



6 Adelaide Street East, Suite 202
Toronto, ON M5C 1T6
Tel: 780-435-0045; Fax: 780-428-3476
www.shearminerals.com
TSXV: SRM

June 10, 2011

Sent via email

To:	Phyllis Beaulieu (NWB)	licensing@nunavutwaterboard.org
	Geoff Clark (KIA)	geoff@qiniq.com
	Sophia Granchinho (NIRB)	sgranchinho@nirb.ca
	Tanya Trenholm (INAC)	Tanya.Trenholm@inac-ainc.gc.ca
	Allison Dunn (EC)	Allison.Dunn@ec.gc.ca
	Robert Beddingfield (DFO)	Robert.Bedingfield@dfo-mpo.gc.ca
	Ian Rumbolt (INAC)	Ian.Rumbolt@inac-ainc.gc.ca

Dear All,

**Re: Shear Diamonds (Nunavut) Corp. – Jericho Diamond Mine
Deposition of Fine Processed Kimberlite Outside of the Processed Kimberlite
Containment Area**

In April, during the under ice sampling component of the Aquatic Effects Monitoring Plan (AEMP), we noted that the fine processed kimberlite (FPK) had been dispersed, by the wind, beyond the extent of the Processed Kimberlite Containment Area (PKCA), see enclosed photos. The full extent to which the fine PK has been deposited is not yet known.

Immediate Action Taken

At Shear's direction, sampling stations were added to the under ice sampling program based on the potential impact of the FPK to nearby and downstream water bodies. These waterbodies include: Lynn Lake, Key Lake, Ash Lake and two unnamed lakes (since named Southeast Lake and Shine Lake). Ash Lake and the two unnamed lakes were frozen solid to the bottom. Water samples were collected at both Lynn (2 metres above the lake bottom and 1 metre below the ice) and Key Lake (1 metre below the ice). A map has been enclosed with this letter identifying the location of these waterbodies (Figure 1).

Shear had purchased six (6) dustfall sampling stations in support of the draft Air Quality Monitoring Program being developed for the Jericho mine site. Upon observing the FPK, an additional ten (10) dustfall sampling stations were ordered.

Shear has contracted EBA Engineering to assist in the development of a mitigation plan to address the deposition of the FPK. The mitigation plan will identify options to control and minimize the deposition of FPK outside of the PKCA. These options will be employed and tested over the next year. The options will be presented at the upcoming Technical Meeting and information gathered during the discussion will be incorporated into the mitigation plan.

Follow Up Action

The South and Southeast Dams outside faces had accumulated considerable snow over the winter and were in April, above the height of the dams. A portion of the wind-dispersed fractions of FPK were captured within these snow-banks. As the snow melted and sublimated the concentration of FPK within the snow-load on these outside dam faces was apparent. The FPK had consolidated into a 2cm mat over the snow packed area at the time of these investigations. The FPK was also evident on snow free slopes in the area and has caked on to low- slope vegetation.

At the direction of Shear, the following actions were undertaken:

- 1) The south slope of the south dam was evaluated for volume of FPK entrained snow. This was conducted by gathering continuous track Global Positioning System (GPS) coordinates of the perimeter of the snow area and by digging a sample pit to determine depth. The slope area on the outside of the southeast dam area was evaluated for volume using the same manner.
- 2) The area was sampled to indicate the quantity, particle size and chemistry of the FPK entrained in the snow. An area of 4 meters squared was dug to bottom (approximately 1.7m) of the snow pile mid-slope. A clean face of the snow pit was cut using a shovel and the stratification was photographed with a tape measure for scale. Two core samples were taken from top of snow to the ground level and are being evaluated for particle size and total particulate. A second sample was retrieved from the top layer of consolidated FPK for chemical composition and shake flask analysis.
- 3) The area around the small lake (Southeast Lake) was walked by Shear environment personnel to determine if the lake was a basin or a lake with inflow and outflow. No flow out of the basin was indicated. Particulate was observed within the riparian area directly down-slope of the southern slope but not of a volume that indicated a multi-year dispersal of the same magnitude and the FPK “dropped out” of the water stream considerably prior to entering the basin lake.
- 4) Attempts were made by site operations to remove the FPK entrained snow from the banks using an excavator and transporting the material by loader to within the PKCA. A volume of snow (approximately 35m³) was removed from the more easterly slope. These attempts were ceased due to safety reasons.

