

May 27, 2024

Mackenzie Valley Land and Water Board
P.O. Box 2130
4922 - 48th Street
7th Floor YK Centre Mall
Yellowknife, NT X1A 2P6

SLR Project No.: 204.030163.00001

Client Reference No.: 700734912

**RE: Application for a Type B Land Use Permit Under Trigger 5b(i) -
Confirmatory Soil Sampling and Limited Phase II Environmental Site
Assessment – Two PSPC Residential Properties
9818 101st Street and 9606 102nd Street
Fort Simpson, Northwest Territories**

Waste Management Plan

Attached please find the Waste Management Plan for the above-noted project. Please contact Shaun Lamoureux with any questions or comments by phone at 1 250 819 9677 or email. Your time and consideration is greatly appreciated.

Regards,

SLR Consulting (Canada) Ltd.

A handwritten signature in black ink, appearing to read "Shaun Lamoureux", with a stylized flourish at the end.

Shaun Lamoureux, P.Eng, PMP
Senior Environmental Project Manager
slamoureux@slrconsulting.com

A handwritten signature in black ink, appearing to read "Ric Horobin", with a stylized flourish at the end.

Ric Horobin, M.Sc., PhD, CGeol, MIAH
Senior Environmental Project Manager
rhobin@slrconsulting.com

Attachment Waste Management Plan



Waste Management Plan

**9818 – 101st Street and 9606 – 102nd Street
Fort Simpson, Northwest Territories**

Mackenzie Valley Land and Water Board

7th Floor – 4922 48th Street, P.O. Box 2130
Yellowknife, NT X1A 2P6

Prepared by:

SLR Consulting (Canada) Ltd.

8 St. Paul Street W, Kamloops, BC V2C 1G1

SLR Project No.: 204.030152.00001

Client Reference No: 700669493

May 27, 2024

Revision: 1.1

Revision Record

Revision	Date	Prepared By	Checked By	Authorized By
1.0	February 8, 2024	Victoria Antoniuk	Shaun Lamoureux	Shaun Lamoureux
1.1	May 27, 2024	Victoria Antoniuk	Shaun Lamoureux	Ric Horobin



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Any findings, conclusions, recommendations, or designs provided in this report are based on conditions and criteria that existed at the time work was completed and the assumptions and qualifications set forth herein.

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1.0 Introduction and Project Details

SLR Consulting (Canada) Ltd. (SLR), has prepared this Waste Management Plan as part of the application process in preparation for a due diligence environmental assessment at 9818 101st Street and 9606 102nd Street in Fort Simpson, Northwest Territories (the site). The properties are 643 m² (9606 102nd Street) and 713 m² (9818 101st Street) in area.

1.1 Contact Information

Company Name: SLR Consulting (Canada) Ltd.

Applicants Name: Shaun Michael Lamoureux, P.Eng. PMP (on behalf of Public Services and Procurement Canada)

Email: slamoureux@slrconsulting.com

Telephone: 250-819-9677 or 250-682-5051

Mailing Address: 8 West St. Paul Street, Kamloops, BC V2C 1G1

1.2 Effective Date of Waste Management Plan

The spill contingency plan will be effective from April 2024 to March 2025. If necessary, the plan may be updated as conditions change. Environmental Policy.

The SLR Group is one of the world's leading global environmental and advisory consultancies and is dedicated to the ideals and practices of sustainability (environmental, social and economic). Through the consulting services it provides, SLR aims to make a positive environmental contribution by assisting clients to reduce adverse environmental impacts and deliver positive environmental outcomes. Furthermore, SLR seeks to protect the environment by minimising the environmental impacts of its own operations. We are committed to:

- Communicating this policy to our staff.
- Complying with relevant environmental legislation and regulations in the countries in which we operate.
- Measuring the environmental impacts of our operations and establishing objectives and targets for continual improvement.
- Setting a science-based target (validated by the Science Based Targets initiative [SBTi]) to achieve a Net Zero position for the business aligned with SBTi's "Business Ambition for 1.5°C" initiative through the absolute reduction of our scope 1, 2 and 3 Greenhouse Gas (GHG) emissions.
- Reducing our Greenhouse Gas (GHG) emissions year on year such that we meet our 2030 commitment to be a Climate Neutral business.
- Reporting annually on our progress and being transparent about our challenges and achievements.
- Identifying opportunities to work with our clients to improve environmental outcomes on the projects on which we work.
- Promoting the adoption of the principles of this policy throughout our Supply Chain.



