Prince Albert Contaminated Site Contaminated Materials Berm Remedial Action Plan Technical Summary

Compiled and summarized from the Berm Area Remedial Action Plan documents received by Saskatchewan Environment

September 26, 2006

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BACKGROUND

The berm appears to have been constructed in the late 1970's and early 1980's using fill from a variety of sources including 15th Street East and the near-surface soils from the former Domtar site. Various wood preserving chemicals and dioxins and furans have been identified in random locations throughout the berm at concentrations that exceed acceptable criteria. A model study conducted by AMEC Earth and Environmental in 2003 revealed that chemicals within the berm are not likely to travel away from the berm, because the berm's shape and well-established vegetative cover keep water out of it. However, a 2006 risk assessment of dioxin and furan contaminated soils found at the surface of the berm, determined that these soils may represent a risk to human health. Since this discovery, the berm has been fenced off, and a remedial action plan to minimize the risk has been in development.

PROPOSED REMEDIAL ACTIVITIES

The proposed Remedial Action Plan for the berm located to the north of SIAST Woodland Campus, south of 8th Street East, between 10th Avenue and 13th Avenues East, is to:

- 1. Develop a site-specific safety program to address potential safety and security concerns at the site. As a minimum, the site will be secured with a chain link fence and around the clock security during remediation. The site-specific safety program will be presented to the province's Occupational Health and Safety representative and Saskatchewan Environment for review prior to work beginning at the site.
- 2. Remove trees and other potential protrusions, which may potentially harm the liner.
- 3. Add soil on side slopes of the berm where required to allow safe mowing of the final grass cover and ensure slope stability.
- 4. Ensure design provides liner and topsoil coverage over all contaminated soils.
- 5. Cover the berm with a geotextile liner (a woven plastic, similar to a commercial tarp). This liner will prevent disturbance of the impacted soils during and following placement of the cover soils, and will also provide a barrier to existing weeds from reaching the surface following remediation.

- 6. Decontaminate all equipment and dispose of associated waste material in a manner acceptable to Saskatchewan Environment.
- 7. Cover the geotextile with a minimum of 400 mm (approximately 16 inches) of clean topsoil (see figure 1, page 3, for approximate cross section).
- 8. Establish a vegetative cover of shallow rooted grasses, the maximum root penetration of which is less than 300 mm (12 inches), to be maintained by the City of Prince Albert through mechanical means (mowing). Burning of the grass will not be permitted.
- 9. Develop a long-term monitoring program to ensure the integrity of the liner, soil cover and vegetative cover in perpetuity.
- 10. Re-evaluate the site-specific risk, given post-remediation conditions, to ensure the remedial actions have been successful in removing the risk to the public.
- 11. Following establishment of the vegetative cover and successful risk analysis, remove the chain link fencing and re-open the area for public access.
- 12. Perpetual monitoring and maintenance of the cover by the City of Prince Albert.

PROJECT MANAGEMENT

Project management will be performed by a qualified engineer or geoscientist.

PROJECT APPROVAL

Saskatchewan Environment will issue an environmental approval under <u>The Environmental Management and Protection Act, 2002</u> for any remediation activities undertaken at the site. This approval will include requirements for adherence to safety procedures, minimization of dust, noise, proper sampling procedures, and the development of an ongoing environmental monitoring program that will ensure the long-term integrity of the cover material and confirm the surficial and/or groundwater conditions at the site remain stable and environmentally acceptable.

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CLOSURE

Upon finalization of all remedial activities, including establishment of vegetative cover, determination that remaining health risks are acceptable, and submission of, and commitment to a long-term monitoring program by the City of Prince Albert, Saskatchewan Environment will issue a statement to the City indicating the site has been successfully remediated to an appropriate land-use condition. This statement should provide confirmation that the site has not adversely impacted the surrounding properties.

