

North Dakota State University

Solid Waste Management/Ash Disposal

I. Introduction

Solid waste has been defined as any garbage, refuse, sludge or other discarded materials, and liquid, semi-solid, or contained gaseous materials.

II. Purpose

The purpose of this procedure is to promote safety awareness and encourage safe work practices when working with solid waste and ash disposal.

III. Goal

The goal is to limit occupational exposure to injury and death when working with solid waste and ash disposal.

IV. Procedures

Each department or division is responsible for the appropriate disposal of their waste or knowledge of the processes for appropriate waste disposal. Facilities which are disposing of wastes in any way not in accordance with federal guidelines are in violation of the law. Various departments on NDSU's campus provide limited assistance with various types of waste disposal. Waste from agricultural activities is included.

Items NOT within the limitations of the definition of solid waste are:

- Domestic sewage
- Waste from irrigation return flow
- Point source discharges which are permitted for release under various federal and national laws, with regard to the Clean Water Act.

If none of the exceptions apply, and if the material involved can be discarded or has served its useful purpose, it is a solid waste. Solid waste may be recycled, reused, discarded, reclaimed or stored, depending on its nature. Many solid wastes may also be hazardous wastes, and subject to other, more restrictive regulations.

A. Solid Waste

Most of the solid waste generated on campus is transported to the City of Fargo Landfill for disposal. Vehicles used for this process are owned by the State of North Dakota and are under the regulations of the State Fleet Services. Management and employees of this function are under the direction of the Facilities Management - Grounds Crew.

All vehicle operators performing this job must adhere to the State Fleet Services Regulations and follow NDSU's Safe Operating Procedures. Please refer to *NDSU's*

Safety and Risk Management Program Employee Reference, NDSU's Safe Operating Procedure for Motor Vehicle Safety, and to the North Dakota State Fleet Services Regulations Handbook.

B. Ash Disposal

Currently NDSU has two buildings/areas in which ash disposal is necessary.

1. Van Es Hall - the incinerator
2. Heating Plant - the coal powered generators

Ash disposal for each of these areas is handled differently as the volumes vary for each facility.

1. Van Es Hall's incinerator is used on a limited base and is therefore only cleaned a couple of times a year. It serves the entire campus for such jobs as the disposal of biohazard items and animal remains.

The technician that manages this incinerator works in conjunction with the Grounds Crew for the appropriate disposal. Please refer to ***NDSU's Safe Operating Procedure - Heating Plant/Boiler Equipment - Incinerator.***

2. NDSU's Heating Plant provides steam generated heat by the burning of coal during the winter months. These incinerators are used and cleaned frequently during the winter months.

Only trained and authorized personnel are allowed to operate the system and perform trouble shooting duties. The complete instruction/operators manual are maintained in the Heating Plant.

The recent automation of the ash removal system has made it easier to manage the ash hauling process. It is an interlocked control system that is about 23 feet above ground level. It is enclosed in guards and has a built in checks and balance system. The system will not run if any one area is unable to operate properly.

With the updated technology, the limited accessibility of the equipment and the limited number of authorized personnel managing this piece of equipment, there is very limited chance of injury or exposure to a possible work related injury. The need for a safe operating procedure has not been identified at this time. It was determined that the standard operating procedure is sufficient.

The ash generated is wet down and transported to the City of Fargo Landfill for disposal. Vehicles used for this process are owned by the State of North Dakota and are under the regulations of the State Fleet Service.

All vehicle operators performing this job must adhere to the State Fleet Services

Regulations and follow NDSU's Safe Operating Procedures. Please refer to *NDSU's Safe Operating Procedure for Motor Vehicle Safety and to the North Dakota State Fleet Services Regulations Handbook*.

C. Chemicals and Other Hazardous Substances

All principle investigators at NDSU must follow procedures to assure the chemical safety of employees and students. These procedures apply to all education and research activities conducted by faculty, students, staff and other representatives of the University.

The University Laboratory and Chemical Safety Committee was developed to oversee the implementation and enforce the *NDSU Hazardous Chemical Management Plan*. This plan outlines all the necessary steps and provides general information regarding use, disposal, safety procedures and emergency action while using chemicals or hazardous materials.

This plan is outlined in manual form and is given to all personnel involved with chemicals and other hazardous substances. These employees also receive annual updates or training on a regular basis. The committee is chaired by a representative of the University's Administration with the Chemical Safety Officer as the contact person for all related issues.

Copies of this manual can be obtained from the Safety Office.