- Developing and maintaining an environmental management system to assist in meeting our objectives.
- Providing adequate training and support such that our staff comply with the Group's policies, relevant legislation and codes of practice.
- Promoting external awareness of our Environmental Policy.

This waste management plan will be reviewed by each employee and worker onsite during initial site orientation, when responsibilities change and when the plan is updated.

1.3 Project Details

The sites are located at 9606 102nd Street and 9818 101st Street in Fort Simpson, Northwest Territories (Appendix A).

9606 102nd Street is located between 102nd Street and the Mackenzie River and is 643 m² in size. 9818 101st Street is located on the east side of 101st Street and is 713 m² in size.

9606 102nd Street was developed with a residential building sometime between 1971 and 1972 and 9818 101st Street was developed with a residential building in 1973. The sites are still currently used for residential purposes.

The proposed scope of work will be conducted at the site:

9606 102nd Street

- Utility locates;
- Excavation of up to 20 m³ of hydrocarbon impacted soils from the base and side walls of an existing heating oil tank spill;
- Load and transport impacted soils to soil treatment facility;
- Drilling of three groundwater monitoring wells up to 8 m in depth, and collection of groundwater samples from the three wells; and,
- Collection of one surface water sample from the Mackenzie River.

9818 101st Street

- Excavation of ~5 m³ of hydrocarbon impacted soil near a leaking heating oil tank. Soil will be transported and disposed of with the impacted soils from 9606 102nd Street;
- Removal, cleaning and disposal of bollards and previous heating oil tank; and,
- Backfill excavation and revegetate and distributed areas, if required.



2.0 Identification of Waste Types

Over the course of the work program, a limited number of types of waste could potentially be generated by equipment and crews. The types of wastes anticipated to be generated are outlined below:

Table 1: Waste Streams

Waste Type	Description	Handling Method	Disposal Method	Environmental Effects
Soils Cuttings	Soil from borehole drilling (potential to be hydrocarbon impacted).	Placed in 20 L buckets with lids until laboratory analysis is received.	Soil will be removed from the site and transported to the KBL Environmental Yellowknife facility for disposal by the contractor.	Potential for degradation of soil, water quality and wildlife habitat.
Contaminated Soils	Petroleum hydrocarbon impacted soil from excavation.	Loaded into tandem trucks for disposal.	Soil will be removed from the site and transported to the KBL Environmental Yellowknife facility for disposal by the contractor.	Potential for degradation of soil, water quality and wildlife habitat.
Waste Water	Groundwater purged from the monitoring wells and cleaning the heating oil tank (potential to be hydrocarbon impacted).	Placed in an on-site tote.	Tote containing purge water will be removed from the site and transported to licensed disposal facility by the Contractor.	Potential for degradation of soil, water quality and wildlife habitat.
Cleared Vegetation	Clearing of brush and/or trees may be required for drill access.	Will be dispersed around site to decompose.	N/A	Erosion
Sewage	Grey/black water.	Staff will return to in-town accommodations to use the washrooms.	N/A	N/A
Domestic Waste (non-hazardous)	Organic and non-organic wastes including food scrapes, plastics and papers.	Wastes will be stored in garbage bags.	Disposed of at the Fort Simpson landfill or in the property garbage bins daily.	May attract animals to the site.
Wastes generated during tank removal	Bollards, concrete and cleaned heating oil tank	Loaded into truck by contractor for disposal.	Disposed of at the Fort Simpson landfill.	None



3.0 Management of Waste Types

3.1 Domestic Wastes

Domestic wastes that may be generated at the site include various plastics (plastic bags, filters, nitrile gloves, tape, plastic wrap, sampling equipment), food wastes, and paper wastes. Waste is expected to be limited to one 55-gallon garbage bag per day. To minimize the potential to attract wildlife, food wastes will be kept in odour-proof containers or put in garbage bags located in vehicles. Other domestic wastes will be collected in garbage bags at the site. Wastes will be transported by SLR or the contractor to the Fort Simpson Landfill daily. Approval from the Fort Simpson Landfill is included in Appendix B.

3.2 Vegetation

Minor brush or tree trimming may be required for drill access. In the event that trimming is required, the trimmings will be collected and disposed of in the local landfill compost waste stream.

3.3 Sewage

No washroom facilities will be available at the site. Workers will return to their in-town accommodations to use restroom facilities.

