Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

Environment Directorate
Northern Affairs Program, DIAND
345-300 Main St.
Whitehorse, Yukon Territory
Y1A 2B5

Your file Votre référence

Our file Notre référence

5510-4-8

November 16, 1995

To: RERC Members - BYG/Mt. Nansen

Re: EARP Screening Report - BYG/Mt. Nansen Project

Please find attached the final Screening Report, dated November 15, 1995 resulting from the environmental assessment carried out under the federal Environmental Assessment and Review Process Guidelines Order (EARPGO) of BYG, Natural Resources Inc. Mt. Nansen Gold Mine Project. Also, attached for your information are the cover letters to BYG and the Public distribution list. Members of the public have been asked to provide comments on the Screening Report by December 15, 1995.

I wish to thank you for your assistance during the review of this project and your cooperation in providing comments back to us on the draft Screening Report in the very tight timeframe we gave you. The input of all RERC and especially those who participated on the RERC Technical Subgroup has, I believe, resulted in a better project design. Thank you again for your ongoing support in the environmental review of these major projects.

Sincerely,

Marg Crombie

Marg Crombie
Chair,
Regional Environmental Review Committee
Environment Directorate, Northern Affairs Program
Department of Indian Affairs & Northern Development

attach: 1995 Screening Report
1995 letter to Jim Smith
1995 letter to public distribution list

Canada

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Northern Affairs Program, DIAND
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Whitehorse, Yukon Territory
Y1A 2B5

Your file Votre référence

Our file Notre référence

5510-4-8

November 16, 1995

To: Public Distribution List for BYG/Mt. Nansen Project

Re: EARP Screening Report - Mt. Nansen Resources Ltd. Gold Mine Project

Please find attached the Screening Report, dated November 15, 1995 resulting from the environmental assessment carried out under the federal Environmental Assessment and Review Process Guidelines Order (EARPGO) of BYG, Natural Resources Inc. Gold Mine Project. If you have any comments in relation to the Screening Report, I would ask that you submit them in writing to Director of Environment Directorate, Northern Affairs Program, DIAND, Room 330, 3rd floor Elijah Smith Building, 300 Main Street, Whitehorse, Yukon, Y1A 2B5. Comments should be submitted no later than December 15, 1995 and will be considered in development of DIAND's Decision Report on this project.

Copies of this Screening Report and further information regarding the environmental assessment process are available at:

- Communication Services, Northern Affairs Program, Room 410 Elijah Smith Building, 300 Main Street, Whitehorse; and
- the Carmacks District Field Operations Office, Northern Affairs Program

The Report is available for viewing at:

- DIAND Library, 3rd Floor, Elijah Smith Building, Whitehorse;
- Whitehorse Public Library, 2nd Avenue, Whitehorse;
- Carmacks Library, Carmacks Yukon
- The Council for Yukon First Nations, ll Nisutlin Drive, Whitehorse; and
- Little Salmon Carmacks First Nation, Carmacks
- Selkirk First Nation, Pelly Crossing
- Na-Cho Ny 'a'k Dun First Nation, Mayo

Canada

Pursuant to Section 12(c) of EARPGO, the Regional Environmental Review Committee (RERC) has recommended that:

"the potentially adverse environmental effects that may be caused by the proposal are insignificant or mitigable with known technology, in which case the proposal may proceed or proceed with the mitigation as the case may be".

Thank you for your interest in this project. If you have any questions in relation to this screening, you may either contact myself at (667-3250) or Kevin McDonnell (Project Manager, Environment Directorate, NAP) at 667-3864.

Yours truly,

Marg Crombie

Marg Crombie
Chair, Regional Environmental Review Committee
Environment Directorate, Northern Affairs Program,
Department of Indian Affairs & Northern Development

Attachment: 1995 Screening Report

cc.
- J. Smith V-President Operations, BYG
- RERC Members - BYG Project
- M. Ivanski, Regional Director General, DIAND, Yukon Region
- L. Craig, Associate Regional Director General, DIAND Yukon Region
- K. McDonnell, Project Manager, Environment Directorate, NAP, DIAND
- J. Wolchuck, RMO, Carmacks
- M. Vance, Little Salmon/Carmacks First Nation
- D. Isaac, Selkirk First Nation
- B. Germaine, Na-Cho Ny'a'k Dun, Mayo
- Yukon Conservation Society
- Yukon Chamber of Mines
- Communication Services, Northern Affairs Program, DIAND
- DIAND Library, 3rd Floor, Elijah Smith Building
- Whitehorse Public Library,
- Carmacks Library
- The Council for Yukon First Nations, Whitehorse
- CBC Yukon, Whitehorse
- CHON-FM Radio, Whitehorse
- CKRW Radio, Whitehorse
- Whitehorse Star, Whitehorse
- Yukon News, Whitehorse
- Yukon Territory Water Board

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Northern Affairs Program, DIAND
345-300 Main St.
Whitehorse, Yukon
YlA 2B5

Your file Votre référence

Our file Notre référence

5510-4-8

November 16, 1995

Jim Smith
Vice President, Operations
BYG, Natural Resources Inc.
208-3190 St. John's Street
Port Moody, B.C.
V3H 2C7
By Fax: 604-469-1534 (original to follow by mail)

RE: EARP Screening Report for BYG Mount Nansen Gold Project

The Regional Environmental Review Committee has concluded its review of the information provided by BYG, Natural Resources Inc. regarding the Mt. Nansen gold mine proposal. The RERC has recommended that a Section 12 (c) decision under the Environmental Assessment and Review Process Guidelines Order be made on the Mt. Nansen Project, specifically:

Section 12(c) "the potentially adverse environmental effects that may be caused by the proposal are insignificant or mitigable with known technology, in which case the proposal may proceed or proceed with the mitigation, as the case may be".

Members of the public and other interested parties are asked to provide comments on the Screening Report by December 15, 1995.

Following public input on the Screening Report, DIAND will prepare the Decision Report. Timing for issuance of the DIAND Decision Report will be contingent upon the nature of the issues raised during the public review.

Canada

If you have any comments or questions in relation to the Screening Report which you wish DIAND to consider before issuing the Decision Report, I would ask that you provide them in writing. If you have any other questions about any of the above, please do not hesitate to either contact myself (667-3250) or Kevin McDonnell (667-3864).

Sincerely,

Marg Crombie

Marg Crombie
Chair, Regional Environmental Review Committee
Environment Directorate
Northern Affairs Program, DIAND

Attachment: 1995 Screening Report

cc. RERC Members - BYG, Mt. Nansen Project
M. Ivanski, Regional Director General, DIAND, Yukon Region
L. Craig, Associate Regional Director General, DIAND, Yukon Region
K. McDonnell, Project Manager, Mt. Nansen Project, Environment Directorate, Northern Affairs Program, DIAND

5510-4-8

SCREENING REPORT:

B.Y.G. Natural Resources Inc.'s

Mount Nansen Gold Mine Project

Prepared Pursuant to the

Environmental Assessment and Review Process Guidelines Order, 1984

Prepared by

Regional Environmental Review Committee and

Department of Indian Affairs and Northern Development

Whitehorse, Yukon Territory

November 15,1995

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B.Y.G. Natural Resources Inc.'s
Mount Nansen Gold Mine Project

1.0 PROJECT IDENTIFICATION

Proponent — B.Y.G. Natural Resources Inc. (B.Y.G.)

Project — Mount Nansen, Open Pit Hard Rock Gold Mine Project (Mount Nansen Project)

File # — DIAND RERC file # 5510-4-8

Entry Point — Department of Indian Affairs and Northern Development, Yukon Region, March 20, 1988

2.0 INTRODUCTION

2.1 Environmental Assessment Process

The *Environmental Assessment and Review Process Guidelines Order (EARPGO)* ensures that as early in the planning process as possible and before any irrevocable decisions are made, the environmental implications of all proposals for which the Federal Government has decision making authority are fully considered. The Federal Government includes in its considerations:

- the potentially significant adverse environmental effects of the proposal; and
- the social effects directly related to those environmental effects including any effects that are external to Canadian territory.

