PEREGRINE
DIAMONDS LTD.

09 August 2012

REPORT ON A SPILL INCIDENT AT DISCOVERY CAMP AIRSTRIP APRON, CHIDLIAK PROJECT: DISCOVERED AND CLEANED UP BETWEEN 01 AND 04 AUGUST 2012

Introduction: What Happened

On 01 August 2012, at approximately 1430h, a leak of Jet-A aviation fuel (UN 1863, "Fuel, Aviation, Turbine Engine") occurred after a scheduled air-charter flight had landed at Discovery Camp. The leak occurred whilst the Twin Otter had landed and was taxiing onto the apron (a natural cobble and rock plain adjoining the natural cobble and rock landing strip). Leakage of 50L occurred from a damaged rear fuel valve on the underbelly onto the apron, with approximately 50% or 25L leaking onto rocks and surface soil in a $3m^2$ area (1.5 m x 2.0m), with the remaining 25L immediately captured in a spill-kit drum and pails already deployed near the airway. There was no proximity to water; the seasonal glacial rill which passes east, south and west of the camp environs is no closer than 60m to the airstrip area at the closest point. Although a thin trail of fuel was initially observed on the ground as the aircraft moved, most of the leakage occurred directly to a small area under the valve when the plane stopped. The spill location was: 64° 14' 21.77" N lat. – 66° 20' 54.84" W long.

Operator of the aircraft was Unaalik Aviation of Iqaluit. Peregrine staff were already at the airstrip for an arriving flight, so necessary supplies were close at hand; assistance also was available quickly from two Great Slave Helicopters (GSHL) engineers on site, who found the right size bolt to plug the drain hole, so that the plane could return safely to Iqaluit. Fuel-contaminated material was excavated at the spill site to a depth of 0.6m or until a sniff test determined that no more fuel contamination remained.

Cause of Spill:

The cause of the leak was failure of a fuel drain valve, which was a circumstance beyond Peregrine's control. It might be speculated that the drain was struck by a rock whilst the plane was taxiing to the apron or that the valve perhaps had worked itself loose after landing. The aircraft fuel gauge did not indicate any loss of fuel during the 30-minute flight between Iqaluit and Discovery Camp.

Actions Taken:

Designated Peregrine personnel were at the airstrip to meet the plane upon arrival, saw the leak coming from under the plane and notified the First Officer that the drain valve was leaking. As soon as the plane had stopped, the leak was temporarily plugged with absorbent padding whilst repairs ensued over a 30-minute period. A GSHL mechanic arrived to the scene quickly, as there were two helicopters on site at the time, and provided an aircraft bolt of proper size to stop the leak. The plane then departed at 1500h, allowing cleanup of the spill area to proceed. (*Please see documenting photos on Pages 3-4*). A total of 25L had leaked from the drain valve prior to plugging of the leak. Spill pads were applied to the spill area to absorb any visible fuel, with padding trailing out along the 70m west-east path that the plane had followed for taxiing. Another 25L was immediately captured when the spill-kit drum nearby was deployed as a refuge container, along with a 20L pail. A labour crew then began excavating the spill by hand with shovels, depositing contents into drums for disposal offsite. At 1800h, after the most pressing spill response was attended to, Acting Project Manager Duncan McBean completed an internal report and filed Report *#12-315* with the NT-NU Spill Report Line at *spills@gov.nt.ca* .

By the evening of 01 August, two 205L drums had been filled with fuel-contaminated soil and rocks to a weight of approximately 270kg each. As rain was expected for that evening and the morning of 02 August, the excavated area

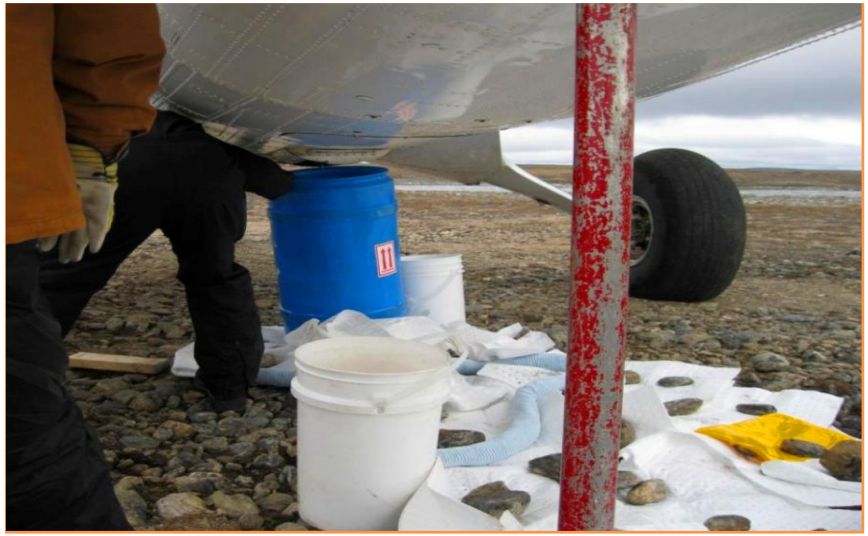
was covered with plywood and tarps to protect the work in progress. Effort was not expended on the thin fuel trail, which had only temporarily marked the ground but did not contain enough product to be absorbed with the matting that was laid down nor to be shovelled into drums.

