COMMENT FORM FOR NIRB SCREENINGS

The Nunavut Impact Review Board has a mandate to protect the integrity of the ecosystem for the existing and future residents of Nunavut. In order to assess the environmental and socio-economic impacts of the project proposals, NIRB would like to hear your concerns, comments and suggestions about the following project application:

Project Title:	Mineral Exploration - Crater Lake Project		
Proponent:	Committee Bay Resources Ltd.		
Location:	66°39.'5 N 091°33.'2 W (Hayes Camp)		
Comments Due By:	February 24, 2004	**NIRB #**	**04EN003**

NWB # NWB2CRA0305 **INAC File #: 9545-2-2-CRA-G**

Indicate your concerns about the project proposal below:

G	no concerns	**G**	traditional uses of land
G	water quality	**G**	Inuit harvesting activities
G	terrain	**G**	community involvement and consultation
G	air quality	**G**	local development in the area
G	wildlife and their habitat	**G**	tourism in the area
G	marine life and their habitat	**G**	human health issues
G	marine mammals and their habitat	**G**	other
G	fish and their habitat		
G	heritage resources in area		

Please describe concerns indicated above:

No concerns. The proponent has done an excellent job of capturing the possible environmental impacts and has further provided a lucid and fairly detailed explanation as to how these impacts are to be mitigated.

Do you have any suggestions or recommendation for this application?

Please refer to attached INAC standard recommendations. The proponent should make every attempt to follow these recommendations; where applicable.

The spill plan was reviewed under a separate document (attached).

Do you support the project proposal? Yes ž **No** ž **Any additional comments?**

There seems to be a discrepancy with respect to the location of the camps. The body of the document places the camps at (approx.) 66° 30'N, however the NWB Public Notice places the camps at approximately 63° N.

INAC suggests that the proponent consult with the Department of Health regarding the disposal camp greywater and blackwater

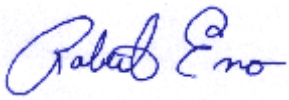
The proponent has indicated that they intend to devise a method for the cleanup of spilled drilling fluids when drilling on ice. The proponent should advise NIRB once they have completed this task.

The plan indicates that waste oil will be burned. How? Incinerator?

The application indicates that burn barrels will be used in the smaller camps. Please refer to attached document regarding suggested ways of enhancing the performance of burn barrels.

Name of Person Commenting	Robert Eno	**of**	Iqaluit

Position	Water Resources Coordinator	**Organization**	Indian and Northern Affairs Canada - Water Resources Branch

Signature		**Date**	13 February 2004

Indian and Northern Affairs Standard Recommendations:

Legislative Authority

Indian and Northern Affairs Canada (INAC), Water Resources Division, derives its regulatory mandate from the *DIAND Act,* and the *Nunavut Waters and Nunavut Surface Rights Tribunals Act*. The latter Act essentially forbids the deposition of a waste into Nunavut waters, except under certain regulated terms and conditions dictated (as in a Water Licence) by the Nunavut Water Board. A waste is defined as any substance which, when deposited into the water, will alter its quality to the detriment of fish, animals, humans or plants.

In reviewing land use and other permit applications, INAC Water Resources Division observes, in addition to our own legislation, other pertinent Federal Acts and Regulations such as the *Fisheries Act*, the attendant *Metal Mining Effluent Regulations* and the *Canadian Environmental Protection Act* ("CEPA").

In addition to Federal Acts and Regulations, the Territorial governments in Nunavut and the NWT have adopted a number of very useful regulations and guidelines under their respective Environmental Protection Act (s). INAC believes that these Acts, Regulations and in particular, guidelines, are quite helpful in assisting proponents to tailor their projects in such a manner that ensures that they will be in compliance with the overall spirit and intent of the various pieces of environmental legislation that govern development activities in Nunavut. These regulations and guidelines include but are not restricted to: *Spill Planning and Reporting Regulations*; *Environmental Guideline for the General Management of Hazardous Waste*; *Environmental Guideline for Industrial Projects on Commissioner's Lands*; *Environmental Guideline for Industrial Waste Discharges* and the *Environmental Guideline for Site Remediation*. INAC advises the proponent to contact the Government of Nunavut, Department of Sustainable Development for further details.