Before a project can be approved, all potentially significant adverse effects must be mitigated or compensated for.

DIAND has developed processes to meet the requirements of EARPGO as part of the Department's administration of resource management statutes. Environmental screening as part of the routine application process is referred to as Level I screening. In cases where there is the potential for significant adverse environmental effects, more detailed assessment takes place, and this is referred to

as a Level II review.

DIAND carries out Level II screening with the assistance of the Regional Environmental Review Committee, or RERC. RERC is chaired by the DIAND Director of Environment and is comprised of representatives of federal and territorial government departments, the Council for Yukon First Nations and Yukon First Nations directly affected by project proposals (Appendix 1).

The assessment process is initiated by the submission of a Project Overview. RERC's evaluation of the Project Overview often results in a request for the preparation of more detailed information in the form of an Initial Environmental Evaluation (IEE). An IEE is a documented evaluation of the proposed Project, providing detailed information regarding the Project's potential environmental and related socio-economic impacts. RERC members will evaluate the adequacy of the information and the proposed mitigation measures. Based upon the information provided, RERC members will make recommendations to DIAND as to whether the Project may proceed or not. RERC may also make recommendations on mitigation.

A Screening Report based on the IEE is prepared by DIAND under the *EARPGO*, and contains recommendations for review by DIAND senior management. The Screening Report may recommend:

- the environmental and related socio-economic impacts of the proposal are insignificant or mitigable with known technology and the project may proceed to the regulatory level (and may include recommendations on mitigation measures);

- the impacts are unknown and call for the proposal to be reassessed and re-screened, or for the proposal to be referred to an EARP Panel;

- the proposal's impacts are significant and should be referred for review by a full EARP Panel; or

- the impacts of the proposal are unacceptable and the proposal should be rejected.

For more information on the Level I and II EARP processes please refer to the DIAND publications:

"The Environmental Assessment and Review Process (EARP) Yukon Region"

"The Environmental Assessment and Review Process Level I Screening: Yukon Region"; and

"The Environmental Assessment and Review Process Level II Screening: Yukon Region".

2.2 Trigger and Scope -- Mount Nansen Project.

The Mount Nansen Project is subject to *EARPGO* because the project takes place on federal lands and it has an environmental effect on an area of federal responsibility. The project requires a federal Water Licence issued under the authority of the ***Yukon Waters Act*** and Land Use and Quarry Permits under the ***Territorial Lands Act.*** The Minister of DIAND must fulfill his obligations pursuant to *EARPGO* prior to making an affirmative regulatory decision.

A Level II screening was initiated for this project as it was determined by DIAND that the proposal had the potential to create significant environmental impacts and therefore required more detailed review than can be achieved under Level I screening.

The scope of the environmental assessment carried out for the Mount Nansen Project is limited to the mining and milling of the Brown-McDade deposit and installation of a culvert at Victoria Creek and associated land use permit and quarry permit.

3.0 CONSULTATION

3.1 Public Consultation

In addition to the RERC members, key stakeholders such as the closest community (Carmacks), the Chamber of Mines and the Yukon Conservation Society were invited to participate during presentations of the Project and IEE to the RERC. In January, 1995 DIAND provided intervenor funding to YCS for their participation in the environmental assessment process for this Project.

A wider public notice by way of advertising and mail-outs is provided when an IEE is received and when a Screening Report is available for public review. A public distribution list was derived for the Mount Nansen Project which included interested members of the public, Yukon Conservation Society, Yukon Chamber of Commerce, Yukon Chamber of Mines, Village of Carmacks and the Whitehorse and Yukon College libraries.

On December 19, 1994 a letter was sent to the Mount Nansen Project public distribution list. This letter informed interested members of the public that B.Y.G.

had submitted their Initial Environmental Evaluation (IEE) and that it was available for public review. The letter also provided information regarding the environmental assessment process and invited members of the public to submit any comments or concerns about the project. The IEE was made available at the Whitehorse and Village of Carmacks Libraries, Selkirk and Little Salmon / Carmacks First Nation Offices, the DIAND office in Carmacks and DIAND library in Whitehorse.

DIAND encouraged B.Y.G. to carry out, and document, a public consultation program. B.Y.G. documented the consultation they carried out in Section 9 of their IEE. This included meetings with Little Salmon / Carmacks First Nation, and the local Village of Carmacks government. On February 21, 1995 B.Y.G. hosted a public meeting in Carmacks which DIAND attended.

DIAND may also hold a public meeting if interested members of the public so desire. At such a meeting, there would be an opportunity for members of the public to ask questions about the project and express any concerns in relation to the EARP review of the project and for DIAND to summarize its findings and recommendations. Public concerns are then considered prior to DIAND making it's final determination on the project. As no significant public concerns were raised at the public meeting held by B.Y.G., nor were any other public concerns identified to DIAND during the assessment, a DIAND sponsored public meeting was not held.

3.2 Consultation with First Nations

The B.Y.G. Project proposal falls within the traditional territory of the Little Salmon/Carmacks First Nation. The Little Salmon/Carmacks First Nation, Council for Yukon First Nations, Selkirk First Nation, and Northern Tutchone Council are represented on the RERC and were provided all RERC correspondence, invited to attend RERC meetings, and were given the opportunity to identify and submit their concerns. In addition, DIAND provided contribution funds to assist Selkirk First Nation in their review. DIAND staff had meetings and telephone conversations with First Nation representatives to solicit and clarify concerns. The concerns raised by the First Nations have been incorporated into this Screening Report.

4.0 CHRONOLOGY

In 1988 and 1989, B.Y.G. approached DIAND and RERC with a Exploration and Development Overview for the Mt. Nansen Property. However during the next few years, B.Y.G. put the project on hold pending better metal prices and financing.

In June 1994, B.Y.G. submitted their Mount Nansen Project Overview to DIAND.

In August, 1994 B.Y.G. presented the Project Overview to the RERC.

Initial Environmental Evaluation Guidelines were prepared by the RERC, sent to B.Y.G. on November 10, 1994, and later that month B.Y.G. presented their Initial Environmental Evaluation (IEE) to the RERC.

In February and March 1995 B.Y.G. and RERC met to discuss the IEE submission. In March, 1995 RERC sent a response letter to B.Y.G. which identified concerns with the IEE.

Beginning in April 1995, B.Y.G. submitted further documentation and information to RERC to address the concerns raised in the March, 1995 RERC response letter.

For a more detailed chronology regarding this project, see Appendix 2: "Chronological Summary of Key Events Related to the Environmental Assessment of the Mount Nansen Project".

5.0 PROJECT DESCRIPTION

5.1 Location and Access

The Mount Nansen Project is located approximately 60 kilometres west of the Village of Carmacks, Yukon (see Figure 1). The location is on NTS map sheet 115 I/3 W at latitude 62 05' north, and longitude 137 08' west. The site lies within the traditional territory of the Little Salmon/Carmacks First Nation. The property claims occur at an elevation of about 1200 metres in the Dawson range. A gravel road from Carmacks to the Mount Nansen property is seasonally maintained by the Yukon Territorial Government.

The Mount Nansen claim group consists of 257 mineral claims and 30 mineral leases with a total area of 5,300 hectares.

The Brown-McDade ore zone, proposed tailings pond and plant and mill site drain to two small creeks, Dome and Pony, which in turn flow to Victoria Creek which flows into the Nisling River.

5.2 Background of Mount Nansen Property

The Mount Nansen property is situated in an area with a history of mining activity, currently in the form of placer mining operations. The first recorded discovery of gold on the current site occurred in 1943. In 1966, a 300 ton/day flotation mill

was constructed and it was operated during the periods 1966-1967 and 1976-1977. The mill, much of the support plant, and two small tailings ponds containing waste from production activities remain on site.

