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**TSXV: SRM**

July 12, 2011

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Dear Mr. Rumbolt:

**Re: Response to June 2011 Inspection Report of the Jericho Diamond Mine Property, 2AM-JER0411 – Shear Diamonds Ltd.**

We have received and reviewed your letter and inspection report, dated July 4, 2011, for Water Licence 2AM-JER0411, Jericho Diamond Mine and offer the following in response.

As a preliminary point, you stated in your opening paragraph of your inspection report, Shear was granted an amendment to the term of the water licence, however this is through to March 1, 2012, not March 31, 2012. As well you state that Shear took over the Jericho Diamond Mine site during the summer of 2010. The acquisition of the Jericho Diamond Mine was not finalized until very late in August 2010. This is important to note since it left Shear very little time to assess existing on-site conditions or to put measures in place to address issues prior to winter, particularly in relation to water issues. Shear did not learn, until personnel arrived on site in September, that there had been no site water management activities undertaken in 2010 prior to the acquisition. This included pumping out water that had accumulated within the fuel storage facilities and discharging from the Processed Kimberlite Containment Area (PKCA). discharge from the Processed Kimberlite Containment Area (PKCA) once personnel arrived on site, sampled, and waited for lab analyses and then the necessary approvals. The volume of water in the PKCA was a concern because there had been no discharging prior to Shear arriving on site in September 2010.

#### **PKCA**

**Fine Process Kimberlite (FPK) from the PKCA was dispersed by wind over the Southeast (SE) Dam. The FPK was dispersed over the Southeast Dam and now covers majority of the ground on the south slope of the dam and rocks in the SE Lake. In a report that was submitted by Shear to the NWB on June 12, 2011, it was noted that the fines were dispersed over the dam. This issue was noticed by Shear staff in April 2011, but was not reported until now, which is a concern for INAC. It is apparent that the containment area is not working as it should be and must be addressed.**

Shear's response: Shear first noted that fine processed kimberlite (FPK) was being dispersed outside of the PKCA by wind during the under ice water sampling for the Aquatic Effects Monitoring Program (AEMP), April 2011. Shear immediately took a number of actions:

- added additional sampling stations to the AEMP in response to this discovery that included two lakes to the winter, under-ice sampling program (Lynn and Key lakes) and two lakes to the summer sampling program (Southeast and Shine lakes). Ash, Southeast and Shine lakes were all frozen to the bottom and thus were not added to the winter, under-ice sampling program.
- immediately upon leaving site, informed and discussed this discovery with the Kitikmeot Inuit Association and the Nunavut Impact Review Board during the community consultation tour.
- notified and discussed this discovery with Northern Contaminated Sites Program, Public Works Government Services Canada, the federal department responsible for oversight of the Jericho Diamond Mine prior to Shear's acquisition of the Mine in late August, 2010 (via email with Michael Bernardin April 25, 2011). Mr. Bernardin stated that while checking in on the site throughout the winter months during (2009/2010), the area around the camp and mill was visually impacted with "windblown tailings". He could not speak to the area beyond the dams though because "monitoring of windblown tailings was not an explicit task in the contractor's scope of work while the site was under C&M with PWGSC".
- notified and met with the Department of Fisheries and Oceans on May 2, 2011 the department responsible in the event FPK settling on water constituted a deleterious substance under the Fisheries Act. On May 2, 2011 an update with photos from site, including photos of the FPK were provided to DFO.
- notified and discussed the FPK with Environment Canada and sought the advice of Dave Fox with regard to the placement of six additional dustfall stations in response to the FPK.

On June 12, 2011, Shear provided an update on the measures taken to date to address the FPK issue. Shear also provided an update during the Technical Meeting held in Cambridge Bay on June 20.

#### **Pit Dewatering**

**Samples and analysis and a letter of intent to discharge must be sent to the NWB and Inspector 10 days prior to discharge.**

As per your request, Shear will provide a letter of intent to discharge accompanied by pit water quality analyses ten (10) days prior to discharge to the NWB and Inspector.

