing facility into an affected facility or at such other times as may be required by EPA.

Condition 20 - Good air pollution control practices in 40 C.F.R. 60.11 are applicable to all NSPS affected facilities subject to Subpart A (EU IDs 1 - 5 and 7).

Condition 21 - States that any credible evidence may be used to demonstrate compliance or establishing violations of relevant NSPS standards for EU IDs 1 - 5 and 7.

Condition 22 - Concealment of emissions prohibitions in 40 C.F. R. 60.12 are applicable to EU IDs 1 - 5 and 7.

The Flare is not subject to 40 C.F. R. 60.18 because it is a safety device and not a control device. It does not receive any tank vapors from any NSPS regulated sources.

Factual Basis: Subpart A contains the general requirements applicable to all affected facilities (sources) subject to NSPS. In general, the intent of NSPS is to provide technology-based emission control standards for new, modified and reconstructed affected facilities.

Conditions 23 - 24, NSPS Subpart GG Requirements

Legal Basis: This condition prohibits the Permittee from exceeding emission standards set out in Subpart GG. NSPS Subpart GG applies to stationary gas turbines with a heat input at peak load (maximum load at 60 percent relative humidity, 59 degrees F, and 14.7 psi) equal to or greater than 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of the fuel fired and constructed, modified, or reconstructed after October 3, 1977.

Factual Basis: These conditions incorporate NSPS Subpart GG NO_x emission and sulfur dioxide (SO₂) standards. EU IDs 1-5 are subject to the NO_x emission standards in Subpart GG. EU IDs 1-5 are affected facilities (turbines) subject to the SO₂ emission standards in Subpart GG. The Permittee may not allow equipment to violate these standards. EU IDs 6 and 8 - 18 are not subject to NSPS Subpart GG requirements because they were constructed prior to October 3, 1977. EU ID 7 is not subject to NSPS Subpart GG NO_x emission standards because this stationary gas turbine has a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 million Btu/hour) but less than or equal to 107.2 gigajoules per hour (100 million Btu/hour) and commenced construction prior to October 3, 1982.

NO_x Standard: For a turbine subject to 40 CFR 60.332, the NO_x standard is determined by the following equation:

$$STD_{NOX} = 0.015(14.4/Y) + F$$

where,

STD_{NOX} = allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis)

Y = manufacturer's maximum rated heat input (kJ/W-hr), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the affected stationary source. The value of Y shall not exceed 14.4 kJ/W-hr

F = NO_x emissions allowance for fuel bound nitrogen, percent by volume, **assumed to be zero for distillate fuel oil and gaseous fuels.**

Based on the manufacturer's heat rating at manufacturer's rated peak load, and assuming fuel bound nitrogen of zero, the NO_x standard is 169 ppmv for EU IDs 1-4 and 150 ppmv for EU ID 5.

SO₂ Standard: The Permittee has chosen to comply with the SO₂ standard by limiting the sulfur content of the fuel burned in EU IDs 1-5 and 7 to not exceed 0.8 percent by weight in accordance with 40 C.F.R. 60.333(b), and to demonstrate compliance with this limit by monitoring the sulfur content of the fuel gas.

Condition 23, NO_x Monitoring, Recordkeeping, and Reporting

Legal Basis: Periodic monitoring is included in Condition 23.2 for all turbines that normally operate for greater than 400 hours in a 12 month period. This additional monitoring is necessary to ensure that turbine emissions comply with the NSPS NO_x standard and is required under 40 CFR 71.6(a)(3) as the subpart does not contain MR&R sufficient for an operating permit.

Factual Basis: The Department does not have enough information to make categorical determinations that certain types of turbines, or turbines with emission test results below a certain percentage of the Subpart GG NO_x emission limit will inherently comply with the Subpart GG limit at all times and will never need additional testing. After a sufficient body of NO_x data is gathered under monitoring conditions for compliance with 40 C.F.R. 60, Subpart GG, the Department may find that it has enough information to make such categorical determinations. In that event, the Department would revise the NO_x monitoring conditions. The Department may determine that to assure compliance it is necessary to retain or increase the current monitoring frequency.