B.Y.G. Natural Resources Inc. acquired the properties and combined them with additional claims to form the current property in 1984. In conjunction with Chevron Minerals, B.Y.G. carried out an exploration program between 1985 and 1989. B.Y.G. currently owns 100% of the Mount Nansen project, subject to royalties.

5.3 Mine Plan Summary and Scheduling

B.Y.G. plans to mine approximately 300 tonnes of gold-bearing oxide ore per day using open pit mining methods. Oxide ore will be excavated from the open pit, trucked and dumped in the run-of-mine ore stockpile. From here it will be reclaimed by front end loader, dumped through a grizzly to a dump hopper and fed by conveyor to the coarse ore bin. Coarse ore would discharge onto a conveyor belt feeding the primary crushing circuit and then transferred via conveyor to the fine ore bins. Fine ore would be transferred to secondary crushing and grinding, followed by thickening prior to cyanidation.

The existing on-site mill would be converted to a process involving cyanidation, carbon adsorption (using the carbon in pulp method), carbon elution and zinc preparation. This process is referred to for simplicity elsewhere in this report as the carbon-in-pulp or CIP process. The resulting sludge would then be fluxed and smelted to produce dore bullion. The CIP tailings would be treated to destroy cyanide prior to discharging to the tailings containment area.

Based on proven reserves, the project life is about four years, including one year of preproduction work. B.Y.G. considers extension of mine life likely through development of additional oxide ore deposits, or if viable metallurgical processes are developed to allow for development of sulphide ore on the property.

B.Y.G. estimates that infrastructure and construction activities necessary prior to start-up would take 4 - 6 months and would include:

- Construct a 50 person kitchen-bunkhouse complex (establish bunkhouse and cafeteria, renovate offices, provide water, power, sewage, telephone services);

- Retrofit the existing flotation mill to a cyanidation/carbon-in-pulp (CIP) gold recovery circuit capable of processing 300 tonnes/day of oxide ore from the Brown-McDade ore zone;

- Renovate warehouse, powerhouse, shop;
- Install a 2,000 KW diesel power plant in the existing power plant building;
- Rehabilitate the water line from Victoria Creek, re-establish wells, install pumps, and renovate power line;
- Improve Victoria Creek Crossing (installation of culvert);
- Construct tailings dam system (including an impoundment dam, a slurry pipeline, a reclaim pump, a reclaim water pipeline, water treatment plant, diversion ditches, an emergency spillway and a seepage collection dam); and
- Develop the open pit operation on the Brown-McDade zone by removing and storing approximately 737,000 tonnes of waste rock in conjunction with extraction of approximately 300,000 tonnes of oxide ore for processing in the CIP mill.

6.0 ENVIRONMENTAL AND SOCIO-ECONOMIC ISSUES, MITIGATION AND RECOMMENDATIONS

The following is a description of the potential adverse environmental and socio-economic impacts of the project, and where applicable a summary of the proponent's proposed mitigation measures. For further details regarding the potential impacts and proposed mitigation readers should refer to the detailed documents listed in Appendix 3: References. The potential impacts and proposed mitigation are then followed by a RERC screening recommendation regarding the acceptability of B.Y.G.'s proposed mitigation, and recommendations for further mitigation.

6.1 General -- Designs Plans, Performance Objectives

Issue / Potential Impact:

B.Y.G. has submitted information regarding the design, construction, operation and abandonment of the proposed mining, milling and associated facilities.

The level of detail of information varies. While a significant amount of information has been submitted, the RERC feels that further detailed

information should be submitted to the Water Board by B.Y.G. in support of it's water licence application. This information should be submitted for the following reasons:

1) It will identify how the proposed mitigative measures will be constructed and implemented;

2) The information submitted in support of the water licence application can be assessed and recommendations made to the Water Board for their consideration when preparing the water licence; and

3) The development of licence conditions based upon detailed information will enable effective enforcement of the water licence such that mitigative measures will be implemented.

B.Y.G.'s Proposed Mitigation:

B.Y.G. has provided the information as listed in Appendix 3: References, and has committed to providing additional information and plans as discussed in this report.

RERC Recommendation:

In the water licence application, B.Y.G: should provide:

- Detailed Design or Construction Drawings;
- Detailed Construction Quality Assurance (CQA) / Construction Quality Control (CQC) manual for the tailings system and diversions, waste dumps and treatment ponds;
- Design Criteria Report;
- Detailed Operations Plan;
- Solution Management Plan;
- Operational Monitoring Plan;
- Waste Rock Management Plan; and
- Emergency Response and Spill Contingency Plan.

The tailings dam and associated facilities should be constructed and operated according to approved CQA/CQC manual and operating plan.

6.2 Pit Wall and Floor Acid Rock Drainage (ARD) Potential

Issue / Potential Impact:

Testing indicates that certain sections of the pit wall and floor may have the potential for ARD. Heavy metals from ARD may contaminate surface and subsurface waters.

B.Y.G.'s Proposed Mitigation:

Testing done by B.Y.G. indicates that the upper portion of the pit wall does not have ARD potential. B.Y.G. notes that the only area that may have ARD potential is a small portion at the base of the north end of the pit. B.Y.G. will analyse approximately twenty additional samples from the pit wall after completion of the pit to confirm the ARD potential of the pit wall. B.Y.G. has proposed the following options to mitigate the potential for ARD at the pit wall at the base of the north end of the pit:

- backfill the area;
- flood the area; or
- cut back the slope to remove the material with ARD potential, mill it and then dispose the tailings to the tailings pond.

RERC Recommendation:

As part of the water licence application B.Y.G. should provide a plan including objectives, sampling methods, triggers and mitigation, scheduling, and reporting for the assessment of the ARD potential of the pit wall. The final decommissioning plan should consider the results of the sampling and identify which abandonment option will be selected for the pit, supported by rationale.

6.3 Seepage from the Pit Floor to the Old Brown-McDade Adit

Issue / Potential Impact:

B.Y.G. has stated that the bottom of the pit will be close to the old Brown McDade adit. There is a concern regarding the potential for pit water to seep from the pit and through the old underground adit to surface. Seepage may occur either during mining operations, or at abandonment when the pit is filling. Pit water may contain elevated levels of ammonia from blasting

residues, suspended solids, or dissolved metals. The passage of water through the adit is also of concern since there are some sulphidic materials in the adit and water flowing through the adit may result in ARD conditions and mobilize metal contaminants.

Furthermore, one of the methods proposed by B.Y.G. to prevent the generation of ARD at the pit floor and wall is to allow the pit to fill with water, which may not happen if sufficient amounts of pit water seep through the pit floor.

B.Y.G.'s Proposed Mitigation:

B.Y.G. stated that they will install a concrete bulkhead in the Brown-McDade adit if water seeps out of the adit. This bulkhead will be designed to prevent passage of any seepage through the adit which may contaminate surface and subsurface waters.

The backup of waters behind the bulkhead will also allow the pit to fill with water, preventing the development of ARD conditions in the pit.

RERC Recommendation:

In the Water Licence Application, B.Y.G. should submit a plan which includes

- program to monitor quantity and quality of seepage from the Brown McDade adit; and

- triggers and contingencies in the event that monitoring shows that seepage of unacceptable quality is being or will be discharged from the adit.

If the adit hasn't been plugged by the time the final decommissioning plan is due, B.Y.G. should identify in the plan long term monitoring for seepage of pit water to the adit, and triggers and contingencies including plugging the adit.

The cost of plugging the adit should be included in the security deposit until the adit is plugged or it can be clearly shown that there will be no need to plug the adit.

6.4 Waste Rock Acid Rock Drainage (ARD)

Issue / Potential Impact:

A few of the waste rock samples demonstrated a potential to generate ARD. ARD conditions in the waste rock may result in the release of heavy metals to the environment. There is a need to ensure that waste rock with the potential for ARD is disposed of properly and is not used for construction.