#### **Fuel Storage**

**There is a considerable amount of old fuel onsite. Shear informed me that an additive could possibly be added and the fuel could be used for other purposes at site. A plan needs to be in place to deal with old fuel in the tank farm.**

Shear's response:

Shear is currently preparing a plan for the old fuel onsite. This will be reviewed with the Nunavut Water Board and the Inspector prior to any fuel handling.

**There are numerous drums of fuel stored to the left of the helicopter landing area. I recommended that these drums be stored in secondary containment. Shear has secondary containment berms scheduled to be sent from Yellowknife to deal with this issue.**

Shear's response:

The secondary containment berms were installed on June 16, 2011. Fuel drums were placed within the secondary containment berms with bungs in the 3:00 and 9:00 position on June 18<sup>th</sup> and 19<sup>th</sup>. Inspections of all fuel containment structures are conducted daily.

**Water has accumulated in nearly all of the secondary containment berms for fuel storage onsite. There are a few issues with this accumulation. 1) In the event of a spill the secondary containment**

should be able to hold 110% of the largest tank. With water in the bermed area, I'm not sure there is enough capacity in the berm in the event of a spill. 2) Water in the berms has been contaminated with fuel from spills that have occurred over the years. Water from the berms will have to be tested, treated and retested to confirm that the water meets the specific criteria for discharge. This analysis and a letter of intent to discharge must be sent to the NWB and Inspector 10 days prior to discharge. 3) The amount of water in a couple of the bermed areas has caused minor damage to the berm itself (i.e. wave action causing erosion issues). Water from all of the secondary containment (bermed) areas must be removed as soon as possible. Shear informed me that this will be dealt with in the near future.

Shear's response:

In the emergency amendment request submitted by Shear to the Nunavut Water Board (January 31, 2011), Shear identified four critical action items that if left, had the very real potential to lead to the contamination of the receiving environment. One of these four action items was the treatment and pumping of water that had accumulated within the secondary containment facilities for the bulk storage of fuel. Water had not been pumped from the secondary containment facilities during the care and maintenance of the site in 2010. When Shear arrived on site in September 2010, there was no way to treat the water and not enough time left to do anything prior to freeze up.

Shear immediately retained the services of the Ketek Group Inc. to assist in designing and building a mobile water treatment system specifically to meet the needs and climate of the Jericho Diamond Mine. This unit has been constructed and is scheduled to arrive at the mine site on June 12th. Shear is aware, via review of filed spill reports, that there were historic spills of significant volume. Shear will treat the water, contain the treated water and collect samples for analyses prior to pumping to the PKCA in order to prove up the system.

In your inspection report you state that the water must meet "specific criteria for discharge". Shear seeks clarification on what the "specific criteria" are and would also like to clarify that the water from the secondary containment facilities is being pumped to the PKCA, not discharged to the receiving environment. Given this, it is unclear as to why you have requested that Shear provide ten (10) days notification of pumping the treated water to the PKCA.

The berms will be inspected during the upcoming Annual Geotechnical Inspection. This report will be submitted, in accordance with Part F, 4(e), to the Nunavut Water Board and the Inspector.

**Numerous minor spills around site will have to be cleaned up and disposed of appropriately.**

Shear's response:

Spills that occur and those historical spills discovered will be cleaned up and disposed of appropriately.

### **Hazardous Waste Transfer Area**

**Hazardous Waste Transfer Area (HWTa) is in need of proper management practices. There is a considerable amount of waste oil, old fuels, contaminated water/fuel that should be dealt with immediately. The liner around the perimeter (numerous locations) is exposed, torn and is in need of repair or replacement. There are numerous barrels that are full of waste oils/fuels that are not covered and leaking on the ground. A large amount of contaminated soil (from a previous spill) is stored in the hazardous waste area and at the time of the inspection was covered with a tarp so it was not open to the elements.**

Shear's response:

Shear shares your concerns, raised in your role as the Inspector, with regard to the state of the containment liner and the volume and storage methods of the hazardous material within the HWTa. The material found within the HWTa existed prior to Shear's acquisition of the site. During our conversations with you on [date/after the Nunavut Mining Symposium] we had expressed concern about the conditions at the Mine site that might be discovered once the snow melted. In our discussions with you on [date]

Shear personnel conveyed to you their findings at the HWTa and recommended that you conduct an inspection and that you bring any necessary bottles for sampling.

