



**NT
ENERGY**

Pursuing our Potential

**INUVIK WIND PROJECT
WASTE MANAGEMENT PLAN**

Version 1

REVISION HISTORY

The table below is a revision history table that outlines the revisions made by NWT Energy Corporation in response to the Gwich'in Land and Water Board's (GLWB) Reasons for Decision for G18L8-001 dated November 27, 2020. The summary of changes outlines the comments and conformance from the GLWB, the location of revised sections indicates the sections where the changes can be found.

NWT Energy Corporation Spill Contingency Plan Revision History			
Version	Item #	Summary of changes	Location of Revised Section(s)
0	-	Original submittal with application for G18X005 and G18L8-001	-
1	-	Updated the Introduction and Project Details to include the Land Use Permit and Water Licence references	Section 1.0
	-	Updated the effective dates of the Waste Management Plan	Section 1.2
	-	Updated the Project Name for "the Project".	Entire Document
	ENR – Comment 1	If the Proponents Waste Management Plan or methods of waste disposal indicate that project waste, or industrial waste, will be transported to community infrastructure for disposal, the Proponent should not assume they may deposit industrial wastes, generated outside of community boundaries, in Northwest Territories community Solid and Liquid Waste Disposal Facilities.	Section 3 Section 4.2 Appendix A
	ENR – Comment 3	If the Proponent is using or generating hazardous waste, they must register as a generator of hazardous waste in the NWT and track the disposal of hazardous waste from the site activities to registered receivers on hazardous waste movement documents provided by ENR.	Section 4.1
	ENR – Comment 19	The Proponent should ensure that all grey water (dishwater, showers, laundry, etc.) and black water (sewage) are treated and disposed of in a manner that will minimize the attraction of wildlife.	Section 4.2
	ENR – Comment 34	At the end of section 4.3.2, section 3.4 is referenced. ENR notes section 3.4 does not exist in the Waste Management Plan.	Section 4.3.2

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1 INTRODUCTION.....	1
1.1 COMPANY NAME, LOCATION AND MAILING ADDRESS.....	1
1.2 EFFECTIVE DATE OF WASTE MANAGEMENT PLAN.....	1
1.3 PURPOSE AND SCOPE	1
1.4 DISTRIBUTION LIST	2
1.5 ADDITIONAL COPIES.....	2
1.6 LIST OF REVISIONS.....	2
1.7 LICENCES, PERMITS AND FEES.....	2
2 WASTE PRODUCTION SUMMARY	3
2.1 NON-HAZARDOUS CONSTRUCTION WASTE	3
2.2 NON-HAZARDOUS OPERATIONS AND MAINTENANCE WASTE.....	3
2.3 HAZARDOUS WASTE.....	3
3 WASTE MANAGEMENT FACILITIES	4
4 MATERIAL STORAGE AND DISPOSAL.....	4
4.1 HAZARDOUS WASTE.....	4
4.2 NON-HAZARDOUS WASTE.....	4
4.3 WASTE MANAGEMENT PRINCIPLES.....	5
4.3.1 Waste Segregation.....	5
4.3.2 Recycling	5
4.3.3 Salvage and Reuse.....	5
4.3.4 Refuse Disposal.....	5
5 WASTE MINIMIZATION.....	6
5.1 PACKAGING	6
5.2 MATERIALS STORAGE	6

LIST OF APPENDICES

APPENDIX A Use of Sewage and Solid Waste Dumping Facilities for Inuvik Wind Project

1 INTRODUCTION

The NWT Energy Corporation (03) Ltd. (NTEC) proposes to construct, operate, and maintain one wind turbine at a site known as High Point (68°21'23.60N latitude and 133°24'29.60W longitude), located 12 km east of the community of Inuvik, NT, and 6.5 km north of the Inuvik airport. The town of Inuvik has a population of approximately 3,500 people and an average electricity demand of approximately 3.5 MW. The Inuvik Wind Project (the Project) will involve installing one 2 to 4 MW wind turbine with a 75 to 100 m hub height, and construction and maintenance of the associated infrastructure. The primary project components will include one wind turbine generator, an all-season access road, and upgrades to the current electrical transmission system.

Currently, electricity is provided to the town by an LNG/diesel power plant. The plant was previously supplied by gas from the Mackenzie Delta gas pipeline. However, use of this gas pipeline was restricted in 2012 leading to 100% reliance on diesel and LNG transported to the town along the Dempster Highway. As a result of this, the cost of electricity in the town has increased dramatically.

The following document outlines the Waste Management Plan (WMP) to be implemented and followed by NTEC and their contractor(s) for construction and operation of the High Point Wind Energy Project. The following WMP demonstrates that NTEC has thoughtfully considered the generation of waste during all phases of the Project as required by the Type "A" Land Use Permit G18X005 and Type "B" Water Licence G18L8-001).