3.4 Soil Cuttings

Soil cuttings will be stored by drillers or field staff in 20 L buckets (with lids) for containment and storage while awaiting laboratory results. It is estimated that 1m³ of soil cuttings will be produced. Upon receipt of laboratory results, the buckets will be removed from the site by the contractor and transported to the KBL Environmental Yellowknife facility for disposal. Email correspondence from KBL Environmental is included in Appendix B.

3.5 Contaminated Soils

Contaminated soil removed from the excavations will be placed in tandem trucks at the site. It is estimated at 20 m³ of impacted soils will be removed from the site. The truck loads will be transported to the KBL Environmental Yellowknife facility using existing municipal roadways by the contractor.

The appropriate waste manifest to fulfill TDGR requirements will be completed. Approval from KBL Environmental is included in Appendix B.

3.6 Waste Water

Purge water (from monitoring well development and sampling) and from cleaning the heating oil tank will be stored by field staff in a tote present at the site. It is anticipated that purge water volume will be less than 10 L. The tote will be removed by the contractor following completion of the field activities. The tote will be transported to the KBL Environmental Yellowknife facility for disposal. Approval from KBL Environmental is included in Appendix B.



3.7 Waste Generated During Heating Oil Tank Removal

Wastes generated during the removal of the heating oil tank and related infrastructure (bollards, concrete), will be removed from the site by the contractor. The heating oil tank will be decontaminated (i.e., washed) and cut in half prior to disposal at the landfill.

Concrete will be less than 1 m length on any axis and no more than 5 m³ will be disposed of at the landfill without prior written approval. Approval from the Fort Simpson Landfill is included in Appendix B.

4.0 Infrastructure Required for Waste Management

The infrastructure required for waste management at the site will be limited to 20 L buckets, a tote and garbage bags. Tandem trucks will be present at the site to remove excavated soils.

5.0 References

- Mackenzie Valley Land and Water Board (MVLWB). 2011. Guidelines for Developing a Waste Management Plan. MVLWB, Yellowknife, NT. Retrieved February 7, 2024 from: <https://mvlwb.com/resources/lwb-policies-and-guidelines>
- GNWT. 2017. Guideline for the Hazardous Waste Management. Retrieved February 8, 2023 from: https://www.enr.gov.nt.ca/sites/enr/files/resources/128-hazardous_waste-interactive_web_0.pdf





Appendix A Site Plan

Waste Management Plan

9818 – 101st Street and 9606 – 102nd Street, Fort Simpson, Northwest Territories

Mackenzie Valley Land and Water Board

SLR Project No.: 204.030152.00001

May 27, 2024

GENERAL LOCATION MAP



BASEDATA:
ESRI, DELORME, HERE, TOMTOM,
INTERMAP, INCREMENT P CORP.,
GEBCO, USGS, FAO, NPS, NRCAN,
GEOBASE, IGN, KADASTER NL,
ORDNANCE SURVEY, ESRI JAPAN, METI,
ESRI CHINA (HONG KONG), SWISSTOPO,
MAPMYINDIA, AND THE GIS USER
COMMUNITY

0 0.5 1 2 3 km

SCALE 1:50,000
WHEN PLOTTED CORRECTLY ON A 11 x 17 PAGE LAYOUT
NAD 1983 UTM Zone 10 N

PUBLIC SERVICES AND PROCUREMENT CANADA
9606 102ND STREET
FORT SIMPSON, NWT

LIMITED PHASE II ENVIRONMENTAL SITE
ASSESSMENT

SITE LOCATION



FIGURE NO:

1

DATE: October 24, 2022

PROJECT NO: 234.30025.00000

Cadfile name: S_234-30025-00000-A1.dwg



Mackenzie River

Excavation of 5 m³
Heating Oil Impacted Soil.

9818 101st. St. Properties		
	Latitude	Longitude
NW Corner	61.86356° N	121.35225° W
NE Corner	61.86370° N	121.35173° W
SW Corner	61.86340° N	121.35207° W
SE Corner	61.86355° N	121.35149° W
Area	713m ²	

9818 Property Boundary

92 Ave.

102 St.

101 St.



9818 Heating Oil Tank Leak
Land Use Application
Fort Simpson NT



Mackenzie River

102St.

96Ave

9606 Properties		
	Latitude	Longitude
NW Corner	61.86235°	-121.34836°
NE Corner	61.86255°	-121.34784°
SW Corner	61.86340° N	-121.34814°
SE Corner	61.86355° N	-121.34762°
Area	643	

— 9606 Property Line
Lot 524 Plan 2979

Existing Open Excavation
Excavation of additional 25 m³
Heating Oil Impacted Soil.