These conditions do not include the initial NSPS performance test requirements as the Subpart A conditions cover these requirements. If an existing or new turbine under this permit is still subject to the performance test requirement of 40 C.F.R. 60.8 is covered under the Subpart A related conditions.

The intent of these conditions is that turbines or groups of turbines be routinely tested on no less than a 5-year cycle. If the most recent performance test on a turbine showed NO_x emissions at less than or equal to 90% of the limit shown in Condition 23, then periodic monitoring is required at the first applicable of three criteria: either within 5 years of the last performance test, or within a year of the issue date of the permit, or within a year of exceeding 400 hours of operation within a 12-month period. If the most recent performance test showed operations at greater than 90% of the emissions listed in Condition 23, then periodic monitoring emission unit testing is required every year until two consecutive tests show emissions at less than or equal to 90% of the limit.

The condition does not state how load must be measured. For some turbines it may be possible to directly measure load as either mechanical or electrical output. For others, it may be necessary to calculate load indirectly based on measurements of other parameters. The Department is not attempting to dictate what method is most appropriate through the permit condition, but should evaluate the adequacy of methods of calculating load based on the load monitoring proposed by the Permittee.

Subpart GG defines “emergency gas turbine¹⁷” and exempts turbines meeting that definition from the GG emission standards. Some turbines may be operated as standby equipment but not meet the definition of emergency turbine, so the Department has added a Method 20 or Method 7E monitoring threshold of 400 hours per 12-month period. For turbines expected to operate less than 400 hours the Department has also added recordkeeping for hours of operation. The Department does not intend to require the Permittee to operate a turbine solely for the purpose of testing.

The condition requires testing at a range of loads, consistent with the performance test requirements in Subpart GG, that is, test at 30, 50, 75, and 100 percent load. If testing at these four loads is not reasonable, the condition allows the Permittee to propose to the Department what test loads will be reasonable and adequate, and the Department will have the responsibility to make a finding on that proposal. If EPA has already approved alternative test loads for the initial performance test the Department would allow those test loads if the information that went into that decision were still representative of the turbine operation.

In Condition 23, the Department considers “fuel type” to mean, for liquid fuels a type of fuel as described in an ASTM or similar fuel specification.

Load measurements or load calculations from load surrogate measurements are for one-hour periods. The intent is to match the averaging period for the test method. Method 20 or Method 7E identify a number of traverse points that vary with the size of the stack. From these points the tester is to choose at least 8 points for NO_x measurements. The time at each point is to be at least one minute plus the average response time of the instrument. The recorded value is the average steady state response. Presumably, the steady state response would exclude some or all of the response time of the instrument. Three runs are to be done at each test load.

The three runs would represent 24 minutes of measurement time or more. A one-hour average load is therefore a reasonable approximation of a load period corresponding to the test method.

Conditions 24, SO₂ Monitoring, Recordkeeping, and Reporting

Legal Basis: This condition requires the Permittee to comply with NSPS Subpart GG SO₂ or fuel quality monitoring, record keeping and reporting. For UOCC oil production platforms in the Cook Inlet subject to NSPS regulations, the EPA granted UOCC a custom fuel monitoring schedule on October 17, 2002 for the current fuel gas source.

Factual Basis: Monitoring, recordkeeping, and reporting requirements for this condition are described in NSPS Subpart GG and in an EPA granted custom fuel sulfur monitoring schedule and have been referenced here. No additional monitoring outside of the Subpart GG requirements is necessary to ensure compliance with the NSPS SO₂ standard.

Monitoring: Condition 24.1 incorporates NSPS Subpart GG fuel sulfur monitoring requirements.

