

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

TECHNICAL ANALYSIS REPORT

**For the terms and conditions of
Minor Permit AQ0062MSS02**

**Issued to Hilcorp Alaska, LLC
For the Anna Platform**

Preliminary – November 20, 2025

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**Reviewed by Dave Jones
ADEC AQ/APP (Anchorage and Juneau)**

1. INTRODUCTION

This Technical Analysis Report (TAR) provides the Alaska Department of Environmental Conservation's (Department's) basis for issuing Minor Permit AQ0062MSS02 to Hilcorp Alaska, LLC (Hilcorp) for Anna Platform. The permit application is classified under 18 AAC 50.502(c)(2)(A) for the relocation of a portable oil and gas operation.

2. STATIONARY SOURCE DESCRIPTION

Anna Platform is an offshore oil and gas production platform, producing fuel gas and oil with some residual water in the oil. Hilcorp performs natural gas and crude oil exploration at this stationary source.

Hilcorp Alaska, LLC currently operates under Operating Permit No. AQ0062TVP04.

3. PERMIT HISTORY RELEVANT TO PROJECT

- Minor Permit AQ1411MSS01 was issued to Hilcorp on July 9, 2015 for the Kuukpik V Drill Rig relocation project.
- Minor Permit AQ1411MSS01 was incorporated into renewal Operating Permit AQ0062TVP03 Rev. 1 on May 10, 2019.
- Minor Permit AQ1411MSS02 was issued on May 30, 2019 to revise Minor Permit AQ1411MSS01 by removing the Granite Point Platform from the list of permitted locations shown on the cover page of Minor Permit AQ1411MSS01.
- Hilcorp applied for Minor Permit AQ1411MSS03 on October 18, 2024 to remove Anna Platform, Dolly Varden Platform, and Grayling Platform from the list of authorized locations for the Kuukpik V Drill Rig shown in Minor Permit AQ1411MSS02 cover page. Minor Permit AQ1411MSS03 was issued on May 8, 2025 and rescinded Minor Permit No. AQ1411MSS02.
- Hilcorp applied for Minor Permit AQ0062MSS02 on October 18, 2024 to authorize the relocation of the Spartan 151 Drill Rig to Anna Platform.

4. APPLICATION DESCRIPTION

Hilcorp submitted its application for Minor Permit AQ0062MSS02 on October 18, 2024 to authorize the relocation of the Spartan 151 Drill Rig to the Anna Platform. Hilcorp intends to incorporate this minor permit into the renewal Title V Operating Permit No. AQ0062TVP05 that is concurrently being processed.

5. CLASSIFICATION FINDINGS

Based on the review of the application, the Department finds that:

1. Minor Permit AQ0062MSS02 is classified under 18 AAC 50.502(c)(2) for relocation of a portable oil and gas operation.

6. APPLICATION REVIEW FINDINGS

Based on the review of the application, the Department finds that:

1. Hilcorp Alaska, LLC's minor permit application for Anna Platform contains the elements listed in 18 AAC 50.540.

2. Anna Platform has been removed from the list of authorized locations for the Kuukpik V Drill Rig to operate, effective upon issuance of Minor Permit AQ1411MSS03 on May 8, 2025. Minor Permit AQ1411MSS03 revises Minor Permit AQ1411MSS01 and rescinds Minor Permit AQ1411MSS02. With the issuance of Minor Permit AQ1411MSS03, terms and conditions of Minor Permit AQ1411MSS01 (Kuukpik V Drill Rig operations at Anna Platform) in Operating Permit AQ0062TVP04 are no longer valid, thereby removing any conflict between the Title I and Title V permits. Thus, Hilcorp may operate under Minor Permit AQ0062MSS02 upon issuance.
3. Hilcorp has indicated in its application that “[b]ecause the Title V operating permit has less than 3 years remaining until expiration, Hilcorp plans to incorporate the pending Title I minor permit and remove conditions associated with Minor Permit No. AQ1411MSS0[1] during the next renewal process.” The Department agrees to incorporate terms and conditions of this Minor Permit AQ0062MSS02 into the pending renewal Title V Operating Permit No. AQ0062TVP05 using the integrated review procedures of 18 AAC 50.326(c)(1). The Title V renewal permit will remove Minor Permit AQ1411MSS01 (Kuukpik V Drill Rig) requirements and replace it with this Minor Permit AQ0062MSS03 (Spartan 151 Drill Rig) requirements.
4. The emissions unit inventory of the Spartan 151 Drill Rig consists of nonroad engines and fuel tanks. The emissions of the nonroad engines of the Spartan 151 Drill Rig are not included when determining the classification of the stationary source under AS 46.16.130 and are not included in the assessable potential to emit (PTE). See Table A and Table B.
5. Emissions calculations from the application for Minor Permit AQ0062MSS02 and from the Minor Permit AQ1411MSS01 TAR demonstrate that replacing the Kuukpik V Drill Rig with the Spartan 151 Drill Rig will result in a decrease in potential emissions for all criteria pollutants.
6. The minor permit does not need to include the conditions associated with the *State Emissions Standards*, since those provisions are part of pending Operating Permit AQ0062TVP05. The minor permit likewise does not need to include the *General Recordkeeping, Reporting, and Certification* conditions, *General Source Testing* conditions, or the *Standard Conditions*, except as required under 18 AAC 50.544(a)(5).

7. EMISSIONS SUMMARY AND PERMIT APPLICABILITY

Table A shows the emissions summary and permit applicability from the stationary source. Emission factors and detailed calculations are provided in Appendix A.

A summary of the PTE and assessable PTE, as determined by the Department, is shown in Table A below.

Table A – Emissions Summary and Permit Applicability, tons per year (TPY)

Parameter	NO _x	CO	VOC	PM/ PM ₁₀ / PM _{2.5}	SO ₂
Kuukpik V Drill Rig PTE ¹	4.60	1.15	0.17	0.46	0.05
Spartan 151 Drill Rig PTE (excluding	0.00	0.00	0.0068 ³	0.00	0.00

Parameter	NO _x	CO	VOC	PM/ PM ₁₀ / PM _{2.5}	SO ₂
NREs) ²					
Change in PTE due to modification	-4.60	-1.15	-0.17	-0.46	-0.05
18 AAC 50.502(c)(3) Permit Thresholds	10	N/A	N/A	NA/10/10	10
502(c)(3) Applicable?	No	N/A	N/A	No	No
PSD Major Modification Thresholds	40	100	40	25/15/10	40
PSD Review Required?	No	No	No	No	No

Notes:

1. Kuukpik V Drill Rig PTE is from Minor Permit AQ1411MSS01 TAR, recalculated to two decimal places.
2. Emissions of NREs are not applicable when determining permit classification under AS 46.16.130.
3. VOC PTE from the diesel storage tanks, S12.

Table B below shows a summary of the stationary source’s PTE and the assessable PTE.

Table B – Assessable Emissions (TPY)

Parameter	NO _x	CO	VOC	PM/ PM ₁₀ / PM _{2.5} ²	SO ₂
Existing Anna Platform PTE	345.82	216.30	35.02	12.31	24.79
Change in PTE due to Spartan 151 Drill Rig	0.00	0.00	0.0068	0.00	0.00
Assessable Emissions	345.82	216.30	35.03	12.31	24.79
Total Assessable	634.25				

Notes:

1. Existing Anna Platform PTE is from the application for Operating Permit AQ0062TVP05, recalculated to two decimal places.
2. PM_{2.5} emissions are part of and conservatively assumed equal to PM₁₀ emissions. PM₁₀ and PM_{2.5} emissions are part of Total PM emissions. Therefore, PM_{2.5} and PM₁₀ are not counted in total assessable emissions to avoid double counting.

8. PERMIT ADMINISTRATION

The provisions of Minor Permit AQ0062MSS02 will be incorporated into the pending Title V Operating Permit No. AQ0062TVP05. The Title V renewal permit will remove Minor Permit AQ1411MSS01 (Kuukpik V Drill Rig) requirements and replace it with this Minor Permit AQ0062MSS02 (Spartan 151 Drill Rig) requirements.