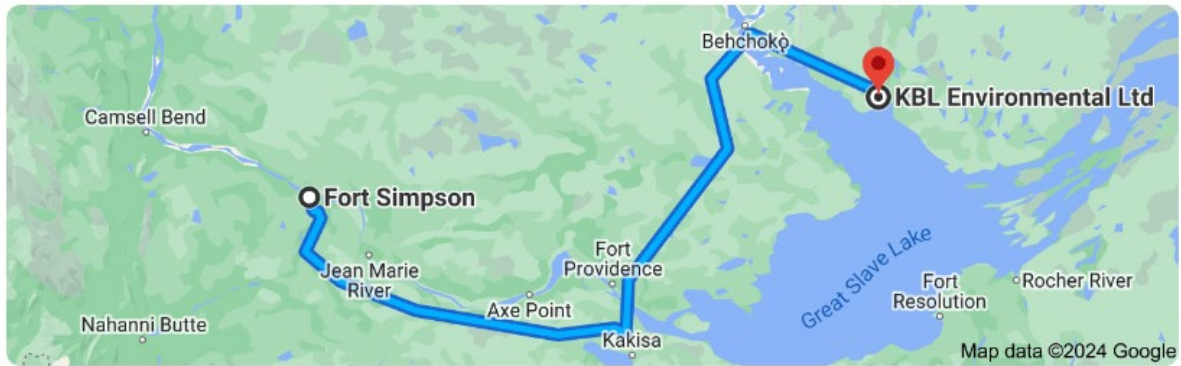
Groundwater Monitoring Well
10 mbgs



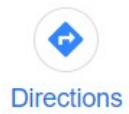
0 10 20
m
Scale

9606 Heating Oil Tank Leak
Land Use Application
Fort Simpson NT

Fort Simpson to KBL Environmental in Yellowknife



7 hr 54 min (627.6 km) via Mackenzie Hwy Wrigley





Appendix B Approvals

Waste Management Plan

9818 – 101st Street and 9606 – 102nd Street, Fort Simpson, Northwest Territories

Mackenzie Valley Land and Water Board

SLR Project No.: 204.030152.00001

May 27, 2024

From: [Mitchell Gast](#)
To: [Victoria Antoniuk](#)
Subject: RE: Domestic waste acceptance
Date: February 08, 2024 12:53:40 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

You don't often get email from mgast@fortsimpson.com. [Learn why this is important](#)

Victoria,

Basic heating oil tanks cleaned of contaminants and cut in half is the routine protocol.

Concrete no larger than 1m in any axis and if more than a small amount(5 cubic metres) is proposed for disposal, we need to discuss the max volume.



Mitchell Gast

Operations Manager/
Acting Senior Administrative Officer
Phone 867-695-2253
Cell 867-695-6501
Fax 867-695-2005
Web www.fortsimpson.com
Email mgast@fortsimpson.com
PO Box 438, Fort Simpson, NT, X0E 0N0

From: Victoria Antoniuk <vantoniuk@slrconsulting.com>
Sent: Thursday, February 8, 2024 12:58 PM
To: Mitchell Gast <mgast@fortsimpson.com>
Subject: RE: Domestic waste acceptance

You don't often get email from vantoniuk@slrconsulting.com. [Learn why this is important](#)

Follow up to this – does the landfill accept pieces of concrete, bollards and heating oil tanks? Everything would be washed/cleaned prior to disposal.

Are there any restrictions to these items being accepted (i.e., no concrete pieces large than x amount, the tank would need to be cut up, etc.)

Thanks!

Victoria Antoniuk

(she/her/hers)

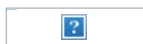
Environmental Geoscientist-in-Training

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M [+1 250 320 7268](tel:+12503207268)

E vantoniuk@slrconsulting.com

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From: Mitchell Gast <mgast@fortsimpson.com>
Sent: February 08, 2024 9:18 AM
To: Victoria Antoniuk <vantoniuk@slrconsulting.com>
Subject: RE: Domestic waste acceptance

You don't often get email from mgast@fortsimpson.com. [Learn why this is important](#)

Victoria,

Yes we accept that type of material.