EPA Custom Fuel Monitoring Schedule Condition 24.1 - (vi) - The affected facility turbines have been permitted by EPA to use an alternative monitoring schedule for monitoring hydrogen sulfide in fuel gas as described in this condition. Furthermore, this UOCC may use

¹⁷ *Emergency Gas Turbine* means any stationary gas turbine that operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation, as defined in 40 CFR 60.331(e), effective 7/1/07.

the length of stain tube test to monitor gas sulfur content as approved by EPA on July 30, 2002 for the current fuel gas source.

Recordkeeping: The Permittee is required to maintain records of all sulfur monitoring data required by NSPS Subpart GG for five years as set out in 18 AAC 50.350(h)(5). This requirement is stated in Condition 53.

Reporting: NSPS Subpart GG SO₂ standard reporting requirements are incorporated in the permit in Condition 24. For the purpose of the EEMSP reports and operating report required under 40 CFR 60.7(c), report daily periods during which the sulfur content of the fuel being fired in the turbine exceeds 0.8 percent by weight, or emissions exceed 150 ppmvd as excess emissions. In Condition 24 the Department requests that a summary of the results from the monitoring requirements in Condition 24.1 be included in the Operating Report required under Condition 58.

Condition 25, National Emission Standards for Hazardous Air Pollutants, Subpart HH, For Oil and Natural Gas Production Emission Units, EU ID 30 (Triethylene glycol (TEG) Dehydration Unit)

Legal Basis: NESHAP Subpart HH applies to area source triethylene glycol (TEG) dehydration units located at oil and natural gas production stationary sources that process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer. See 40 CFR 63.761(b)(2). As described above in the introductory portion of this Statement of Basis, UOCC Grayling is an area source of hazardous air pollutants and as such is not subject to the broader major affected source definition listed in 40 CFR 63.761(b)(1).

Factual Basis: The actual annual average flow rate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day or the actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagrams per year. Under NESHAP Subpart HH, the stationary source is required to keep records of the annual average natural gas flow rate or actual average benzene emissions. The Grayling Platform is an area source, not located in a designated urban area and is not required to prepare a startup, shutdown, and malfunction plan, or submit an initial notification, or Notification of Compliance. As long as either the annual average flow rate or the actual average emission rates are below the thresholds listed above, no standard applies.

The TEG Dehydration Unit at the Grayling Platform does not vent to the flare. Additionally, this typically operates as a closed system with the exception of a rupture disk that allows venting to the atmosphere if over pressure occurs. The Grayling Platform is not required to operate a control device to comply with Subpart HH.

Note: A process change notification is only required if a process change results in the loss of the “no controls” exclusion for dehydration units with a throughput less than 3 MMscfd, or benzene emissions less than 1 tpy.

Conditions 26 - 28, Standard Terms and Conditions

Legal Basis: These are standard conditions required under 18 AAC 50.345(a) and (e)-(g) for all operating permits. This provision is incorporated in the federally approved Alaska operating permit program of November 30, 2001.

Factual Basis: These are standard conditions that apply to all permits.

Conditions 29, Administration Fees

Legal basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.400-405 as derived from AS 46.14.130. This condition requires the Permittee, owner, or operator to pay administration fees as set out in regulation. Paying administration fees is required as part of obtaining and holding a permit with the Department or as a fee for a Department action.

Factual Basis: The owner or operator of a stationary source who is required to apply for a permit under AS 46.14.130 shall pay to the Department all assessed permit administration fees. The regulations in 18 AAC 50.400-405 specify the amount, payment period, and the frequency of fees applicable to a permit action.

Conditions 30 - 31, Emission Fees

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.410-420. The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These emission fee conditions are Standard Condition I under 18 AAC 50.346(b) adopted pursuant to AS 46.14.010(d). The Department determined that these standard conditions adequately meet the requirements of AS 46.14.250. No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of AS 46.14.250.