Shear is currently developing plans to address the damaged liner and is working to sort and properly contain the wastes until they can be shipped off-site for appropriate disposal.

#### **Non-Compliance of Act or Licence**

**Fine process kimberlite was dispersed over the South East Dam over the winter. This was noticed by Shear staff during April 2011, but was not reported until June 11, 2011. Any unauthorized discharges should be reported immediately after it has been discovered.**

Shear's response:

Shear disagrees with this comment. Shear did report this finding to various agencies immediately upon discovery (see the dates and agencies identified above). In doing so, Shear sought the advice of those individuals with specific expertise to appropriately address the issue of the FPK. As indicated above, Shear corresponded with Michael Bernardin on April 25, 2011 who indicated that he knew of the FPK issue whilst Jericho was under his care as a representative of AANDC. Unfortunately, and unbeknownst to Shear, this information was clearly not shared amongst other individuals within AANDC, which Shear had presumed would have been the case. This information was however, conveyed to all other agencies that had regulatory interest and responsibility for the Mine.

**Plans must be developed and implemented to deal with the hazardous wastes and for the old fuel stored onsite. At the moment hazardous wastes are accumulating in the hazardous waste transfer area, but no transfer or disposal of these wastes have occurred. There is a considerable amount of old fuel onsite that will either have to be used or disposed off.**

Shear's response:

Shear is currently developing plans to repair/replace the damaged liner, to sort and properly contain the wastes that exist in the HWTa and to treat the water that has accumulated. The hazardous wastes are not accumulating in the HWTa; they were already there when Shear assumed ownership of the Mine. The volume of hazardous material is significant. The contaminated soil that has been stored on site from previous historic spills is substantial. None of this material was disposed of during operations conducted under Tahera nor whilst under the care and custody of AANDC. Shear has submitted the following plans, in support of the Type A Water Licence renewal application:

- Waste Management Plan
- Preliminary Landfarm Design Plan
- Landfarm Management Plan

The tears that exist in the liner, as well as the spills which have led to the volumes of contaminated soil and hazardous wastes, did not occur since the acquisition of the property by Shear, yet nothing was done to address this previously. Shear has been completely open with the findings at the site and proactive in developing plans to address the non-compliances that have been discovered to date.

**Secondary containment is recommended for all fuels stored in drums.**

Shear's response:

All drummed fuel is now stored in secondary containment.

**A plan of action (schedules and timelines) is required to deal with the issues onsite. Shear and INAC should work together on this to make certain that issues are being dealt and moving forward in a timely manner.**

Shear's response:

Shear has been open, transparent and communicative with all agencies, including AANDC and the Inspector. Shear personnel contacted the Inspector to request an inspection of the site and

recommended that the inspection occur prior to the Technical Meetings held in Cambridge Bay on June 20, 2011. Shear also informed the Inspector of the concerns with regard to the FPK, the HWTA and the volume of water in the secondary containment facilities. Shear recommended to the Inspector that he should bring adequate bottles to site to collect samples during his inspection. Shear believes that we have demonstrated a willingness to work with all agencies and that we have been open in discussing concerns and issues. It is Shear's desire to continue working in this manner.

The tone of the inspection report is in stark contrast to the cooperative dialogue that we experienced during your inspection of site and the phone calls both prior and subsequent to your inspection. It is not that Shear "seems" to be making a conscious effort; Shear is, and will continue to make a conscious effort to recognize and address the various issues onsite.

Sincerely,



Pamela Strand, M.Sc., P. Geol.  
President



Julie Lassonde Gray  
Executive Chairman & CEO

cc: Bernie MacIsaac, Director of Operations, NU Regional Office, AANDC  
Charlie Evalik, President, Kitikmeot Inuit Association  
Phyllis Beaulieu, Manager of Licencing, Nunavut Water Board  
Ryan Barry, Director of Technical Services, Nunavut Impact Review Board

## Secondary Containment Berms Installed at Site for Drummed Fuel