Hilcorp Alaska, LLC currently operates Anna Platform under Operating Permit No. AQ0062TVP04. With the issuance of Minor Permit AQ1411MSS03 on May 8, 2025, terms and conditions of Minor Permit AQ1411MSS01 (Kuukpik V Drill Rig operations at the Anna Platform) in Operating Permit AQ0062TVP04 are no longer valid, thereby removing any conflict

between the Title I and Title V permits. Thus, Hilcorp may operate under Minor Permit AQ0062MSS02 upon issuance.

9. PERMIT CONDITIONS

The bases for the standard and general conditions imposed in Minor Permit AQ0062MSS02 are described below.

Cover Page

18 AAC 50.544(a)(1) requires the Department to identify the stationary source, Permittee, and contact information. The Department provided this information on the cover page of the permit.

Section 1: Emissions Unit Inventory

The EUs authorized and/or restricted by this permit are listed in Table 1 of the permit. Unless otherwise noted in the permit, the information in Table 1 is for identification purposes only. Condition 1 is a general requirement to comply with AS 46.14 and 18 AAC 50 when installing a replacement EU.

Condition 2 is a general requirement for good air pollution control practices and maintenance of EUs operated at the stationary source. Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards assume that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. 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.

Section 2: Fee Requirements

18 AAC 50.544(a)(2) requires the Department to include a requirement to pay fees in accordance with 18 AAC 50.400 through 18 AAC 50.499 in each minor permit issued under 18 AAC 50.542. Details of the fee and assessable emissions requirements are addressed in the pending Title V Operating Permit AQ0062TVP04.

Section 3: Ambient Air Quality Protection Requirements

18 AAC 50.544(a)(6) requires the Department to include conditions to protect air quality, when warranted. The Department determined that conditions are warranted to protect the annual NO₂, 24-hour PM₁₀, annual PM_{2.5}, and 1-hour, 3-hour, 24-hour, and annual SO₂ AAAQS for the reasons described in Appendix B of this TAR.

Condition 4 limits the sulfur content of the liquid fuel burned by the Spartan 151 Drill Rig EUs while at Anna Platform to no more than 15 ppmw. Condition 5 limits the cumulative rated capacity of the nonroad engines on the Spartan 151 Drill Rig while at Anna Platform to no more than 8,615 hp.

Section 4: General Recordkeeping, Reporting, and Certification Requirements

Condition 6, Certification

18 AAC 50.205 requires the Permittee to certify any permit application, report, affirmation, or compliance certification submitted to the Department. The Department used the language

in Standard Permit Condition (SPC) XVII. This requirement is reiterated as a standard permit condition in 18 AAC 50.345(j).

Condition 7 Submittals

Condition 7 clarifies where the Permittee should send their reports, certifications, and other submittals required by the permit. The Department used the language in SPC XVII. The Department included this condition from a practical perspective rather than a regulatory obligation.

Section 5: Standard Permit Conditions

Conditions 8 through 13, Standard Permit Conditions

18 AAC 50.544(a)(5) requires each minor permit issued under 18 AAC 50.542 to contain the standard permit conditions in 18 AAC 50.345, as applicable. 18 AAC 50.345(a) clarifies that subparts (c)(1) and (2), and (d) through (o), may be applicable for a minor permit.

The Department included the relevant minor permit-related standard conditions of 18 AAC 50.345 in Minor Permit AQ0062MSS02. The Department incorporated these standard conditions as follows:

- 18 AAC 50.345(c)(1) and (2) is incorporated as Condition 8 of Section 5 (Standard Permit Conditions);
- 18 AAC 50.345(d) through (h) is incorporated as Conditions 9 through 13, respectively, of Section 5 (Standard Permit Conditions);
- 18 AAC 50.345(j) is incorporated as Condition 6 of Section 4 (Recordkeeping, Reporting, and Certification Requirements).
- 18 AAC 50.345(k) through (o) are not incorporated, as source testing requirements were not relevant to this permit.

APPENDIX A: Emissions Calculations

Table A-1 presents details of the EUs, their characteristics, and emissions. Potential emissions are estimated using maximum annual operation for all fuel burning equipment as defined in 18 AAC 50.990(39) subject to any operating limits.