These standard conditions require the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date. The Department modified the standard condition to correct Condition 31.2 such that it referenced "submitted" (i.e., postmarked) rather than "received" in accordance with the timeframe of Condition 31.1.

The default assessable emissions are generally potential emissions of each air pollutant in excess of 10 tons per year authorized by the permit (AS 46.14.250(h)(1)(A)).

The conditions allow the Permittee to calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air pollutant. Therefore, fees based on actual emissions shall be paid on any pollutant emitted whether or not the permit contains any limitation of that pollutant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match.

Condition 32, Good Air Pollution Control Practice

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.346(b)(5) and applies to all emission units, **except** those subject to federal emission standards, those subject to continuous emission or parametric monitoring, and for insignificant emission units, i.e., except EU IDs 1-5 and 7.

Factual Basis: The condition requires the Permittee to comply with good air pollution control practices for all emission units.

The Department adopted this condition under 18 AAC 50.346(b) as Standard Operating Permit Condition VI pursuant to AS 46.14.010(d). The Department determined that this standard condition adequately meets the requirements of 40 CFR 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard condition meets the requirements of 40 CFR 71.6(a)(3).

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the Department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the Department. The Department may use these records as a trigger for requesting emission unit testing if the records show that maintenance has been deferred.

Condition 33, Dilution

Legal Basis: This condition prohibits the Permittee from using dilution as an emission control strategy as set out in 18 AAC 50.045(a). This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

Condition 34, Reasonable Precautions to Prevent Fugitive Dust

Legal Basis: This condition requires the Permittee to use reasonable precautions when handling, storing or transporting bulk materials or engaging in an industrial activity in accordance with the applicable requirement in 18 AAC 50.045(d). Bulk material handling requirements apply to the Permittee because the Permittee will engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the stationary source.

Factual Basis: The condition requires the Permittee to comply with 18 AAC 50.045(d), and take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

Condition 35, Stack Injection

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.045(e)-(f). It prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). Stack injection requirements apply to the stationary source because the stationary source contains a stack or emission unit constructed or modified after November 1, 1982.

Factual Basis: No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the emission unit or stack would need to be modified to accommodate stack injection.

Condition 36, Air Pollution Prohibited

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.110. The condition prohibits the Permittee from causing any emission 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. Air Pollution Prohibited requirements apply to the stationary source because the stationary source will have emissions.

Factual Basis: While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

ADEC adopted this standard condition into 18 AAC 50.346(a) pursuant to AS 46.14.010(d). The Department determined that this condition adequately meet the requirements of 40 CFR 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard condition meets the requirements of 40 CFR 71.6(a)(3).

The Permittee is required to report any complaints and injurious emissions. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints, and to submit copies of these records upon request of the Department.

Condition 37, Technology-Based Emission Standard

Legal Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of any technology-based emission standard in this permit. This condition ensures compliance with the applicable requirement in 18 AAC 50.235. Technology Based Emission Standard requirements apply to the stationary source because the stationary source contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other “technologically feasible” determinations.

Factual Basis: The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with Condition 57. Excess emission reporting under Condition 57 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 57.

Condition 38, Asbestos NESHAP

Legal Basis: The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. This condition ensures compliance with the applicable requirement in 18 AAC 50.040(b)(1) and (2)(F). The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

Factual Basis: Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 39, Refrigerant Recycling and Disposal

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.040(d) and applies if the Permittee engages in the recycling or disposal of certain refrigerants. The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F that will apply if the Permittee uses certain refrigerants.

Factual Basis: Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

Conditions 40 - 41, Halon Prohibitions

Legal Basis: These prohibitions apply to all stationary sources that use halon for fire extinguishing and explosion inerting. The condition prohibits the Permittee from causing or allowing violations of these prohibitions. The Grayling Platform uses halon and is therefore subject to the federal regulations contained in 40 C.F.R. 82.

Factual Basis: These conditions incorporate applicable 40 C.F.R. 82 requirements.

