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Subject: Questions Regarding Table A-1 of the TAR for Donlin Gold Project's Preliminary Construction Permit AQ934CPT02
Date: Monday, October 17, 2022 10:12:00 AM

Enric,

After reviewing Donlin's suggested corrections to the technical analysis report's Table A-1 (full PTE table), the Department has the following comments and questions. The comments are to explain the rationale behind certain decisions and the questions (underlined) are to obtain the final information we need to send the preliminary permit to the FLMs and EPA for pre-public notice review.

Note that the Department's preliminary PTE spreadsheet is too large to send via email and is therefore available to download at the following website for the next 7 days:

<https://drop.state.ak.us/drop/pickup.php?claimID=rh2xRjmRuubt3f5P&claimPasscode=J6mYVf2pvfgTmNri>

Regarding corrections suggested for the PTE Table A-1 (Full PTE Table) in the technical analysis report

Please provide the Department with an updated PTE spreadsheet in Excel format that corresponds to the suggested values presented in Donlin's September 29, 2022 submittal of Table A-1. In this spreadsheet, please identify which cells correspond to the total stationary emissions and total fugitive emissions for each criteria pollutant suggested in Donlin's proposed changes to Table A-1. This will assist the Department in verifying the accuracy of the suggested edits.

Regarding the PM-2.5 and PM-10 emission factors for the ULSD burning boilers, heaters, and burners (EUs 15-20, 22, and 26)

The Department erred in combining the filterable particulate emissions for distillate oil from AP-42 Table 1.3-1 (2 lb/1,000 gal) with the particle size specific values from Table 1.3-6 (0.25 lb/1,000 gal for PM-2.5 and 1.0 lb/1,000 gal for PM-10). Instead the Department should have used the same particle size values from Table 1.3-6 combined with the condensable particulate emissions for No. 2 fuel oil from Table 1.3-2 (1.3 lb/1,000 gal), as all condensable emissions are assumed to be less than 1.0 micron in diameter (as stated in Table Note a). Donlin included the emissions from Table 1.3-6 but left out the condensable particulate emissions which resulted in PM-2.5 for diesel combustion having lower emissions than natural gas combustion for the boilers and proposed these E.F.s and PTE in Table A-1. The Department has made the appropriate corrections to Table A-1 and the current version of our electronic PTE spreadsheet (attached). We note that this has no effect on the BACT limits as they were set at the total PM emissions limits for ULSD which Donlin proposed as 3.3 lb/1,000 gal and the Department concurs with.

Regarding the incinerator EUs 27 and 28

The Department intends to add a BACT section for VOC emissions from the incinerators based on the reported emissions from those EUs in Donlin's marked up version of Table A-1. The preliminary permit already has an analysis for catalytic oxidation for CO emissions from the incinerators so the

addition of a VOC section will go quickly. Donlin's proposed E.F.s for VOC emissions are lower than the AP-42 emission factors of either 3.0 or 15 lb/ton of total organic compounds for multiple or single chamber refuse combustion in Table 2.1-12 and 1.7 lb/ton of total nonmethane organic compounds for solid waste incineration in Table 2.2-1. Please provide the basis for these E.F.s and include these emissions in the updated MS Excel PTE spreadsheet.

Regarding the update of PTE in Table A-1 for the diesel engines with combined NOx + NMHC BACT emissions limits (EUs 29-24 and 25-37)

The Department has combined the NOx + VOC BACT limits to match the NSPS Subpart IIII emissions standards. However, we intend to leave the emissions as they are in this PTE table (95% to NOx and 5% to VOC) so as to not double count emissions of NOx and VOC for potential and assessable purposes. We are therefore going to update the footnotes for these EUs in Table A-1 to explain this rationale.

Regarding the requested change in the tpy rating of EU 120 (waste unloading and reloading)

The rating in the EU inventory table in the permit states a high end of 155,123,914 tons/yr. However, the PM tpy calculations in the Mining tab of the attached Department PTE spreadsheet feeds from cells BG23 and BG29, which add up to 153,695,020 tpy. Please confirm that the Department's calculation is correct or provide new values for these cells that equal the higher 155 million tpy value.

Regarding the requested change in E.F. for EU 121 (water truck)

The E.F. suggested by Donlin does not include the 90% control which was used by Donlin in the Mining tab, Cell DW23 for water/chemical application in order to calculate PTE. Therefore the Department intends to leave this E.F. as proposed.

Regarding access roads EUs 158 – 159 Emissions

The Department has re-calculated the emission factors for EUs 158 and 159 using the total emissions (including tailpipe emissions and not including tailpipe emissions) in the Access Rds tab in columns C – M. It is somewhat unclear if the tailpipe emissions from the vehicles on these access roads need to be included in PTE Table A-1 for EUs 158 – 159. The Summary tab of the electronic PTE spreadsheet lists tailpipe emissions from access roads, but they were not included in Table A-1 of the TAR. Is this discrepancy an oversight or an attempt to not double count tailpipe emissions that are accounted for elsewhere, possibly in EUs 121-123?

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Regarding the Jungjuk Port to Mine Site

Emissions from the Jungjuk port to mine site are accounted for in the Access Rds tab of the electronic spreadsheet which feeds into the Summary tab, but there is no specific EU for this road listed in the spreadsheet. Is this road the same as the haul road EU 160? If so, the Department plans to modify Table A-1 to combine these emissions in the Access Rds tab resulting from 651,046 total vehicle miles traveled (VMT) with the emissions for EU 160 in the Mining tab resulting from 4,847,140 VMT. This would change the combined rating of EU 160 to 5,498,186 VMT.

Thanks for completing a thorough initial review of the PTE spreadsheet so we may send out as

accurate as possible of a preliminary permit to the FLMs/EPA and subsequent public notice. If you have any questions or believe the intricacies of hammering out the details of Table A-1 would be better handled with a meeting between Kevin Lewis and myself feel free to reach out.

Regards,

Dave Jones

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