CONCEPTUAL AIR QUALITY AND EMISSIONS MONITORING AND MANAGEMENT PROGRAM DESIGN PLAN FOR THE JAY PROJECT

DOMINION DIAMOND

Ekati Mine AQEMMP

- The existing AQMP for the Ekati Mine monitors the air quality as it relates to the existing facilities. It includes monitoring for:

  - Nitrogen oxides (NO_X) and sulphur dioxide (SO_2)

  - Particulate matter including suspended and deposited fractions

  - Snow and lichen sampling

- The AQMP will be expanded spatially to include monitoring the effects of the Jay Project

Conceptual AQEMMP for Jay Project

- A conceptual AQEMMP was prepared for the Jay Project

  - It documents a process for including the air quality effects of the Jay Project

    - Additional monitoring locations near the Jay Pit and Jay Road

    - Adds regular calculation of emissions to compare with DAR estimates

    - Now has threshold triggers that when reached, require a particular action (i.e., Adaptive Management Framework)

- The AQEMMP will be finalized during the regulatory permitting process, incorporating comments and feedback from regulators and communities

AQEMMP Thresholds

- There are three threshold levels proposed, each corresponding to a measured change in air quality and each requiring a different response

  - Level 1 – change is within acceptable limits, continue monitoring

  - Level 2 – air quality is inconsistent with expectations and an internal review and development and implementation of action plan is required

  - Level 3 – air quality is becoming a concern and an external review and development and implementation of action plan is required

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Data Analysis and Interpretation

- Key questions addressing:

    - Comparison to DAR predictions

    - Comparison to AQEMMP thresholds

    - Comparison to NWT Air Quality Standards

    - Assessment of spatial and temporal trends

Next Steps

- The AQEMMP will be implemented at the commencement of construction of the Jay Project

- The AQEMMP will be finalized during the regulatory permitting process, and will incorporate input from regulators and communities as part of the engagement process