B.Y.G.'s Proposed Mitigation:

B.Y.G. has stated that the waste rock used for construction will not have ARD potential. B.Y.G. conducted titration testing of waste rock samples which showed that the waste rock contains minerals that should provide adequate gradual buffering over the acidic pH range. B.Y.G. will analyse thirty representative samples of the waste rock to be used for construction for ARD potential using the Acid Base Accounting static test. The handling of waste rock will be controlled by a Waste Management Plan supervised by a qualified geologist. B.Y.G. has proposed that any waste rock with ARD potential will either be milled, left on the pit floor and flooded, or blended in the waste rock dump.

RERC Recommendation:

With the water licence application B.Y.G. should submit a waste rock management plan that includes the following:

- Commitment not to use waste rock with ARD potential for construction;
- Waste rock sampling and assessment plan to verify ARD potential of waste rock;
- Handling plan for the use of non-ARD waste rock, and disposal plans for waste rock with ARD potential; and
- Responsibility of the qualified geologist to supervise the implementation of the waste rock management plan.

6.5 Tailings Impoundment Facility

6.5.1 Thaw Settlement

Issue / Potential Impact:

The region in which the mine is located lies within the discontinuous permafrost zone and B.Y.G.'s studies indicate that the entire minesite, including the tailings impoundment facility, is underlain by discontinuous permafrost.

The presence of frozen soil under the dam may pose problems since the temperature of the permafrost is only slightly below zero, and slight changes to the thermal properties of the ground may result in thawing of the permafrost. Depending upon soil properties, moisture content and design factors, if thawing did occur it could result in unstable foundation conditions for the dam or lowering of the dam crest such that overtopping occurs. Unstable dam foundation conditions or overtopping could lead to failure of the dam and loss of tailings and pond water to the environment.

The key issue with respect to the stability, design, and expected performance of the tailings dam is whether it will remain stable if the foundation thaws.

B.Y.G.'s Proposed Mitigation:

B.Y.G. collected and submitted further information ("Tailings Impoundment Final Design Report", August, 1995) with respect to the dam and associated infrastructure which included information on:

- site selection;
- the geotechnical conditions at their proposed site;
- dam design details including thermal, thaw settlement, and seepage analyses;
- details regarding hydrology and water management (eg. water balance; design details for the diversion channel, emergency and closure spillways);
- Performance monitoring plan including a field monitoring program.

B.Y.G. estimates that the dam crest would settle by 0.6 m during the three years of operation as a result of thawing of foundation materials. Following construction, B.Y.G. proposed the dam crest elevation to be 1151.5 m. After three years, B.Y.G. anticipates the dam crest to be 1150.9 m (1151.5

- 0.6). During a 200-year precipitation event, B.Y.G. estimates a maximum tailings pond water level of 1150.5 m, which would allow a freeboard of 1 m at start-up and 0.4 m after three years of operation (where 0.6 m settlement occurs).

Because B.Y.G. considers that the shallow foundation soils are thaw-stable and the deeper soils below the active layer will not thaw in the long term, they have not proposed to construct a berm on the downslope face of the tailings dam, but propose to monitor thawing and seepage and construct the berm if it is determined to be necessary.

They propose to monitor the performance of the dam and, prior to abandonment (after three years of operation), and depending upon the results of the monitoring, B.Y.G. might do the following:

- raise the dam crest; and
- construct a toe berm and drains.

Such measures were considered by B.Y.G. to be sufficient to accommodate further long term settlements which may occur.

RERC Recommendations:

The performance monitoring and field monitoring program should be submitted with the water licence application. This program should include monitoring for thaw settlement, triggers and implementation of contingency measures such as raising the dam crest and construction of a toe berm/drain.

In the final decommissioning plan, B.Y.G. should identify what measures will be done to abandon the tailings dam. This should include any modifications or construction plans supported by the results of the monitoring done to date, and plans for the post-decommissioning monitoring of the physical stability of the tailings facility. All design and construction work to be done for decommissioning should be to appropriate engineering standards.

The cost of constructing a toe berm and drains and raising the dam crest should be part of the security deposit until the toe berm, and drains are constructed and the crest raised, or it can be clearly shown that there will be no need to construct the berm and drains and raise the crest.

6.5.2 Seepage

Issue / Potential Impact:

Seepage of water from the tailings impoundment facility is of concern for two reasons:

- High rates of seepage may be indicative of thawing of foundation soils, and may affect the stability of the dam foundation through development of thaw induced pore pressures, differential settlement, piping or loss of material at the toe; and

- There is a potential for seepage of water containing contaminants from the tailings impoundment facility to the downstream environment (i.e. Dome Creek) since all dams seep to some extent.

B.Y.G.'s Proposed Mitigation:

To address the concern with seepage and implications to dam stability, B.Y.G. has proposed in the performance monitoring plan to install and monitor piezometers in the embankment and foundation zones which are unfrozen. This will assist in determining seepage through the dam and will allow measurement of actual thaw-induced pore pressures for stability assessment.

To address the possibility of seepage through the tailings and dam, B.Y.G. submitted particle size analysis test results of the tailings in order to provide RERC with further information regarding potential seepage rates of pond water through the tailings and dam foundation.

To minimize seepage through the dam, B.Y.G. proposed to:

- construct a geosynthetic clay liner on the upstream face of the dam. This liner would be intended to minimize potential seepage during the pond construction, when water will be ponded against the upstream slope prior to tailings deposition;

- develop a tailings beach of fine materials on the upstream face of the dam. The thickness of the tailings will increase throughout the life of the mine; and

- construct a seepage recovery pond downstream of the tailings pond. Any seepage would be collected in this pond and be pumped back to

the tailings pond, or released to the downstream environment if it was of acceptable quality.

RERC Recommendations:

The performance monitoring and field monitoring program should include plans for monitoring of seepage, triggers for implementation of contingency measures such as construction of a toe berm and drains so that the physical stability of the tailings structure is maintained.

For the water licence application, B.Y.G. should propose a sampling program of Dome Creek downstream of the tailings dam and seepage recovery pond. B.Y.G. should identify a trigger based on changes in water quality that will indicate that seepage from the tailings facility or seepage recovery pond is getting into Dome Creek. B.Y.G. should identify a monitoring program to determine the source of the contamination including groundwater monitoring, and propose mitigative measures to prevent further contamination of Dome Creek.

6.5.3 Liquefaction Potential

Issue / Potential Impact:

The RERC had concerns that due to the nature of the tailings and dam foundation, there is a potential for liquefaction of the foundation and tailings during seismic events resulting in an unstable dam structure.

B.Y.G.'s Proposed Mitigation:

It was noted in the final design report that the dam foundation could liquefy. To address this B.Y.G.'s consultant recommended the following approach:

- Monitor the actual performance of the dam and foundation over the 3 years of operation;
- At time of mine closure, review seismic stability including the design earthquake and Standard Penetration Test data from thawed zones (if any);
- Review liquefaction potential and, if required, include a downstream berm in the mine closure plan.

RERC Recommendations:

The performance monitoring and field monitoring program should include monitoring for liquefaction potential and identify the trigger that will initiate contingencies. The contingencies, such as construction of a toe berm should be identified.

The final decommissioning plan should include the results of the review of the seismic stability including the design earthquake and SPT data from thawed zones (if any). Proposed actions and rationale based upon the results should also be included in the decommissioning plan.

6.6 Diversion Channel, Emergency Spillway, Temporary Diversion Ditch

6.6.1 Diversion Channel

Issue / Potential Impact:

The proposed tailings dam site is located in the Dome Creek valley. Uncontrolled water flow inputs into the tailings dam via Dome Creek would be unadvisable for reasons which include water management problems; increased head in dam which may increase seepage rates and stability concerns; outflow of pond water via the spillway, and a corresponding need to treat water.

B.Y.G.'s Proposed Mitigation:

In order to control the flow of water into the tailings dam, B.Y.G. has stated that a diversion channel will be constructed to divert the flow of Dome Creek around the tailings pond to the north and then rejoin Dome Creek downstream of the pond. B.Y.G. proposed to monitor the diversion channel, especially in the spring, to ensure that water is properly conveyed through the channel.

