



SCHEDULE III
(Subsection 6(1))

APPLICATION FOR LICENSE, AMENDMENT OF LICENSE OR RENEWAL OF LICENSE

APPLICATION/LICENSE NO:
(amendment or renewal only)

1. NAME AND MAILING ADDRESS OF APPLICANT

BHP DIAMONDS INC.
#1102, 4920 - 52nd ST.
YELLOWKNIFE, NT
X1A 3T1
ATTN: John Witteman
Phone: 867-880-2232 Fax: 867-880-4008

2. NAME OF HEAD OFFICE IN CANADA IF INCORPORATED

BHP DIAMONDS INC.
#1102, 4920 - 52nd ST.
YELLOWKNIFE, NT
X1A 3T1
Phone: 867-669-9292 Fax: 867-669-9292

3. LOCATION OF UNDERTAKING (describe and attach a map, indicating watercourses and location of any proposed waste deposits)

The three areas of proposed mining development are Beartooth Pipe and Sable Pipe located as follows:

Beartooth Pipe at 64°43.9'N 110°30.4'W
Sable Pipe at 64°51.4'N 110°31.2'W

The proposed Sable Road will run between the Long Lake Containment Area and the Sable Pipe over approximately 19 km of terrain.

4. DESCRIPTION OF UNDERTAKING (describe and attach plans)

The development and mining of two kimberlite pipes (Beartooth and Sable) is proposed. These developments will require the dewatering of Sable and Beartooth Lakes. Pumping of Beartooth Lake inflow water to Upper Panda Lake, construction of an all weather access road from Long Lake Containment Area to Sable (approx. 19km), and construction of waste rock storage areas.

A more detailed project description with drawings is attached.

5. TYPE OF UNDERTAKING

Mining

6. WATER USE

To pump water around a proposed pit (Beartooth inflow)
To dewater 2 small lakes (Beartooth and Sable)
To cross a watercourse (Sable Road at kilometre 2.75)

7. QUANTITY OF WATER INVOLVED (litres per second, litres per day or cubic metres per year, including both quantity to be used and quantity to be returned to the source)

Water Use:	Beartooth	<1000 m ³ /yr	Sable	<1000 m ³ /yr
Water Diversion:	Beartooth	560,000 m ³ /yr	Sable	<100,000 m ³ /yr
Dewatering:	Beartooth	145,000 m ³	Sable	393,000 m ³

Water diversion includes diversion of existing inflows away from open pits (Beartooth).
Water Diversion includes diversion of known flows and operational pit dewatering.
Dewatering includes the initial removal of lake water from Beartooth and Sable Lakes.



NORTHWEST TERRITORIES WATER BOARD

MINING EXPLORATION AND DEVELOPMENT QUESTIONNAIRE

FOR

WATER LICENCE APPLICATIONS

AUGUST 1995

In Support of Water License Application
for Proposed Development of Beartooth and Sable Pits
By BHP Diamonds Inc.

November, 1998

volume of 145,000 m³. Over the last two years, two reports were prepared detailing the baseline environmental conditions of the lake and its one connecting stream, these are:

- Environmental Baseline Assessment: Beartooth and Bearclaw Lakes, Northwest Territories, 1996; and
- Beartooth Lake 1997 Fisheries Resource and Habitat Survey.

Sable Lake is approximately 19 kilometres north of the Long Lake Containment Area. It has a relatively small surface area of 8.9 hectares, a maximum depth of 16 metres and a volume of 393 000 m³. Environmental baseline reports prepared to date include the following:

- Sable Lake 1996 Environmental Data Report – Primary and Secondary Producers
- Sable Lake 1997 Fisheries Resource and Habitat Survey.

5. INDICATE THE PRESENT (OR PROPOSED) SCHEDULE FOR THE DEWATERING ACTIVITY.

Dewatering of Beartooth and Sable Lakes will be required. Dewatering of these lakes will be done in the winter at a maximum of 0.5m³/sec to maximize the stilling effects of ice cover and minimize catchment runoff. The following schedules apply for each dewatering operation:

	<u>Beartooth Lake</u>	<u>Sable Lake</u>
hours per day	<u>24</u>	<u>24</u>
days per week	<u>7</u>	<u>7</u>
weeks per year	<u>4</u>	<u>6</u>
number of employees	<u>10</u>	<u>10</u>

6. ESTIMATE THE TERM (LIFE) OF THE ~~EXPLORATION~~ MINING ACTIVITY.

Sable: 72 months
 Beartooth: 36 months

7. ATTACH A DETAILED MAP DRAWN TO SCALE SHOWING THE RELATIVE LOCATIONS (OR PROPOSED LOCATIONS) OF THE EXPLORATION ACTIVITY, SEWAGE AND SOLID WASTE FACILITIES, AND CONTAINMENT AREAS. THE PLAN SHOULD INCLUDE THE WATER INTAKE AND PUMPHOUSE, FUEL AND CHEMICAL STORAGE FACILITIES, ORE AND WASTE ROCK STORAGE PILES, PIPING DISTRIBUTION SYSTEMS, AND TRANSPORTATION ACCESS ROUTES AROUND THE SITE. THE MAP ALSO SHOULD INCLUDE ELEVATION CONTOURS, WATERBODIES AND AN INDICATION OF DRAINAGE PATTERNS FOR THE AREA.