Mitchell Gast

Operations Manager/
Acting Senior Administrative Officer
Phone 867-695-2253
Cell 867-695-6501
Fax 867-695-2005
Web www.fortsimpson.com
Email mgast@fortsimpson.com
PO Box 438, Fort Simpson, NT, X0E 0N0

From: Victoria Antoniuk <vantoniuk@slrconsulting.com>
Sent: Thursday, February 8, 2024 10:11 AM
To: Mitchell Gast <mgast@fortsimpson.com>
Subject: Domestic waste acceptance

You don't often get email from vantoniuk@slrconsulting.com. [Learn why this is important](#)

Hi Mitch,

We are just going through a permitting process at the moment, so I'm just looking for confirmation that the Fort Simpson landfill can accept general domestic wastes (i.e., food scrapes, plastics, papers) that will be contained in garbage bags.

Thanks!

Victoria Antoniuk

(she/her/hers)

Environmental Geoscientist-in-Training

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M [+1 250 320 7268](tel:+12503207268)

E vantoniuk@slrconsulting.com

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From: [Rola Hogan](#)
To: [Victoria Antoniuk](#)
Cc: [Shaun Lamoureux](#); [Katie Oliver](#)
Subject: RE: Soil disposal
Date: February 01, 2024 1:39:41 PM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[Yellowknife Acceptance - Criteria and requirements 2024.pdf](#)

You don't often get email from rhogan@kblenv.com. [Learn why this is important](#)

Hi Victoria: I reviewed the lab analysis results that you sent. The analysis indicates the from a hydrocarbon and VOC it would meet criteria.

We also require a metals analysis to compare the metals content for acceptance. I have attached the criteria guidelines for you to look over. We would require a laboratory analysis certificate for us to review to assure the soils meet these criteria.

Please forward the metals analysis so we can indicate acceptance or rejection.

-

We can not accept the materials without this data.

Thanks

Rola Hogan

From: Victoria Antoniuk <vantoniuk@slrconsulting.com>
Sent: Tuesday, January 30, 2024 9:02 AM
To: Rola Hogan <RHogan@kblenv.com>
Cc: Shaun Lamoureux <slamoureux@slrconsulting.com>
Subject: RE: Soil disposal

See attached soil analytical results. Please let me know if the soils can be accepted at the facility in Yellowknife.

Thanks!

Victoria

Victoria Antoniuk
Environmental Consultant

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M [+1 250 320 7268](tel:+12503207268)
E vantoniuk@slrconsulting.com

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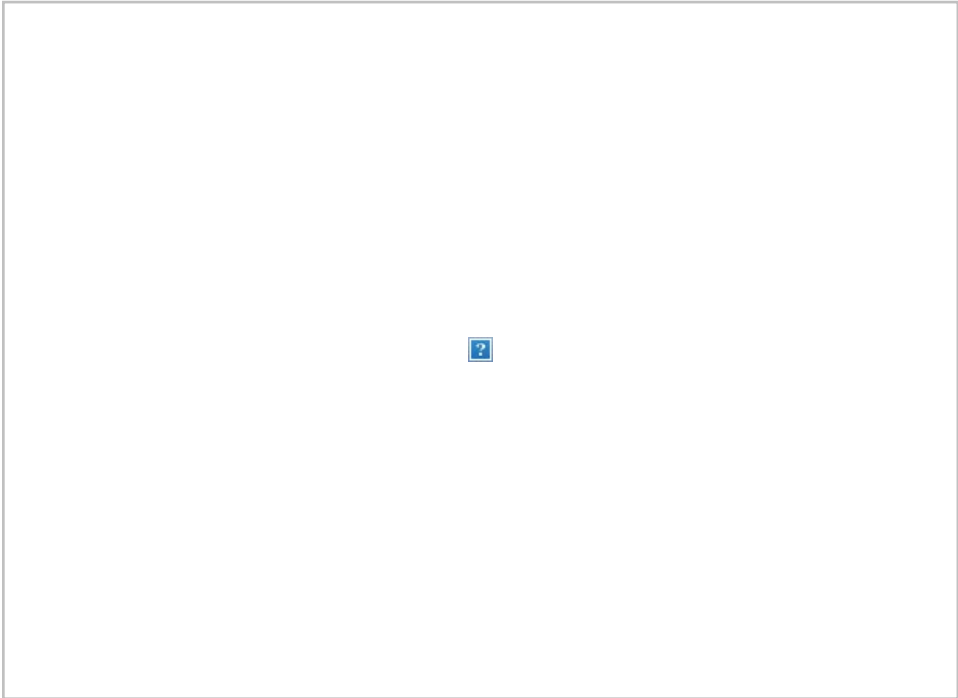
From: Rola Hogan <RHogan@kblenv.com>
Sent: January 29, 2024 4:07 PM
To: Victoria Antoniuk <vantoniuk@slrconsulting.com>
Subject: Soil disposal

