

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPOSER: Enviroclean Landfill Solutions Ltd.
PROPOSAL NAME: Enviroclean Landfill Solutions Ltd. – Organic Waste Processing Plant (Composting Facility)
CLASS OF DEVELOPMENT: 1
TYPE OF DEVELOPMENT: Bulk Materials Handling Facility
CLIENT FILE NO.: 5543.00

OVERVIEW:

On October 12, 2011, Manitoba Conservation and Water Stewardship received a Proposal for the construction and operation of an organic waste processing facility at 41 Jefferson Street in the Town of Morden. The facility will produce compost from food waste, meat waste, livestock mortalities, and green waste (leaves, wood waste, grass, etc.) using in-vessel composting contained in an existing building.

The Department, on November 3, 2011, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station), the Winnipeg Public Library, the Manitoba Eco-Network, the Millennium Public Library, and the South Central Regional Library in Morden. Copies of the Proposal were also provided to the Technical Advisory Committee (TAC) members. A notice of the Environment Act proposal was also placed in the Morden Times on November 10, 2011. The newspaper and TAC notifications invited responses until December 9, 2011.

COMMENTS FROM THE PUBLIC:

The following is a summary of the comments received from the public:

- The proposal refers to the Manitoba Conservation Guidelines for Compost Facilities as a Regulation. This document is a guideline, not a regulation. If the guideline is used, the facility does not meet the setback requirement of 400 metres from any building.
- The proposal should identify potential spread fields for the compost as well as compost storage areas.
- The proposal does not indicate where incoming material will be sorted/separated.
- More information is required on outdoor storage of compost including odour and leachate management. Tarps, as suggested, are likely to be futile due to high winds.
- It is not clear when or if the incinerator will be installed.
- Contrary to what was said in the proposal, municipal approval has not been obtained.
- More information on the use of this technology in other jurisdictions should be provided.

- How will material that is delivered outside of operating hours be managed? Where will it be stored?
- There should be a second, redundant, air pollution control system in place in case the first one fails.
- The proposal should include more information on the current proposed location.
- This type of facility should not be located in the industrial park. A more appropriate location is at the SWAMP landfill.

The following is a summary of the comments received from the Town of Morden:

- The application advised the Town of Morden has given approval to this development, however this is not the case.
- To date there has been general information provided, however the Town has not given written approval regarding the development.
- The intended use appears to be a conditional use under our zoning by-law. Until this has been determined, and if necessary the conditional use has been obtained, I ask that the environmental licence not be provided.
- The application states the Town's green waste is already stored closer to the residences in the area. I must advise this is not accurate. The Town's compost site is approximately 1,900 feet from residences, while the proposed site is less than 1,000 feet. As well material at the Town's site is relocated to an out of Town location on a regular basis, normally once a week.
- The town is concerned with animal waste from rendering plants and dead animals from other sources at this location. This is one of the main items the Town would consider placing restrictions on with regards to this development.

Disposition:

The proponent provided satisfactory responses to the concerns raised. Municipal approval was granted on January 11, 2012. Clause 30 of the draft Environment Act Licence prohibits the Licencee from accepting livestock manure, clauses 32 and 33 restrict outdoor storage of material for processing and processed material, clause 34 prohibits the proponent from accepting organic material outside of operating hours, clauses 14 and 16 prohibit the proponent from operating their process when the pollution control equipment is not operating, clause 35 requires that food waste and meat (animal) waste only be accepted in sealed containers and that it be processed within 12 hours of receipt, and clause 38 addresses the use of processed material for any purpose besides use as compost. An incinerator would require registration as per the requirements of *The Incinerators Regulation*.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Canadian Environmental Assessment Agency

No concerns.

Disposition:

No action needed.