RERC Recommendation:

Detailed designs and CQA/CQC for the diversion channel should be provided in the water licence application.

6.6.2 Emergency Spillway

Issue / Potential Impact:

The design capacity and operation of the tailings pond is based upon inputs from runoff, precipitation and tailings, and outputs due to evaporation. To calculate the water balance, baseline data from nearby meteorlogical stations was extrapolated to estimate the amounts and rates of water gains and losses.

However since the water balance is based upon extrapolation and estimations, extreme events such as a major flood may result in an emergency situation where water has to be discharged from the tailings pond. Although it is unlikely that unplanned discharges from the tailings pond will occur, a contingency must be made in the design for the emergency discharge of water from the tailings pond via an emergency spillway. The alternative is overtopping of the dam which could result in a failure of the dam, and loss of tailings and effluent to the environment.

B.Y.G.'s Proposed Mitigation:

B.Y.G. proposed to construct an emergency spillway to prevent overtopping of the dam crest during peak inflow and provided design specifications for it. The emergency spillway inlet at the tailings pond is designed to convey solutions from the tailings dam to join the Dome Creek diversion channel.

RERC Recommendation:

B.Y.G.'s proposed mitigation is acceptable. In the final decommissioning plan, B.Y.G. should identify how the water flows into and out of the tailings pond will be managed, address the long term stability of structures designed to handle water, and identify future monitoring and maintenance requirements.

6.6.3 Temporary Diversion Ditch

Issue / Potential Impact:

B.Y.G. anticipates construction of a temporary diversion ditch in order to deal with Dome Creek water flows during dam construction. In the Tailings Impoundment Final Design report it was noted that the temporary diversion channel is subject to erosion during major flows. There is a concern that erosion may lead to breaches of the ditch, and increase suspended solids

levels in Dome Creek.

RERC Recommendation:

Construction, operation and abandonment of the temporary diversion ditch should be to appropriate engineering standards and the potential for erosion minimized.

6.7 Tailings Acid Rock Drainage (ARD)

Issue / Potential Impact:

B.Y.G. has stated that tailings from the Brown-McDade oxide ore have a slight negative net neutralizing potential which means that they have the potential to generate acid. There is a concern that ARD conditions in the tailings will release heavy metals to the pond water and the water will require treatment prior to discharge to the environment, possibly for long after the mine has closed.

B.Y.G.'s Proposed Mitigation:

B.Y.G. notes that because of the low sulphide content and fine particle size of the tailings, ARD conditions should not develop. B.Y.G. has proposed to conduct monthly Acid Base Accounting static tests on the tailings, and, if the tailings demonstrate ARD potential then kinetic tests will be conducted to verify the theoretical results. If the kinetic tests determine that acid generation is still a concern then the tailings will either be permanently flooded at abandonment, or covered with sufficient overburden to prevent ARD.

RERC Recommendation:

A detailed study plan which includes objectives, methodology, triggers and action plans, scheduling, and reporting should be included as part of the water licence application. The study plan should address the sampling and analysis of tailings samples for ARD potential by static and kinetic tests. Sampling and assessment of tailings should be ongoing during the life of the mine.

In their water licence application B.Y.G. should propose contingency measures such as special milling strategies and restoration options in the event that tailings with ARD potential are generated, as determined by the detailed study plan.

The final decommissioning plan for the tailings impoundment facility should reflect the results of the study plan, and specify how the tailings will be abandoned, as well as the need for ongoing monitoring and maintenance.

The cost of decommissioning the tailings in a manner to prevent ARD conditions from developing or to treat ARD should be included as part of the security deposit until it can be clearly shown that the tailings will not generate ARD, or the tailings have been adequately decommissioned.

6.8 Arsenic in Tailings

Issue / Potential Impact:

Tests indicate that the tailings will contain arsenic and there is the potential for arsenic to go into solution in the tailings pond water. There is a concern that B.Y.G. has yet to finalize a process for treating arsenic that has gone into solution (been solubilized). There is also a concern that arsenic solubilization from the tailings may continue after mine closure such that there may be a need for the long term treatment of the ponded water in the tailings impoundment facility prior to discharge to the environment.

B.Y.G.'s Proposed Mitigation:

Preliminary testing done by B.Y.G. indicates that a portion of the arsenic in the tailings could be stabilized by the addition of ferric sulphate. Additional testing to be done after start-up will assess the feasibility of adding ferric sulphate to the mill tailings to reduce the potential problem of arsenic solubilization. B.Y.G. proposes to assemble a detailed work program and submit it to the Water Board for comment prior to commencing the tests.

If ferric sulphate addition to tailings does not work, then B.Y.G. will follow the conventional practice of using the ferric sulphate high density sludge process to remove arsenic from excess reclaim water and to generate a stable sludge for disposal to the tailings impoundment facility.

B.Y.G. states that the water balance for the tailings pond is such that no discharge of treated water will be required for the first two years after start-up. If, depending upon the water balance of the tailings pond, B.Y.G. does need to discharge water, it will be excess reclaim water which will be treated.

Regarding the potential for long term chemical release of arsenic to the tailings pond water, B.Y.G. states that the best approach would be to

submerge the tailings and to cover any exposed beaches with overburden. Due to the fine particle size of the tailings, B.Y.G. notes that the diffusion of arsenic from the tailings to the impounded water would be slow. B.Y.G. provided particle size analysis test results of the tailings to demonstrate that the tailings have a low permeability. Covering the exposed tailings will prevent runoff water from flushing the arsenic from the tailings.

RERC Recommendation:

The commitments made by B.Y.G. should be incorporated into the water licence. A detailed study plan on the treatment of arsenic in the tailings and pond water, which includes objectives, methodology, triggers and action plans, scheduling, and reporting should be submitted as part of the water licence application.

The final decommissioning plan should identify how the tailings will be abandoned, considering the potential for arsenic solubilization from the tailings.

The cost of decommissioning the tailings to prevent arsenic solubilization should be included as part of the security deposit until it can be shown that the tailings will not solubilize arsenic, or that the tailings have been adequately decommissioned.

6.9 Effluent quality

Issue / Potential Impact:

The tailings pond water will contain cyanide, ammonia and metals, and it will require treatment before discharge to the environment. There is a concern regarding the need for B.Y.G. to conduct additional studies before finalizing the effluent treatment process.

B.Y.G.'S Proposed Mitigation:

B.Y.G. has proposed to treat the tailings slurry using the SO_2 air process to reduce cyanide levels in the tailings slurry prior to discharge to the tailings impoundment facility. Excess reclaim water would be treated using sulphur dioxide and air, or possibly hydrogen peroxide, to destroy residual cyanide, and ferric sulphate and a clarifier to precipitate arsenic. Treated effluent will be discharged to a polishing pond prior to release to Dome Creek. B.Y.G. states that it will not have to discharge effluent for two years after mill start-up. During this time and once equilibrium conditions have been reached

between the discharge of tailings from the mill, and the recycle of tailings pond water to the mill, B.Y.G. will evaluate on a bench scale basis, the process for the treatment of cyanide and arsenic in the reclaim water.

RERC Recommendation:

As part of the water licence application, B.Y.G. should submit a detailed study plan for the development of a treatment process for the effluent. A detailed program including the objectives, methodology, triggers and action plans, scheduling, and reporting should be submitted as part of the water licence application. The treatment process should be developed and operational prior to the discharge of any waste, which B.Y.G. currently projects to be two years from the date of start-up. The final decommissioning plan should discuss the need for ongoing and long term treatment of effluent, and if necessary, detail how it will be done.

6.10 Existing ore dump

Issue / Potential Impact:

At the B.Y.G. site there is an existing ore dump from previous mining operations. This ore dump is located at the mouth of the Brown-McDade adit in the Pony Creek drainage area. There is concern that this ore dump is leaching metals into Pony Creek.