The Air Quality Monitoring Program will include the additional dustfall stations and vegetation sampling locations to be sampled this coming summer. As stated above, Shear installed six (6) dustfall stations late May. These dustfall stations were placed specifically to gather information on the deposition of the fine PK, see Figure 1 attached.

The AEMP will be amended to include summer sampling of Southeast and Shine lakes and under ice sampling at Lynn and Key Lake. Lynn, Key and Ash Lake are already included in the

summer AEMP sampling program. In July of this year, a study will be undertaken at Southeast and Shine lakes to determine if they are fish bearing.

Moving Forward

Samples were taken from within the PKCA for particle size analysis. Going forward to address dispersal of FPK and to mitigate against future incidents it is important to get an understanding on how, why and when the FPK is wind dispersed outside the containment area. Knowing what fractions of FPK are most susceptible to dispersal and conversely which are not will assist with the development of a plan to manage the FPK going forward. In total 16 samples of process Kimberlite were taken from within the PKCA.

Shear will present the mitigation options at the Technical Meeting and will distribute a mitigation plan for review following these discussions. Trials will be established this year and monitored. A follow up report with findings will be submitted.

If you have any questions, please do not hesitate to contact us.

Sincerely,

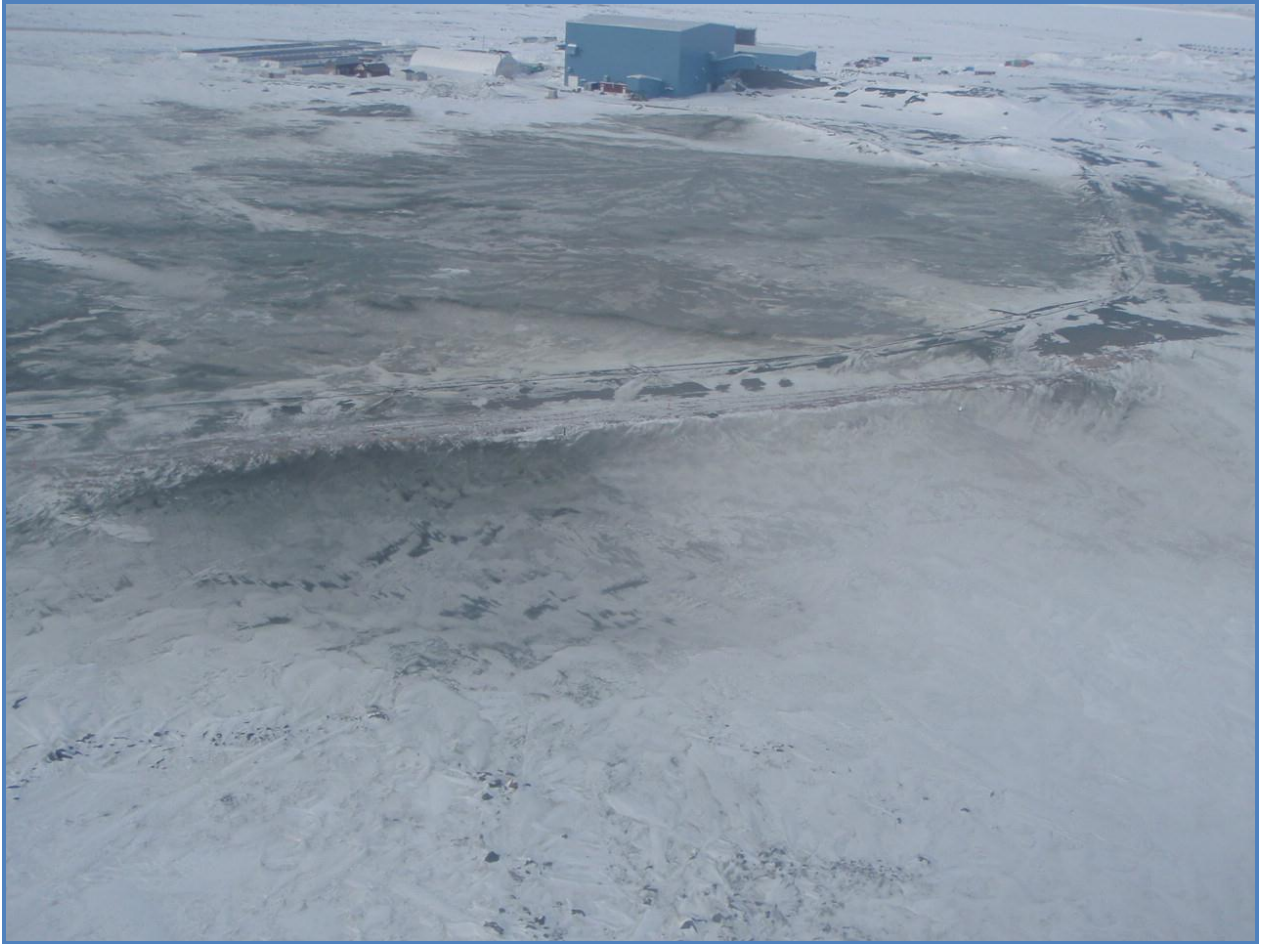
Shear Diamonds Ltd. and Shear Diamonds (Nunavut) Corp.

