

Undertaking Number: DAR-MVEIRB-UT2-02

Source: Undertaking from Day 1 (Sept 14) of the Public Hearings

Subject: Air Quality – GHG Emissions

DAR Section(s): 7

Request:

DDEC is to provide a breakdown of sources of GHG emissions, in terms of mine operations.

Response:

On Day 1 of the Jay Project Public Hearing, the Mackenzie Valley Environmental Impact Review Board (MVEIRB) requested Dominion Diamond provide a breakdown of the Jay Project's Greenhouse Gas (GHG) emissions by source category. This request was registered as Undertaking No. 2 from the hearing.

Dominion Diamond previously provided the requested in our response to DAR-MVEIRB-IR-73. The same information is provided in Table 2-1 below. The table provides a breakdown of the estimated maximum annual GHG emissions for the life of the project (2016 to 2033) based on the estimated fuel usage for each equipment type (e.g., generators, boilers/heaters, mine fleet, transportation for the winter road, aircraft, and construction equipment).

Table 2-1 Estimated Annual Greenhouse Gas Emissions for the Jay Project

Source	Maximum Annual GHG Emissions (kt CO ₂ E/yr)																		
	Base Case	Construction Phase			Operation Phase											Closure Phase			
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Generators	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	26	26	26	20
Boilers/heaters	29	29	29	29	9	9	9	9	9	9	9	9	9	9	9	9	9	9	7
Mine Fleet	79	79	79	79	80	229	231	231	231	204	155	127	111	82	48	48	48	48	36
Transportation- Winter Road	2	5	5	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Transportation- Aircraft	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Construction Equipment	—	47	92	21	16	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	271	320	366	294	269	402	403	403	403	376	327	299	283	255	220	89	89	89	68

GHG = Green House Gas; kt CO₂E/yr = kilotonnes carbon dioxide equivalent per year; — = no emission.