Condition 42, Open Burning

Legal Basis: The Permittee has requested this condition. The Permittee has certified that no open burning is conducted at the platform.

Factual Basis: Extensive monitoring and recordkeeping is not warranted because the Permittee has requested a permit condition to prohibit open burning at the stationary source.

Condition 43, Requested Emission Unit Tests

Legal Basis: The Permittee is required to conduct emission unit tests as requested by the Department. The Department adopted this condition under 18 AAC 50.345(k) as part of its operating permit program approved by EPA November 30, 2001.

Factual Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.220(a) and applies because this is a standard condition to be included in all operating permits. Monitoring consists of conducting the requested emission unit test.

Conditions 44 - 46, Operating Conditions, Reference Test Methods, Excess Air Requirements

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.220(b) and apply because the Permittee is required to conduct emission unit tests by this permit. The Permittee is required to conduct emission unit test as set out in Conditions 44 through 46.

Factual Basis: These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with Conditions 44 through 46 consist of the test reports required by Condition 51.

Condition 47, Test Exemption

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.345(a) and apply when the emission unit exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), amended May 3, 2002, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Conditions 48 - 51, Test Deadline Extension, Test Plans, Notifications and Reports

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.345(l)-(o) and apply because the Permittee is required to conduct emission unit test by this permit.

Factual Basis: Standard conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. These standard conditions supplement specific monitoring requirements stated elsewhere in this permit. The emission unit test itself monitors compliance with this condition.

Condition 52, Particulate Matter (PM) Calculations

Legal Basis: This condition requires the Permittee to reduce particulate matter data in accord with 18 AAC 50.220(f). It applies when the Permittee tests for compliance with the PM standards in 18 AAC 50.050 or 50.055.

Factual Basis: The condition incorporates a regulatory requirement for PM emission unit tests. This condition supplements specific monitoring requirements stated elsewhere in this permit.

Condition 53, Recordkeeping Requirements

Legal Basis: Applies because the Permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide an evidence of compliance with this requirement.

Condition 54, Certification

Legal Basis: This condition requires the Permittee to comply with the certification requirement in 18 AAC 50.205 and applies to all Permittees under EPA's approved operating permit program of November 30, 2001.

Factual Basis: This standard condition is required in all operating permits under 18 AAC 50.345(j).

This condition requires the Permittee to certify any permit application, report, affirmation, or compliance certification submitted to the Department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the stationary source report, even though it must still be **submitted** more frequently than the stationary source operating report. This condition supplements the reporting requirements of this permit.

Condition 55, Submittals

Legal Basis: This condition requires the Permittee to comply with standardized reporting requirement in 18 AAC 50.326(j) and applies because the Permittee is required to send reports to the Department.

Factual Basis: This condition lists the Department's appropriate address for reports and written notices. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the standard reporting and notification requirements of this permit.

Condition 56, Information Requests

Legal Basis: This condition requires the Permittee to submit requested information to the Department. This is a standard condition from 18 AAC 50.345(i) of the state approved operating permit program effective November 30, 2001.

Factual Basis: This condition requires the Permittee to submit information requested by the Department. Monitoring consists of receipt of the requested information.

Condition 57, Excess Emission and Permit Deviation Reports

Legal Basis: This condition requires the Permittee to comply with the applicable requirement in 18 AAC 50.235(a)(2) and 18 AAC 50.240. Also, the Permittee is required to notify the Department when emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The Department adopted this condition as Standard Operating Permit Condition III under 18 AAC 50.346(c) pursuant to AS 46.14.010(d). The Department determined that this standard condition adequately meet the requirements of 40 CFR 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of 40 CFR 71.6(a)(3). The Department made a correction to the Standard Operating Permit Condition III to allow identical reporting methodology for both Excess Emissions and Permit Deviations reports which use identical forms and should have identical submissions methods.