B.Y.G.'s Proposed Mitigation:

B.Y.G. has stated that this material would be re-processed during operation, or buried in the new tailings pond, and that this would be a priority reclamation activity.

RERC Recommendation:

B.Y.G.'s proposed mitigation is acceptable. Furthermore the RERC commends B.Y.G. for taking the initiative to clean up existing contaminated sites.

6.11 Hydrology

Issue / Potential Impact:

Concerns were raised that further data was needed to verify the water balance information provided by B.Y.G.

B.Y.G.'S Proposed Mitigation:

B.Y.G. has committed to implement a Water Balance Contingency Plan to ensure that adequate data is collected to update the water balance and make decisions regarding changes to operating plans. During the first year of operation, the water balance would be revised on a monthly basis and the Water Balance Contingency Plan will include potential measures for correcting the water balance through reductions in inputs to the system, increased recycle, or other measures. B.Y.G. proposed to submit the plan by December 31, 1995.

RERC Recommendation:

In the water licence application B.Y.G. should provide a monitoring plan for the collection of data to be used to update the water balance model. B.Y.G. should confirm when the Water Balance Contingency Plan will be submitted to the Board. The Water Balance Contingency Plan should be submitted to the Board for review and approval.

6.12 Victoria Creek Crossing

The gravel access road (Nansen Creek Road) to B.Y.G.'s minesite crosses Victoria Creek. The road is currently used by B.Y.G. employees and members of the public. Vehicles ford the Creek at a point where the Creek flows across a gravel flood plain and such usage is expected to increase. The road is B.Y.G.'s primary access and B.Y.G. wishes year-round, secure access, which causes minimal disruption to the environment.

B.Y.G. proposes to construct and install a culvert at Victoria Creek. Their proposed crossing was designed to allow passage of runoff from a two-year storm event; allow the passage of fish; and allow passage of a flood greater than the design by flow over a low section of the road.

6.12.1 Archaeological / Heritage Resources

One archaeological site has been identified in the Victoria Creek crossing area. There is a potential to impact the archaeological site as a result of the upgrading of the Victoria Creek Crossing through fill extraction or other activities.

B.Y.G.'s Proposed Mitigation:

None proposed.

RERC Recommendation:

B.Y.G. should avoid disturbing the identified archaeological site. Prior to any fill extraction or other land altering activities, BYG should contact Heritage Branch, Yukon Territorial Government (403) 667-5983 to ensure adequate site protection measures are implemented.

6.12.2 Baseline Climatic Data

There is a concern that the culvert proposed for the Victoria Creek crossing is inadequately designed since it is based on a 2 year flood return period.

B.Y.G.'s Proposed Mitigation:

None proposed.

RERC Recommendation:

B.Y.G. should redesign the culvert on a 10 year flood return period and submit the design as part of the water licence application.

Issue / Potential Impact:

The rainfall-intensity-duration-frequency information used was from the Atmospheric Environment Service station in Carmacks, and was not adjusted for the difference in elevation at the Mt. Nansen site.

B.Y.G.'s Proposed Mitigation:

None proposed.

RERC Recommendation:

The Carmacks precipitation data should be calibrated to account for the difference in elevation. The Victoria Creek culvert design should be revised accordingly.

6.13 Decommissioning Plan

Issue / Potential Impact:

There is concern that the present mine plan presents a high risk and high maintenance closure scenario. There are a number of uncertainties

surrounding mine reclamation strategies. During the operating life of the mine, the company proposes to undertake a number of studies to resolve uncertainties and develop reclamation measures. These studies and monitoring plans should be considered when developing the final decommissioning plan.

There is a concern that due to the short mine life and need to complete detailed studies before finalizing reclamation plans, that a detailed final reclamation plan will not be ready by mine closure.

B.Y.G.'S Proposed Mitigation:

B.Y.G. has stated in their addendum that a revised reclamation plan will be assembled after one year of operation, and a final reclamation plan will be submitted to the Water Board by December 31, 1996.

RERC Recommendation:

B.Y.G. should submit to the Water Board for review and approval, a final site decommissioning plan.

The decommissioning plan should include but not be limited to the following items:

- the results of reclamation studies that B.Y.G. has done;
- the results of the tailings monitoring program, and any other monitoring which may have implications to decommissioning;
- final design and supporting information for the construction of a permanent spillway assuming probable most adverse ground conditions;
- Detailed engineered designs and quality control / assurance procedures for decommissioning and abandoning the project; and
- post-decommissioning monitoring requirements of the tailings and dam, and any other potential sources of contamination to the environment.

As part of the water licence application, B.Y.G. should provide a schedule that identifies what studies are being done, when they will be completed, and confirm when the final decommissioning plan will be submitted.

6.14 Control of Hunting in Project Area

Issue / Potential Impact:

A concern was raised regarding the impact from employees of the mine hunting in the area.

B.Y.G.'S Proposed Mitigation:

B.Y.G. has committed to controlling hunting activities on the project site to the best of their legal ability by forbidding firearms in the camp facility or on the site. B.Y.G. states this will apply to all employees and contractors of the Company. In addition B.Y.G. will post the area from the Property boundary near Victoria Creek to the Webber zone 2 km. to the north of the mill as a "No Hunting Zone" for safety reasons.

RERC Recommendation:

B.Y.G. implement their commitment to forbid firearms and post the No Hunting Zone at the project site.

6.15 Security Deposit

Issue / Potential Impact:

The level of security put up by B.Y.G. should be sufficient to cover the costs of reclamation should B.Y.G. be unable or unwilling to do so and be based upon the level of risk associated with the project. Environmental liability is defined as the cost to the government to assume responsibility for mitigation / reclamation measures should the company prove unable or unwilling to do so. There is a concern that the amount of security proposed by B.Y.G. is inadequate because of the uncertainties surrounding mine reclamation strategies.

B.Y.G.'S Proposed Mitigation:

B.Y.G. has provided a Supplemental Closure Plan Cost Estimate, and has proposed to post a bond of $150,000 at start-up with an increase to $200,000 after Year 3.

RERC Recommendation:

Adequate financial security must be provided by B.Y.G. Natural Resources

Inc. to cover the environmental liability associated with the Mount Nansen Project. This should include, but not be limited to, the costs associated with plugging the adit and decommissioning the tailings facility to ensure physical and chemical stability.

DIAND and the Water Board should review the amount of financial security so that there is adequate financial security available to ensure that reclamation can be carried out.

The security should be in place within a reasonable, specified time after issuance of the Water Licence. Security should be included as a term and condition of the Water Licence.

The security should be accessible to the Government of Canada.

7.0 CONCLUSION

The Regional Environmental Review Committee has concluded its review of the information provided by B.Y.G. Natural Resources Inc. regarding the Mount Nansen mine project and recommends that the proposal, with mitigation measures identified in the documents submitted by B.Y.G. and the recommendations and mitigation measures set forth in this report, can proceed to the regulatory process for issuance of the necessary authorizations.

8.0 RECOMMENDATION

It is recommended that B.Y.G.'s proposal, as outlined in this Screening Report, and as presented in B.Y.G.'s IEE and IEE Addendum submissions in response to the RERC, meets the requirements of the Environmental Assessment and Review Process Guidelines Order under Section 12 © specifically:

Section 12 © "the potentially adverse environmental effects that may be caused by the proposal are insignificant or mitigable with known technology, in which case the proposal may proceed or proceed with the mitigation, as the case may be".

Pursuant to Section 13 of the Guidelines Order, it is recommended that a public review by an EARP panel of the B.Y.G. Mt. Nansen Project is not necessary:

Section 13 "Notwithstanding the determination concerning a proposal made pursuant to Section 12, if public review is desirable, the initiating department shall refer the proposal to the Minister for public review by a panel".