per:

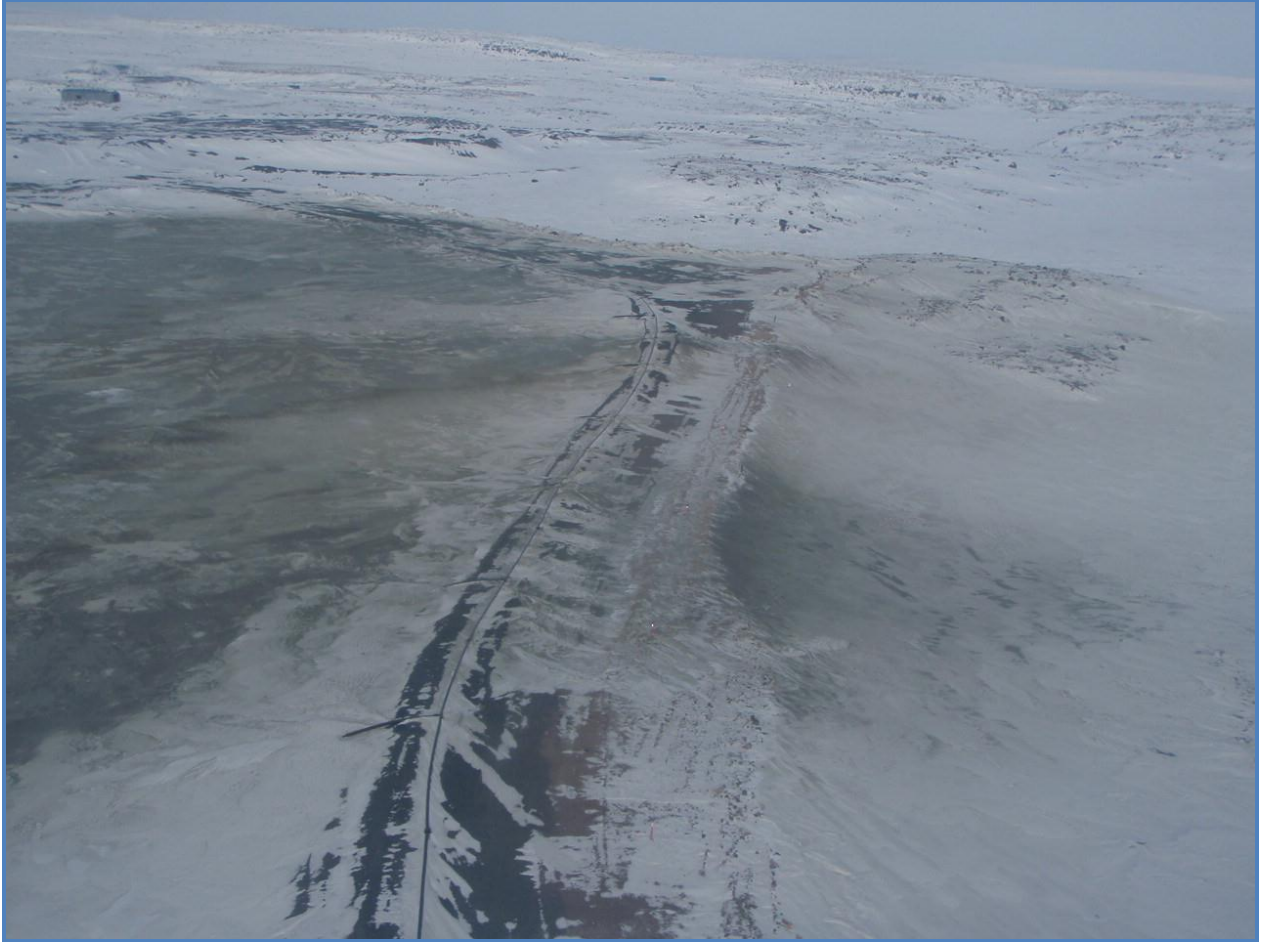
A handwritten signature in cursive script, reading "Pamela Strand".

