NEEGAN BURNSIDE

Whitesand First Nation
Cogeneration and Pellet Mill Project

Decommissioning Plan Report

Sagatay Cogeneration LP

October 2014

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Cogeneration and Pellet Mill Project

Decommissioning Plan Report

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Prepared for:

Sagatay Cogeneration LP, with its General Partner, Sagatay Cogeneration Ltd., and Whitesand First Nation as agent

October 2014

File No: 300030895.0000

Record of Revisions

Revision	Date	Description
0	December 18, 2013	Draft Report Submission for Consultation
1	October 17, 2014	Application to the Ministry of the Environment and Climate Change for Renewable Energy Approval

Executive Summary

Sagatay Cogeneration LP, with its General Partner, Sagatay Cogeneration Ltd., and Whitesand First Nation as agent is proposing to develop, construct and operate a biomass fueled electric power and heat cogeneration plant, and wood pellet facility. The Project is located on Crown Land in an unorganized territory of the Thunder Bay District near Whitesand First Nation and Armstrong, Ontario. The unorganized territory is administered by the Armstrong Local Service Board and the Project will be located solely on the traditional territory of Whitesand First Nation.

The purpose of this Report is to explain how the Project location will be restored to a clean and safe condition at the end of the life of the Project. Steps will include the retiring of the elements of the renewable energy generation facility, restoring or rehabilitating the land, and prudently handling the excess of materials and waste.

This Decommissioning Plan Report has been prepared in accordance with Item 3, Table 1 of O.Reg. 359/09 which sets out specific content requirements, including:

- procedures for dismantling or demolishing the facility;
- activities related to the restoration of any land and water negatively affected by the facility; and,
- procedures for managing excess material and waste.

The equipment utilized in this Project has a typical operational lifespan of approximately 25 years. This report describes the decommissioning activities for the facility components that will occur at the end of the equipment's useful life. It also discusses requirements in the event that Sagatay Cogeneration LP is unable to complete the construction or abandons the project. Upon completion of decommissioning, the Project area will be restored to its pre-development state, subject to regulatory and Land Use Permit requirements.

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1.0 Introduction

1.1 Background

Sagatay Cogeneration LP ("Sagatay"), with its General Partner, Sagatay Cogeneration Ltd., and Whitesand First Nation ("Whitesand") as agent, is proposing to develop, construct and operate a biomass fueled electric power and heat cogeneration plant, and wood pellet facility (the "Project"). The Project is located on Crown Land in an unorganized territory of the Thunder Bay District near Whitesand First Nation and Armstrong, Ontario. The unorganized territory is administered by the Armstrong Local Service Board and the Project will be located solely on the traditional territory of Whitesand First Nation.

The cogeneration facility is classified as a Class 1 Thermal Facility under Ontario Regulation 359/09 (O.Reg. 359/09) of the *Environmental Protection Act*. As such, an Application for Renewable Energy Approval ("REA") is being prepared under O.Reg. 359/09.

The Project consists of the following main components:

- a Woodyard with material handling and storage components, as well as access roads, a maintenance garage, diesel fuel storage / filling station, and waste oil building;
- a Biomass Cogeneration Plant, which will generate electricity for the Project and the nearby community, having a nameplate capacity of up to 3.6 MW. It will also generate process steam and heat for use in the Pellet Plant and on-site buildings;
- a Pellet Plant, which will create approximately 60,000 metric tons per year of residential and/or industrial grade wood fuel pellets;
- wells to supply process water and domestic potable water for the facility;
- an on-site wastewater management system for facility process wastewater and domestic sewage;
- a water storage pond and pump building; and,
- a transformer substation to interface between the cogeneration plant and the local grid operated by Hydro One Remote Communities.

Construction of the Project will not commence until Renewable Energy Approval and other permits as required have been obtained. The construction period is estimated to take approximately 14 months in duration, with commencement of Project operation anticipated in 2016. It is anticipated that the Project will be operational for approximately 25 years.

1.2 Land Use

A portion of the Project Location ("Site") was previously used as an industrial site for a forestry operation under a Land Use Permit which was forfeited to the Crown. Whitesand First Nation currently holds a Land Use Permit that includes the full extent of the Project Location. There are conditions in the Land Use Permit that require removal of specified debris left behind from the previous forestry operation. In this report, "pre-development conditions" will be considered those in which the Site will be upon removal of the specified debris noted above.