Spill Contingency Plan

The applicant should have a contingency plan for responding to chemical, petroleum and other spills which might occur during the proposed activity. The plan should include, but not be restricted to, a list of available spill response equipment and the names of trained personnel who will be on-site and available in the case of a spill. The Government of the Northwest Territories' Environmental Protection Service has developed a very useful spill planning and reporting guideline to complement their *Spill Contingency Planning and Reporting Regulations*; both of which have also been adopted by the Government of Nunavut. Environment Canada has also developed their own *Guidelines for the Preparation of Hazardous Material Spill Contingency Plans*. The proponent may find these guidelines to be helpful in developing a spill plan.

Fuel Storage

To prevent spreading in the event of a spill, fuel stored in drums should be located, whenever practical, in a natural depression a minimum distance of 30 meters from all streams, preferably in an area of low permeability. All fuel storage containers should be situated in a manner that allows easy access and inspection as well as removal of containers in the event of leaks or spills. Large fuel caches in excess of 20 drums, should be inspected daily. Additionally, the proponent is strongly advised to keep a written log of the inspections. For long term storage (> 6 months), it is strongly recommended that drummed fuel be stored on pallets to prevent the bottoms from rusting out.

Chemical Storage

All chemicals should be stored in a safe and chemically-compatible manner a minimum of 30 meters from all bodies of water. The applicant should be required to remove unused chemicals for reuse or disposal to an approved site using methods approved by the Land Use Inspector. Material safety data sheets (MSDS) should be provided for each chemical and should be posted in a central location; accessible by all camp personnel. Camp personnel should be conversant in the handling of these chemicals as well as be able to

deal with any accidents or spills involving that chemical.

Location of Hazardous Materials

Hazardous materials stored on-site should be marked so they will be visible under all conditions, in all seasons. This recommendation is intended to prevent possible injuries to camp personnel and/or damage to the containers. Unless otherwise specified by the land use inspector or licence -issuing agency, all hazardous materials should be removed from the site upon completion of the activity.

Waste Oil/Waste Fuel Disposal

Waste oil and waste fuel should be removed and returned for recycling or destruction when the land use activity is completed. Alternative methods of disposal that provide an equivalent level of environmental protection will be considered on a case-by-case basis.

Used Drums

Used fuel and oil drums should be removed from the site, returned for deposit, or reused.

Contaminated Soil

Soil contaminated by fuel (e.g., soils from under a old storage tanks) should be treated on site, such as by landfarming or thermal desorbtion, or it should removed to an approved disposal facility and replaced with new soil.

Winter Roads

- Existing winter road routes and trails should be used whenever possible, to avoid unnecessary land clearing and disruption of site hydrology.
- Speed on winter roads should not exceed: 30 km/hr for fully loaded vehicles; 50 km/hour for empty vehicles.
- Trucks should carry at least 10 square meters of polyethylene material (for lining a trench or depression), a spark-proof shovel & oil absorbent blankets or squares.
- Trucks should carry reliable radio and/or satellite phone communications.
- Trucks should carry sufficient response equipment for the safe removal of fuel from an overturned tanker (such as hatch cone covers, hoses etc).
- In general, the proponent should be fully prepared to deal with spills resulting from vehicle accidents along the road in a timely and efficient manner.

Drill Sumps

- The sumps should only be used for inert drilling fluids, not any other materials or substances. All sumps should be constructed of materials that normally exhibit low permeability and in a manner that prevents intrusion of runoff water.
- All drilling waste should be contained in the drill waste sump at a minimum of one (1) metre below the active layer of permafrost. In the event the initial sumps do not consist of low permeability materials, the proponent should construct an offsite sump which fulfills the aforementioned requirements.

- Drilling fluids from the sumps should not be permitted to enter into any waters or onto any land surface where the drilling fluids may enter any waters.

