

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** GFL Environmental West Corporation (formerly MidCanada Environmental Services Ltd.)

**PROPOSAL NAME:** Soil Treatment Facility

**TYPE OF DEVELOPMENT:** Bulk Material Handling Facility

**CLIENT FILE NO.:** 5439.00

### **OVERVIEW:**

On December 22, 2009, the Department received a Proposal from MidCanada Environmental Services Ltd. for the continued operation of a soil recycling facility at the RM of Ritchot landfill at Legal sub-division 4 of Section 33, Township 8, Range 4 EPM in the Rural Municipality of Ritchot, Manitoba.

On January 12, 2010, the Department placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station), the Winnipeg Millennium Public Library and the Manitoba Eco-Network. As well, copies of the Proposal were provided to the Technical Advisory Committee (TAC) members. The Department placed a public notification of the Proposal in the Winnipeg Free Press on January 16, 2010. The newspaper and TAC notification invited responses until February 15, 2010. The Department was informed that the company name has been changed effective April 4, 2011 to GFL Environmental West Corporation.

### **COMMENTS FROM THE PUBLIC:**

A letter of concern was received from Ernie Dumaine and John Liska in February, 2010. The information in the letter included the following:

- When delivering garbage to the Ritchot landfill, Mr. Dumaine noticed an awful smell. He and a co worker were at the location for 5 to 10 minutes and both of them had instant headaches.
- The day that they were at the landfill they noticed workers in white coveralls and masks who were mixing chemicals
- Also a person driving a grader around the landfill area had headaches.
- The two authors of the letter stated that they were worried that people from Grande Pointe, Ile des Chenes or from the RM of Ritchot would get seriously ill.
- The final point in the letter was a concern about trucks driving out of the area and spreading contaminated soil on the roads on their tires.

## Disposition

The letter was sent to the Proponent for response. Their reply is as follows:

Mr. Dumaine's letter appears to be in reference to the treatment of soil shipped from a remediation project at the former IKO roofing material plant site in St. Boniface. A plan for treatment of this soil at the Ritchot facility had been developed by the remediation contractor, Hazco Environmental, in conjunction with Mid Canada. The plan was submitted to Manitoba Conservation and was approved by the Department on May 28, 2009. The soil which was shipped to the site was contaminated primarily with roofing tar, which contains polycyclic aromatic hydrocarbons (PAH). PAH in soil can be remediated using natural soil bacteria or by chemical processes. Neither of these processes could be conducted at the former IKO plant site, and Mid Canada operates the only facility in the area that is permitted to receive soil for this type of treatment process.

Mr. Dumaine's letter does not provide the dates on which he experienced the effects he described. The relevant timelines for the IKO soil treatment project are as follows:

- Soil shipped to Mid Canada site- - May 20 to June 17/08 and June 15 to December 2/09
- Chemical oxidation treatment conducted by Hazco - October 5 to December 1/09 and August 31 to November 24/10
- Bioremediation conducted - started April 6, 2010

The situation which Mr. Dumaine noted where workers were wearing protective suits was the chemical oxidation process being carried out by Hazco. This process involves placing some of the more highly contaminated soil in a lined containment area, mixing oxidizing chemicals into the soil and saturating the mixture with water. The by-products of the oxidation process are carbon dioxide and water. Since this process involves manually handling the chemicals and the potential of splashing liquid during the process, Hazco's health and safety plan required all of their staff to wear Tyvek protective coveralls and respirators. The identified hazards were to the workers in the immediate area of the chemical process only.

One of the lighter PAH fractions in the soil is naphthalene. This is the component which is most likely to be released to the air when the soil is handled. Naphthalene has a distinct odour similar to moth balls. The odour was noticeable within the soil treatment cell when loads of soil from the IKO site were being dumped. There was one incident on June 24, 2009, when staff involved in moving soil which had been just been off-loaded reported feeling unwell when the odours were unusually strong. Mid Canada immediately provided cartridge respirators to staff working in the vicinity of the soil. Mid Canada is not aware of any occasions when the naphthalene odour was reported outside of the soil treatment facility.

The distinctive odour is also noticeable at relatively low levels on site when soil layers are being turned

or tilled during biotreatment. The odour in this case is not as prevalent and, again, there have been no known reports of odours beyond the facility boundary during these operations.

It was acknowledged in the Environment Act proposal that an open air soil treatment facility, such as the Mid Canada operation, will result in the release of some volatile contaminants to the atmosphere. We are confident that the siting and mitigation measures described in the Environment Act Proposal will minimize any Impacts to air quality in the vicinity of the soil treatment facility. In addition, the half life of naphthalene in air is reported to be 3 to 8 hours, thereby further limiting the likelihood of any off-site exposures from air-borne contaminants generated at the soil treatment facility.

Based on the description in Mr. Dumaine's letter, it would be difficult to confirm what caused the discomfort he describes when he and his co-worker were at the landfill. If he was on site during the one recorded incident described above, we cannot rule out the possibility that short term exposure to the air-borne contaminants coming from the soil pile may have been the cause. However, this was one isolated incident. At other times, it seems unlikely that Mr. Dumaine would have felt effects from the soil treatment operation if the full time staff on site were not reporting similar symptoms.