Upon completion of decommissioning activities, the land will be available for future uses as deemed appropriate by the Ministry of Natural Resources (MNR) acting on behalf of the Crown. While there are no municipal or local authority land use plans in effect for the area, the Crown Land in the vicinity of the Project is part of a "General Use Area" classified as "G2619" by MNR. According to the Crown Land Use Policy Report for G2619, the primary use of this land is for the extraction of resources (forestry, mining, trapping). For the purposes of this report, it is assumed that the future land use at the Site will be either left as part of the natural environment or planted for forestry operations. If the Site is re-developed for the extraction of resources, the future user will be contacted to determine if any Project components can be left in place for re-use.

1.3 Objective and Scope

The purpose of this Report is to explain how Sagatay proposes to restore the Project Location to a clean and safe condition at the end of the life of the Project. Steps will include the retiring of the elements of the renewable energy generation facility, restoring or rehabilitating the land, and prudently handling the excess of materials and waste.

This Decommissioning Plan Report is one component of the REA Application for the Project, and has been prepared in accordance with Item 3, Table 1 of O.Reg. 359/09 which sets out specific content requirements as provided in **Table 1**.

Table 1 Decommissioning Plan Report Requirements

Requirements	Completed	Reference This Report Section #
Set out a description of the plans for the decommissioning of the renewable energy generation facility including:		
Procedures for dismantling or demolishing the facility.	Yes	2.0
Activities related to the restoration of any land and water negatively affected by the facility.	Yes	3.0
Procedures for managing excess material and waste.	Yes	4.0

2.0 Decommissioning Procedures

The equipment utilized in this Project has a typical operational lifespan of approximately 25 years. This report describes the decommissioning activities for the facility components that will occur at the end of the equipment's useful life. In addition to dismantling and removal of equipment, alternative scenarios may include refurbishment or sale of equipment in place for continued operation of the Project. Details regarding refurbishment and continued operation of the Project would be addressed in the future by the appropriate proponent according to the applicable regulations and required permits.

2.1 Decommissioning During Construction (Abandonment of Project)

In the event that Sagatay is not able to complete construction activities, it is envisioned that the rights to the Project would be sold and the Project would be successfully constructed by the purchasing developer.

Should the Project be abandoned, Sagatay will be responsible for the removal of all equipment, foundations and imported material from the Project area in accordance with applicable local, provincial and federal policies.

The decommissioning process to be followed and any mitigation measures resulting from the abandonment of the Project will be the same as those detailed below for decommissioning after ceasing operation of the Project. Furthermore, since the first step during the construction phase of the Project would be to install erosion and sediment controls and implement safety measures, it is not expected that the Site would be vulnerable to potential negative environmental effects. As such, no additional negative environmental effects are anticipated due to sudden Project abandonment during construction.

2.2 Decommissioning After Ceasing Operation

This section of the report assumes that the Project will be dismantled and disposed of at the end of the equipment's useful life. Sagatay will ensure that the Project Location will be restored to its pre-development condition in consultation with MNR, and meet the requirements of applicable local, provincial and federal policy.

In general, decommissioning of the Project will involve the following activities:

- safe dismantling and demolition of Project components;
- removal of equipment from the Site and disposal at an approved facility;
- removal of foundations, concrete, and asphalt, and disposal at an approved facility;

- filling-in or demolition and abandonment of the subsurface wastewater management system in accordance with applicable regulations;
- removal of gravel Site roads or leaving in-place as required by MNR;
- removal of the pond liner and filling-in the pond or leaving in-place as required by MNR;
- decommissioning of wells in accordance with O.Reg. 903;
- removal of all remaining debris;
- restoration of the Project Location to pre-development conditions in consultation with MNR; and,
- ensuring that there are minimal environmental impacts related to decommissioning activities.

It is expected that decommissioning procedures would take 4-6 months to complete. During this time, signage will be erected and will include a contact phone number to address public concerns. All such communications will be logged as outlined in the Communications Plan in Section 6.0 of the Design and Operations Report under a separate cover. Should there be a need to notify the general public, newspaper ads, direct/general mail-outs, and/or posting notices in the community will occur as appropriate. All decommissioning communications with the public and agencies will be documented and kept on file.

