



Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor, 4922 – 48<sup>th</sup> St.,  
Yellowknife, NT  
X1A 2P6

Re: MV2020L2-0002

March 17, 2022

Regarding your letter of February 25, 2022

You requested a revision of our Structure Design and Construction Plan – Waste Rock, Ore, Roads, Rev. 1.5 dated by March 31, 2022.

Specifically, you require all edits detailed in the public review for confirmation of conformity by board staff.

We reviewed the spread sheet from the last review as well as board staff comments in an email to us. In that board staff requested:

1. While concordance tables like this are also helpful, they are most often provided as part of the covering letters that are supposed to accompany all submissions to the Board. Conformity Tables are required. The table included does not respond to the recommendation or directive. The recommendation and directive require NDM to refer to Schedule 3 requirements laid out in Licence MV2020L2-0002 for Structure Description and Construction Plans and provide the cross-reference to the Plan location showing where each line item has been addressed.

The proponent has reformatted the document removing the concordance table which is addressed in this letter, and updating the Conformity table.

The proponent has reviewed their responses, and supplemented such that each recommendation and directive with reference to Schedule 3 of MV2020L- 0002. That schedule is appended to this letter with annotations confirming each component confirming conformity.

2. The Executive Summary introduces acronyms such as NAG, PAG, AG , SNP which are not defined. SNP stands for Surveillance Network Program, not Protocol. PAG and AG first used in Facility Description in the body of the plan and not defined. EQC and TSS first used without definition NPR first used without definition...etc.

These have all been accommodated and updated.

3. The statement still seems to suggest that the waste laydown area (which is shown on the map adjacent to historic tailings on Figure 1 which is not referred to in the text) already exists. The text refers to the 'Site Plan Map.' There is no figure with that title. The Site Map provided as an Appendix does not show the historic tailings location.

A reference to the figures has been added to the text when describing the "proposed" waste laydown areas. The Site Plan Map has been relabeled Site Map and updated to confirm content.

4. Labels added instead of legends. Ok.

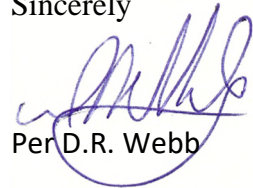
Labels have been added and legends updated.

5. The 'statement of fact' is not substantiated and results from monitoring of historic tailings have demonstrated TSS levels above License limits. Other edits acknowledged.

Reference to the data provided in the Groundwater and Water Management Plan has been made, and to ease this cross reference, and summary table showing the historical data has been added.

We trust that this provides acceptable responses to the directives.

Sincerely



Per D.R. Webb

//attach.

## Schedule 3 from MV2020L – 0002

### New Discovery Mines Ltd.

1. a) i) A description of the facilities to be constructed, including the purpose of the facilities;

This includes three items: Waste piles (NAG, PAG, and AG) and Roads which are addressed in Waste Rock Management and Geochemical Characterization Plan, Sumps, which is addressed in the Groundwater and Water Management Plan, and the Dry Stack Tailings which is discussed in the Tailings Management Plan.

- ii) The proposed location(s) of the facilities, with GPS coordinates and a map to scale;

These are shown on the Site Map in the Appendixes of the Structure Design and Construction Plan, as well as the three other Management Plans mentioned above.

- iii) Relevant background information for the area beneath the footprint of the facilities, including the results of any investigations;

This is discussed in each of the three Management Plans mentioned above.

- iv) Construction specifications and performance parameters;

This is discussed in each of the three Management Plans mentioned above.

- v) A description of any operations and maintenance requirements associated with the facilities;

This is discussed in each of the three Management Plans mentioned above.

- vi) An explanation of why the facilities do not need to be designed by a Professional Engineer.

This is discussed in each of the three Management Plans mentioned above.

1. b) i) A Construction schedule, including sequencing information;

This is discussed in each of the three Management Plans mentioned above.

- ii) A description of the materials required for Construction, including, but not limited to:

- a) Sources
    - b) Quantities
    - c) Physical characteristics
    - d) Geochemical characteristics

This is discussed in each of the three Management Plans mentioned above.

- iii) A description of any potential effects on the Receiving Environment associated with Construction of the facilities;

This is discussed in each of the three Management Plans mentioned above.

- iv) A description of any mitigation measures that will be undertaken to minimize the potential impacts identified as per (b)(iii).

This is discussed in each of the three Management Plans mentioned above.

1. c) Information regarding monitoring during Construction, including
  - i) A description of any monitoring that will be conducted to determine the potential impacts to the Receiving Environment and the effectiveness of the mitigation measures described as per (b)(iv), including, but not limited to:
    - a) Locations
    - b) Parameters
    - c) Frequency, and
    - d) Rational
  - ii) Linkages to other monitoring programs required in this license.