The cleanup of the spill area resumed on 02 August and concluded on 04 August, with outshipment of the last container of material. Material was sent for treatment to Nunatta Environmental Services in Iqaluit, who are Peregrine's identified environmental-response firm. Six drums of rocks, cobbles and soil weighing 270kg each for a total of 1 620kg were transferred to and accepted by Nunatta; a further overpack container weighing approximately 36kg (empty pails, used padding, *etc*.) also was sent to Nunatta. The event is now considered successfully concluded.

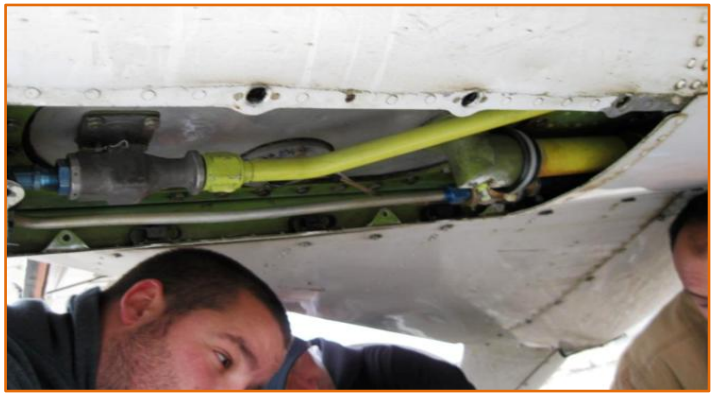
Conclusion:

The above is an accounting of spill event *#12-315* and its resolution. We trust that all is in order. Documenting photos are attached at the end of this report.

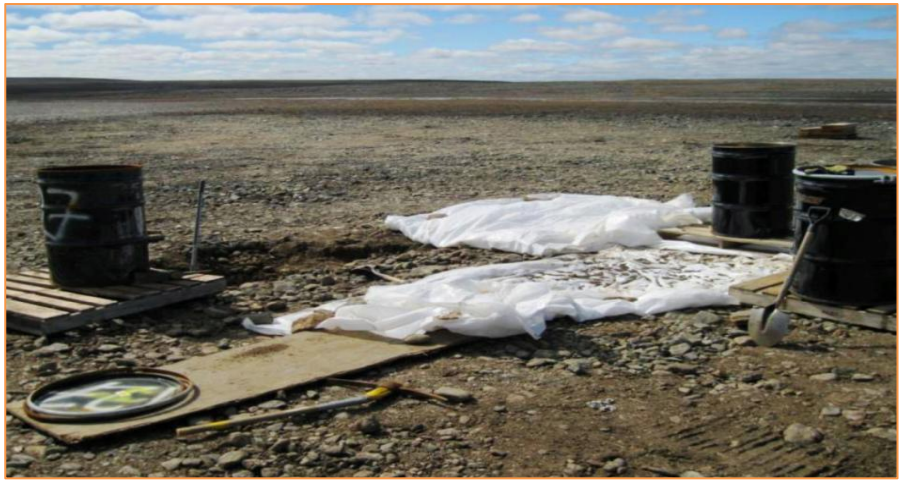
Shirley Standafer-Pfister
Manager, Regulatory and Environmental Affairs
Peregrine Diamonds Ltd.



Left: Spill-kit drum, pails captured 25L immediately.
Above: Spill pads on fuel trail.



Above: Heli engineers had a bolt that fit the drain.
Right: Long view of fuel trail on apron.



Far left: Rocks and cobbles were shovelled onto tarps and then into drums.
Left: Typical drum of material retrieved.

Above: Cobbles, rocks and gravelly, silty soil was shovelled out and placed in containers. Right: Peregrine staff backfilled area with with clean native material from the apron area.

Left: View of main spill area after backfill with clean native material. (Completion date of cleanup: 04 August 2012.)