

Boswick, Robert (CC)

From: Leigh Johnston <leigh.johnston@ckpi.com>
Sent: July-16-21 1:31 PM
To: Kohler, Shannon (CC)
Cc: Boswick, Robert (CC); Huculak, Cristal (CC); Burland Ross, Siobhan (CC); Tamsin Patience; Lisa Jones
Subject: Canadian Kraft Paper - Additional Application of Biosolids to Existing Landspreading Sites
Attachments: L2605769_COA_P-olsen test.PDF; Proposed sites for additional landspreading layers.pdf; Fully Labeled Landspreading Site Map.pdf

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ATTENTION: ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Afternoon Shannon,

As per section 3 of the May 28, 2021 correspondence titled "*Re: Continuation of Land Spreading Pilot Study on CKPI Mill Site*", Canadian Kraft Paper has analyzed previously landspread areas onsite for available phosphorus to determine if another lift of effluent treatment system biosolids can be applied to these sites. The test results are summarized in Table 1 below.

Table 1: Available Phosphorus

| Site | Available Phosphorus (mg/kg) |
|--------------------|------------------------------|
| 2a Zone 1 | 32.9 |
| 2a Zone 2 | 66.6 |
| 2a Zone 3 | 50.4 |
| 2b | 66.5 |
| CLF1 Zone 1 | 77.4 |
| CLF1 Zone 2 | 57.8 |
| CLF1 Zone 3 | 312 |

Sites 2a (Zone 1), 2a (Zone 3) and CLF1 (Zone 2) have less than 60 mg/kg of phosphorus and as such CKP plans to add an additional layer of biosolids on these locations. These areas are currently bermed to capture any rain/melt water runoff, the berms will continue to be maintained/monitored and captured run off will be returned to the effluent treatment system. These sites will also be reseeded once the biosolids have dried enough for seeding equipment to access the areas.

Table 2 summarizes the volumes and rates of application for each proposed site.

Table 2: Proposed Application Rates

| Site | # of Hectares | Rate | Bone Dry Tonnes of Material |
|---------------|---------------|-------------------------------|-----------------------------|
| 2a (Zone 1) | 2.18 | 691.4 tonne/Ha or 1' in depth | 1,507.25 |
| 2a (Zone 3) | 1.36 | 691.4 tonne/Ha or 1' in depth | 940.30 |
| CLF1 (Zone 2) | 2.39 | 691.4 tonne/Ha or 1' in depth | 1652.45 |

CKP is seeking approval to spread on these sites in order to carry out dredging of the aerated lagoon this year. Attached is the phosphorus testing COA from ALS Labs and maps showing the location of the 3 sites.

Please notify me of your decision by July 30, 2021 or earlier so CKP can proceed with planning and selection of a dredging contractor.

If you have any questions, please contact me at (t) (204) 623-8585 or (e) leigh.johnston@ckpi.com.

Sincerely,



Leigh Johnston

Environmental Superintendent

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leigh.johnston@ckpi.com

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Hwy #10 North | The Pas, MB | R9A 1L4 | Box 1590

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Canadian Kraft Paper Industries Limited
ATTN: ERNIE BALLANTYNE
PO Box 1590
The Pas MB R9A 1L4

Date Received: 24-JUN-21
Report Date: 05-JUL-21 07:02 (MT)
Version: FINAL

Client Phone: 204-623-8636

Certificate of Analysis

Lab Work Order #: L2605769

Project P.O. #: SV-31066

Job Reference:

C of C Numbers:

Legal Site Desc:

[REDACTED]
Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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ALS ENVIRONMENTAL ANALYTICAL REPORT