Table A-1 – Emissions Summary, in Tons Per Year (TPY)¹

EU ID	Unit ID/Description	Maximum Rating or Capacity		Operating Limits		NO _x		CO		VOC		PM		SO ₂	
						EF	PTE (TPY)	EF	PTE (TPY)	EF ²	PTE (TPY)	EF	PTE (TPY)	EF	PTE (TPY)
S12	Spartan Drill Rig Tank	32,943	Gallons	8,760	hr/yr	N/A	0.00	N/A	0.00	6.88 lb/yr	3.4E-03	N/A	0.00	N/A	0.00
	Spartan Drill Rig Tank	646	Gallons	8,760	hr/yr	N/A	0.00	N/A	0.00	0.14 lb/yr	7.0E-05	N/A	0.00	N/A	0.00
	Spartan Drill Rig Tank	28,663	Gallons	8,760	hr/yr	N/A	0.00	N/A	0.00	5.92 lb/yr	3.0E-03	N/A	0.00	N/A	0.00
	Spartan Drill Rig Tank	3,305	Gallons	8,760	hr/yr	N/A	0.00	N/A	0.00	0.76 lb/yr	3.8E-04	N/A	0.00	N/A	0.00
Total Potential to Emit							0.00		0.00		6.8E-03		0.00		0.00

Notes

- 1 This table does not include drill rig engines because they are nonroad engines. Nonroad engines are excluded from permit applicability per 18 AAC 50.100; therefore, their PTE are not included in the table.
- 2 VOC EFs are from EPA AP-42 Section 7.1 for EU ID S12.

APPENDIX B: Modeling Report



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

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MEMORANDUM

DATE: 20 November, 2025

TO: File

THRU: Grace M. Germain, Supervisor
Juneau Air Permits Program Section

FROM: James Renovatio, Supervisor
Anchorage Air Permits Program Section

Subject: Alaska Department of Environmental Conservation Findings regarding Hilcorp Alaska, LLC's Ambient Demonstration for Air Quality Control Minor Permit AQ0062MSS02

This memorandum summarizes the Alaska Department of Environmental Conservation's (Department's) findings regarding Hilcorp Alaska, LLC's (Hilcorp's) ambient demonstration for the Anna Platform Spartan 151 Drilling Project. Hilcorp's demonstration was provided in support of their application for Air Quality Control Minor Permit AQ0062MSS02 (AQ0062MSS02). The Department is issuing this memorandum in lieu of a Modeling Report in consideration of Hilcorp's atypical approach and brevity of findings.

APPLICATION

Hilcorp prepared an application for AQ0062MSS02 dated 18 October, 2024. The application generally requests authorization to relocate a currently permitted Spartan 151 drill rig to the Anna Platform in western Cook Inlet. The activities proposed in Hilcorp's application entail oil and gas drilling at said location.

Application materials generally describe the emissions unit (EU) inventory of the Spartan 151 rig at Anna Platform as an integral collection of liquid fuel-fired reciprocating internal combustion engines and fuel storage tanks. Approximately 8,700 rated horsepower of rig EUs are identified as non-road engines in the application for AQ0062MSS02.

Anna Platform is located at 60° 58' 36.98" North, 151° 18' 47.99" West. This location is situated over open water, approximately 8.5 kilometers (km) southwest of the community of Tyonek and about 4 km from the nearest western shore.

CLASSIFICATION

Hilcorp's application is classified under 18 AAC 50.502(c)(2)(A) for the relocation of a portable oil and gas operation and 18 AAC 50.508(6) for the revision or rescission of Title I permit terms and conditions. These permit classifications necessitate a demonstration of select ambient impacts under the application information requirements of 18 AAC 50.540(c)(2)(B) and 18 AAC 50.540(k)(3)(C). Specifically, Hilcorp must provide a demonstration of impacts with regard to the following regulated pollutants and averaging periods:

- annually averaged nitrogen dioxide (NO₂);
- 24-hour particulate matter with an aerodynamic diameter of 10 microns or less (PM-10);
- annually averaged particulate matter with an aerodynamic diameter of 2.5 microns or less (PM-2.5); and
- annually averaged, 24-hour, three-hour, and one-hour sulfur dioxide (SO₂).