1.1 COMPANY NAME, LOCATION AND MAILING ADDRESS

NWT Energy Corporation (03) Ltd. (NTEC)
#4 Capital Drive
Hay River, NT
X0E 1G2

Main Contact: Bruno Pereira - Director
Phone: (867) 874-5230
Email: bpereira@ntenergy.ca

1.2 EFFECTIVE DATE OF WASTE MANAGEMENT PLAN

The Waste Management Plan will be in effect for the duration of Project construction, which could begin as soon as September 2021 and continue until May 2023 at the latest.

1.3 PURPOSE AND SCOPE

The purpose of this plan is to minimize the amount of waste generated by the High Point Wind Energy Project, and where possible, reuse and recycle material that would otherwise be directed to the landfill. Minimizing, reusing and recycling materials and packaging can reduce waste disposal and material costs, especially in a northern community such as Inuvik, where disposal and transportation costs are increased. Waste reduction will be achieved through best management practices and recycling or re-use efforts.

Adequate training of staff and contractors will be paramount to minimizing the amount of waste generated and maximizing the volume of waste that is recycled or reused for another purpose. NTEC and its contractor(s) will be required to follow this Plan for the disposition of the waste generated by their activities. This Plan applies to the construction, operation and maintenance of the Project.

1.4 DISTRIBUTION LIST

This plan and the most recent revisions will be distributed to all staff and contractors working on the Project. The Plan will be presented during a construction tailgate meeting prior to the start of construction. The Waste Management Plan will be included as part of new staff orientation activities.

1.5 ADDITIONAL COPIES

Several copies of the plan are to be kept on site at all times. A copy is also to be held at the NTEC office in Inuvik and with the Gwich'in Land and Water Board. Additional copies of the plan can be obtained by contacting NTEC directly at the phone number or email presented in **Section 1.1**.

1.6 LIST OF REVISIONS

Any revisions to the plan will be submitted to the Gwich'in Land and Water Board for approval prior to implementing any changes.

1.7 LICENCES, PERMITS AND FEES

All solid and hazardous wastes related to the construction, operation and maintenance of the Project will be handled, stored and disposed of in accordance with this Plan and all applicable federal, state, and local laws and regulations. NTEC and its contractor(s) will be responsible for any required fees, licences, and permits.

2 WASTE PRODUCTION SUMMARY

Waste will inevitably be produced during construction, operations, and maintenance of the High Point Wind Energy Project. The following sections discuss the various sources of waste that are expected to be produced and potential methods of disposal.

2.1 NON-HAZARDOUS CONSTRUCTION WASTE

The majority of waste generated for the Project will be produced during the construction phase. During construction, the Project will generate municipal solid waste and construction waste from activities such as foundation installation and turbine erection. Types of construction waste may include:

- Excess concrete,
- Packaging for material and supplies such as plastics, cardboard and scrap metal,
- Waste wood such as pallets, framework or other sources of scrap lumber,
- Human waste produced by onsite personnel, and
- Cleared vegetation

2.2 NON-HAZARDOUS OPERATIONS AND MAINTENANCE WASTE

During operations and maintenance, the Project will generate small volumes of construction waste, including packaging for material and supplies such as plastics, paper and cardboard products, and scrap metal. A small volume of wood waste and domestic refuse may also be produced.

2.3 HAZARDOUS WASTE

NTEC anticipates that small amounts of hazardous waste may be generated during construction, operations, and maintenance of the Project. Hazardous materials that may be generated include automotive fluids, fuel, or any materials contaminated by hydrocarbons. NTEC will review any hazardous materials to be used on-site prior to authorizing their use on the Project and will monitor and limit the quantities of hazardous materials brought on-site to minimize the amount of hazardous waste generated.

3 WASTE MANAGEMENT FACILITIES

The following is a list of approved waste management facilities located in the town of Inuvik, NT (see Appendix A):

- Inuvik Solid Waste Disposal Facility (SWDF)
 - Location: Airport Road, beside Inuvik golf course
 - Phone: 867-777-8615
- Inuvik Recycling Depot (Caps Off Recycling)
 - Location: 4 Carn Road
 - Phone: 867-777-2434
 - Accepts beverage containers and electronics
- Inuvik Sewage Lagoon
 - Location: North of town, Tank Farm Road
 - Phone: 867-777-5936

4 MATERIAL STORAGE AND DISPOSAL

All waste will be stored within designated temporary waste collection areas until it is collected for transport to an approved facility. Materials that can be recycled will be stored and transported separately. Used oil will not be mixed with other solid or hazardous waste and will be stored separately within appropriate secondary containment in accordance with all applicable rules and regulations.

