Paul Mercredi

From: Aileen Stevens <Aileen_Stevens@gov.nt.ca>
Sent: Tuesday, January 08, 2013 3:54 PM
To: Paul Mercredi
Subject: follow up

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Hi Paul,
You requested that ENR provide further information regarding the following comment provided in Paragraph 5, Section 3 of the GNWT Technical report for the Avalon Thor Lake Rare Earth Element Project, November 29, 2012: "The complex nature of incineration and the difficulties demonstrated by other incinerator operations in the NWT provides further evidence that stack testing is a necessary component for appropriate incinerator management".

Waste incineration is complex. To appreciate the mechanical/technical complexity experienced with the operations of such incinerators, it is helpful to consider other documented difficulties in northern incinerator operations. This helps to demonstrate the range of difficulties that result; from getting units into service, to emission exceedances despite the proponent's provision of an Incinerator Management Plan.
ENR provides the following examples:
1) BHP Ekati Diamond Mine (Ekati), NT:

- In 2005, Ekati commenced the onboarding of 2 new incinerators, with intended improvements such as reduced emissions compared to its then-existing incinerators (BHP Letter to INAC, "Notification of Incinerator facility construction, Land Lease 76D/10-3-2 Tailings Disposal Facility", June 6, 2005).
- However, BHP experienced a number of issues since the purchase of these new incinerators that prevented them from being brought on line until 2011. BHP noted in 2011 that it "encountered a number of frustrating operational issues that have prevented it (incinerator) from being put into use. Necessary physical modifications to the incinerator are underway and the facility will be commissioned as soon as it is ready" (BHP Response to Recommendation #1, Independent Environmental Monitoring Agency Annual Report Summary Brochure, 2010-2011).
- Since the incinerators have been brought on line, they continue to demonstrate operational issues. The report from the AANDC Water License Inspection conducted on October 9th, 2012, noted that "there has been a lot of soot build up observed on the outside of the new incinerator building which may be an indication of incomplete combustion" (AANDC letter to BHP,"Re: September 6th, 2011 AANDC Water Licence Inspection", October 18th, 2012).
- A stack test has not yet been completed, but Ekati indicated at a November 6th, 2012 workshop that one is slated for January of 2012 (Environmental Impact Review 2012 Public Workshop, November 6, 2012).

2) Miramar Hope Bay Mining Limited (HBML) Doris North, NU:

- Despite measures outlined in the HBML Doris North Incinerator Management Plan, July 2009, (required by Water License 2AM-D0H0713, Part G, Section 7), stack testing conducted on Sept 29 through Oct 1, 2009 reported exceedances of the CWS Standard for Dioxins and Furans emission criteria (average 2,170 pg/Rm^3 vs standard of 80 pg/Rm^3). Following this, in a letter provided to Environment Canada (Feb 16, 2010, "Doris North Incinerator Stack Testing") HBML provided that mitigative management practices and determined efforts would be implemented in preparation for another stack test. Stack testing conducted on July 17th to 19th, 2012 reported emission concentrations in compliance with the CWS standards (average of 29 pg/Rm^3 vs standard of 80 pg/Rm^3).

- This example demonstrates that despite the development of an Incinerator Management Plan, exceedances of emission criteria occurred, and stack testing was required to monitor the effectiveness of practices, and direct corrective measures.

Please advise if you require further information, and thank you for the opportunity to provide clarification.
Best regards,
Aileen

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