APPROACH

Applicants typically employ dispersion modeling to estimate their ambient impacts within a regulatory demonstration supporting a Minor Source Specific permit. The U.S. Environmental Protection Agency offers detailed guidance on this type of preferred approach in their *Guideline on Air Quality Models*, which is published as Appendix W to 40 C.F.R. 51. Less commonly, however, an alternative approach may be sufficient to demonstrate protection of the ambient air quality standards on a case-specific basis.

Hilcorp did not perform source-specific dispersion modeling for the Spartan 151 rig to be operated at Anna Platform. They instead relied upon the results of dispersion modeling previously performed in support of Air Quality Control Minor Permit AQ0066MSS02 (AQ0066MSS02) as a representative surrogate of estimated impacts for this proposed Minor Permit AQ0062MSS02 for the Anna Platform. The demonstration for AQ0066MSS02 characterized impacts from the Spartan 151 rig while operating at the nearby Granite Point Platform.

REVIEW

The Department considered Hilcorp's proposed reliance upon an ambient demonstration for a nearby stationary source to characterize impacts in the Anna Platform Spartan 151 Drilling Project. It noted several salient aspects of this case-specific approach:

- The Spartan 151 rig modeled in Hilcorp's demonstration for AQ0066MSS02 at the Granite Point Platform is predicated upon
 - a larger EU inventory than that proposed in AQ0062MSS02; and
 - the firing of liquid fuels with a sulfur content of no greater than 15 parts-per-million by weight, i.e., ultra-low sulfur diesel, in all rig EUs.
- The results of dispersion modeling performed in support of AQ0066MSS02 at the Granite Point Platform demonstrated estimated results for
 - NO₂ and PM-2.5 that were approximately half of the respective ambient air quality standards listed in 18 AAC 50.010;
 - PM-10 that was approximately a third of the respective standard listed in 18 AAC 50.010; and
 - SO₂ that were below the respective significant impact levels listed in Table 5 of 18 AAC 50.215(d).

- Meteorological and downwash conditions at both Anna and Granite Point Platforms are not anticipated to meaningfully differ in sufficient character to drive the over-water impacts estimated through dispersion modeling.
- Annually estimated emissions from Hilcorp's proposed Anna Platform Spartan 151 Drilling Project are relatively smaller than those assumed for AQ0066MSS02, calculated as
 - 55-percent fewer tons NO₂
 - 22-percent fewer tons of PM-10 and PM-2.5, each; and
 - 51-percent fewer tons of SO₂.

The Department separately notes that Hilcorp has previously requested a similar surrogacy approach in their ambient demonstration for Air Quality Control Minor Permit AQ0091MSS04, which authorized relocation of the Spartan 151 rig to the nearby Tyonek Platform. This permit action was subject to special notification during public comment in response to requests from various tribal stakeholders.

FINDINGS

The Department finds that Hilcorp's case-specific use of dispersion modeling previously prepared in support of AQ0066MSS02 is sufficient to demonstrate that the operations proposed in their application for AQ0062MSS02 will not cause or contribute to a violation of the ambient air quality standards subject to review. It is, therefore, accepting this surrogate approach, in lieu of a typical ambient demonstration, to meet the requirements of requirements of 18 AAC 50.540(c)(2)(B) and 18 AAC 50.540(k)(3)(C) on a case-specific basis. This finding is based on the anticipated conservatism of Hilcorp's approach as described herein.

RECOMMENDATIONS

The Department is recommending the preservation of terms and conditions included to protect ambient air quality established through the ambient demonstration for Minor Permit AQ0066MSS02. Early notification of the Department's preliminary decision to tribal stakeholders is also recommended.

Alternative approaches to meet ambient demonstration requirements listed under 18 AAC 50.540 are uncommon and rigorously evaluated on a case-specific basis. The Department, therefore, encourages applicants to discuss the appropriateness of such an approach for a particular project through pre-application discussion to avoid potential delays or findings of incompleteness.