| Sample Details/Parameters | Result | Qualifier* | D.L. | Units | Extracted | Analyzed | Batch |
|--|--------|------------|------|-------|-----------|-----------|----------|
| L2605769-1 SITE 2A ZONE 1, 0-15 COMPOSITE GROUND SAMPLE Sampled By: CLIENT on 22-JUN-21 @ 11:30 Matrix: SOIL Miscellaneous Parameters Available Phosphate-P | 32.9 | | 1.0 | mg/kg | 02-JUL-21 | 02-JUL-21 | R5508859 |
| L2605769-2 SITE 2A ZONE 2, 0-15 COMPOSITE GROUND SAMPLE Sampled By: CLIENT on 22-JUN-21 @ 11:15 Matrix: SOIL Miscellaneous Parameters Available Phosphate-P | 66.6 | | 2.0 | mg/kg | 02-JUL-21 | 02-JUL-21 | R5508859 |
| L2605769-3 SITE 2A ZONE 3, 0-15 COMPOSITE GROUND SAMPLE Sampled By: CLIENT on 22-JUN-21 @ 11:45 Matrix: SOIL Miscellaneous Parameters Available Phosphate-P | 50.4 | | 2.0 | mg/kg | 02-JUL-21 | 02-JUL-21 | R5508859 |
| L2605769-4 SITE 2B, 0-15 COMPOSITE GROUND SAMPLE Sampled By: CLIENT on 22-JUN-21 @ 12:05 Matrix: SOIL Miscellaneous Parameters Available Phosphate-P | 66.5 | | 2.0 | mg/kg | 02-JUL-21 | 02-JUL-21 | R5508859 |
| L2605769-5 CLF1 ZONE 1, 0-15 COMPOSITE GROUND SAMPLE Sampled By: CLIENT on 22-JUN-21 @ 10:25 Matrix: SOIL Miscellaneous Parameters Available Phosphate-P | 77.4 | | 5.0 | mg/kg | 02-JUL-21 | 02-JUL-21 | R5508859 |
| L2605769-6 CLF1 ZONE 2, 0-15 COMPOSITE GROUND SAMPLE Sampled By: CLIENT on 22-JUN-21 @ 10:05 Matrix: SOIL Miscellaneous Parameters Available Phosphate-P | 57.8 | | 2.0 | mg/kg | 02-JUL-21 | 02-JUL-21 | R5508859 |
| L2605769-7 CLF1 ZONE 3, 0-15 COMPOSITE GROUND SAMPLE Sampled By: CLIENT on 22-JUN-21 @ 10:48 Matrix: SOIL Miscellaneous Parameters Available Phosphate-P | 312 | | 20 | mg/kg | 02-JUL-21 | 02-JUL-21 | R5508859 |
| | | | | | | | |

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

| ALS Test Code | Matrix | Test Description | Method Reference** |
|--|--------|--------------------------------|--------------------|
| PO4-AVAIL-OLSEN-SK | Soil | Available Phosphate-P by Olsen | CSSS (2008) 8 |
| Plant available phosphorus is extracted from air dried soil using a fixed ratio bicarbonate extraction. Phosphorus is determined by colorimetry. | | | |

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

| Laboratory Definition Code | Laboratory Location |
|----------------------------|---|
| SK | ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA |

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L2605769

Report Date: 05-JUL-21

Page 1 of 2

Client: Canadian Kraft Paper Industries Limited
PO Box 1590
The Pas MB R9A 1L4
Contact: ERNIE BALLANTYNE

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|-----------------------|----------|------------|--------|-----------|-------|-----|--------|-----------|
| PO4-AVAIL-OLSEN-SK | Soil | | | | | | | |
| Batch | R5508859 | | | | | | | |
| WG3567766-1 DUP | | L2605769-4 | | | | | | |
| Available Phosphate-P | | 66.5 | 62.8 | | mg/kg | 5.7 | 30 | 02-JUL-21 |
| WG3567766-3 IRM | | FARM2005 | | | | | | |
| Available Phosphate-P | | | 118.1 | | % | | 80-120 | 02-JUL-21 |
| WG3567766-4 LCS | | | | | | | | |
| Available Phosphate-P | | | 104.2 | | % | | 80-120 | 02-JUL-21 |
| WG3567766-2 MB | | | | | | | | |
| Available Phosphate-P | | | <1.0 | | mg/kg | | 1 | 02-JUL-21 |

Quality Control Report

Workorder: L2605769

Report Date: 05-JUL-21

Page 2 of 2

Legend:

| | |
|-------|---|
| Limit | ALS Control Limit (Data Quality Objectives) |
| DUP | Duplicate |
| RPD | Relative Percent Difference |
| N/A | Not Available |
| LCS | Laboratory Control Sample |
| SRM | Standard Reference Material |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| ADE | Average Desorption Efficiency |
| MB | Method Blank |
| IRM | Internal Reference Material |
| CRM | Certified Reference Material |
| CCV | Continuing Calibration Verification |
| CVS | Calibration Verification Standard |
| LCSD | Laboratory Control Sample Duplicate |