- If during the drilling, an artesian aquifer is encountered producing water flowing at the surface, the proponent should immediately notify the licencing/permitting agency. Samples of the water may be required for analysis.

Garbage Disposal

Garbage should be removed from the camp periodically; alternatively, all combustible wastes can be incinerated on site and non-combustibles collected and removed upon termination of the activity.

Incineration

For camps of less than 10 people, it is recommended that a burn barrel be employed to dispose of the combustible wastes. A burn barrel is essentially a 45-gallon drum or equivalent, with a hole cut into the bottom to facilitate air intake, and is closed at the top with a lid and a chimney for the exhaust. INAC does not consider burning wastes in a burn barrel to be true incineration, however, for small camps, this is an acceptable means to deal with combustible wastes. The burn barrel should be operated so that a high temperature burn is maintained at all times. This will promote complete combustion and eliminate pollutant and odour concerns.

Attached, are instructions for a very simple incinerator design which is highly portable and can be constructed cheaply. The design – which has an excellent track record – was conceived and developed by personnel with the former Government of the Northwest Territories, Department of Renewable Resources (since re-named Resources, Wildlife & Economic Development) in Yellowknife. Several of these units were constructed and tested here in the Baffin Region in the early 1990's and were found to be a cheap, effective and practical solution for disposing of domestic garbage from small camps. This information is provided is only a suggestion and should not in any way, be misconstrued as a directive from INAC. The final decision with respect to how solid/domestic camp wastes are managed rests with the proponent; it is INAC's responsibility to assess the environmental efficacy of the proponent's plan.

For camps of more than 20 people, it is recommended that a properly-designed, commercially-available incinerator be used to manage wastes. Once again maintaining a high temperature burn to reduce wastes and prevent the creation of toxic by-products, is imperative.

Kitchen wastes, cardboard, paper products, packaging and untreated wood wastes are suitable for incineration in a burn barrel and an incinerator. Industrial wastes and non combustible wastes should be removed from the camp and disposed of at a designated landfill or other approved facility. Under no circumstance should hazardous wastes be managed through open burning or incineration.

For camps of greater than 50 people, it is recommended that a municipal waste incinerator, which produces emissions that meet CCME air quality guidelines, be used to dispose of camp wastes. The manufacturer will specify operating conditions and types of wastes that can be disposed of in the incinerator in order to meet the specified CCME standards. It is recommended that municipal waste incinerators be operated to meet manufacturer specifications.

The aforementioned comments are a brief outline of what INAC suggests that a proponent should be implementing to mitigate any damage or alterations to the environment during the course of their proposed activities. In terms of legal compliance, the proponent is referred to the various Federal and Territorial Acts mentioned earlier in this document and which directly or indirectly govern land and water use activities in Nunavut.

Indian and Northern Affairs Canada Spill Contingency Plan Review

Committee Bay Resources Ltd. Crater Lake.

Comments:

Overall, the proponent has done a thorough job in developing their spill plan, however, the reviewer has the following comments and suggestions to offer:

1. While the proponent has provided, in the body of the application, an inventory of contaminants in their control, they have not included it with the spill plan. Please note that a spill plan should be treated as a separate, stand-alone document. It should be kept in mind that while first response/regulatory agencies keep copies of spill plans, they may not necessarily have the accompanying documents, such as exploration permit applications.

2. The proponent should update their list of government contacts for the Territorial and Federal government agencies that are listed in their plan; all of whom have offices in Nunavut.

    - The Government of the Northwest Territories Environmental Protection Service no longer has regulatory authority in Nunavut. The Department of Sustainable Development (DSD), Government of Nunavut assumed this role as of April 1st 1999. DSD is headquartered in Iqaluit.

    - Environment Canada, the Department of Fisheries and Oceans and DIAND all have regional offices in Iqaluit, Nunavut.

3. It should be noted that DIAND does not have a spill line. There is only one spill line for the NWT/Nunavut.

4. The proponent provided, in the body of their application, site maps for each of the camps as well as an overall site map showing the location of the activities, in the application. These maps should be duplicated and included as a component of the spill plan. The site maps clearly identify the location of structures and contaminants storage areas, however, they should also indicate likely pathways of contaminant flow (in the event of a spill), potentially sensitive areas, such as water bodies, and general topography.

