

Boswick, Robert (SD)

From: Park, Randy <RPark@winnipeg.ca>
Sent: February-26-18 11:46 AM
To: Boswick, Robert (SD)
Cc: Burland Ross, Siobhan (SD); Graham, Cory (SD); Reimer, Geoff
Subject: RE: Summit Soil Fabrication Pilot Project
Attachments: Summit Landfill Soil Fabrication Pilot Project Follow Up Information.docx; Figure 1 - Soil Fabrication Plots - Phase 1 (February 2018).pdf

Thank you, Robert, for your February 16th email.

On the two attachments, we have provided the additional information that you requested. Should you require further information, please do not hesitate to contact us.

Randy Park, C.E.T.
Acting Manager
Solid Waste Services Division
City of Winnipeg
204.794.4601



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From: Boswick, Robert (SD) [mailto:Robert.Boswick@gov.mb.ca]
Sent: Friday, February 16, 2018 3:18 PM
To: Park, Randy
Cc: Burland Ross, Siobhan (SD); Graham, Cory (SD)
Subject: Summit Soil Fabrication Pilot Project

Good afternoon Randy,

I am responding to the February 6, 2018 letter and proposal respecting the City of Winnipeg's (City's) proposed Summit Soil Fabrication Pilot Project. The letter and proposal were submitted under Section 6, Exemption of Manitoba Regulation 164/88 (amended), Classes of Development.

The letter and proposal describe a pilot project relative to the use of biosolids and other organic and inorganic residuals to fabricate a soil for the vegetative support layer as part of the final cover system at the site of the City's Summit Landfill.

Upon review of the letter, the proposal and related matters, it has been determined that additional information must be provided in support of the proposed pilot project prior to a decision being made on the request. Please provide the following additional information:

1. are you going to be the contact person for the duration of the pilot project?
2. when will the bench scale testing be completed and when would a related update regarding the results be available?
3. general details regarding the expert consultant(s) that will be involved;
4. an estimated quantity of biosolids that will be involved in each phase of the pilot;
5. what method of containment will be used for blending/mixing materials on site?
6. have the characteristics of the biosolids respecting foreign matter, micro-constituents, nutrients, pathogens, trace elements, etc. remained the same over the past several years (as may have been observed during recent other biosolids-related pilot project activities)?;
7. what control measures for vector attraction will be utilized?;
8. how was 0.6 metre chosen as the final thickness of the fabricated soil and what are potential difficulties that may be encountered during winter operation of the pilot? How might they may be avoided or managed?; and
9. I haven't received the paper copy yet but the email did not include 'Figure 1'.

Once this information is submitted a proper assessment of your request can be completed.

If you have any questions or would like to discuss this matter please contact me at 204-945-6030.

Robert Boswick, P.Eng.

Environmental Engineer

Environmental Approvals Branch

Manitoba Sustainable Development

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Summit Landfill Soil Fabrication Pilot Project – Additional Information

February 2018

In response to the questions provided by Manitoba Sustainable Development on February 16, 2018, please see additional information below:

1. Are you going to be the contact person for the duration of the pilot project?

- a. The designated contact person for the duration of the pilot project is:

Becky Raddatz MCP, RPP
Environmental Planner
Water & Waste Department
City of Winnipeg
Phone: 204-986-3107
Mobile: 204-451-4508
Email: braddatz@winnipeg.ca
Address: 1120 Waverley, Winnipeg, MB R3T 0P4

2. When will the bench scale testing be completed and when would a related update regarding the results be available?

- a. Bench scale testing is anticipated to be complete by the end of March. The technical memo will be provided to MSD upon completion.

3. General details regarding the expert consultant(s) that will be involved;

- a. Sylvis Environmental Services Ltd. Is involved in all facets of biosolids management in Western Canada and beyond. Sylvis assisted the City of Winnipeg in developing the successful soil fabrication pilot project at the Brady Road Resource Management Facility. Sylvis is experienced in mixing, testing and implementing soil fabrication projects across Western Canada. More information can be found at www.SYLVIS.com
- b. For the pilot project, Sylvis will be involved by:
- Conducting the bench scale testing to develop the soil mix ratios
 - Provision of independent review and professional advice for the project plan
 - Provision of independent review and consulting advice for interim and final reports
 - Operational site visits, including review and advice
 - General provision of expert guidance over the three year pilot project

4. An estimated quantity of biosolids that will be involved in each phase of the pilot;



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- a. Volume of biosolids used per operational phase is dependent on the availability of the other feedstocks. Operational phases in Year 1 are design to last a maximum of one month. In Year 1, biosolids quantity would not exceed 4,000 m³ per operational phase.
 - b. Based on results and learnings from Year 1, timelines and volumes may be proposed to be adjusted in Year 2 and Year 3 of the pilot project. This would be done in consultation and with approval from MSD.
- 5. What method of containment will be used for blending/mixing materials on site?**
- a. Summit Landfill is a secure facility with a perimeter fence and no public access. The designated mixing area is framed by the street sweepings and woodchip feedstock piles. Biosolids will be unloaded at the designated mixing area. Biosolids will not be stored overnight.
- 6. Have the characteristics of the biosolids respecting foreign matter, micro-constituents, nutrients, pathogens, trace elements, etc. remained the same over the past several years (as may have been observed during recent other biosolids-related pilot project activities)?;**
- a. Yes, based on the information available biosolids have remained generally consistent. More information on biosolids can be found in the annual compliance reports submitted to MSD as a requirement of our Environment Act License (1089E RR).
- 7. What control measures for vector attraction will be utilized?**
- a. Summit Landfill has been closed for 20 years and does not accept any form of garbage. Nuisance birds such as pigeons and seagulls have not been reported at Summit since the closure of its tipping face. These types of birds are attracted to the sparkling visual surface and food source an open landfill provides. Additionally, there is no large body of water near the site, which tends to be breeding grounds for geese and ducks. As such, birds present a low risk factor to this pilot project.
 - b. Summit Landfill is fenced, with 1 m periodic gaps along the east and west side to allow for wildlife to pass through. Deer, rabbits and other small prairie mammals have been spotted onsite. These mammals pose no threat to operations and animal access to the site will not be further restricted. Feedstocks involved in this pilot project do not provide a food source for wildlife and operations do not pose a threat to their habitats.
 - c. If required, pest control measures from the BRRMF operation will be utilized at Summit Landfill.
- 8. How was 0.6 metre chosen as the final thickness of the fabricated soil?**
- a. The 2017 soil fabrication pilot project at BRRMF assessed plots of three different thicknesses: 30cm, 60cm, and 90cm. The 30cm plot showed significantly more weedy growth than the 60cm and 90cm plots. The 60cm plot was chosen for this vegetative reason, plus the ability to cover more area than a 90cm application.



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9. **What are potential difficulties that may be encountered during winter operation of the pilot? How might they may be avoided or managed?**
 - a. Winter conditions pose potential difficulties with equipment operation at cold temperatures, and safety for staff in extreme weather conditions. Operations will be suspended in unsafe conditions and biosolids will be redirected to BRRMF.
10. **I haven't received the paper copy yet but the email did not include 'Figure 1'.**
 - a. Please see Figure 1 attached.

Figure 1 - Summit Landfill Soil Fabrication Site