As decommissioning will occur a minimum of 25 years from now, decommissioning activities will be conducted in general accordance with the approach described in this report, but under consideration of all applicable regulations and technology at that time.

2.3 Equipment Dismantling and Demolishing

Table 2 outlines the procedures for the dismantling and demolition of Project infrastructure. The areas required for disassembly of Project elements are expected to remain within the Project Location, and specifically in previously disturbed areas. As such, no impacts are expected on archaeological or cultural heritage resources. In addition, the mitigation measures outlined in the Construction Plan Report under a separate cover will be implemented to minimize potential effects.

Table 2 Decommissioning Procedures

Works/Activities	Description
Design and implementation of an erosion and sediment control plan	• Design and implement an erosion and sediment control plan to minimize erosion and sedimentation, and prevent the release of any deleterious substance (including sediment) from entering any water body.
Removal and Disposal of Biomass	• Any remaining biomass at the facility will either be sold for industry use or disposed of at an approved off-site facility.
Dismantling and removal of equipment in the Woodyard	• Dismantling of the mechanical conveyor system, biomass belt dryer, truck scale, truck dumper, security equipment, fencing, gates, and signs; • Sale of above materials for salvage value or otherwise removal and recycle or disposal at an approved off-site facility; • Removal and disposal at an approved facility of the diesel fuel storage and filling station in accordance with the applicable laws regarding fuel transport; • Removal and disposal at an approved facility of the paved concrete and asphalt areas under the biomass storage pads and around the buildings; and, • Removal of the gravel Site roads if required in consultation with MNR.
Dismantling and removal of equipment within and associated with the Site buildings	• Dismantling and sorting of all equipment within and associated with the cogeneration plant, pellet plant, maintenance garage, and fire pump building; • Sale of above materials for salvage value or otherwise removal and disposal at an approved off-site facility; and, • Removal of metal waste oil barrels by an approved hauler for disposal and recycling.
Demolition of Site buildings	• Upon removal of all interior equipment and clean-up of any waste, demolish Site buildings in accordance with applicable laws; and, • Removal and recycle or disposal of the demolished building debris at an approved facility.
Dismantling and Removal of Site transformers	• After disconnection, all the oil in the transformers will be safely removed by pumping the oil into an industry approved disposal container by an approved hauler to an approved waste management facility. The container will be sealed to prevent spills during transportation. The empty transformers will be removed and transported off-site by truck. The transformers will be recycled, if possible, or will be disposed of at an approved facility.

Works/Activities	Description
Dismantling and removal of equipment at the transformer substation	• Dismantling and sorting of all equipment at the transformer substation; • Removal of underground infrastructure (i.e., power and grounding cables); • Sale of above materials for salvage value or otherwise removal and disposal at an approved off-site facility; • Removal of material within the main transformer's secondary containment area off-site at an approved facility, and replacement with a suitable fill material in consultation with MNR; and, • Removal of surface gravel if required in consultation with MNR.
Removal of Foundations	• Building and equipment foundations will be broken up by heavy machinery and removed for disposal at an approved off-site facility.
Removal of underground utilities	• Pumping/draining and collection of glycol from underground heat distribution pipes into an industry approved sealable container, and disposal at an approved facility by a licensed hauler; • Removal of underground utilities, including cables, heat distribution pipes, and water distribution pipes; • Sale of above materials for salvage value, or disposal at an approved facility for recycling or waste as appropriate.
Pumping and demolition of Wastewater Management System	• Pumping-out any remaining waste from the septic tank and oil/grit separators on-site and removal off-site at an approved facility by a licensed hauler; • Removal of pump stations and sale for salvage value or disposal off-site at an approved facility; • Filling of the underground tanks with suitable fill material, or demolition in-place in accordance with applicable regulations and in consultation with MNR; and, • Upon completion of pumping, demolition, and filling in accordance with applicable regulations and guidelines; abandonment of wastewater management system and conveyance pipes in-place, in consultation with MNR.
Removal and decommissioning of the remaining water supply features.	• Removal of the pond liner and filling-in the pond or leaving in-place as required by MNR; and. • Decommissioning of wells in accordance with O.Reg. 903.
Site Restoration	• Restoration of the Site in accordance with Section 3.0.