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



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Cha



L2605769-COFC

COC Number: 20

Page 1 of 1

| | | | | |
|--|--|---|---------------------|---|
| Report To Contact and company name below will appear on the final report | | Turnaround Time (TAT) Requested | | AFFIX ALS BARCODE LABEL HERE (ALS use only) |
| Company: Canadian Kraft Paper Contact: Leigh Johnston/ Ernie Balantyne Phone: 204 623 8585 Company address below will appear on the final report Street: PO Box 1590 City/Province: The Pas, MB Postal Code: R9A 1L4 | | Select Report Format: <input checked="" type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge QC/QCI Reports with COA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: lisa.jones@ckpi.com Email 2: leigh.johnston@ckpi.com Email 3: | | |
| Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of Invoice with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Company: Contact: | | Invoice Recipients Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: lisa.jones@ckpi.com Email 2: ernie.balantyne@ckpi.com | | Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests. Date and Time Required for all E&P TATs: dd-mm-yy hh:mm am/pm For all tests with rush TATs requested, please contact your AM to confirm availability. |
| Project Information ALS Account # / Quote #: Q65026 Job #: PO / AFE: SV-31066 / LSD: | | Oil and Gas Required Fields (client use) AFE/Cost Center: Major/Minor Code: Routing Code: Requisitioner: Location: | | |
| ALS Lab Work Order # (ALS use only): | | ALS Contact: | | Sampler: |
| ALS Sample # (ALS use only) | Sample Identification and/or Coordinates (This description will appear on the report) | Date (dd-mm-yy) | Time (hh:mm) | Sample Type |
| | Site 2A Zone 1, 0-15cm Composite Ground Sample | 22-Jun-21 | 11:17 - 11:30 | Soil |
| | Site 2A Zone 2, 0-15cm Composite Ground Sample | 22-Jun-21 | 11:00 - 11:15 | Soil |
| | Site 2A Zone 3, 0-15cm Composite Ground Sample | 22-Jun-21 | 11:32 - 11:45 | Soil |
| | Site 2B, 0-15cm Composite Ground Sample | 22-Jun-21 | 11:50 - 12:05 | Soil |
| | CLF1 Zone 1, 0-15cm Composite Ground Sample | 22-Jun-21 | 10:10 - 10:25 | Soil |
| | CLF1 Zone 2, 0-15cm Composite Ground Sample | 22-Jun-21 | 9:50 - 10:05 | Soil |
| | CLF1 Zone 3, 0-15cm Composite Ground Sample | 22-Jun-21 | 10:30 - 10:45 | Soil |
| Drinking Water (DW) Samples¹ (client use) | | Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only) | | |
| Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO | | SAMPLE RECEIPT DETAILS (ALS use only) Cooling Method: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> ICE <input type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO Cooler Custody Seals Intact: <input checked="" type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A INITIAL COOLER TEMPERATURES °C: FINAL COOLER TEMPERATURES °C: | | |
| SHIPMENT RELEASE (client use) | | INITIAL SHIPMENT RECEPTION (ALS use only) | | |
| Released by: | Date: June 22, 2021 | Time: | Received by: | Date: JUN 24 2021 |
| | | | Received by: | Date: JUN 24 2021 |

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

ALS 2019-2020

Fig 1: Site 2a Zone 1 and Zone 3 are represented by the yellow and purple polygons, respectively.

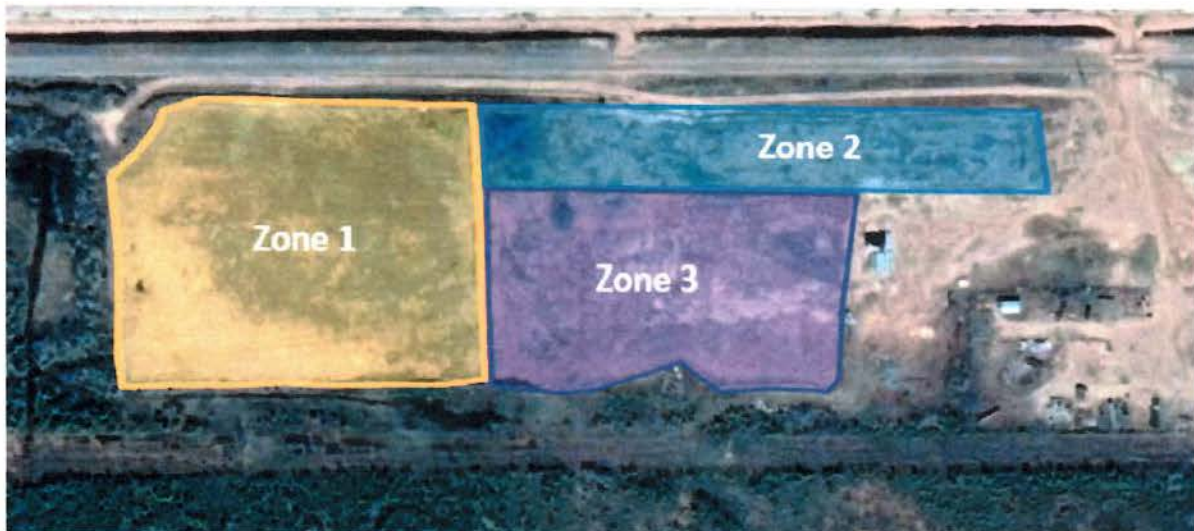


Fig 2: Site CLF1 Zone 2 is represented by the purple polygon.



