



NEBRASKA

Good Life. Great Journey.

DEPARTMENT OF TRANSPORTATION

Unexpected Waste Action Plan

Nebraska Department of Transportation
Lincoln, Nebraska

February 2023

UNEXPECTED WASTE ACTION PLAN



February 2023

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
LIST OF ACRONYMS	iv
PREFACE	v
SECTION 1.0 INTRODUCTION	1-1
1.1 Introduction	1-1
1.2 Purpose and Scope	1-1
1.3 Roles and Responsibilities	1-2
1.3.1 Identification of a Responsible Party.....	1-2
1.3.2 NDOT Highway Project Manager (HPM).....	1-2
1.3.3 Field Crew (Contractor employees, NDOT employees)	1-3
1.3.4 NDOT Roadside Development and Compliance Unit (RDCU)	1-3
1.3.5 Nebraska Department of Environment & Energy (NDEE).....	1-4
1.3.6 NDOT Communications Division Manager	1-4
1.3.7 NDOT ROW Division	1-4
1.3.8 Nebraska State Fire Marshal.....	1-5
1.3.9 Local Agencies	1-5
1.3.10 NDOT Environmental Consultant/Contractor	1-5
1.3.11 Federal Highway Administration (FHWA).....	1-6
1.3.12 Environmental Protection Agency (EPA).....	1-6
1.4 Unexpected Waste Action Plan Organization	1-6
SECTION 2.0 RECOGNITION AND IDENTIFICATION OF UNEXPECTED WASTE OR CONTAMINATION	2-1
2.1 Unexpected Waste Types	2-1
2.1.1 Construction and Demolition (C&D)	2-1
2.1.2 Municipal Solid Waste.....	2-2
2.1.3 Contaminated Waste	2-3
2.1.4 “Other” Wastes	2-4
SECTION 3.0 UNEXPECTED WASTE DISCOVERY PROCEDURES	3-1
3.1 Stop Work	3-1
3.2 Secure the Site	3-1
3.3 Notify NDOT HPM	3-1
3.4 Document Site and Nature of Discovery	3-2
3.5 Conduct Initial Evaluation of Waste Types	3-2
3.5.1 Non-Contaminated Material	3-2
3.5.2 Potentially Contaminated Material.....	3-3
3.6 Agency Coordination	3-3
3.6.1 Release Notification Requirements - NDEE	3-3
3.6.2 Tanks, Drums, Other	3-5
3.7 Figures	3-7

SECTION 4.0 UNEXPECTED WASTE CHARACTERIZATION PROCEDURES.....	4-1
4.1 Non-Contaminated Material Characterization	4-1
4.2 Contaminated Material Characterization	4-2
4.2.1 Sampling and Analysis Plan.....	4-2
4.3 Remedial Action Plan (RAP)	4-6
4.3.1 Permitting.....	4-6
SECTION 5.0 WASTE DISPOSAL.....	5-1
5.1 Non-Contaminated Waste Disposal	5-1
5.1.1 Municipal Solid Waste Disposal Area.....	5-2
5.1.2 Materials Recovery Facility	5-2
5.1.3 Construction and Demolition Disposal Facility	5-2
5.2 Contaminated Materials Waste Disposal	5-3
5.2.1 Petroleum-Contaminated Materials.....	5-3
5.2.2 Hazardous Wastes	5-3
5.3 “Other” Wastes.....	5-4
5.3.1 Household Appliances	5-4
5.3.2 Asbestos.....	5-5
5.3.3 Waste Tires.....	5-5
5.3.4 Special Wastes.....	5-5
5.3.5 Liquid Wastes.....	5-6
SECTION 6.0 DOCUMENTATION AND REPORTING.....	6-1
6.1 Reporting for Discovery of Hazardous Wastes	6-1

LIST OF TABLES

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
4-1	Non-Hazardous Waste Analytical Methodology	4-1
4-2	Petroleum-Contaminated Material Analytical Methodology	4-3
4-3	Hazardous Waste Analytical Methodology	4-5

LIST OF FIGURES

<u>Figure No.</u>	<u>Title</u>	<u>Page</u>
3-1	Procedure for Identification and Notification of Unexpected Waste	3-8
3-2	Procedure for Characterization and Disposal of Construction and Demolition Debris and Municipal Waste	3-9
3-3	Procedure for Notification, Characterization, and Disposal of Unknown Underground Storage Tank	3-10
3-4	Procedure for Notification, Characterization, and Disposal of Drums or Containers	3-12
3-5	Procedure for Notification, Characterization, and Disposal of “Other” Unexpected Waste Types	3-13
3-6	Procedure for Notification, Characterization, and Disposal of Contaminated Material	3-14

LIST OF ATTACHMENTS

Attachment No.

