



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Natural Resources

DIVISION OF MINING, LAND & WATER

Mining Section

550 West 7th Avenue, Suite 900B

Anchorage, Alaska 99501-3577

Minerals Property Management Main: 907.269.8642

Fax: 907.269.8649

Coal Regulatory/Abandoned Mine Lands Main: 907.269.8631

Fax: 907.269.8930

TDD: 907.269.8411

June 25, 2018

John Egan
Acting General Manager, Red Dog Mine
Teck Alaska Incorporated
3105 Lakeshore Drive
Building A, Suite 101
Anchorage, AK 99517

Subject: Request for Amendment to Reclamation Plan Approval F20169958 to Expand the Tailings Storage Facility and the Main Waste Dump at Red Dog Mine

Dear Mr. Egan:

On May 29, 2018, the Division of Mining, Land, and Water (DMLW) received correspondence from Teck Alaska Inc., Red Dog Mine (Teck) dated May 24, 2018, requesting approval to amend the ***Red Dog Mine Reclamation Plan Approval (RPA F20169958)*** to expand the Tailings Storage Facility (TSF) and Main Waste Dump (WMD).

The DMLW understands this request includes the potential to clear approximately 47 acres for the TSF and approximately 35 acres for the WMD. DMLW understands that Teck has applied for authorization from the U.S. Army Corps of Engineers (USACE) to disturb 12.5 acres of wetlands.

The DMLW Mining section has reviewed the proposed amendment and has received no objection from other notified agencies including the Alaska Department of Environmental Conservation (ADEC), Alaska Department of Fish & Game (ADF&G), and the Alaska Dam Safety Program.

The requested amendment to the POOA as proposed and illustrated in your May 24, 2018 submission is hereby approved as ***Red Dog Mine Reclamation Plan Amendment Approval F20169958.01 (RPA)***. Nothing in this decision changes the conditions of the original Reclamation Plan Approval dated September 28, 2016. These changes should be accounted for in the next update to the Plan and the reclamation cost estimate.

Please be advised that this authorization does not eliminate the potential need for authorization of your activity from other Federal, State, or local divisions or agencies.

A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040© and (d) and may be mailed or delivered to the Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska, 99501; faxed to 1-907-269-8918, or sent by electronic mail to dnr.appeals@alaska.gov. If no appeal is filed by the appeal deadline, this decision becomes a final administrative order and decision of the department on the 31st calendar day after issuance. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

If you have any questions regarding this approval, please contact Brent Martellaro at 907-451-2788

Sincerely,



Steve Buckley
Mining Section Chief

Enclosure: Copy of Teck May 24, 2018 amendment request

Cc via email: Chris Eckert, Teck
Frank Bendrick, Teck
Lance Miller, NANA
Brent Martellaro, ADNR
David Schade, ADNR
Tim Pilon, ADEC
Carolyn Curley, ADNR

Robert Napier, Teck
Wayne Hall, Teck
Kyle Moselle, ADNR
Kindra Geis, FGMI
Charles Cobb, ADNR
Audra Brase, ADF&G

May 24th, 2018

Brent Martellaro
Division Mining, Land and Water
Department of Natural Resources
3700 Airport Way
Fairbanks, AK 99709-4699

RE: Red Dog Mine Amendment request for TSF and MWD Dump Expansion

Teck Alaska Inc. Red Dog Mine is requesting an amendment to the Reclamation and Closure Plan (RCP), Approval F20169958 for the expansion of the Tailings Storage Facility (TSF) to the 1006' elevation and placement of a 35 acre waste rock dump along the southern edge of the existing Main Waste Dump (MWD).

The TSF expansion is necessary to accommodate the projected elevation increase of the TSF from 986' to the 1,006' elevation. Upon ADNR Dam Safety approvals the expansion will incur multiple construction phases beginning in 2018 and ending 2024-25. Other non-dam related work such as the relocating the main access road and utilities will be necessary to accommodate the increased TSF footprint.

The TSF expansion will involve clearing approximately 47 acres of undisturbed ground within the 1006' footprint. Of the 47 acres, 12.5 acres are considered wetlands. The Corps of Engineers (COE) are currently reviewing the project (POA-1984-12-M51) and expected to issue a permit sometime in June since the public comment period was extended for the Kivalina community.

Figure 1 illustrates the 1006' TSF proposed outline, new disturbances, main road corridor, dam raises and impacted wetland areas. Topsoil removed from the 47 acres of new disturbance will be recovered and stockpiled onsite. Minimal disturbance around the TSF is expected during 2018 year with most of the clearing of topsoil occurring during 2019 or 2020.

A Certificate of Approval (COA) NID ID# AK00303 was recently issued by ADNR Dam Safety for the back dam raise to a 996' elevation. The main dam design to the 996' elevation is currently being reviewed by ADNR Dam Safety. Conceptual designs for both dam raises to the 1006' elevation have been submitted to ADNR Dam Safety for review.