Manitoba Conservation and Water Stewardship – Environmental Operations

The following comments were provided:

- Request details with respect to the volume of water that would be required to operate this facility. What is the source of this water?
- Wastewater:
 - Request confirmation or clarification on the recycling of wastewater as to the treatment processes, storage, and estimated volumes.
 - Clarification of chemicals to be used within the disinfection process.
 - Request confirmation or clarification on truck and container wash water disposal methods including expected volumes.
 - Request confirmation or clarification on disposal methods of the onsite domestic sewage (washrooms and showers).
 - If wastewater is to be disposed to municipal infrastructure, details of volumes and authorization are requested. Clarification if the discharge will meet Town's Bylaws.
- Ensure Internal Workplace Health and Safety Issues are addressed.
- Request confirmation or clarification on an Emergency Plan for the facility.
- Request confirmation as to the type of feedstock to be stored at the facility including storage methods, duration and volume.
- Request details of plans to address runoff from the site so it is controlled in such a way as to prevent the flow of accidental discharges from waste containers and process chambers.
- Request details to address noise issues generated from the facility.
- What methods of vector control (i.e. mice, flies, rats, pigeons, etc) will occur at the facility?
- Livestock Mortalities Management:
 - Mortality Management at a minimum must be in compliance with the *Livestock Manure and Mortalities Management Regulation*. Confirmation is required on how livestock mortalities will be stored on site when received and not within active processing.
 - What contingency plans have been developed to deal with extra mortalities that may accumulate or during downtimes?
 - Clarification is needed that the facility will only receive cattle. Will other livestock species be accepted (i.e. hogs and chickens)? Provide amounts, storage methods, and duration.
 - Livestock Mortality handling, processing, and disposal must be in compliance with Canadian Food Inspection Agency requirements (i.e. SRM material). This documentation should be provided to Manitoba Conservation as part of the licence requirement.

- Details of the incinerator need to be included.
- Compost Facility:
 - Location where maturing compost material is stored or composting pad(s) must ensure that soil, groundwater and surface water contamination does not occur. Details of these facilities and locations are requested. They should be constructed to industry standards for livestock manure and mortality management.
 - Request clarification of volume of composted material that will be stored on site at any point in time.

Disposition:

The proponent provided satisfactory responses to the concerns raised. Clauses 45 – 47 of the draft Environment Act Licence address wastewater, clause 48 requires an emergency response plan, clause 29 addresses feedstock, clauses 32 and 33 restrict outdoor storage and therefore address storage, runoff and vermin concerns, clause 12 addresses noise, clause 35 addresses meat waste (including mortalities) management, and clause 31 prohibits receipt of SRM material without authorization from CFIA. An incinerator would require registration as per the requirements of *The Incinerators Regulation*. The remaining concerns are addressed by existing legislation, and therefore the requirements are not repeated in the draft Environment Act Licence.

Manitoba Conservation and Water Stewardship – Environmental Services

The following initial comments were provided:

- Request confirmation with regards to the maximum volume and type of feedstock to be stored at the facility at any point of time, and the volume of composted material that will be stored outside on site at any point of time.
- Request confirmation or clarification on the types of feedstock to be processed at the facility, including whether or not manure is to be utilized, and if so the proportion of manure.
- If manure is to be utilized at the facility, a manure management plan (including acceptable soil tests) must be submitted to Manitoba Conservation in accordance with the Livestock Manure and Mortalities Management Regulation (M.R. 42/98).
- Request confirmation/clarification on the installation of an incinerator.
- Request details on the base and attributes (soil type, depth to groundwater, yard drainage, collection basin...) of the outdoor compost maturing pad and site.
- Information on location of compost storage during winter months when land application is prohibited.
- Request information regarding standards intending to achieve with the compost (ie BNQ or CCME or CFIA or other).
- Request details with respect to water use/source/disposal to include:
 - Source of water (municipal, well or other)