- 1 NDOT Unexpected Waste Notification Form (NDOT Form 691)
- 2 Waste Type Photographs

LIST OF ACRONYMS

ACM	Asbestos Containing Material
ASTM	American Society for Testing and Materials
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
C&D	Construction and Demolition
CFR	Code of Federal Regulations
HPM	Highway Project Manager
DRO	Diesel Range Organics
ESM	Environmental Section Manager
FHWA	Federal Highway Administration
FLST	Flammable Liquid Storage Tank
GRO	Gasoline Range Organics
LOC	Limits of Construction
NDEE	Nebraska Department of Environment & Energy
NDOT	Nebraska Department of Transportation
Plan	Unexpected Waste Action Plan
RAP	Remedial Action Plan
RDCU	Roadside Development and Compliance Unit
ROW	Right of Way
RSL	Regional Screening Levels
SAP	Sampling and Analysis Plan
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbon
VCP	Voluntary Cleanup Program

PREFACE

This “Unexpected Waste Action Plan (Plan)” has been developed as a guide for NDOT staff, Local Project Agencies (LPA), and Responsible Charge (RC) personnel in the event of an *unexpected* discovery of waste or contamination during excavation for road construction projects. Throughout Nebraska’s history, common household trash/waste, construction debris, and manufacturing wastes were commonly disposed of through burial. Modern solid waste disposal regulations did not take effect until the mid-1970s. Additionally, leaks of waste or chemical products (from pipelines, buried or above-ground tanks, lagoons, and other facilities) have contaminated soils, groundwater, and surface water. Locations of waste burial or contamination sites are not always documented and available for discovery during the Project Development early hazardous materials review. Discovery of unexpected waste/contamination during project excavation typically results in increased cost and schedule delays. This guidance has been developed to assist the user in responding to an unexpected discovery of waste/contamination in the most efficient, effective way, while addressing safety; notifying the appropriate individuals; properly identifying, handling, and disposing of the waste/contamination; and documenting and reporting the discovery. Training will be provided to ensure that the user understands the Plan to use it effectively and correctly. The user will be trained on such topics as: unexpected waste and possible contamination identification, roles and responsibilities, procedures for contacting appropriate agencies, and procedures for properly disposing of the unexpected waste.

SECTION 1.0 INTRODUCTION

1.1 Introduction

In the event that unexpected waste or contamination is discovered within Nebraska Department of Transportation (NDOT) right-of-way or Limits of Construction (LOC), the appropriate response actions will need to be completed to address the waste and possible contaminants according to current laws and regulations. Following the discovery of waste or contamination, NDOT is responsible for protecting public safety, notifying appropriate persons/agencies, characterizing the waste material through proper testing, removing and possibly disposing of the waste material, and documenting completion of the response actions.

This Unexpected Waste Action Plan (Plan) provides guidance to NDOT staff, Local Project Agencies (LPA), Responsible Charge (RC) personnel and contractors when unexpected waste or contamination is discovered. This Plan applies to construction or maintenance projects involving ground disturbance activities where waste or contamination is unexpectedly discovered. The procedures outlined in this Plan do not apply to spills or releases during construction projects that are the responsibility of the Contractor. Those procedures would be covered in the Contractor's spill response procedures, following all laws and regulations per NDOT Standard Specifications. This Plan also does not cover operations or spills and releases at NDOT facilities (e.g., Maintenance Yards, District Offices), where incidents are covered by specific guidance for those facilities. The plan is also not intended for use as a response plan to spills or releases on roadways, unrelated to construction activities.

1.2 Purpose and Scope

The purpose and scope of this Plan are as follows:

- Identify roles and define responsibilities when unexpected waste or contamination is discovered during construction projects.
- Provide procedures for protecting the public and workers; contacting appropriate local, state, and federal agencies; and characterizing¹ unexpected waste.

¹ Characterization would include a preliminary determination of waste type and estimation of the approximate volume of the discovery.

- Provide procedures for disposing of unexpected waste or contamination, if required, and documenting decisions, activities, and required regulatory reporting.