In conclusion, Mid Canada Environmental Services is confident that the soil treatment facility can and will continue to be operated in a responsible manner which will minimize any detrimental impact on air quality. In reference to the symptoms which Mr. Dumaine and his co-worker experienced at the landfill, while we do not question his description of how they felt, we cannot identify a direct link between their symptoms and the operation of the soil treatment facility.

#### **COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:**

##### **Manitoba Culture, Heritage and Tourism, (Historic Resources Branch).**

No concerns with regard to this project's potential to impact heritage resources.

##### **Manitoba Conservation, (Parks and Natural Areas Branch).**

No comments.

##### **Manitoba Conservation, ( Pollution Prevention Branch – Air Quality Section).**

1. We believe that the proposed bioremediation process will be generally aerobic. According to a California Air Resources Board (CARB) document (#94-17), anaerobic condition will promote the transformation of compounds of lesser volatility into compounds of greater volatility0 thus additional pollutants or toxic air contaminants (TAC) may be released. Hence, a well designed bioremediation operation is required to ensure that anaerobic conditions are short lived and of minor importance.

2. Odour concern will not be significant at this time considering that the nearest occupied property is 1.5 kilometers away.

## **Disposition**

Where appropriate the concerns will be incorporated into the licence. The licence will include the odour nuisance clause.

### **Manitoba Conservation, (Operations Division, Central Region).**

- 1 There appears to be a residence on the air photo map (Figure 1 – to the north of the waste water lagoon) that is not identified as a residence and which is closer than 1.5 km from the site. Could you confirm that this is or is not a residence.
- 2 In section 5.2.4 soil amendments are discussed including addition of nutrients – consideration for adding nutrients to the suite of parameters in the storm water ponds prior to discharge is recommended
- 3 Consideration for identifying a routine groundwater monitoring program is recommended – this would include frequency (e.g., annual) as well as identifying a suite of parameters for analyses

The client was forwarded the above comments and the response was as follows:

A 1 There is a residence located on the lot located north of the Ritchot wastewater lagoon. When the Environment Act Proposal was being prepared, the residence was thought to lie outside of the 1.5 km radius from the soil facility. The residence was not marked on Figure 1 as it was not on a transportation route to the facility. Upon closer review of the Google Earth map, the distance from the north-east corner of the soil treatment cell to the residence appears to be in the order of 1.48 km. Approximately 75% of the soil cell lies outside of the 1.5 km separation distance.

A 2. Mid Canada is in agreement with the addition of nutrients to the analytical suite for storm water discharge if and when the use of nutrients as a soil amendment is undertaken.

A3. Mid Canada agrees with the need for a regular groundwater monitoring program. The sampling parameters reported in Appendix B of the Environment Act Proposal would be the basic suite for all wells. Nutrients would be added as per the response to Comment 4 above. The sampling events described in Section 4.2 included a broader group of parameters for monitoring wells MW4 and MW5 due to their proximity to the adjacent Class 1 landfill site.

## **Disposition**

Where appropriate the concerns will be incorporated into the licence. The licence will include clauses requiring groundwater monitoring.

### **Manitoba Local Government, (Community Planning & Development Branch).**

No comments.

### **Manitoba Innovation, Energy and Mines, (Energy Division)**

No comments.

### **Manitoba Conservation, (Sustainable Resource and Policy Management Branch).**

No concerns.

### **Canadian Environmental Assessment Agency**

Application of the Canadian Environmental Assessment Act with respect to this proposal will not be required.

### **Manitoba Water Stewardship Division**

*The Water Rights Act* indicates that no person shall control water or construct, establish or maintain any “water control works” unless he or she holds a valid licence to do so. “Water control works” are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, OR changes or may change the location or direction of flow of water, including but not limited to water in a water body, by any means, including drainage. If a proposal advocates any of the aforementioned activities, an application for a Water Rights Licence to Construct Water Control Works is required. Application forms are available from any office of Manitoba Water Stewardship.

A contact person is Mr. Geoff Reimer C.E.T., Senior Water Resource Officer, Water Control Works and Drainage Licensing, Manitoba Water Stewardship, Box 4558, Stonewall, Manitoba R0C 2Z0, telephone: (204) 467-4450, email: geoff.reimer@gov.mb.ca.

The Department recommends an *Environment Act* Licence to include the following requirements:

- At a minimum, the treated soil should meet the CCME commercial/industrial soil quality guidelines limits prior to being used as intermediate cover material.
- The water quality sampling regime referenced in section 4.3 of the proposal should be continued to ensure that the impounded water complies with CCME criteria for Freshwater Aquatic Life.
- Impounded water shall be released after the spring spawning window date of June 15<sup>th</sup>.

### **Disposition**

Where appropriate the concerns will be incorporated into the licence. The licence will include clauses requiring groundwater monitoring.

### **Manitoba Infrastructure and Transportation (Highway Planning and Design Branch).**

No concerns.

### **PUBLIC HEARING:**

A public hearing is not recommended.

### **RECOMMENDATION:**

The Proponent should be issued a Licence, in accordance with the attached draft, to operate the Soil Recycling facility. Enforcement of the Licence should be assigned to the Central Region.

PREPARED BY:

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