Recommended to DIAND by:

Marg Crombie
Chair,
Regional Environmental Review Committee

Kevin McDonnell
Project Manager
Northern Affairs Program

Appendix 1: RERC Membership

Federal Government:

- Northern Affairs Program, Department of Indian Affairs and Northern Development:
    - Environment Directorate
    - Land Resources
    - Economic Development
    - Water Resources
    - Exploration and Geological Services
    - Mineral Development
- Department of Fisheries and Oceans
- Environment Canada
- Health and Welfare Canada

Yukon Government:

- Yukon Worker's Compensation Health and Safety Board (Mine Safety)
- Transportation Planning and Programming, Community and Transportation Services
- Community Services Branch, Community and Transportation Services
- Economic Development, Economic Policy Planning and Research Branch
- Heritage Branch, Department of Tourism
- Environmental Assessment, Department of Renewable Resources

First Nations:

- Northern Tutchone Council
- Selkirk First Nation
- Little Salmon Carmacks First Nation
- CYFN

Other:

- Village of Carmacks

Appendix 2: Chronological Summary of Key Events Related to the Environmental Assessment of the Mount Nansen Project

March 15, 1988	DIAND sent B.Y.G. an outline of information requirements
March 20, 1988	B.Y.G. submitted to DIAND "Exploration and Development Overview, Mt. Nansen Property " report
March 23, 1988	RERC meeting in Whitehorse at which B.Y.G. gave a brief overview of project.
January, 1989	B.Y.G. consultant (Archer Cathro) submitted "Report on the Geology and Mineral Inventory of the Mt. Nansen and Tawa Properties, Yukon Territory, with Assessment of the Economic Potential for Open Pit Mining of Oxidized Mineralization in the Brown -McDade Zone"
March 20, 1989	B.Y.G. submitted four reports (previously submitted) for review by RERC:
May 9, 1990	RERC sent response letter to B.Y.G. regarding B.Y.G.'s submissions and identified concerns and deficiencies
May 28, 1991	Letter to B.Y.G. from DIAND to ascertain status of project.
June 14, 1991	B.Y.G. reply to May 28th letter from DIAND, stating that the project is on hold.
July 15, 1993	DIAND sent letter to B.Y.G. inquiring about status of project.
July 19, 1993	B.Y.G. replied to DIAND's July 15th letter and requested that the project remain on the active list of projects undergoing environmental assessment.
April 27, 1994	DIAND met with B.Y.G. and consultants to discuss the status of the project, and the environmental assessment and regulatory processes.
	B.Y.G. submitted two-page proposed production plans and environmental update.

May 31, 1994	DIAND requested B.Y.G. to submit a Project Overview and sent B.Y.G. a copy of Generic Initial Environmental Evaluation (IEE) Guidelines; a chronology of the Mt. Nansen Project; and further information.
June 16, 1994	DIAND met with B.Y.G. to discuss RERC review, mining plans, IEE information requirements, Project Overview, public consultation. B.Y.G. submitted a Project Overview.
August 3, 1994	RERC meeting at which B.Y.G. representatives presented the project.
September 16, 1994	B.Y.G. submitted "Laboratory Evaluation of the Inco SO_2 ... Process ..." which summarized test results from the Inco SO_2 air process treatment of carbon-in-pulp tailings.
October 25, 1994	RERC sent draft Initial Environmental Evaluation (IEE) Guidelines for the Mount Nansen Project to B.Y.G.
November 10, 1994	DIAND sent final IEE Guidelines to B.Y.G.
November 22, 1994	B.Y.G. submitted their two-volume IEE.
November 23, 1994	RERC meeting with B.Y.G. representatives to discuss their IEE submission.
February 21, 1995	A public information session, hosted by B.Y.G., was held in Carmacks regarding the Mount Nansen Project.
February 22, 1995	A RERC meeting with B.Y.G. representatives occurred to discuss B.Y.G.'s IEE submission and RERC members' concerns with it.
March 1, 1995	DIAND and B.Y.G. met in Vancouver to discuss outstanding (i.e. geotechnical) issues.
March 21, 1995	RERC sent the IEE response letter to B.Y.G.
March 21, 1995	B.Y.G. submitted their Water Licence Application for the mine and mill development proposal

April 6, 1995	B.Y.G. submitted "Tailings Impoundment -- Feasibility Design Update" to RERC for review.
April 7, 1995	B.Y.G. submitted IEE Addendum Report to RERC for review.
April 7, 1995	B.Y.G. applied for Type B Water Licence for Victoria Creek culvert installation.
April 10, 1995	B.Y.G. submitted "Victoria Creek Crossing and Titration Report" and "Acid Titration Tests on B.Y.G. Mt. Nansen ABA Samples" to RERC for review.
April 19, 1995	B.Y.G. submitted a revised "Victoria Creek Crossing" letter to replace the letter submitted April 10, 1995.
April 11, 1995	B.Y.G. submitted an application to the Yukon Territory Water Board (YTWB) for a Type B Water Licence for highway culvert installation at Victoria Creek.
April 12, 1995	YTWB issued a notice indicating a May 29, 1995 intent date for Water Licence for highway culvert installation.
May 16, 1995	DIAND met with B.Y.G. to discuss outstanding EARP screening information requirements.
May 26, 1995	B.Y.G. submitted further information in response to concerns raised by RERC members and DIAND's geotechnical consultant which included a program of site investigation for the tailings impoundment.
May - June, 1995	During May and June, 1995 there were a series of letters between DIAND, key RERC members, B.Y.G. and consultants, and the Yukon Territory Water Board with respect to the Water Board hearing date. B.Y.G. requested that the June 6 hearing date not be postponed. Certain RERC members and DIAND stated that, because the EARP screening had not been completed (due to outstanding required information from B.Y.G.), they were unable to participate in the public hearing.

June 5, 1995	Chair, RERC sent B.Y.G. a letter in response to B.Y.G.'s recent submissions (eg. Addendum Report; Tailings Impoundment -- Feasibility Design Update) which included DIAND's (June 2, 1995) geotechnical report in relation to B.Y.G.'s May 25 submission.
June 6, 1995	Yukon Territory Water Board hearing took place in Whitehorse. Because the EARP screening was not completed, DIAND, Environment Canada and Department of Fisheries and Oceans did not participate.
June 6, 1995	DIAND and B.Y.G. met to discuss status of EARP review.
July 10, 1995	B.Y.G. submitted their Final Draft Reclamation Review.
July 18, 1995	Chair, RERC and Project Officer had a meeting with Selkirk First Nation in Pelly and Little Salmon Carmacks First Nation in Carmacks to discuss the project.
July 26, 1995	A letter was received from B.Y.G. regarding the control of hunting in the project area.
July 27, 1995	A Preliminary Draft Screening Report excluding assessment of tailings dam and associated facilities was distributed to proponent and RERC for review and comment.
August 14, 1995	B.Y.G. submitted their Tailings Impoundment Final Design Report.
August 14, 1995	A letter was sent by the RERC Chair to B.Y.G. advising them not to proceed with the proposed construction at this time as it did not meet the terms of the Yukon Waters Act Regulations.
August 23, 1995	B.Y.G. submitted a copy of the response to the Reclamation Cost Estimate Review.
September 8, 1995	DIAND and B.Y.G. met to discuss tailings dam and financial security.
September 12, 1995	B.Y.G. submitted a letter with further information on outstanding environmental issues.

September 22, 1995	B.Y.G. submitted comments in response to RERC inquiries on "construction of a bulkhead and long term stability of the tailings impoundment."
November 15, 1995	Screening Report distributed to public for review.
December 15, 1995	Due date for public comments on Screening Report.

Appendix 3: REFERENCES

B.Y.G. Natural Resources Inc.'s Initial Environmental Evaluation for the Mt. Nansen Project consisted of the following two documents:

- Initial Environmental Evaluation -- Mount Nansen Development, Volume 1, November, 1994

- Initial Environmental Evaluation -- Mount Nansen Development, Volume 2 -- Appendices, November, 1994

Further documentation that B.Y.G. submitted in support of their project proposal which were reviewed when evaluating this project consisted of the following:

- "Report on preliminary investigation for tailings disposal and leach pad sites for the Mt. Nansen project", prepared by Klohn Leonoff Ltd., dated November 7, 1985.