- Disposal method of wastewater for each process (OWMS, recycle to compost process or municipal sewer) from 1) truck wash/bin wash areas, 2) washroom/shower facilities, 3) impacted surface run off.
- If wastewater is to be disposed of to municipal infrastructure, details of volumes and municipal authorization for disposal to municipal infrastructure.
- Recommend that the following content be considered for incorporation into license clause(s):
 - All food waste, biosolids, meat wastes or manure feedstock must be incorporated into the composting process the day of receipt at the facility.
 - All green or perishable leaf and yard waste must be incorporated into the composting process within 4 days of receipt at the facility.
 - The Licencee must provide a copy of any authorization documentation received from CFIA with respect to handling, processing, or disposal of SRM material to the director; prior to accepting any SRM materials at the facility.
 - Minimum curing time after process of 21 days after which the maturity testing determines if suitable for sales, if no maturity testing requirements, minimum 6 months storage.
 - Written sampling plan to the director, of how the feedstock, and resultant compost are to be sampled to ensure results are reproducible, and that samples are collected, handled, and stored in an appropriate manner.
 - The application of compost to agricultural soils must be in compliance with *Livestock Manure and Mortalities Management Regulation (42/98)* and the *Nutrient Management Regulation (M.R. 62/08)*.
 - The Licencee is required to submit a Manure Management Plan or Nutrient Management Plan (depending upon feedstock) upon the written request of the Director.
 - The Licencee shall submit the design plans and the installation timelines for a vapour spray disinfectant system upon the written request of the director.
 - The Licencee shall ensure that the analysis of compost is completed at a laboratory accredited to ISO/IEC 17025:2005 or equivalent standard acceptable to the director.
 - The Licencee shall maintain and make available records to include the mass of feedstock, type of feedstock, mass of compost generated and mass of compost sales and ultimate mass, method and location of disposal for compost which is not sold.

The following additional comments were provided:

Environmental Services Engineering recommends that the following content be considered for incorporation into license clause(s):

- Submission of a proposal if/when an incinerator is to be installed.

- Maximum volumes of material are stipulated for on-site production, storage and retention.
- Statement to prevent the storage of any compost outside that does not comply with the requirements of cured compost, as documentation notes that no uncured compost will be stored outside.
- The quality of the compost be included (or reference to a standard BNQ, CCME, CFIA, or other) to allow for assessment to determine whether it can/can not be stored outside of the building. Ie if mature.
- All sanitary wastewater be directed to a licensed wastewater treatment facility. The response from the proponent did not address the question regarding the source of water or disposal of sanitary wastewater and indicated only water was to be used in the process for cleaning and disinfection of containers, et al.
- All food waste, biosolids, meat wastes or manure feedstock must be incorporated into the composting process the day of receipt at the facility.
- All green or perishable leaf and yard waste must be incorporated into the composting process within 4 days of receipt at the facility.
- The Licencee must provide a copy of any authorization documentation received from CFIA with respect to handling, processing, or disposal of SRM material to the director; prior to accepting any SRM materials at the facility.
- Minimum curing time after process of 21 days after which the maturity testing determines if suitable for sales, if no maturity testing requirements, minimum 6 months storage.
- Written sampling plan to the director, of how the feedstock, and resultant compost are to be sampled to ensure results are reproducible, and that samples are collected, handled, and stored in an appropriate manner.
- Application rates of compost applied to agricultural soils must be in compliance with agronomic rates and in compliance with the *Livestock Manure and Mortalities Management Regulation* and the *Nutrient Management Regulation*.
- The handling of any manure shall be in accordance with LMMMR.
- The Licencee is required to submit a Manure Management Plan upon the written request of the Director.
- The Licencee shall submit the design plans and the installation timelines for a vapour spray disinfectant system upon the written request of the director
- The Licencee shall maintain and make available records to include the mass of feedstock, type of feedstock, mass of compost generated and mass of compost sales and ultimate mass, method and location of disposal for compost which is not sold.