3.0 Site Restoration

In general, the Project area will be restored to pre-development conditions, subject to environmental requirements and any conditions or agreements made with the Ministry of Natural Resources regarding the Crown Land.

If necessary, Sagatay will develop a Rehabilitation Plan, which will be designed to restore habitat in areas that were affected by the facility infrastructure. This plan will be developed in consultation with the appropriate agencies, prior to commencement of decommissioning works. It is expected that a Rehabilitation Plan will include, but not be limited to:

- removal of any impacted soils, if any, and replacement with suitable clean fill material;
- filling of the water storage pond with suitable clean fill material, or minor re-grading of the area; and,
- re-vegetation of the Project Location using native plant material and seeds as appropriate.

The Rehabilitation Plan will also involve a monitoring period which would allow for the Project area to experience seasonal changes and help determine if additional restoration is required.

4.0 Management of Excess Materials and Waste

Decommissioning of the Project will result in the production of waste and excess materials. Waste streams will be disposed of in accordance with local, provincial and federal regulations in effect at the time of decommissioning as applicable.

Since the Project would include several buildings requiring demolition with a total footprint of at least 2,000 m^2, O.Reg. 102/94 would apply under current legislation. Under O.Reg. 102/94, the demolisher would be required to perform the following:

- prior to demolition work, conduct a waste audit, covering the waste that would be generated in the demolition project;
- prepare a written report of the audit;
- prepare a written waste reduction work plan based on the waste audit to reduce, reuse and recycle waste generated in the demolition project;
- implement the waste reduction work plan; and,
- implement measures to communicate the plan to workers at the demolition Site.

As part of the waste reduction work plan, efforts will be made to find industry users that could benefit from the waste materials generated during demolition, including:

- biomass users (i.e., other biomass combustion plants or pellet plants)
- concrete and aggregate manufacturers;
- electrical equipment manufacturers and resellers;
- mechanical equipment manufacturers and resellers; and,
- metal recycling facilities.

All excess materials and waste will be transported off-site by transport trailer or dump truck, as required, by a licensed hauler to facilities within the province of Ontario. Any hazardous wastes that are used on site, such as used lubricating oils, will be removed in accordance with O.Reg. 347 and disposed of at a licensed facility.

5.0 Other Considerations

5.1 Emergency Response and Communications Plans

Emergency Response and Communications Plans will be implemented through all phases of the Project, as described in the Design and Operations Report, under a separate cover. The purpose of these plans is to ensure members of the community, Aboriginal communities, the local service board, and government ministries are informed of pertinent Project activities, in addition to any emergencies that may occur.

The potential emergency situations during decommissioning are the same as those identified during construction and operation. Further details of these emergencies and the associated response procedures are outlined in the Design and Operations Report, under a separate cover.

All decommissioning staff will be trained in emergency response, communication plan, and safety procedures.

5.2 Public, Local Authority and Aboriginal Community Notification

Whitesand will create a Communications Plan that clearly outlines a process for two-way communication with all stakeholders. At all times, the Communications Plan will be available on the Project website and at the cogeneration plant. The local service board will also be supplied with contact information to direct stakeholder communications and complaints to the appropriate personnel who can implement the proper procedures.

All non-emergency communications will be disseminated through a variety of media avenues to keep stakeholders apprised of Project updates and activity. Where applicable, these avenues will include:

- project website;
- newspaper notices;
- notices posted in the community;
- construction signage; and,
- email and/or letters.

Project updates will include any legally required notices as well as any information that Whitesand and/or the Contractor considers relevant to inform the public of and ensure their safety.

5.3 Other Approvals

The authorities having jurisdiction, including the Ministry of Natural Resources for Crown Land interests, will be contacted prior to decommissioning works to ensure the appropriate agreements and permits are in place. This decommissioning plan report will be updated six months prior to decommissioning activities to ensure proper notification takes place with the appropriate stakeholders of that time.

6.0 Conclusion

The Whitesand First Nation Cogeneration and Pellet Mill Project will be decommissioned in a manner that reduces waste, and restores the Site to a clean and safe condition, suitable for the likely future use of the land.