5. The proponent has indicated that their personnel will receive spill response training. A description of the training should be included with the spill plan (such as a course outline, duration of training etc.). This information is useful to regulatory agencies in that it allows them to determine how well-prepared a proponent is to deal with accidental spills. Proper training of the spill response crew is one of the key elements of an effective and efficient response. It is strongly recommended that personnel be provided with basic spill response training; preferably the type of training which includes practical, hands-on exercises.

6. The proponent should provide a complete inventory of spill clean up equipment that will be available for use at each site.

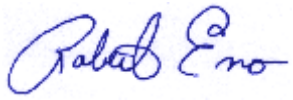
7. The reviewer appreciates the details provided in the proponent's spill plan. The proponent made reference to the GNWT's *Spill Contingency Planning and Reporting Regulations*, which were also adopted by the Government of Nunavut in 1999. It is suggested that the proponent obtain a copy of the *Guide to the Spill Contingency Planning and Reporting Regulations*. This guide was originally developed by Environmental Protection Service of the Government of the Northwest Territories to complement the aforementioned regulations. The proponent is also directed to a document developed by Environment Canada's Yellowknife office in 1990 entitled: *"Guidelines for the*

Preparation of Hazardous Material Spill Contingency Plans". The proponent may find these guidelines to be helpful in fine tuning their spill plan.

8. The body of the proponent's application contains a lot of information which would be useful to the spill plan, such as site and topographic maps, inventories of equipment and materials, site locations and their proximity to communities. To repeat an earlier comment: the spill plan should be treated as a separate stand-alone document; as such, the proponent should include this information with the spill plan as well as in the body of their application.

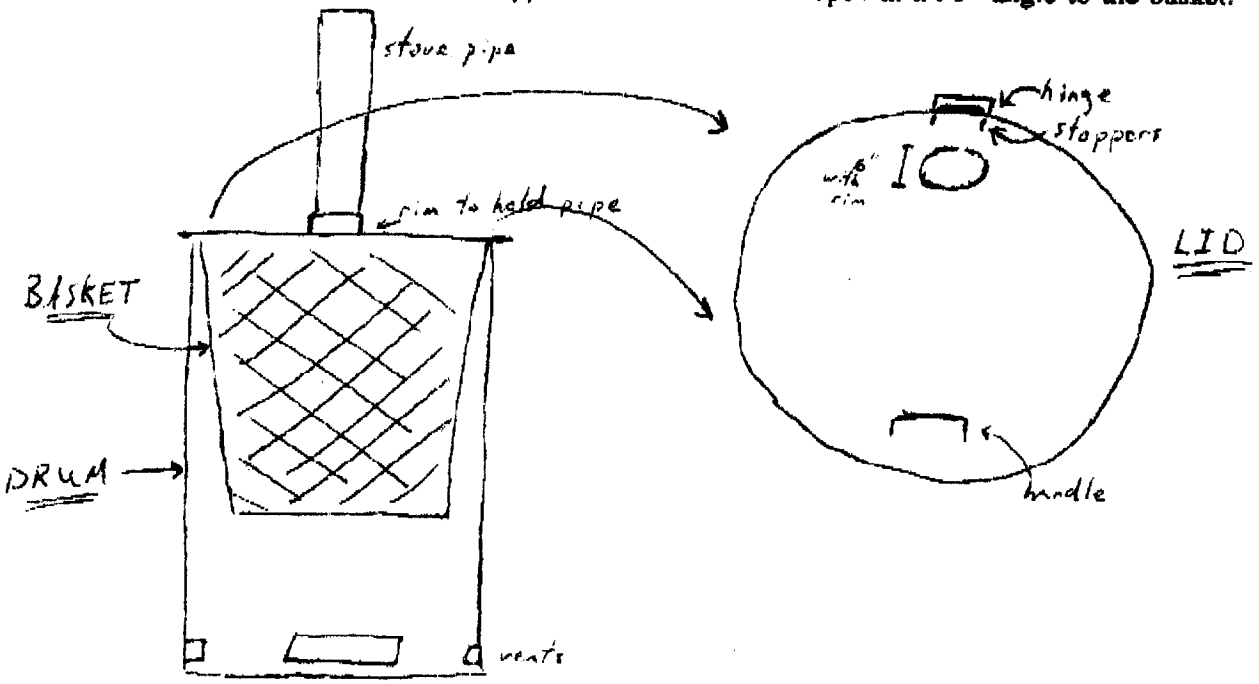
9. The reviewer is willing to address any questions that the proponent may have regarding spill contingency plans.

