

Public

ALASKA LNG

Alaska LNG Liquefaction Plant Construction Permit
Application

**Project Information Form Attachment 9:
Pre-Construction Monitoring**

March 2018

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In Table 1, the Alaska LNG Project (Project) has compared modeled maximum impacts of its Liquefaction Plant to Significant Monitoring Concentrations (SMCs) provided in the PSD rules at 40 CFR 52.21(i)(5), and adopted by reference into 18 AAC 50.

Table 1. Alaska LNG Liquefaction Plant Pre-Construction Monitoring per 40 CFR 52.21(m)

Air Pollutant	Averaging Period	Maximum AERMOD Predicted Concentration ($\mu\text{g}/\text{m}^3$)	52.21 (i)(5) Significant Monitoring Concentration (SMC) ($\mu\text{g}/\text{m}^3$)	Pre-Construction Monitoring Required?	Source of Monitoring Information?
SO ₂	24-hour	19.0	13	Yes	Alaska LNG monitoring
CO	8-hour	1132	575	Yes	Alaska LNG monitoring
NO ₂	Annual	8.4	14	No	n/a
PM ₁₀	24-hour	6.0	10	No	n/a
PM _{2.5}	24-hour	SMC is effectively 0 $\mu\text{g}/\text{m}^3$ ^a		Yes	Agrium Monitoring
O ₃	SMC does not apply			Yes	Agrium Monitoring

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

^a In its final rule, the EPA adopted and set values for an SMC for PM_{2.5}. See 75 Fed. Reg. at 64,864. However, In *Sierra Club v. EPA*, decided on January 22, 2013, The Court of Appeals for the District of Columbia rejected EPA's rules governing SMC for determining PSD permitting requirements for new sources of PM_{2.5}. Therefore, PM_{2.5} pre-construction monitoring is always required for projects triggering PM_{2.5} PSD review.

From the Table above, the Project believes it **does not have** 52.21(m) pre-construction monitoring requirements for:

- Oxides of Nitrogen (NO_x), based on the SMC for nitrogen dioxide (NO₂)
- Particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀)

From the Table above, the Project believes it **does have** 52.21(m) pre-construction monitoring requirements for:

- Sulfur dioxide (SO₂)
- Carbon monoxide (CO)
- Particulate matter with an aerodynamic diameter of 2.5 microns or less (PM_{2.5})
- Ozone (O₃) note: per 52.21(i)(5), there is no SMC for Ozone, the Project has emissions greater than 100 tons per year of NO_x, creating a monitoring requirement for O₃.

In Figure 1, the Alaska Department of Environmental Conservation (ADEC) approved use of existing (Agrium) data for the following parameters having a pre-construction monitoring requirement:

- Particulate matter with an aerodynamic diameter of 2.5 microns or less (PM_{2.5})
- Ozone (O₃)

Existing (Agrium) pre-construction monitoring information is provided in the folder *NO_x_PM_PreConstruction Data*, associated with the attachment 7 electronic format modeling files.

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The Department did not approve the use of existing data for the following parameters having a pre-construction requirement:

- Sulfur dioxide (SO₂)
- Carbon monoxide (CO)

The Project has initiated a program to collect pre-construction monitoring data for SO₂ and CO, at a site approved by ADEC. This additional information will be provided to the Department in a supplement to this application, when available.

Figure 1. ADEC Approval for Use of Certain Existing Pre-Construction Monitoring

From: Schuler, Alan E (DEC) <alan.schuler@alaska.gov>
Sent: Tuesday, June 13, 2017 4:33 PM
To: Jim Pfeiffer (jpfeiffer@agdc.us); Kalb Stevenson (KStevenson@agdc.us)
Cc: Schuler, Alan E (DEC); Trost, Barbara E (DEC); Renovatio, James J (DEC); Pfeiffer, Jim A
Subject: ADEC Response Re Nikiski Pre-Construction Monitoring
Attachments: Is an LNG plant a fuel conversion plant under the Clean Air Act?; FW: trailers

Follow Up Flag: Follow up
Flag Status: Flagged

Jim and Kalb,

The Department is providing the following response to Alaska LNG's 6/7/17 request to use Agrium and Swanson River ambient monitoring data to meet the Prevention of Significant Deterioration (PSD) pre-construction monitoring requirements for the Kenai Liquefaction Facility. We agree that the 2013 – 2014 Agrium coarse particulate (PM-10), fine particulate (PM-2.5), and ozone (O₃) data would meet the PSD pre-construction monitoring requirements for the proposed project. The 2008 – 2009 Swanson River nitrogen dioxide (NO₂) and carbon monoxide (CO) data does not meet PSD pre-construction monitoring requirements due to its age. (The data is supposed to be "current" per Section 2.4.3 of the U.S. Environmental Protection Agency's (EPA's) *Ambient Monitoring Guidelines for Prevention of Significant Deterioration* guidance, which the Department has adopted by reference in 18 AAC 50.035(a)(5).)

We believe AK LNG has the following three options as to how they could meet the pre-construction monitoring requirements for NO₂ and CO:

- 1) Demonstrate that the project impacts are below the Significant Monitoring Concentration (SMC) for the given pollutant;
- 2) Propose some other surrogate data set; or
- 3) Collect at least 12-months of PSD-quality pre-construction data.

We're available to discuss these options in greater detail if that would help. I'm also attaching an email train regarding a possible source of monitoring equipment as a FYI (See FW: trailers).

Staff also recently received the attached email regarding LNG conversion plants, which I'm forwarding as an additional FYI.

Feel free to contact us if you have any questions.

Alan