No changes are expected for the main dam seepage collection system until 2019. Designs to modify the seepage system are currently being engineered and a proposed design will be submitted later this year. Upon approval of the new seepage design an amendment to the RCP will be submitted in 2019. If necessary, a financial cost estimate will be included with the seepage system amendment.

A 35 acre extension of the Main Waste Dump is proposed directly south of the existing MWD. The proposed location is within a drainage basin which drains to the TSF. The dump extension area is situated on 35 acres of undisturbed ground, of this 0.5 acres is wetlands (included in COE application POA-1984-12-M51). A dump design will be engineered once geotechnical work has been completed and incorporate a stormwater swale on the southern side of the dump to ensure runoff from the dump is directed to the TSF. Figure 2 depicts the overall dump footprint, topography and the drainage swale.

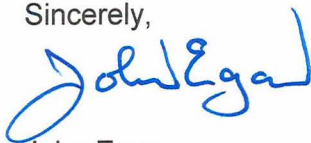
The Standard Reclamation Cost Estimator (SRCE, V2) was used to determine a reclamation cost estimate. An electronic file labeled *SMWD SRCE V2.xlsm* is attached for your review.

A reclamation cost estimate of \$550,170 is proposed for the MWD 35 acre extension. The expansion of the TSF is not expected significantly effect the current closure cost and will be updated during the 2021 renewal cycle.

The estimate is based on replacing topsoil removed from the 35 acre disturbance, reseeding and monitoring until 2021, at that time the cost estimate will be rolled into the 5-year renewal cost estimate for the entire facility. The estimate does not include grading of any waste rock since waste rock was not included in the estimate. Prior to placing any waste rock a revised cost estimate will be submitted based on the amount of waste rock which may be placed in this area through 2021.

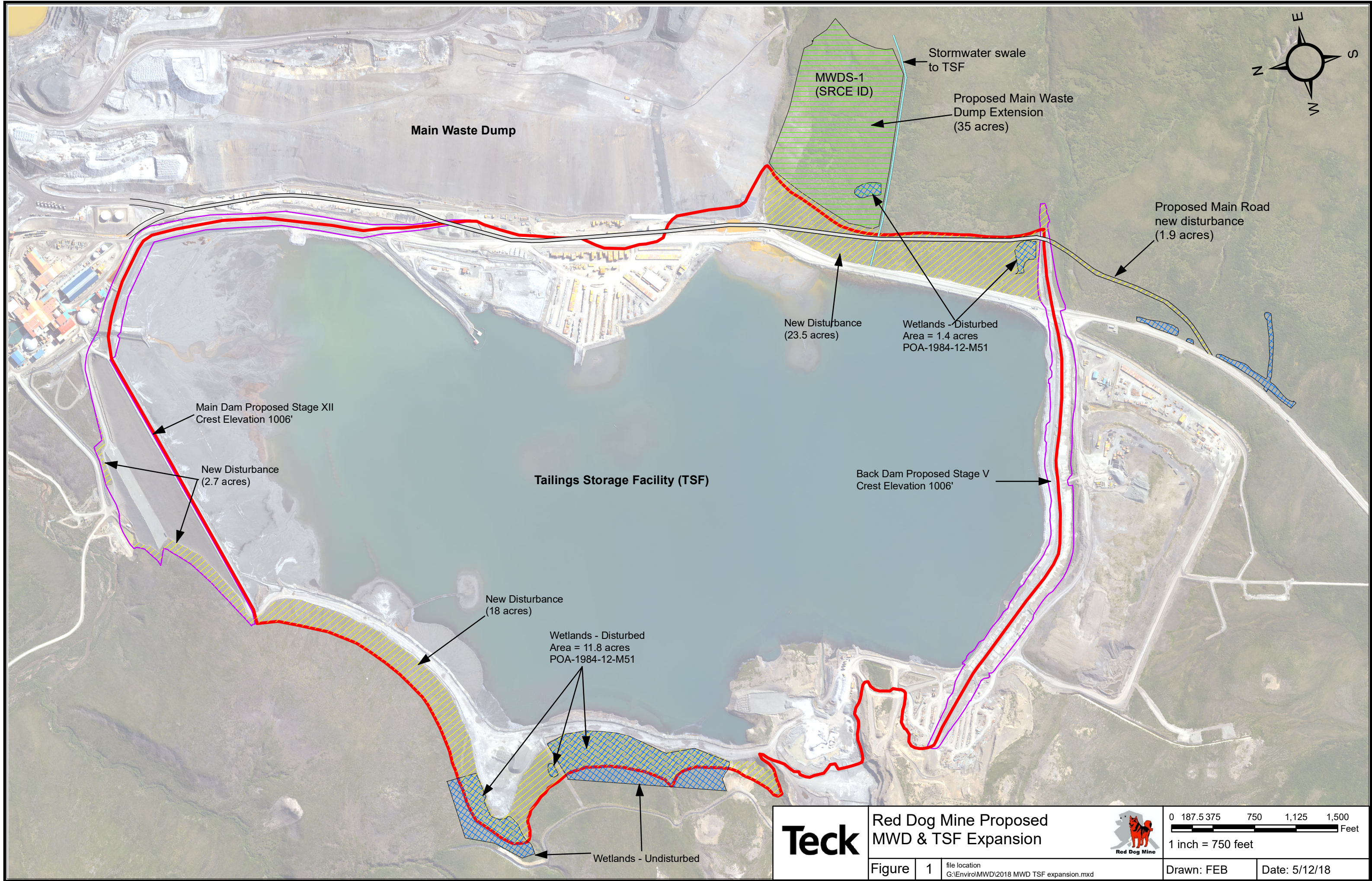
If you have any questions regarding this waiver application, please feel free to contact Frank Bendrick at (907) 754-5138, or via email at frank.bendrick@teck.com.