4.1 HAZARDOUS WASTE

It is anticipated that the project will not generate any hazardous waste, but if hazardous waste is generated, NTEC and its contractors will register as a generator of hazardous wastes in the NWT and track disposal as required by ENR.

4.2 NON-HAZARDOUS WASTE

Non-hazardous waste will be disposed of according to the Waste Management Principles described in **Section 4.3**.

Temporary structures will be used during construction. This includes a shelter with lunch and bathroom facilities for the construction crew. All waste water including sewage and grey water will be hauled out with pump out trucks and disposed of at Town of Inuvik facilities.

Inert construction waste such as concrete, packaging and waste will be disposed of at Town of Inuvik facilities.

Vegetation that has been removed will be cleared off the access road as clearing proceeds. Excess brush will be made to lay flat adjacent to the disturbed access road. . If burning of the brush is determined necessary, brush piles will be burned in the middle of the access road to minimize the risk of fire spreading.

4.3 WASTE MANAGEMENT PRINCIPLES

4.3.1 Waste Segregation

Segregation of all waste streams by type or category will avoid potentially undesirable combined effects and will facilitate the reuse, recycling, recovery and/or disposal of the various wastes. To the extent practicable, sorting will take place at the source and the sorted waste will be stored at the site. Contractors at the site are required to manage the waste generated from their activities in a manner compatible with this WMP.

4.3.2 Recycling

Recyclable materials may include paper, aluminum cans, corrugated cardboard, glass, aerosol cans, wood, plastic, and metals. As of October 2018, the Inuvik Recycling Depot only accepts beverage containers (cartons, bottles, cans, etc.) and electronics. The Town of Inuvik is understood to be developing additional recycling options. To the extent that local programs are available and can be implemented, these materials will be recycled. If no feasible recycling options can be identified, the recyclable materials will be disposed of as refuse.

4.3.3 Salvage and Reuse

Salvage is the recovery of materials for on-site reuse, off-site sale, or donation to a third party. Reuse is making use of a material without altering its form. Materials can be reused on-site or reused on other projects off-site. To the extent practicable, materials will be salvaged and/or reused to divert them from the Inuvik SWDF. Options for the salvage and reuse of wood pallets or other wood products in particular will be discussed with the community prior to disposal.

4.3.4 Refuse Disposal

Refuse materials will be removed from the Project site on a regular basis. NTEC and its contractor(s) will not allow refuse to accumulate on-site for extended periods of time. Refuse that may be a wildlife attractant will be disposed of on a daily basis. Other refuse will be disposed of on a weekly basis.

Refuse materials will be transported off site and disposed of at the Inuvik SWDF. Refuse materials not permitted to be disposed at the Inuvik SWDF will be backhauled to a permitted facility where disposal is approved. Burning of refuse material will not be permitted.

5 WASTE MINIMIZATION

NTEC and their contractor(s) will minimize the amount of construction waste and debris disposed of in the Inuvik SWDF to the extent possible. NTEC and their contractor(s) will be responsible for communication and training of field personnel and subcontractors regarding waste management.

5.1 PACKAGING

All vendors and their suppliers will be encouraged to minimize the packaging for materials and equipment and to identify opportunities for the return of packaging materials for reuse. Packaging materials will be evaluated, and their selection will take into consideration opportunities for reuse and recycling.

5.2 MATERIALS STORAGE

All materials will be stored in a manner to prevent contamination, expiration and deterioration. This ensures that the material will meet the specified requirements and that unused or outside-specification products will not become waste. Inventory control procedures will be implemented by NTEC and its contractor(s) to ensure that excess materials are not brought on site.

APPENDIX A

USE OF SEWAGE AND SOLID WASTE FACILITIES FOR INUVIK WIND PROJECT



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February 10, 2021

NT Energy
#301, 76 Capital Drive
Hay River, NT X0E 1G2

Attention: Mr. Kumar Balachandran

Re: Use of Sewage and Solid Waste Dumping Facilities for Inuvik Wind Project

Mr. Balachandran:

Please be advised that the Town of Inuvik acknowledges that NT Energy may use the above-mentioned facilities in conjunction with the Inuvik Wind Project. As part of this approval NT Energy or any contractor working on their behalf has acknowledged that there will be a fee for use of these facilities. In addition, they shall inform the Town of Inuvik Director of Public Services when they are to make use of the sewage dumping facility and report the volume of sewage brought in from this project.

We are required as part of our water license to account for these types of additional wastes entering our sewage lagoon and solid waste site, respectively.

If you have any questions or concerns, please do not hesitate to contact me. Thank-you in advance for your cooperation.

Regards

Town of Inuvik

Grant Hood
Senior Administrative Officer

CC: Rick Campbell – Town of Inuvik – Director of Public Services