Disposition:

The proponent provided satisfactory responses to the concerns raised. Clause 30 of the draft Environment Act Licence prohibits the Licencee from accepting livestock manure at the Development, clauses 32 and 33 restrict outdoor storage of material for processing and processed material, clause 36 requires the proponent to achieve the CCME compost quality

guidelines, clauses 14 and 16 prohibit the proponent from operating their process when the pollution control equipment is not operating, clause 35 requires that food waste and meat (animal) waste only be accepted in sealed containers and that it be processed within 12 hours of receipt, clause 31 prohibits receipt of SRM material without authorization from CFIA, clause 39 requires a monitoring plan, clause 5 requires all laboratory analysis to be completed at an accredited lab, clause 41 requires record keeping and requires those records be made available to an Environment Officer, and clauses 45 – 47 address wastewater. An incinerator would require registration as per the requirements of *The Incinerators Regulation*. Existing legislation requires that when compost and/or processed organic material is applied to soil it be done so in accordance with the requirements of *The Livestock Manure and Mortalities Management Regulation* and *The Nutrient Management Regulation*, and therefore these requirements are not repeated in the draft Environment Act Licence. *The Environment Act* requires that the Licencee submit a Notice of Alteration to the Director for any changes to the Development, including the potential installation of a vapour spray disinfectant system.

Manitoba Conservation and Water Stewardship – Lands Branch

No concerns.

Disposition

No action needed.

Manitoba Conservation and Water Stewardship – Parks and Natural Areas Branch

No concerns.

Disposition

No action needed.

Manitoba Conservation and Water Stewardship– Pollution Prevention

The following comments were provided:

- Issues of concern related to the proposal include:
 - The incompleteness of the proposal
 - Location of “facility” in urban area – has the proponent conducted any consultation with neighbours or the community as a whole?
 - Feedstocks identified including animal products with potential SRMs have significant potential for odours and requirement for controlled composting process.
 - Lack of quality control of processed organics (no testing protocol, feedstocks, maturity)
 - Storage of feedstocks and storage of “uncured” output. The proposed process is inadequate and has potential for odours.

- Sale of processed organics as “fertilizer” – this is regulated by CFIA.
 - Use of processed organics as heating pellets (?)
 - Proposed rapid composting process and maturity of compost - curing periods and process are insufficient
 - Air filtration process (water bath) may not be viable or sufficient (most compost facilities use a bio-filter process)
 - SRM separation and incineration on site
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- As noted on p13 there is “no system, in the world, so far identified, that is currently achieving the process speed, efficiency and scope of this project”.
 - For source separated food and commercial wastes, process controls are required to rapidly compost organic waste without excessive odour production and emissions. It is not clear that the technology has sufficient process controls for temperature, moisture, aeration and feedstock “recipe” (C/N ratio).
 - While cured (stable/mature) compost can be readily stored or bagged, uncured green compost cannot be stored without going anaerobic even if very dry. There is a high odour potential during storage, shipping and application. The uncured end product may have agricultural applications if land applied without storage. There is no evidence that the proponent has done any computer modelling related to noise and smell (i.e. air quality modelling).
 - To be labelled as compost, the product should meet both the CCME standard and the Composting Council of Canada’s Compost Quality Assurance (CQA) Program.

Disposition:

The proponent provided additional information to address the concerns raised. Clauses 36 and 37 of the draft Environment Act Licence require compliance with the CCME Compost Quality Guidelines, clause 13 addresses odour, clause 39 requires a monitoring program, clauses 32 and 33 restrict outdoor storage, clause 38 addresses the potential use of processed material for any purpose other than as compost, and clauses 9 - 25 address air pollution control.

Manitoba Conservation and Water Stewardship – Sustainable Resource and Policy Branch

No concerns.

Disposition

No action needed.

Manitoba Conservation and Water Stewardship - Water Stewardship Division

The following initial comments were provided:

- Manitoba Water Stewardship provides the following concerns:

- In the event that the water source for the proposed Development is the Morden public water system, the public water system must be protected with backflow prevention devices in accordance with the requirements of *The Manitoba Plumbing Code*.
 - Note: The proposal states that feed stock will include abattoir waste and livestock mortalities (dead animals). These materials would present a high hazard of cross-contamination of the public water supply should backflow or back syphonage of these waste products into the water system occur.
- Manitoba Water Stewardship requests clarification for the following:
 - The Proposal does not appear to note where the wastewater streams (process and domestic) from the facility will be released. Information needs to be provided to ensure that wastewater is handled in such a way as not to contaminate any surface or ground water sources for public water supplies.
 - What are the chemical constitutions of the end product of this rapid digesting process (i.e. concentrations of ammonia, phosphorus, E. coli)?
 - The proposed Development needs to include a component of surface and ground water quality monitoring to establish possible impacts.
 - Waste meat and green waste would contain a substantial amount of water that could potentially leach or runoff into ground and surface water. The Proposal does not appear a discussion on the mitigation of possible environmental contaminants including impacts to surface and ground water.
 - Since meat waste products will include specific risk material, there may be a concern of deleterious substances such as prions on spread field in agricultural lands, or pathogens entering ground and surface water.
 - Should the end product be applied to agricultural lands, nutrient management zones, restrictions, set backs, and application rates as outlined in the *Nutrient Management Regulation* under *The Water Protection Act* will apply.
- Manitoba Water Stewardship submits the following comments:
 - Manitoba Water Stewardship does not object to this proposal, at this time.
 - The proponent needs to be informed of the following for information purposes:
 - Erosion and sediment control measures should be implemented until all of the sites have stabilized.
 - *The Water Rights Act* requires a person to obtain a valid licence to control water or construct, establish or maintain any “water control works.” “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, a person is required to submit an application for a Water Rights Licence to Construct Water Control Works. A person may contact the following Water Resource Officer to obtain an application and/or obtain information.

- 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 following additional comments were provided:

- The Water Stewardship Division requires to include the following in an *Environment Act* Licence:
 - The Licencee is required to implement on-site containment of all process water or wastewater generated from the proposed Development. Process water or wastewater will not allowed to be discharged to the municipal drainage ditch or other surface water feature.
- The Water Stewardship Division requests clarification for the following concerns:
 - The proponent did not address concerns about composting animal waste considered “specific risk material” and the fate of this material once applied to soils. How will the proponent ensure that this material is excluded from products that are retrieved from the packing plants?
 - What are the units of the metals in a table that was provided in the response by the proponent’s consultant?
 - Regarding the process, the proponent needs to clarify how any un-named spread fields will be linked to any spread fields associated with a manure management plan.

Disposition:

The proponent provided additional information to address the concerns raised. Clauses 45 – 47 of the draft Environment Act Licence address wastewater, clauses 32 and 33 restrict outdoor storage of material and therefore address related concerns, clause 39 requires a monitoring program, and clause 31 addresses SRMs. The other comments provided are addressed by existing legislation and the proponent is made aware of the requirements by way of this Summary Report.

Manitoba Conservation and Water Stewardship – Wildlife & Ecosystem Protection Branch

No concerns.

Disposition

No action needed.

Manitoba Innovation, Energy and Mines – Energy

The following is a summary of the comments provided:

- The proposal does not indicate how the process works, and there is no information online related to Rapid Biological Digestion or Enviroclean.
- This system, unlike traditional composting, appears produce a gaseous that has a composition quite similar to biogas, with elevated levels of ammonia.
- The H₂S concentration in the gas stream is 1000 ppm, which is very toxic
- The proposal does not clearly indicate what is happening to the gas stream. If it is used as fuel it must be done so very carefully. If it is released, it is highly problematic from a greenhouse gas perspective because it is very high in methane.
- The proposal also suggests they may produce fuel pellets. Will they be given away or sold to others? Where will they be used? There is concern regarding carryover of waste material into the pellets, including SRMs.

Disposition

Clauses 9 – 25 of the draft Environment Act Licence address air emissions. Clause 38 addresses the potential use of processed material for any purpose other than as compost.

PUBLIC HEARING:

A public hearing is not recommended.

CROWN-ABORIGINAL CONSULTATION:

It has been determined that Crown-Aboriginal consultation is not required for this project as it located on privately owned land in an existing industrial development.

RECOMMENDATION:

The Proponent should be issued a Licence for the construction and operation of an organic waste processing (composting) facility in accordance with the specifications, terms and conditions of the attached draft Licence. Enforcement of the Licence should be assigned to the Environmental Operations Branch of Manitoba Conservation.

A draft environment act licence is attached for the Director's consideration.

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