Pamela Strand, P. Geol.
President

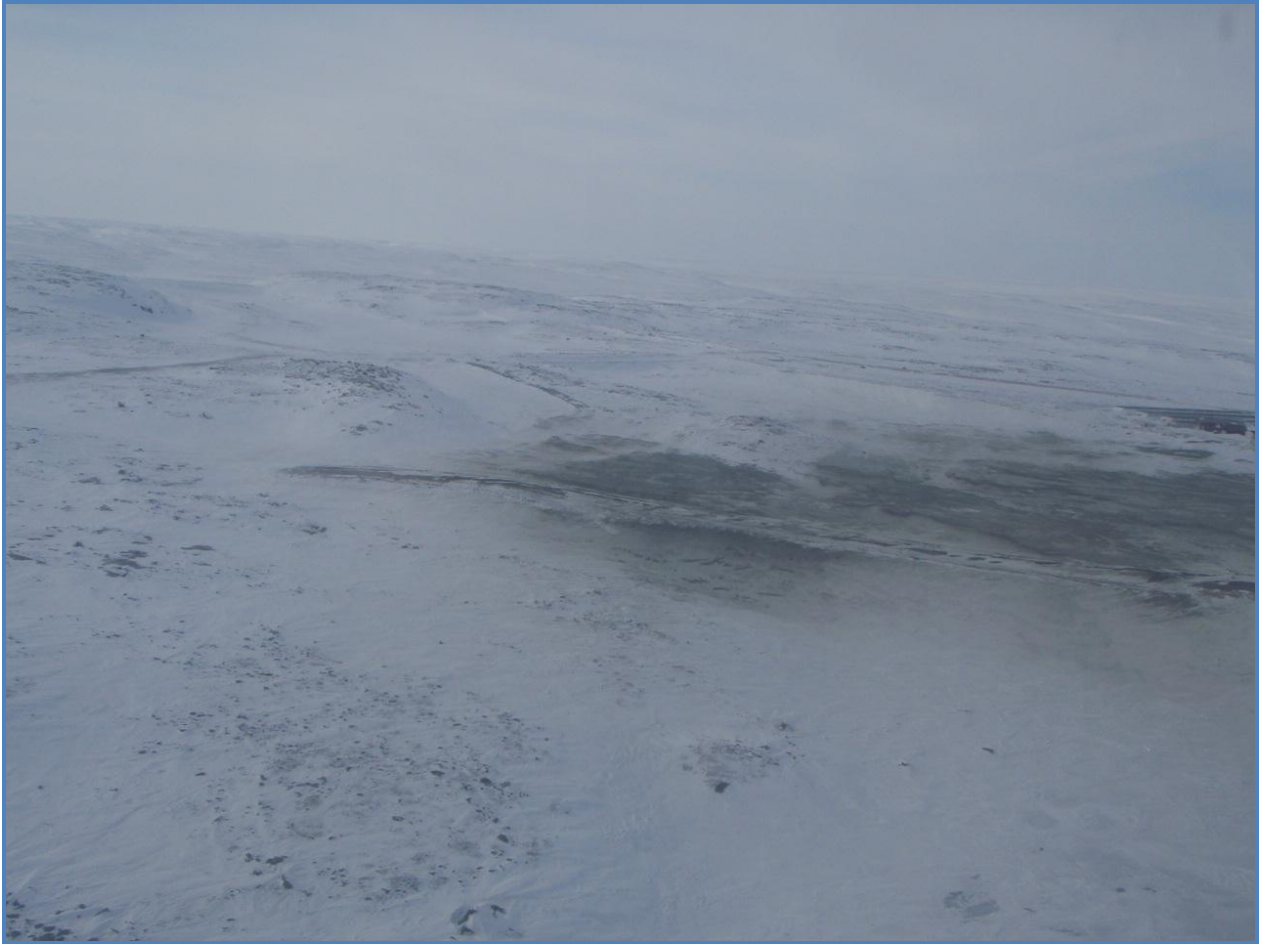
PHOTOS



View looking toward the Southeast Dam.