Burnside has prepared this Decommissioning Plan Report for Whitesand in accordance with O.Reg. 359/09. This report has been prepared by Burnside for the sole benefit of Whitesand, and may not be re-produced by any third party without the express written consent of Whitesand.

Respectfully submitted,

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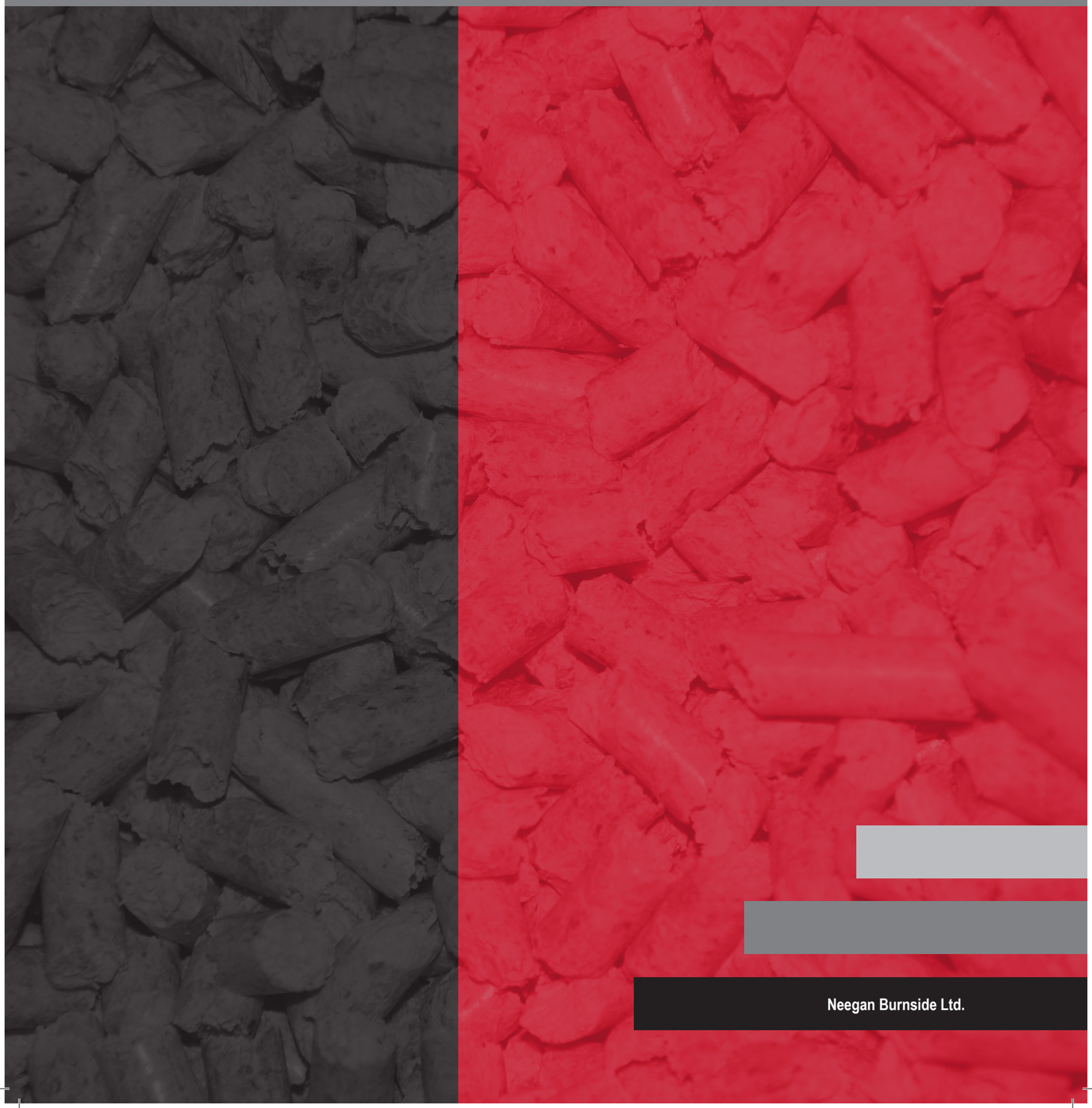

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