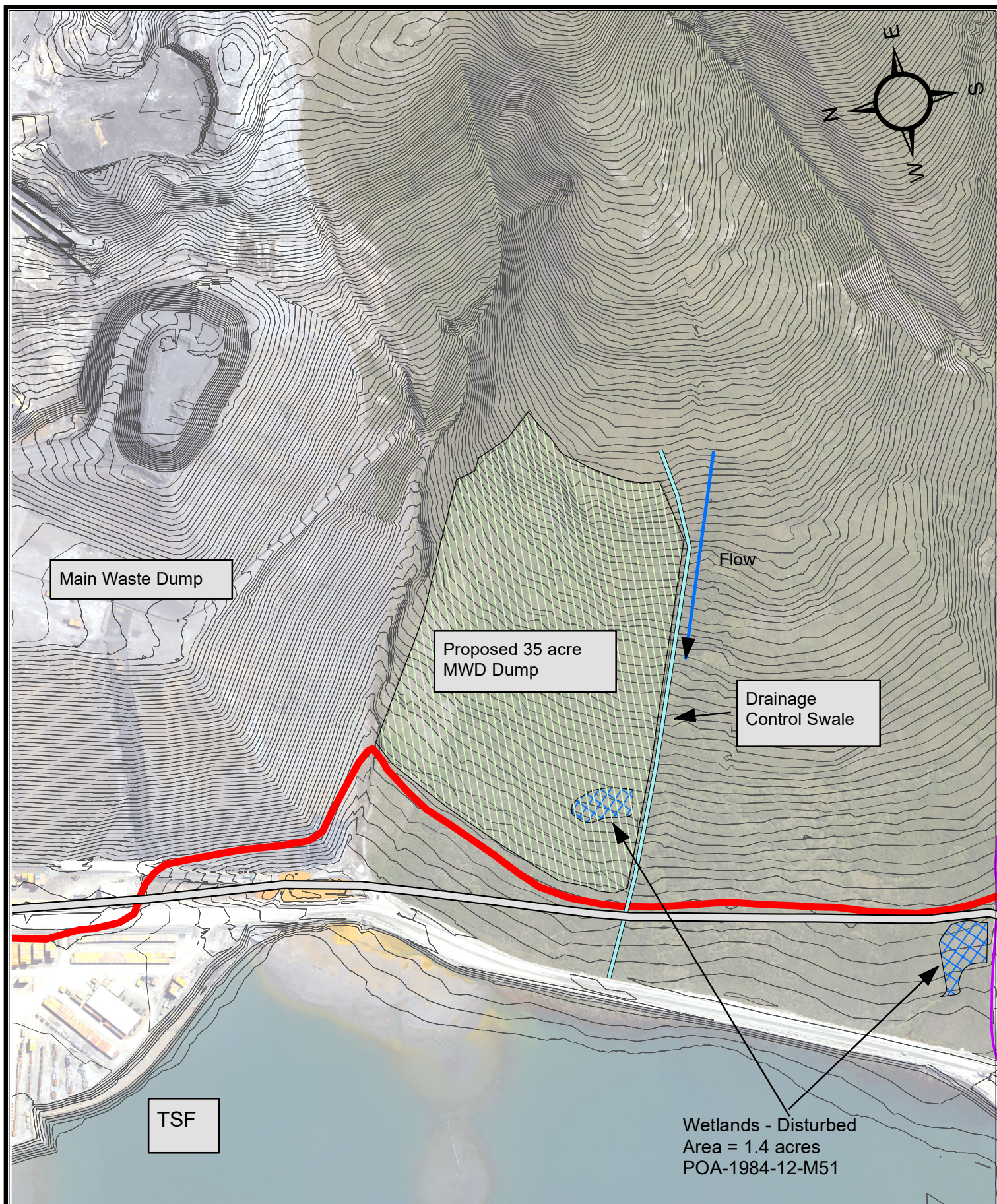
Sincerely,



John Egan
Acting General Manager – Red Dog Mine

cc: Tim Pilon, ADEC, Fairbanks;
Lance Miller, NANA
Wayne Hall, Red Dog





Teck

Red Dog Mine Proposed MWD Extension



0 125 250 500 750 1,000
Feet
1 inch = 500 feet

Figure

2

file location
G:\Enviro\MWD\2018 MWD extension.mxd

Drawn: FEB

Date: 5/19/18