Notice of Alteration Form

Manitoba
Sustainable Development

Client File No. :	Environment Act Licence No. : 1339R
Legal name of the Licencee: Canadian Kraft Paper Industries Ltd.	
Name of the development: Canadian Kraft Paper Industries Ltd.	
Category and Type of development per Classes of Development Regulation: Forestry — Pulp and paper mills	
Licencee Contact Person: Leigh Johnston, Environmental Superintendent Mailing address of the Licencee: PO Box 1590 City: The Pas Province: Manitoba Postal Code: R9A 1L4 Phone Number: (204) 623-8585 Fax: (204) 623-5995 Email: leigh.johnston@ckpi.com	
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant):	
Phone: Fax:	Mailing address:
Email address:	
Short Description of Alteration *(max 90 characters)*: Continuation of the Landspreading Pilot Study Project on Canadian Kraft Paper's millsite.	
Alteration fee attached: Yes: ☐ No: ☑ If No, please explain: Continuation of existing project. Reduction of landfill waste and GHG emissions.	
Date: 2021-02-11	Signature: [redacted] Printed name: Leigh Johnston

MANITOBA SUSTAINABLE DEVELOPMENT
ENVIRONMENTAL APPROVALS BRANCH
FEB 12 2021
RECEIVED

A complete Notice of Alteration **(NoA)** consists of the following components:

- ☑ **Cover letter**
- ☑ **Notice of Alteration Form**
- ☐ **2 hard copies and 1 electronic copy of the NoA detailed report** (see "Information Bulletin - Alteration to Developments with Environment Act Licences")
- ☐ **$500 Application fee, if applicable** (Cheque, payable to the Minister of Finance)

Submit the complete NoA to:

Director
Environmental Approvals Branch
Manitoba Sustainable Development
1007 Century Street
Winnipeg, Manitoba R3H 0W4

For more information:

Phone: (204) 945-8321
Fax: (204) 945-5229
http://www.gov.mb.ca/sd/eal

Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an Environment Act Proposal Form (see "Information Bulletin – Environment Act Proposal Report Guidelines")

CANADIAN Kraft Paper
PO Box 1590 • The Pas, Manitoba • R9A 1L4 Telephone (204) 623-7411

February 12, 2021

TM-10001
Code #09-LF-009

MANITOBA SUSTAINABLE DEVELOPMENT
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Shannon Kohler
Director
Environmental Approvals Branch
Manitoba Conservation and Climate
1007 Century Street Winnipeg, Manitoba
R3H 0W4

Re: Canadian Kraft Paper Landspreading Pilot Study Project – Continuation

Dear Ms. Kohler:

Since October 2017 Canadian Kraft Paper Industries (CKP), with the approval of Manitoba Conservation and Climate (MCC), has undertaken a Landspreading Pilot Study Project which involves removing sludge from the effluent treatment system and applying it to industrial lands on CKP's millsite. In April 20, 2018, CKP submitted a modified approach to the Landspreading Pilot Study Project. The primary focus of the project is now to assess the feasibility of using the sludge as a growing media for native grasses. In CKP's specific case, the interest is using the sludge to grow grasses on disturbed industrial lands, which will greatly improve dust control and aesthetics on site. Approval from MCC for the modified approach was received on June 12, 2018, which states that the Pilot Study is valid until April 30, 2022. CKP continued to work under this approval in 2020. Table 1 summarizes the volume and location of the landspreading to date on CKP sites/lands.

Table 1: 2017-2020 Landspreading Volume and Location

Year	Site	# of Hecatares	Rate (BDT/Ha)	Bone Dry Tons of Material (BDT)	Source of Biosolids
2017-2018	2A	4.72	327.38	1545.24	North and South Settling Basin
2018	2B	0.72	644.15	463.79	South Settling Basin
2018-2020	Capped Landfill 1	11.56	709.66	8203.63	North and South Settling Basin; Aerated Lagoon
2020	Capped Landfill 2	0.90	397.74	357.97	South Settling Basin
Total		**17.9**	**519.73**	**10570.63**	

The sludge landspreading on Sites 2A and 2B was complete in 2018. These sites will continue to be tested and monitored in order to assess the effectiveness of the sludge as a growing media. Capped Landfill 1 was used as the landspreading area in 2018, 2019, and 2020, both primary and secondary sludge was spread on this area. Portions of the primary and secondary sludge spread on Capped Landfill 1 were seeded, the remaining portions that

received sludge in 2020 will be seeded in spring 2021 as it was still too soft to access last fall. Results of past years seeding have been impressive with sites showing large amounts of vegetation growth, see photos from 2020 in Appendix A.

During conference calls in fall 2020 with personnel from MCC's Environmental Approval Branch, CKP was requested to submit an Environment Act License in order to continue the landspreading of sludge from the effluent treatment system beyond April 2022. Until an Environmental Act license is issued, MCC also requested that an additional NOA be submitted to continue with the current Landspreading Pilot Study Project. The continuation of the Pilot Study Project will allow CKP to maintain the integrity of the effluent treatment system onsite by ensuring the removal and landspreading of sludge from the system in 2021. Continuing the project will also divert the sludge from our onsite landfill, extending the landfill's life and aligning with MCC directive to reduce landfill waste.

