| State of Alaska<br>Department of Environmental Conservation<br>**Policy and Procedure Policy** | POLICY AND PROCEDURE NUMBER<br>**04.02.105** | PAGE<br>**1 of 4** |
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| | EFFECTIVE DATE<br>**November 20, 2006** | |
| SUBJECT<br>**Intermittently Used Oilfield Support Equipment** | SUPERSEDES<br>**All Previous Editions** | |
| SECTION<br>**Air Quality Division** / CHAPTER<br>**Permit Processing** | APPROVED BY | |

## PURPOSE

This policy establishes a procedure by which small, intermittently used oilfield support equipment can be managed through fuel sulfur levels, rather than ambient air quality assessments. This policy is limited to North Slope emission units.

Intermittent oilfield support equipment are typically used for two primary categories of work: oil well servicing and maintenance, and general oilfield maintenance for pipelines, roads and other existing infrastructure. Generally the emission units include diesel powered internal combustion engines for mechanical and electrical power, portable heaters, vehicle engines, and small electrical generators for light plants. Additional examples can include:

- Slickline units, well wireline units, coil tube units, fractionation units, hot oil units, and associated equipment related to well servicing
- Welding, brazing, cutting, and soldering equipment
- Snow blowers, melters, and general snow removal activities
- Hydraulic lifts
- Cranes
- Portable generators
- Road, pad, camp, pipeline and dock maintenance (grading, repairs, small construction projects, etc.)
- Well tie-ins and piping connects/disconnects related to well servicing.

Drilling rigs used for exploratory and development drilling are not considered as intermittent support equipment.

The guidance is presented as an overall policy direction followed by specific questions and direction to clarify the issues and policy decision.

**Background:** In 2004, the department undertook significant reforms for the new source review program to more closely mimic the federal new source review regulations. The department also decided to manage the air impacts from small, intermittent well servicing activities through fuel sulfur reductions rather than explicit pre-permit modeling demonstrations. The department will rely more upon in-field inspections, observation and compliance verification and less upon pre-permit technical reviews, where those reviews

are not clearly mandated by federal law or rules and where practices employed by EPA and other states have generally not gone to the level of detail that Alaska has done in recent years.

## PURPOSE

**Applicability:** Do air quality increments or National Ambient Air Quality Standards (NAAQS) apply for these operations?

**Action:** The department is obligated to make reasonable inquiry to assure that emissions from these emission units will not results in violations of the NAAQS.

In recognition of their portable nature, their infrequent intermittent use at any given location and how EPA and other states manage such emission units the department finds that these emissions are not subject to the more restrictive increment standards.

**Applicability:** Should these activities be managed via a Permit? If so, what type of permit and who is the permittee?

The department finds that these are comparatively small sources of air emissions, especially those used during wireline, hot oil and slickline functions as well as those used for general oil field infrastructure support.

Applicants must list all of the expected intermittent oilfield support equipment in the permit application. This includes emission units that will not be included in any ambient assessment that may be performed. For purposes of this policy, "intermittent" means a portable unit that only operates on an occasional basis at the given stationary source.

Air permits staff may include the fuel sulfur limits listed below as a permit condition applicable to the entire stationary source. For purposes of this policy, the department will assume that all intermittent support equipment will be refueled from the fuel storage tanks used by the stationary source or brought on-site with a portable oil and gas operation (as defined in 18 AAC 50.990) and that any fuel that comes on-site in the support equipment fuel tanks is inconsequential. Permittees are responsible for retaining fuel delivery records to document sulfur content and such records may be requested by DEC air permits staff. Fuel receipts are anticipated to be necessary for the permittee to fulfill their due diligence requirement for annual compliance certification. Unless required by federal law or rule, DEC issued permits will not require periodic reporting of fuel sulfur content for purposes of the equipment addressed by this policy document.

No other use restrictions will be placed on the equipment via the permit unless: 1) the applicant request to use a higher sulfur content fuel; 2) a specifically required modeling analyses provides a reasoned basis to anticipate a violation of a NAAQS; or 3) field measurements of fuel sulfur

content, ambient measurements or staff observations provide compelling evidence of a likely violation of a NAAQS.

Notes:
1)The department considered the situation that these well service tasks are generally performed by contractors rather than the company operating the field.

2) The department reviewed ambient air quality measurements performed at PBU Well Pad A and an associated use record for portable and intermittent units that operated on that pad. A multi-year record was provided for ambient NOX. The results demonstrate that these units do not degrade air quality to a measurable extent. In 2003, BP installed an ambient SO2 instrument at the same location to track short term ambient conditions associated with intermittent source activity on this oil field production pad.

3) Nothing in this policy prevents the department from conducting it's own ambient monitoring adjacent to these field support operations.

**Applicability:** What ambient Air Quality Modeling is appropriate for these smaller units?

**Action:** After considerable review of the issue and research of practices among EPA and other states, the department concludes that properly characterizing small close to the ground emission units such as small electrical and heat plants, and well service operations, can be difficult and the modeling results can be questionable.

However, coil tubing drilling units and fractionation units normally incorporate larger reciprocating engines. These emission units are easier to characterize and have a greater potential for violating ambient air quality standards. At the discretion of the supervisor of the construction permitting group, the Department may require pre-permit modeling for coil tubing drilling units and well fractionation units to assess compliance with the NAAQS. If requested, such modeling should be adequate if performed for a generic unit of each type for a typical location in the particular oil field or exploration site.

Applicants using intermittent internal combustion units rated at less than 400 bhp or intermittent boilers/heaters with a heat input rating of less than 2.8 MMBtu/hr, who agree to use fuel with a sulfur content listed below, do not need to include these units in a modeling analysis.

Applicants who wish to rely on fuel sulfur restrictions must agree to use only fuel that meets the following sulfur limits in all diesel-fired intermittent units operating at the given stationary source:

- $\leq$ 1000 parts per million by weight (ppmw) through January 31, 2009; and
- $\leq$ 15 ppmw after January 31, 2009.

## AUTHORITY

## IMPLEMENTATION RESPONSIBILITY

The Division Director.