Section 12, Notification Form

The Department modified the notification form contained in Standard Permit Condition IV in a revised rulemaking dated August 20, 2008 to more adequately meet the requirements of Chapter 50, Air Quality Control. The modification consisted of correcting typos and moving failure to monitor/report and recordkeeping to the permit deviations Section 2.

Condition 58, Operating Reports

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.346(b)(6) and applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit. The reports themselves provide monitoring for compliance with this condition.

The Department used the Standard Permit Condition VII as adopted into regulation on August 20, 2008. For reporting, MR&R conditions are Standard Permit Condition VII adopted into regulation pursuant to AS 46.14.010(d). The Department determined that these standard conditions adequately meet the requirements of 40 CFR 71.6(a)(3)(iii)(A). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of 40 CFR 71.6(a)(3).

Condition 59, Annual Compliance Certification

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.040(j)(4) and applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Each annual certification provide monitoring records for compliance with this condition.

Condition 59.2 provides clarification of transition periods between an expiring permit and a renewal permit to ensure that the Permittee certifies compliance with the permit terms and conditions of the permit that was in effect during those partial date periods involved in the transition. No format is specified: the Permittee may provide one report certifying compliance with each permit term or condition and the effective permit at that time, or may chose to provide two reports – one certifying compliance with permit terms and conditions from January 1 until the date of expiration of the old permit, and a second report certifying compliance with terms and conditions in effect from the effective date of the renewal permit until December 31.

The Permittee may submit one of the required copies electronically at their discretion. This change more adequately meets the requirements of 18 AAC 50 and agency needs, as the Department can more efficiently distribute the electronic copy to staff in other locations.

Condition 60, NSPS and NESHAP Reports

Legal Basis: The Permittee is required to provide the federal administrator and Department a copy of each emission unit report for units subject to NSPS or NESHAP federal regulations under 18 AAC 50.326(j)(4). 40 CFR 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

Factual Basis: The condition supplements the specific reporting requirements in 40 CFR 60, 40 CFR 61, and 40 CFR 63. The reports themselves provide monitoring for compliance with this condition.

Condition 61, Permit Applications and Submittals

Legal Basis: The Permittee may need to submit permit applications and related correspondence.

Factual Basis: Standard Condition XIV directs the applicant to send copies of all application materials required to be submitted to the Department directly to the EPA, in electronic format if practicable. This condition shifts the burden of compliance from the Department to ensure that copies of application materials are submitted to EPA by transferring that responsibility to the Permittee.

Conditions 62- 64, Permit changes and revisions requirements

Legal Basis: The Permittee is obligated to notify the Department of certain off-permit source changes and operational changes under 18 AAC 50.326(j)(4). 40 CFR 71.6(a)(10), (12), and (13) incorporated by reference under 18 AAC 50.040(j) require these provisions within this permit. 40 CFR 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

Factual Basis: These are conditions required in 40 CFR 71.6 for all operating permits to allow changes within a permitted stationary source without requiring a permit revision.

The Permittee did not request trading of emission increases and decreases as described in 71.6(a)(13)(iii).

Condition 65, Permit Renewal

Legal Basis: The Permittee must submit a timely and complete operating permit renewal application if the Permittee intends to continue stationary source operations in accord with the operating permit program under 18 AAC 50.326(j)(3). The obligations for a timely and complete operating permit application are set out in 40 CFR 71.5 incorporated by reference in 18 AAC 50.040(j)(3). 40 CFR 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