In 2021, the north settling basin and portions of the aerated lagoon will be dredged to maintain the efficiency of the effluent treatment system. CKP plans to landspread on the remaining sites that have been previously identified, these sites are listed in Table 2 and shown in Figure 1 below (2D, south of water treatment, in front of lagoon, and north of sawmill). We are also requesting to utilize other sites on CKP property that meet the criteria set forth in the 2018 NOA; these sites will go through the appropriate background soil testing to ensure they meet criteria; this will be done at a later date.

Figure 1: CKP Millsite with Labelled Landspreading Sites

Table 2: Proposed Application Rates and Locations (hectares estimated from Google Earth)

Source of Biosolids	Site	# of Hectares	Rate	Bone Dry Tonnes of material
Lagoon, NSB or SSB	2D	1.3	691.4 tonne/Ha or 1' in depth	899
Lagoon, NSB or SSB	Front of Lagoon (vi)	0.6	691.4 tonne/Ha or 1' in depth	415
Lagoon, NSB or SSB	South of Water Treatment (iv)	2.8	691.4 tonne/Ha or 1' in depth	1936
Lagoon, NSB or SSB	North of Sawmill	2.15	691.4 tonne/Ha or 1' in depth	1451
Lagoon, NSB or SSB	Other sites meeting criteria set forth in June 12, 2018 NOA	TBA	691.4 tonne/Ha or 1' in depth	TBA
Total		**TBD**		**TBD**

Each site listed in Table 2 that is slated to receive sludge will be bermed prior to application in order to capture any potential run-off. A formal monitoring program is in place to address and mitigate any non-compliances that may occur, in order to reduce potential impact of the landspreading project on the surrounding environment. Specifically, weekly inspections of the berms will be done. If a significant amount of water accumulates within any of the bermed areas, it will be removed by vacuum truck, and taken to the effluent treatment system for treatment.

As requested by MCC, Table 3 lists the available phosphorus from 15 and 30 centimetre depths (composite samples) on landspreading sites at CKP. Note that results from the control areas, site 2D, north of sawmill, and south of water treatment are all background soil values (no sludge applied). The remaining results are from sites with sludge applied over the soils and as such the samples would contain both native soils and sludge. There are a number of sites, Site 2A/2B and portions of CLF1 in particular, where available phosphorus levels are currently below 60 ppm in the soil after sludge application. On these locations, CKP is requesting to spread an additional 1' layer of sludge. With 3-4 years of erosion and plant growth on these sites, sludge depths have reduced to as little as 3-4" in some locations and in others have become homogenous with the underlying soils. This can be seen in the site photos in Appendix B. Prior to applying an additional layer of sludge, these sites would be harrowed to create a uniform base layer containing previously applied sludge and soil. The 2021 dredging and landspreading pilot study project is tentatively scheduled to begin in mid-May. CKP is requesting a response regarding the continuation of the Pilot Study Project by March 12, 2021 to ensure that there is no delay in this planned work for spring 2021.

It should also be noted that during the fall 2020 conference call with MCC, CKP requested additional information from MCC regarding maximum available phosphorus levels for industrial soils. During the call MCC had mentioned a 60 ppm limit but this applied to agricultural soils. CKP has yet to receive a response on this matter.

Table 3: Available P for all Landspreading Sites from 2017-2020

Site	Depth (cm)	Year	Source of Sludge/Material	2017	2018	2019	2020
Site 2A – Zone 1	0-15	2017	North Basin	1.8	35.3	25.1	25.0
Site 2A – Zone 2	0-15	2018	South Basin	1.8	118	58.5	36.8
Site 2A – Zone 3	0-15	2018	South Basin/Yard Waste	1.8	45.8	18.5	41.8
Site 2A - Control	0-15	-	-	-	<1.0	<1.0	<1.0
Site 2B	0-15	2018	South Basin	1.8	58.1	42.9	21.5
Site 2B - Control	0-15	-	-	-	1.3	2.3	1.5
CLF1 – Zone 1	0-30	2018	South Basin	3.6	55.7	69.7	83.1
CLF1 – Zone 2	0-30	2019	North Basin	3.6	-	49.4	72.0
CLF1 – Zone 3	0-30	2018/2019	Aerated Lagoon	3.6	113	244	137
CLF1 – Zone 4	0-30	2020	South Basin	-	-	-	56.2
CLF2	0-30	2020	South Basin	1.6	-	-	49.7
Site 2D	0-15	-	-	-	-	-	<1.0
North of Sawmill	0-15	-	-	-	-	2.8	-
South of Water Treatment	0-20	-	-	1.6	-	-	-

CKP would like to thank MCC for working with our company on this Pilot Study Project over the last four years. If you have any questions or require any further information, please do not hesitate to contact me at (204) 623-8585 or Tamsin Patience, Technical Manager at (204) 623-8619.

Sincerely,

[redacted]

Leigh Johnston
Environmental Superintendent

cc: Asit Dey, Manitoba Conservation and Climate
Robert Boswick, Manitoba Conservation and Climate
Tamsin Patience
Andre Murphy
EC-19

Appendix A

Capped Landfill 1 July 2020

Capped Landfill 1 September 2020

Site 2A July 2020

Site 2A July 2020

Site 2B August 2020

Site 2B September 2020

Appendix B

Site 2B October 2020

Site 2B October 2020

Site 2A October 2020

Site 2A October 2020

Site 2A October 2020

Site 2A October 2020