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Conservation and Climate
Environmental Approvals Branch
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File No: 3023.00

October 28, 2021

Leigh Johnston
Canadian Kraft Paper Industries Ltd. (CKPI)
PO Box 1590
The Pas MB R9A 1L4
leigh.johnston@ckpi.com

Dear Leigh Johnston:

Re: Land Spreading Pilot Study on CKPI Mill Site – Lime Mud Application Sites

This letter is in response to the August 5, 2020 notice of alteration requesting approval of the inclusion of land spreading of lime mud from the emergency spill pond mixed with primary sludge from the settling basin at selected additional application sites as a supplementary component of the ongoing land spreading pilot study at the Canadian Kraft Paper Industries Ltd. (CKPI) mill. Environment Act Licence No. 1339 RR applies to CKPI's activities at the associated sites.

The purpose of the pilot study was to determine if a beneficial use program could be developed for process sludge produced at the site. Representatives of CKPI and the Environmental Approvals Branch have previously discussed CKPI's interest in submitting an Environment Act Proposal and to receive an Environment Act Licence for similar activities to occur following completion of the pilot study. The June 12, 2018 director's letter approved this pilot study to proceed until April 30, 2022.

The August 16, 2021 director's letter approved the request to continue the pilot study by land spreading biosolids materials from the lagoon and the north and south settling basins on sites identified as 2a (Zone 1), 2a (Zone 3), and CLF1 (Zone 2).

Environmental Approvals Branch also received requests to approve activities involving a 50/50 mixture of lime mud and sludge as a component of this pilot study. The August 5, 2020 notice of alteration identified that sites proposed to receive the 50/50 mixture include; south of water treatment plant (site iv), capped landfill 2 (CLF2), and 2D. A September 17, 2020 email from CKPI stated that available data from site 2A (control) are likely indicative of the characteristics of surficial soils at site 2D.

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CKPI submitted results of pH analyses of surficial soils at the area south of water treatment plant (site iv) and Site 2A (control) (0-60 cm composite), indicating 7.76 and 7.63 respectively, while the lime mud from the emergency spill pond was 8.63. Note that reviews of reference documents indicate that the preferred pH of lime mud type soils for grasses is 6.0. Based on the pH readings provided by CKPI, using the proposed 50/50 mixture would not provide a favorable environment for most types of grasses, likely including the native grass mixture CKPI proposed for seeding use during this pilot study.

The phosphorus concentrations of the samples obtained from Site IV and Site 2D in October 2017 were 363 and 293 mg/kg respectively. The 2018 report provided total phosphorus concentrations of 2080 and 4290 mg/kg for sludge composite samples taken from the south setting basin and aerated stabilization basin respectively.

After review of the August 5, 2020 notice of alteration, the June 12, 2018 approval letter, the September 17, 2020, October 19, 2020, July 29, 2021, and August 16, 2021 emails, and the February 12, 2021 notice of alteration letter, Environmental Approvals Branch has concluded that the environmental effects of the identified ancillary activities for pilot study will be insignificant, and, therefore, pursuant to Section 14(2) of The Environment Act, are approved as follows:

1. Materials will be sourced only from the settling basin (primary sludge) and the spill pond (lime mud).

2. Materials sourced from the settling basin and the spill pond for these land application events must be effectively mixed prior to and upon land application.

3. All materials sourced from the settling basin and the spill pond will be sampled, analyzed, and reported for Olson-P and Olson-P shall also be included when reporting all monitoring of the surficial soils of the application sites in subsequent years.

4. Materials sourced from the settling basin and the spill pond may be land applied at locations, proportions, and rates as follows:

Site	# of Hectares	Mixture (primary sludge/lime mud)	Rate of Mixture Application	Primary Sludge (Bone Dry Tonnes)	Lime Mud (Bone Dry Tonnes)
Capped Landfill 2 (CLF2)	0.9	50/50 (maximum 0.3 m in depth)	500 tonne/ha @ 0.3 m	225	225
2D	1.3	75/25 (maximum 0.3 m in depth)	500 tonne/ha @ 0.3 m	487	163
Site iv (South Water Treatment Plant)	2.8	90/10 (maximum 0.3 m in depth)	500 tonne/ha @ 0.3 m	1260	140
Totals	5			1972	528

5. Sites receiving primary sludge – lime mud mixture materials must have a means of effectively collecting any surface runoff with collected liquids being returned to a site setting basin or lagoon cell.

6. Effective scheduled sampling, recording, and analysis of applied materials and site conditions must occur in accordance with the requirements identified in the June 12, 2018 director's approval letter to the April 20, 2018 notice of alteration and related subsequent correspondences to the satisfaction of the director.

Approval for additional pilot study activities to be completed prior to April 30, 2022 may be requested by submission of a new notice of alteration.

If you have any questions on these matters, please contact Robert Boswick, Senior Environmental Engineer, at (204) 918-5853 or Robert.Boswick@gov.mb.ca.

Sincerely,

Original signed by,

Laura Pyles, A/Director
The Environment Act

c. Tamsin Patience - CKPI
Yvonne Hawryliuk, Cristal Huculak - Environmental Compliance and Enforcement
Eshetu Beshada, Robert Boswick - Environmental Approvals
Public Registry