Factual Basis: In accordance with AS 46.14.230(a), this operating permit is issued for a fixed term of five years after the date of issuance, unless a shorter term is requested by the permit applicant. The Permittee is required to submit an application for permit renewal by the specific dates applicable to Grayling Platform as listed in this condition. As stated in 40 CFR 71.5(a)(1)(iii), submission for a permit renewal application is considered timely if it is submitted at least six months but no more than eighteen months prior to expiration of the operating permit. According to 71.5(a)(2), a complete renewal application is one that provides all information required pursuant to 40 CFR 71.5(c) and must remit payment of fees owed under the fee schedule established pursuant to 18 AAC 50.400. 40 CFR 71.7(b) states that if a source submits a timely and complete application for permit issuance (including renewal), the source's failure to have a permit is not a violation until the permitting authority takes final action on the permit application. Therefore, for as long as an application has been submitted within the timeframe allowed under 40 CFR 71.5(a)(1)(iii), and is complete before the expiration date of the existing permit, then the expiration of the existing permit is extended and the Permittee has the right to operate under that permit until the effective date of the new permit. However, this protection shall cease to apply if, subsequent to the completeness determination, the applicant fails to submit by the deadline specified in writing by the Department any additional information needed to process the application. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal.

Condition 66 - 67, Permit Applications

Legal Basis: These conditions set out the protocol the Permittee must follow to submit amendment, modification and renewal applications to the Department under 18 AAC 50.326(j)(3) and to the Federal Administrator under 40 CFR 71.5, 71.7 and 71.10.

Factual Basis: This condition directs the Permittee to submit application materials to the Department's Anchorage office. The current address at time of permit issuance is provided in a footnote because it is likely to change during the life of this permit. The current address can be obtained by contacting the Department, checking the website, or by other reasonable means. The Permittee may submit copies of application materials in electronic formats compatible with ADEC software as the Department can more efficiently distribute the electronic copy to staff in other locations. Condition 67 directs the applicant to send copies of all application materials directly to the EPA, in electronic format if practicable.

Conditions 68 - 72, General Compliance Requirements and Schedule

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.326(j)(3). The Permittee is required to comply with these standard conditions set out in 18 AAC 50.345 included in all operating permits. 40 CFR 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

Factual Basis: These are standard conditions for compliance required for all operating permits.

Conditions 73 - 74, Permit Shield

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.326(j)(3). The Permittee is required to comply with these standard conditions set out in 18 AAC 50.345 included in all operating permits. 40 CFR 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

Factual Basis: Table C of Operating Permit No. AQ0069TVP02 shows the permit shields that the Department granted to the Permittee. The permit conditions set forth the requirements that the Department determined were not applicable to the stationary source. The following table shows the requests that were denied and the reasons that they were denied. The Department based the determinations on the permit application, past operating permit, likelihood for the stationary source to become subject during the life of the permit, Title I permits and inspection reports. The Department did make changes to the requested shields for 40 CFR 63 to shield only those provisions that apply to a HAP major source and area source provisions for glycol dehydrator units with an annual average throughput equal to or greater than 85,000 standard cubic meters per day or with actual average benzene glycol dehydration unit process vent emissions equal to or greater than 0.90 megagrams per year rather than shielding UOCC from the subparts in total.

The three shield denials below were determined by the Department to be for EUs likely to become affected emission units during the term of the permit, thus necessitating re-opening of the permit to add specific terms and conditions applicable.

Table F - Permit Shields Denied

Shield requested for:	Reason for shield request:	Reason for request denial:
Compression Ignition Engines: EU IDs 21 - 27		
40 CFR 60 Subpart IIII	Grayling does not contain equipment meeting the applicability criteria under 40 CFR 60.4200(a).	These emissions units are likely to become affected facilities during modification or reconstruction during the term of the permit.
Stationary Gas Turbines: EU IDs 1 - 18:		
40 CFR 60 Subpart KKKK	EU IDs 1- 18 were constructed before February 18, 2005 and have not been modified or reconstructed after this date.	These emissions units are likely to become affected facilities during modification or reconstruction during the term of the permit.
Organic Liquid Storage Tanks		
40 CFR 60 Subpart Kb	Permittee did not commence construction, modification or reconstruction of any existing tank after June 11, 1973	Although tanks currently are not subject to Subpart Kb, UOCC may during the life of the permit modify or reconstruct these tanks.