Review Date: February 13, 2004
Reviewer: Robert Eno



Goodday Robert!

As per your request, here is an update on our incinerator plans: Due to a mis-communication between the welding company and myself, the exact plans you received from me were not constructed. It was reasonably close though. The most important part of the design is still that the lid and wire mesh basket are a one piece unit. This accommodates easy use and portability. The lid however was not constructed as a split-hinged lid. It is a whole lid but still has the 6" hole for the stove pipe on top. The lid opens from the basket at a hinge located behind the 6" hole at the lip of the basket. Remember the lip keeps the unit on top of the drum. The lid now has stoppers which can hold it open at a 90° angle to the basket.



I tested out the unit on ordinary household garbage. It contained thick cardboard, newspaper, plastic, leftover fish parts, an oyster tin, and two aluminum pop cans (among other things). With three holes punched in the bottom of a 45-gallon drum and only using regular unleaded gas & wood for fuel, the burn went very well. An excellent draft was created and smoke poured out the chimney (6' of stove pipe was used). Few ashes were left after the burn. Nothing was left of the aluminum pop cans but the oyster tin and some tin-foil were left unscathed. I was quite pleased with the results however we still recommend a slower burning fuel for incineration.

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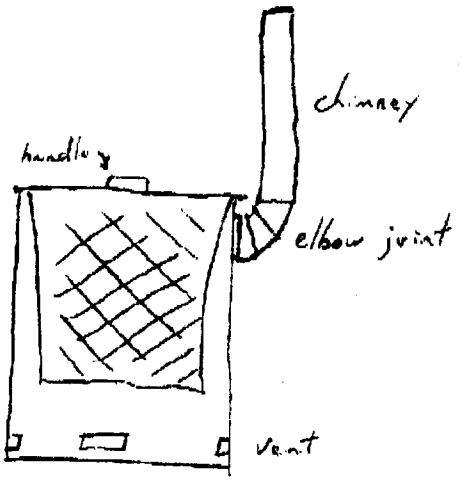
There is a problem for our model however. The lid acts as a flue channelling the flow of smoke and heat to the chimney. If the lid is opened during incineration, it is likely that flames may shoot out at the body opening it. The operator will not be able to add garbage to the unit unless the burn is completed. This may pose a problem to the larger camps which create lots of garbage to burn at once. However if multiple incinerator units are in place at a camp, and burns are completed after every meal, the units should be able to withstand the garbage load created.

We had three incinerator units constructed for $870.00. All three of these units were given to and are in place at Bathurst Arctic Services' Salmita Camp on Matthews Lake. This is an exploration camp with about 50 people in it. So far no complaints or comments have filtered back to me.

Andy [redacted] (Con. Ed. Officer, Yellowknife) likes the idea of moving the chimney to the side of the drum. Using an elbow joint affixed to the side, the stove pipe would protrude from there. The lid and basket would still be a one piece unit. Andy is now working on getting that model made up and sent out. This model would be safer as the flue is on the side of the barrel, not the top. However, the problem with this is that assembly is required for use. In the field, someone will have to punch a hole in the side of the drum and then bolt the elbow joint to it. I believe the best model should require little or no assembly or maintenance.



So this is the stage we are at now. Ray [redacted] and myself look forward to any comments or suggestions that you might have. Cheers!