See Project Description.

OUTLINE METHODS USED (OR TO BE USED) AND PROVIDE TEST RESULTS IN AN ATTACHED REPORT (IE. STATIC, KINETIC TESTS).

A representative number of samples from kimberlite and waste rock will be subjected to static ABA testing and static leachate testing. Static ABA tests will include a modified Sobek method for determination of net neutralization potential and analysis for total sulphur, sulphur, sulphate, paste pH and metals. If the results of static testing indicate a potential for acid generation, kinetic testing will be initiated to determine reaction rates, predict leachate quality, and provide input for development of mitigation techniques if required.

22. ESTIMATE THE PERCENTAGE OF SULPHIDES IN THE MINERALIZATION:

<u>pyrite</u>	<u>trace</u>
<u>pyrrhotite</u>	<u>not observed</u>
<u>pyrite/pyrrhotite mixture</u>	<u>not observed</u>
<u>arsenopyrite</u>	<u>not observed</u>

Kimberlites are known world wide to contain only trace amounts of sulphides. Observations on several kilometers of drill cuttings from each pipe indicate the sulphide content is highly variable locally from nil to less than 0.5%. The nature of the observed sulphide is usually pyritic globules disseminated in the kimberlite groundmass and very rarely as fine needles of millerite (NiS).

SECTION 5:

THE CONTAINMENT AREAS

38. WHAT IS THE (PROPOSED) METHOD OF DISPOSAL OF THE MINEWATER, MILL OR PROCESS PLANT TAILINGS (IE. SUMP, SUBAQUEOUS, SURFACE TAILINGS POND, SETTLING POND)?

Process plant tailings will be deposited into the Long Lake Containment Area as regulated by existing license N7L2-1616. Coarse kimberlite rejects from the process plant will be stored in specific areas of the Panda and Koala waste rock dumps.

Minewater collected within pit sumps will be either recycled for use in road watering and drilling equipment. Any residual mine water from the Beartooth Pit will be pumped to the Long Lake Containment area. Residual mine water from Sable Pit will be pumped to a settlement pond prior to release to Two Rock Lake.

39. ATTACH DETAILED SCALE PLAN DRAWINGS OF THE PROPOSED (OR PRESENT) CONTAINMENT AREA. THE DRAWINGS MUST INCLUDE THE FOLLOWING:

- (a) details of pond size and elevation;
- (b) details of all retaining structures (length, width, height, materials of construction, etc.);
- (c) details of the drainage basin;
- (d) details of all decant, siphon mechanisms etc., including water treatment plant facilities;
- (e) details with regard to the direction and route followed by the flow of wastes and/or waste waters from the area; and
- (f) indications of the distance to nearby major watercourses;

Drawings within the attached Project Description show the locations of individual pit sedimentation ponds. The design and operation of the Long Lake Containment Area has been addressed within existing license N7L2-1616.

40. JUSTIFY YOUR CHOICE OF LOCATION FOR THE CONTAINMENT AREA DESIGN BY RATIONALIZING REJECTION OF OTHER OPTIONS. CONSIDER THE FOLLOWING CRITERIA IN YOUR COMPARISONS: subsurface strata permeability, abandonment, recycling/reclaiming waters, and assessment of runoff into basins. ATTACH A BRIEF SUMMATION.

the project to proceed or not. Because formal assessment and screening of water licences was only initiated in about 1989, applicants will find that this process may be required even if the project has been built and in operation for several years. However, if your project has been previously screened (eg. for a renewal) then a further assessment may not be required, or a more limited process may be used. This will depend on individual circumstances, including the stage of the project. Some projects may need a higher level of review or submission of more information before being screened.

For all water licence applications, the Regulatory Approvals Section of Water Resources Division undertakes environmental assessment on behalf of the Minister for the larger "Type A" mining projects, and on behalf of the NWT Water Board for the smaller "Type B" projects (such as exploration and bulk sampling). In both cases, a screening determination is made and recommended to the appropriate office. No licence will be issued without the "go ahead" recommended following screening. If the project proceeds, environmental concerns raised will be considered when drafting the terms and conditions of the licence.

54. HAS THIS PROJECT EVER UNDERGONE AN INITIAL ENVIRONMENTAL REVIEW, INCLUDING PREVIOUS OWNERS?

YES _____ BY WHOM/WHEN _____
 NO X UNKNOWN _____

The Beartooth and Sable components were not directly addressed during the 1995 EARP process.

55. HAS ANY BASELINE DATA COLLECTION AND EVALUATION BEEN UNDERTAKEN WITH RESPECT TO THE VARIOUS BIOPHYSICAL COMPONENTS OF THE ENVIRONMENT POTENTIALLY AFFECTED BY THE PROJECT (eg. wildlife, soils, air quality), ie. in addition to water related information requested in this questionnaire?

YES X NO _____ UNKNOWN _____

56. IF YES, PLEASE ATTACH COPIES OF REPORTS OR CITE TITLES, AUTHORS AND DATES.

- NWT Diamonds Project Environmental Impact Statement, BHP Minerals 1995
- Bird Inventory and Habitat Assessment – 1995 Baseline Update, Rescan, December, 1995
- Eskers Carnivores and Dens – 1995 Baseline Update, Rescan, December, 1995