This is discussed in each of the three Management Plans mentioned above.

1. d) A description of how monitoring will be evaluated and what actions may be taken in response to monitoring results.

This is discussed in each of the three Management Plans mentioned above.

2. The Design and Construction Plans referred to in Part E, Condition 8 shall include, but not be limited to, the following:
  - a) Information regarding the design of the facilities:
    - i) A description of the facilities to be constructed;

This is discussed in each of the three Management Plans mentioned above.

- ii) The proposed location(s) of the facilities, with GPS coordinates and a map to scale;
    - iii) Relevant background information for the area beneath the footprint of the facilities, as deemed adequate by the Professional Engineer responsible for the design, including:
      - a) the results and data from geotechnical and geochemical investigations; hydrogeological investigations; and programs to characterize soil, rock, Groundwater, ground ice, and ground temperature conditions to the depth expected to be affected by the proposed facilities; and

This is discussed in each of the three Management Plans mentioned above.

- b) Other relevant information

This is discussed in each of the three Management Plans mentioned above.

- iv) A design alternatives analysis;

This is discussed in each of the three Management Plans mentioned above.

- v) Design specifications and performance parameters and quantifiable performance objectives as established by the Engineer of Record;

This is discussed in each of the three Management Plans mentioned above. An Engineer of Record is not needed for the minor Structure Design and Construction Plans except for the Tailings Management Plan, which has been prepared by Golder and Associates and submitted.

- vi) Stability analyses;

This is discussed in each of the three Management Plans mentioned above.

- vii) A description of how the design has been optimized for Closure and Reclamation;

This is discussed in each of the three Management Plans mentioned above as reflected in the Closure and Reclamation Plan.

- viii) A description of how climate change projections and considerations have been incorporated into the design;

The planet has never had a stable climate and has been subject to cooling and warming episodes for over 2,000,000,000 years. We have seen glacial periods up to 50 million years, 110 to 170 million years, 270 to 325 million years, and 425 to 455 million years ago interspersed with very warm periods. We have historically never been so cold since 450 million years ago. The interglacial periods have seen polar ocean temperatures over 12°C warmer 50 million years ago, and much warmer 75, 260, 360, and 490 million years ago. And CO<sub>2</sub> levels have also been very much higher, generally correlating with the warmer periods. Current best estimates indicate a change in temperature of up to 3° C per century. The Proponents LUP is a 5 year renewable license and its WL will need renewal before 2027. So, the change in temperature of 0.15° C (5x3/100) is fully accommodated.

- ix) A description of any instrumentation that will be installed as part of the facilities, including locations and rationale

This is discussed in each of the three Management Plans mentioned above.

- x) A description of any operations and maintenance requirements associated with the design of the facilities.

This is discussed in each of the three Management Plans mentioned above.

2 b) Information regarding the Construction of the facilities:

- i) A Construction schedule, including sequencing information;

This is discussed in each of the three Management Plans mentioned above.

- ii) Description of the materials required for Construction, including, but not limited to:
  - a. sources;
  - b. quantities;
  - c. physical characteristics; and
  - d. geochemical characteristics

This is discussed in each of the three Management Plans mentioned above.

- iii) A description of any potential effects on the Receiving Environment associated with Construction of the facilities;

This is discussed in each of the three Management Plans mentioned above.

- iv) A description of any mitigation measures that will be undertaken to minimize the potential impacts identified as per (b)(iii).

This is discussed in each of the three Management Plans mentioned above.

2. c) Information regarding monitoring during Construction, including

- i) A description of any monitoring that will be conducted to determine the potential impacts to the Receiving Environment and the effectiveness of the mitigation measures described as per (b)(iv), including, but not limited to:

- e) Locations
- f) Parameters
- g) Frequency, and
- h) Rational

- ii) Linkages to other monitoring programs required in this license.

This is discussed in each of the three Management Plans mentioned above.

2 d) Information regarding responses to monitoring results during Construction, including:

- i. Definitions, with rationale, for Action Levels applicable to the performance of the mitigation measures; and
- ii. For each Action Level, a description of how exceedances of the Action Level will be assessed and, generally, which types of actions may be taken by the Licensee if the Action Level is exceeded.

This is discussed in each of the three Management Plans mentioned above.

- 2 e) A Quality Control Plan stamped by a Professional Engineer, a component of which includes a plan for a Professional Engineer to supervise and field check Construction activities.

This is provided for the engineered structures (Dry Stack Tailings Facility).