- "Tailings Dam Preliminary Design Report, Mount Nansen Gold Project", prepared by Klohn Leonoff, dated December 7, 1988.

- "Victoria Creek Crossing" letter report, dated April 6, 1995

- "IEE Addendum Report", dated April 6, 1995

- "Acid Titration Tests on B.Y.G. Mount Nansen ABA Samples", dated April 10, 1995

- "Tailings Impoundment, Feasibility Design Update", prepared by Klohn-Crippen, dated April 4, 1995

- "Water Licence Application, Victoria Creek Culvert

- "Victoria Creek Crossing Updated Submission for Culvert Design", dated April 17, 1995 (which replaced April 6, 1995 letter report)

- "Mount Nansen Project Tailings Disposal -- Response to RERC Concerns", dated May 25, 1995

- B.Y.G. letter to Water Resources, DIAND concerning "Tailings Dam Construction Project" dated August 9, 1995.

- B.Y.G. "Response to Reclamation Cost Estimate Review" dated August 17, 1995

- B.Y.G. submitted a letter dated September 12, 1995 clarifying their position with respect to "ARD from Open Pit and Tailings Dam Stability "

- B.Y.G. response letter to RERC enquiries regarding bulkhead and long term stability of tailings dam, dated September 15, 1995

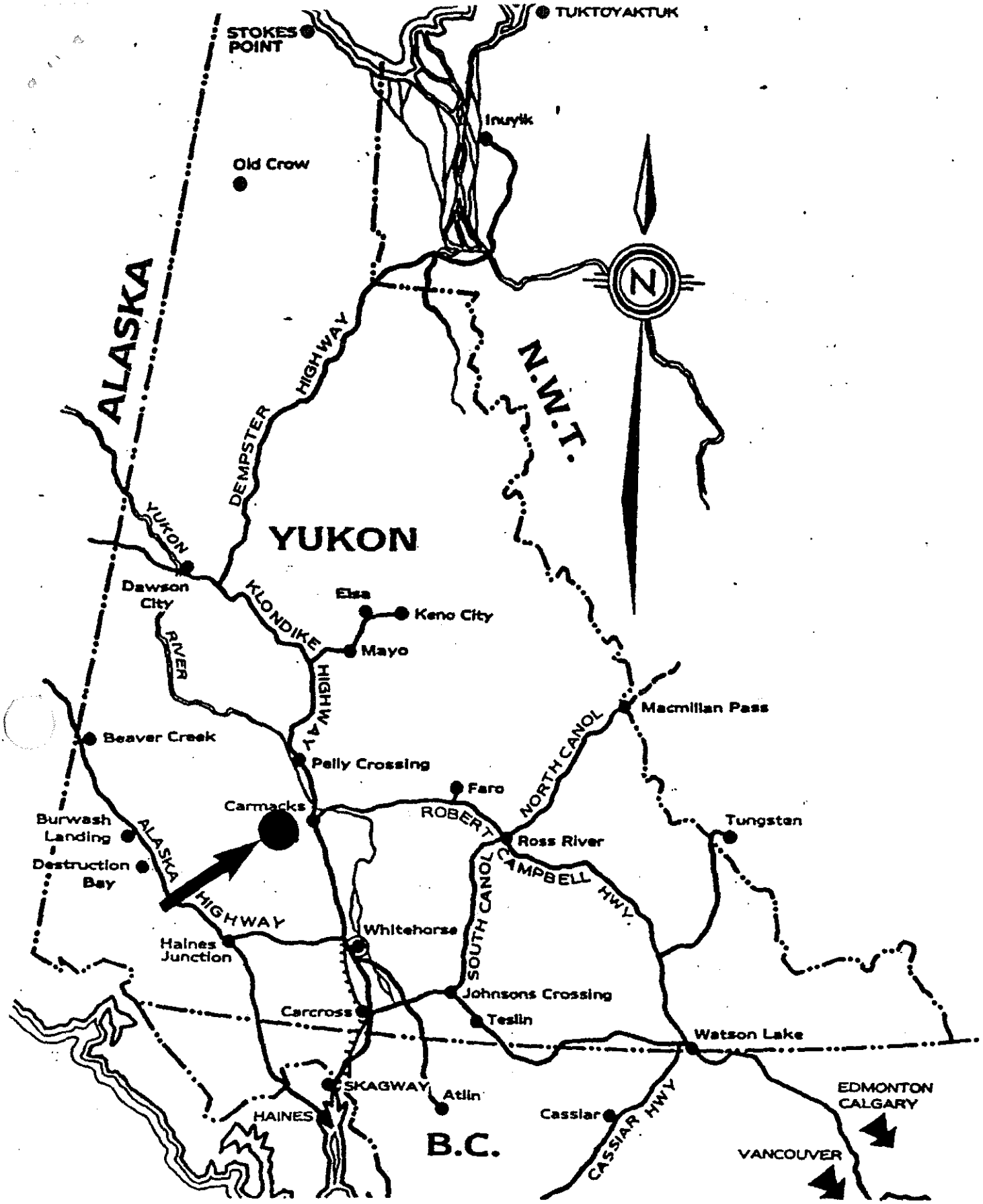

Figure 1: Location of Mount Nansen Project

From: Kevin McDonnell
To: CornettD, PrivettF, CrombieM, AdamD
Date: 11/16/95 2:36pm
Subject: B.Y.G. 5510-4-8

I talked to Graham Dickson today (Nov. 16, 2:30).

I mentioned that we are just finalizing the screening report and expect to have it out today or tomorrow.

I mentioned that we had a meeting late last week with other Directorates to discuss concerns.

Graham noted that he is working on reponses now. Had just completed Spill Plan. I recommended that upon receipt of the screening report, that he review report, ensure appropriate responses, and submit to Water Board and Dan Cornett in Water Resources. Graham advised that he intends to do this. He noted that Jim is due back next Monday, and he will have package for Jim's review next week, and hopes to submit it next week sometime.

I noted that security may be an issue and encouraged Graham to follow up with Dan Cornett/Fred Privett on levels and approach. Graham noted that he will follow up with Dan Cornett. He is interested in a phased approach.

Kevin

P.S. Dan - I will email you the screening report shortly.

Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

Environment Directorate,
Northern Affairs Program, DIAND
345 - 300 Main St.
Whitehorse, Yukon Territory
Y1A 2B5

Your file Votre référence

Our file Notre référence
5510-4-8

November 15, 1995

J.B. Smith
Vice President
BYG Natural Resources Inc.
Suite 208 - 3190 St. John's Street
Port Moody, B.C.
V6B 1P2
By Fax: 604-469-1534

Dear Mr. Smith

RE: Mount Nansen Project -- Emergency Response and Spill Contingency Plan

In follow up to my November 2nd letter regarding the above and the voice mail I left on your answering machine this morning, I pass on the following further information.

The Canadian Standards Association (CSA) has a publication entitled "Emergency Planning for Industry" which is available from CSA's Edmonton sales office tel: 403-490-2007; fax: 403-435-0998. I understand that this publication is the general standard by which your submission will largely be compared.

For further information, resources, and the interpretation of the CSA standards contained in the above publication, I have been advised that you should contact the CSA Toronto office; the contact person there is Jackie Halge at tel: 416-747-2303. While there is a local CSA office in Richmond B.C., that office advised that they are limited to providing further information with respect to electrical testing and that the Toronto office should be contacted for other information.

.../2

Canada

I hope you find this of some assistance.

Sincerely,

Daniel Adam
Project Officer
Environment Directorate,
Northern Affairs Program, DIAND
tel: 667-3340

cc. M. Crombie
K. McDonnell
D. Cornett
T. Polyck
G. Balmer