From:	Fernandez, Enric
To:	Jones, Dave F (DEC)
Cc:	Ejaz Memon; Kevin Lewis; Simpson, Aaron J (DEC); Renovatio, James J (DEC); Heroy, Catherine A (DNR); Murrell, Jennifer S (DNR); Donlin Permitting
Subject:	RE: Information Request for Donlin Gold Project"s Construction Permit AQ0934CPT02 Application
Date:	Thursday, March 24, 2022 5:15:39 PM
Attachments:	RFI#2_2022.02.23 memo_2022.03.22.pdf

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[Internal]

Dave

Attached is Donlin Gold's response to ADEC's inquiry regarding the diesel particulate filters (DPFs) BACT analysis for the Wartsila and emergency generators.

Please, let us know if you have any questions or if you are unable to download the Appendix B data from the cloud.

Thanks.

From: Jones, Dave F (DEC) <dave.jones2@alaska.gov>
Sent: Wednesday, February 23, 2022 3:20 PM
To: Fernandez, Enric <efernandez@DonlinGold.com>
Cc: Ejaz Memon <ememon@airsci.com>; Kevin Lewis <klewis@airsci.com>; Simpson, Aaron J (DEC) <aaron.simpson@alaska.gov>; Renovatio, James J (DEC) <james.renovatio@alaska.gov>; Heroy, Catherine A (DNR) <catherine.heroy@alaska.gov>
Subject: RE: Information Request for Donlin Gold Project's Construction Permit AQ0934CPT02 Application

[External]

Enrique,

Upon further review of Donlin Gold's application and EPA's RACT, BACT, LAER, Clearinghouse (RBLC) data, the Department has found diesel-fired engines equipped with diesel particulate filters to control particulate emissions. This finding is located in RBLC Source ID MI-0433 which has large and small emergency diesel engines equipped with diesel particulate filters. In addition, the most recent PSD Construction Permit issued by the Department for a facility with large diesel engines (Construction Permit AQ1524CPT01 for the Alaska Gasline Development Corporation's Gas Treatment Plant) contained a BACT economic analysis for diesel particulate filters. Therefore, the Department is requesting the following information be included with the previous information request:

Information Request Regarding the Large Engine Generators (including limited use engines) EUs 1 – 12 & 29 – 34

1. Please provide the Department with BACT analyses for diesel particulate filters for the primary engines EUs 1 – 12 and the limited use engines rated at 600 and 1,500 kWe (EUs 29 – 34). For these

analyses please:

- Provide the analyses in Microsoft Excel format using new cost estimates.
- Use the methodology from the most recent EPA Air Pollution Control Cost Manual, available on the following website: https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-reports-and-guidance-air-pollution.
- Use an appropriate equipment life for the Capital Recovery Factor (CRF) portion of the analyses and justify if a shorter equipment life is warranted.
- Use the current bank prime loan interest rate for the CRF portion of the analyses available here: https://www.federalreserve.gov/releases/h15/.

Regards,

Dave Jones

Env. Engineering Assistant II
ADEC – Air Quality – Juneau
dave.jones2@alaska.gov
907.465.5122

From: Jones, Dave F (DEC)
Sent: Friday, February 18, 2022 3:57 PM
To: Fernandez, Enric <efernandez@donlingold.com>
Cc: Ejaz Memon <ememon@airsci.com>; Kevin Lewis <klewis@airsci.com>; Simpson, Aaron J (DEC) <aaron.simpson@alaska.gov>; Renovatio, James J (DEC) <james.renovatio@alaska.gov>
Subject: Information Request for Donlin Gold Project's Construction Permit AQ0934CPT02 Application

Enrique,

As the Alaska Department of Environmental Conservation (Department) continues to review the application for the Donlin Gold Project's Construction Permit AQ0934CPT02, we have identified a couple of emission unit types in the BACT section that require additional information. Based upon our review, The Department is requesting additional information under AS 46.14.160(c) in order to prepare a preliminary permit decision.

The Department will continue to process Donlin Gold LLC's (Donlin Gold's) application while the requested information is being prepared and will subsequently notify Donlin Gold if unable to proceed due to inadequate information. The Department is requesting that Donlin Gold prepare a response to this request by Friday, April 1, 2022, or provide a request for additional time as needed.

Information Request Regarding the Boilers and Heaters EUs 15 – 20

1. Please provide the Department with updated NOx and CO BACT analyses for the boilers and heaters rated at 16 MMBtu/hr or greater (EUs 15 – 20). For these analyses please:

- Provide the analyses in Microsoft Excel format.
- Use the methodology from the most recent EPA Air Pollution Control Cost Manual, available on the following website: https://www.epa.gov/economic-and-cost-analysis-air-pollution-

regulations/cost-reports-and-guidance-air-pollution.

- Obtain new cost estimates instead of using costs from 1999 and adjusting for inflation, unless using spreadsheets provided by EPA (e.g. SCR Cost Calculation Spreadsheet in Section 4 of cost manual website).
- Use an appropriate equipment life for the Capital Recovery Factor (CRF) portion of the analyses and justify if a shorter equipment life is warranted.
- Use the current bank prime loan interest rate for the CRF portion of the analyses available here: https://www.federalreserve.gov/releases/h15/.
- For selective catalytic reduction (SCR) calculations for NOx, please use the maximum emissions scenario resulting from the firing of ULSD.
- For the oxidation catalyst analyses, please include the emission reductions to both CO and VOC emissions in one cost calculation.

2. Please provide an explanation as to why one set of dual-fuel heaters (EUs 19 and 20) are compatible with low NOx burners, while the other heaters and boilers are not. Additionally, please provide justification as to why Donlin is proposing the same NOx emissions rates for the boilers with low NOx burners as the boilers without low NOx burners.

3. Please provide justification as to why flue gas recirculation was not included as a possible NOx control method when the Department found multiple instances of flue gas recirculation used on natural gas fired boilers and heaters less than 100 MMBtu/hr.

Information Request Regarding the Black Start and Emergency Engine Generators EUs 29 – 34

1. Please provide the Department with updated NOx and CO BACT analyses for the limited use engines rated at 600 and 1,500 kWe (EUs 29 – 34). For these analyses please:

- Provide the analyses in Microsoft Excel format using new cost estimates.
- Use the methodology from the most recent EPA Air Pollution Control Cost Manual, available on the following website: https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-reports-and-guidance-air-pollution.
- Use an appropriate equipment life for the Capital Recovery Factor (CRF) portion of the analyses and justify if a shorter equipment life is warranted.
- Use the current bank prime loan interest rate for the CRF portion of the analyses available here: https://www.federalreserve.gov/releases/h15/.
- For the oxidation catalyst analyses, please include the emission reductions to both CO and VOC emissions in one cost calculation. Additionally, if one piece of control equipment is being used to satisfy the emissions reduction (e.g. EPA Tier 4 Final engine controls), please include the cost of each criteria pollutant reduced.

Note that the Department intends to include in the construction permit a 500 hour per year BACT limit for the emergency diesel engines as this value is used to calculate the cost effectiveness for emissions reductions.

Feel free to contact my be email or telephone if you have questions or concerns regarding this request or any associated matters regarding the new construction permit.

Regards,

Dave Jones

Env. Engineering Assistant II

ADEC – Air Quality – Juneau
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907.465.5122