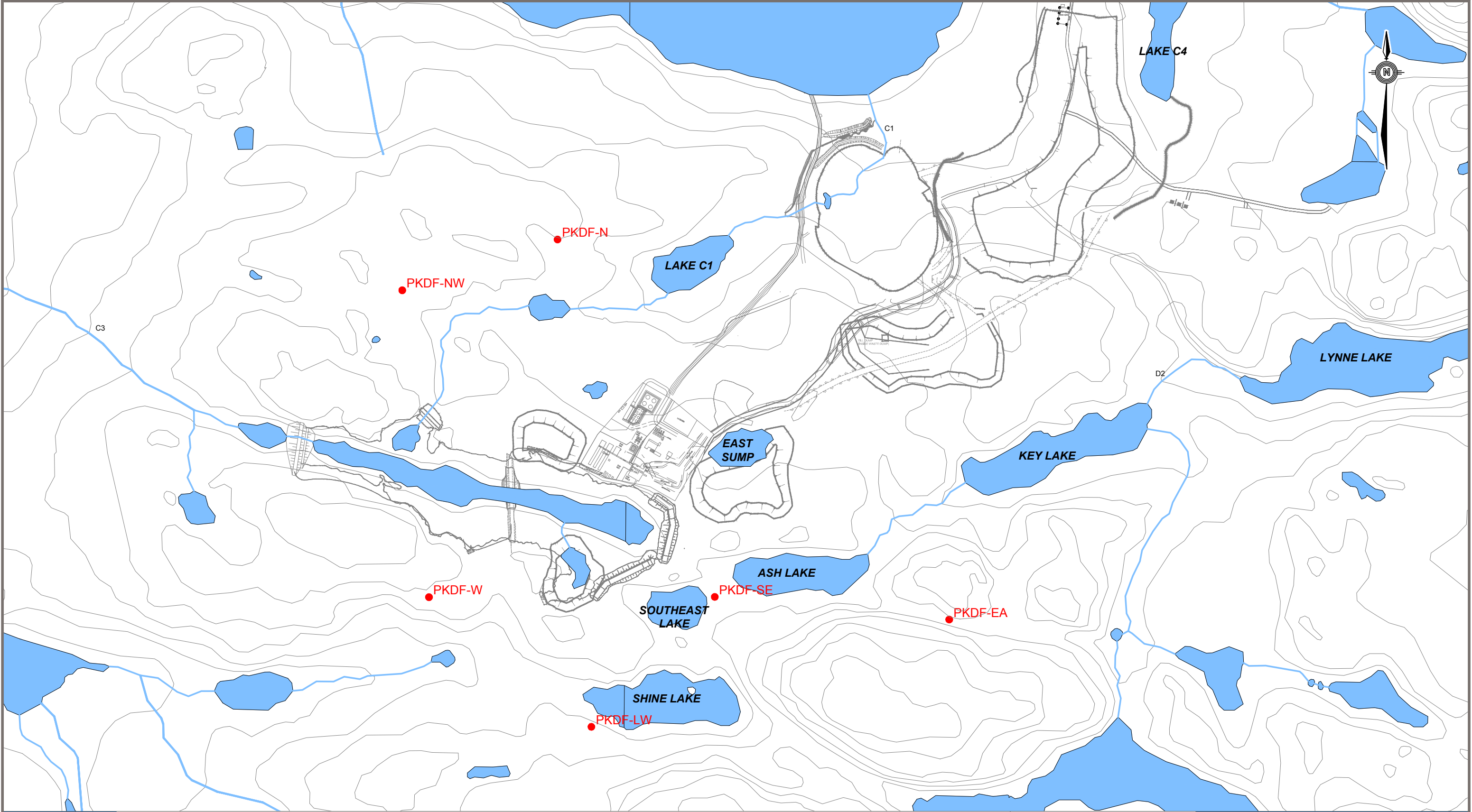


View of the Southeast Dam. PKCA on the left.



View looking toward the Southeast Dam.

FIGURE 1



LEGEND

● - PASSIVE DUSTFALL STATIONS FOR FINE PROCESSED KIMBERLITE MONITORING

NOTES
DRAWING BASED ON NTS MAP 76E13, 76E14, 76L03,
AND 76L04

STATUS
ISSUED FOR USE

CLIENT



AIR QUALITY MONITORING PLAN
JERICO DIAMOND MINE, NUNAVUT

PASSIVE DUSTFALL STATIONS FOR FINE
PROCESSED KIMBERLITE MONITORING

PROJECT NO.
E14101118

DWN
DBD

CKD
WL

REV
0

OFFICE
EBA-EDM

DATE
June 01, 2011

Figure 1