Robert [redacted]
Wildlife Technician

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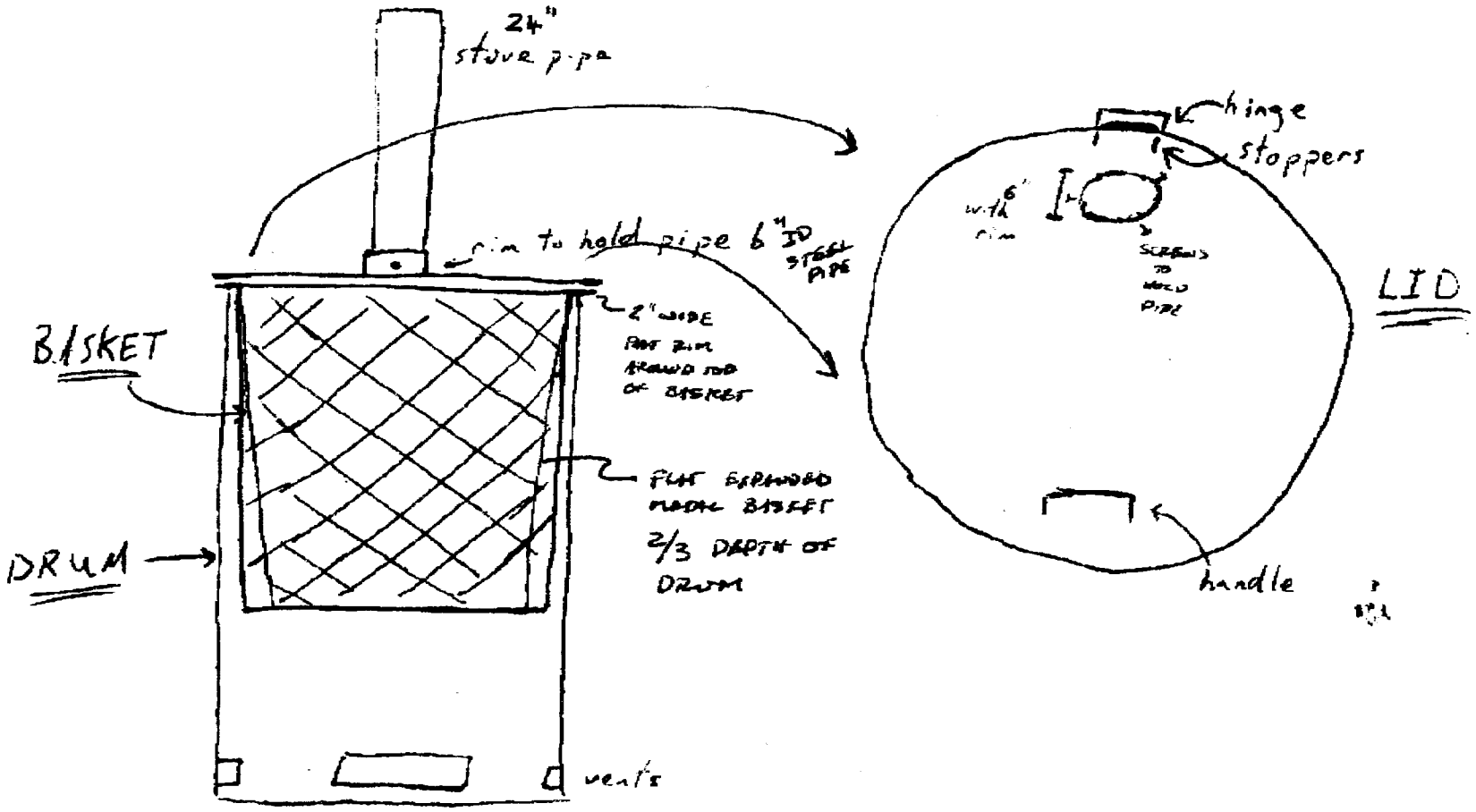

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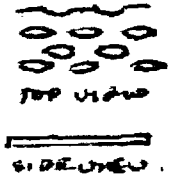

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