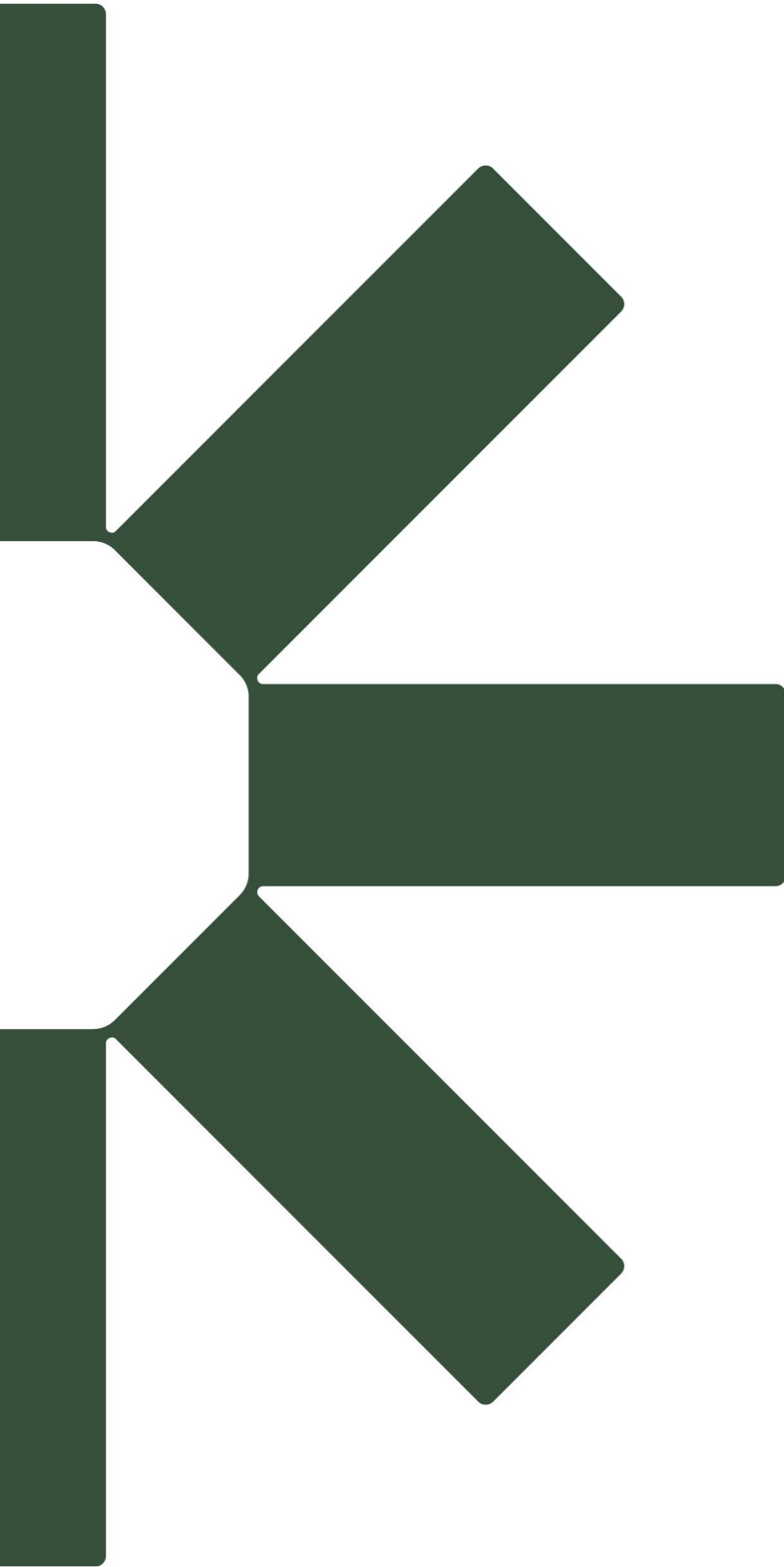
You don't often get email from rhogan@kblenv.com. [Learn why this is important](#)

Good afternoon, Veronica. WE do have room at the facility. Please forward the analytical so I can see what we have and if it fits

within our approvals conditions.

Rola Hogan





Making Sustainability Happen