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OFFICE OF THE WORKS & OPERATIONS DEPARTMENT

The Town of Marathon Landfill Site Development Needs
A Phased Approach

Background

The Existing Marathon Landfill Site (MLS) is a 50 plus year old municipal waste management facility owned by the Town of Marathon and situated on the north side of Penn Lake Road. It is governed under Provisional Certificate of Approval (C of A) # A591801, issued by the Ministry of Environment (MOE). The approved capacity for the Site under Condition # 19 is 506,532 cubic metres. Only waste generated from within the geographical boundaries of the Town of Marathon may be received for disposal at the site. Solid non-hazardous municipal waste and contaminated fill may be accepted at the site under the current C of A. This includes waste generated by our Wastewater Treatment Plant and the various sectors; Residential, Commercial, Institutional and Industrial. In November of 2003 an Operational Plan (OP) was developed to support the continued operation of the site. The operations plan detailed how the site would be operated and monitored to ensure protection of the environment and public safety, while a long term waste management solution was being sought. General acceptance of the OP was received from the MOE in January 2004. In support of the OP, a compliance and Trigger Level Monitoring Program (TLMP) was developed for the site, which has since been included in our annual monitoring reports. This TLMP was a proactive method of monitoring the performance of the landfill, which is a natural attenuation design, defined by the absence of liner and leachate collection system. The landfill performance data is reviewed to assess the groundwater quality at the site boundaries with respect to the site specific Reasonable Use Criteria established based on the Ontario Drinking Water Standards for various key indicator parameters.

The New Regional Landfill Site (RLS) is located 64 KM by road northwest of Marathon approximately 26 KM north of Highway 17 via Dead Horse Creek Road, Jack Pine Road and Vein Lake Road. The RLS encompasses 77 hectares. The Contaminant Attenuation Zone (CAZ) and the contingency CAZ encompasses another 208.9 ha. This represents a total of 285.9 ha or 706.5 acres. Since this property is owned by the Ministry of Natural Resources (MNR), we have proceeded with a Crown Land Disposition for the 77 ha (190 acres) called the active zone and a ground water easement for the CAZ. In June of 2007, the Ontario Cabinet issued a Declaration Order declaring the Town of Marathon's new Regional Landfill Site as an undertaking to which Section 5 of the Environmental Assessment Act does not apply. The order also had the effect of exempting the disposition of Crown land for the site from the requirements of the MNR Class Environmental Assessment. The proposed capacity of the new site is 534,000 cubic metres with an overall estimated site life of 40 years. This site life estimate factors in the use of the site by in the regional partners, who consist of 18 municipalities and First Nations communities. The site

will be licensed to accept solid non-hazardous domestic and industrial waste, and contaminated fill. Provisions for leaf and yard waste and the disposal of asbestos have been included in the OP for this landfill.

Rationale behind the need for a phased approach

Over the past year, the Town has determined that whereas the RLS will provide a secure facility to manage Marathon's solid waste in the long term, there are a number of outstanding issues that make development of the site difficult in the near-term. These include:

- Land Acquisition Difficulties - According to the chronological history of this project, consultation began with various groups 1992. The MNR believe consultation is yet to be complete and as such have not transferred the land to the Town. Without ownership, no further work can begin because the finalization of the Certificate of Authorization (C of A) is highly doubtful under these circumstances.
- Capital Cost of Construction - Upon closer review of the true cost associated with building the regional landfill site and upgrading the roadway system into the site, our present day cost to complete the construction would be \$16,630,000. Without regional partners, a capital expense of this magnitude even with both federal and provincial help would seriously jeopardize the financial health of the Town of Marathon. Regional partners are not yet willing to commit to this project, as they currently have sufficient capacity.
- Operating Cost - Since MPI (Marathon Pulp Inc.) has filed bankruptcy and the SFL (sustainable forestry license) is no longer maintaining Dead Horse Creek road, our operational cost associated with regional site has increased substantially. Our current estimate of the annual operating costs of the RLS is \$537,750 which would be borne entirely by the Town of Marathon until regional partners joined or contributed to the site costs. Over the life of this landfill site this would translate into a present day expense of \$21,510,000. This more than doubles our current operating expense and given the lost tax revenues from MPI, is not something the Town can afford at this time without partners.

Planned Phased Approach

Given the current economic climate and land acquisition progress as it relates to the RLS, the following steps are now recommended as it relates to our existing MLS.

Phase I:

Apply to the MOE Approvals Director for an Emergency C of A to expand the MLS capacity by less than 40,000 cubic metres. Amend the OP and the closure plan to accommodate the change in capacity.

Phase II:

Under Ontario Regulation 101/07 (made under the Environmental Assessment Act, Waste Management Projects) under Part II, Section 4, increase the total waste disposal volume of our existing MLS by 100,000 cubic metres. Given our current fill rate of 5,000 to 6,000 cubic metres per year this would provide the Town with approximately an additional 16 years of capacity. This would require an Environmental Screening process. As part of this Screening process, the Town will conduct a technical review of the expansion alternatives to ensure that it is feasible and affordable and that there are no significant issues that might prevent such an expansion. The review will include:

1. *Waste volumes and potential lifespan:* we will review historical waste volumes generated and determine the appropriate lifespan of the proposed future landfill expansion.
2. *Area requirements:* the property north of the landfill site is owned by Marathon Pulp Inc. and the review will address what parcel of land is required for purchase.
3. *Landfill impact assessment:* A preliminary review of these aspects of the landfill site will be critical in determining whether a natural attenuation landfill site is acceptable or whether an expansion would have to incorporate a liner and leachate collection system. This review will include the following:
 - Drill additional wells to assess the hydrogeological conditions in the area of the proposed expansion and in other areas as required.
 - Construct and run a contaminant flux model to evaluate the impact of the existing conditions and selected alternative expansion designs to assess the suitability of these alternatives relative to their influence on the natural environment.
4. *Nuisance issues assessment:* Odours, bears and litter, etc.
5. *Economic impact:* Assess the economic impact of the expansion, operating and maintaining the waste transfer station and expanded landfill site and explore the implementation costs such as the environmental and engineering studies, approvals, land acquisitions and design costs.
6. *Implementation Plan:* Develop an implementation plan, assuming the technical and economical analysis proves to be viable. The plan will outline the steps required in order to expand, the approvals required and estimated timelines for completion of the process.

Phase III:

Continue to complete the C of A process for the RLS by dealing with the following issues:

1. Resolve the Crown Land Disposition process with MNR. Legal survey requirements have been met and we are awaiting MNR's response.

2. Prepare for and complete the formal Environmental Review Tribunal hearing.
3. Secure the partners needed to financially make the regional landfill site viable for the tax payers of Marathon.