1.3 Roles and Responsibilities

Clear identification of roles and responsibilities of NDOT personnel is necessary to properly execute response actions to the discovery of unexpected waste or contamination. The actions and decisions required upon the discovery of unexpected waste or contamination are defined in the following roles and responsibilities:

1.3.1 Identification of a Responsible Party

NDOT shall notify NDEE regarding the unexpected waste or contamination. If a responsible party can be identified, it shall be notified of the discovery by the NDEE and their fiscal responsibility for the clean-up will be determined. It is not the responsibility of NDOT to identify or notify suspected parties responsible for the occurrence of contamination. The level of involvement by NDEE will depend upon the nature of the material identified and the governing regulations. Construction may resume after the waste material has been properly identified, characterized and removed as per regulations.

1.3.2 NDOT Highway Project Manager (HPM)

If the party responsible for generating the unexpected waste or contamination, within the Right-of-Way, cannot be identified, NDOT will properly identify, characterize and dispose of the waste material, under the guidance of NDEE and their regulations. The NDOT HPM is responsible for implementing this Unexpected Waste Action Plan. The NDOT HPM will assume the lead role in addressing the issue and will be the central point of contact for all discussions and decisions. It is the NDOT HPM's responsibility to bring together the appropriate NDOT staff to assure proper response procedures are followed, as well as to convey the information to all participants, which may include subcontractors and/or local, state, and federal agencies.

The NDOT HPM is responsible for assuring that an Initial Site Evaluation is conducted and a NDOT Unexpected Waste Notification Form (NDOT Form 691) is completed (Attachment 1). Based on the results of the Initial Site Evaluation the RDCU representative will be contacted. The initial waste discovery responsibilities will include the following actions:

1. Ensure that all Field Crew employees have stopped work in the area of discovery and the site is secured (cordoned off, fenced, taped, or other method to identify a no-entry zone).
2. Assess the situation and take appropriate measures to protect workers and public safety. Appropriate measures may include but are not limited to cordoning off the area to establish a safe perimeter, evacuating, if necessary (making sure that personnel are upwind or crosswind), and identifying waste, if possible, but ensuring that unauthorized personnel do not do any exploratory or investigative work that would result in further worker or public safety and/or environmental exposure.
3. HPM shall contact the RDCU representative of the NDOT Project Planning and Development Division for assistance in identifying needs for waste assessment, contaminant identification, and contact of appropriate agencies or contractors (HPM may do this in absence of RDCU representative). The RDCU representative will arrange for on-call consultant assistance as needed.
4. Document the Initial Site Evaluation on the NDOT Form 691 and in the Site Manager database.
5. Obtain clearance from appropriate agencies or RDCU before giving notice to crew to resume work.
6. Develop a Field Change Order, if needed, for the Prime Contractor to execute.

1.3.3 Field Crew (Contractor employees, NDOT employees)

The primary responsibility of the Field Crew is to recognize the presence of unexpected waste or contamination (using knowledge from hazmat training). The Field Crew member who discovers the waste or contamination is responsible for the following actions:

1. Immediately notify his or her supervisor, who shall be responsible for immediately notifying the NDOT HPM.
2. Stop work in the area of discovery until further instruction is received from the NDOT HPM.
3. Clear employees from the area to a safe distance, and secure the area as directed by the NDOT HPM.

1.3.4 NDOT Roadside Development and Compliance Unit

The ESM has designated RDCU Hazardous Material PQS personnel as the liaison between the environmental regulatory agencies and the NDOT HPM. Typically, the agencies will

include the Nebraska Department of Environment & Energy (NDEE), the Nebraska State Fire Marshal, the U.S. Environmental Protection Agency (when applicable), and the Nebraska State Patrol. The RDCU representative will determine which on-call consultant will be used for investigation, waste characterization, and response plan development. The RDCU representative will keep District management informed and assist with change orders to cover the environmental investigation. The RDCU representative will assist in determining if a specialty contractor is needed and will assist the Construction office and the Prime Contractor as needed in locating said contractor.

1.3.5 Nebraska Department of Environment & Energy

If waste that exhibits contamination is discovered during an NDOT construction project, NDEE will be notified by the NDOT RDCU representative. NDEE will be asked for assistance in interpretation and review of the NDOT selected method for management and disposal of contaminated materials that were found. NDEE will inform NDOT of the interpretation related to the disposal method selected (allowed or not allowed), and any testing or other possible reporting that may need to be done to satisfy NDEE's regulatory requirements.

1.3.6 NDOT Communications Division

The NDOT Communications Division will communicate with other agencies' public affairs staff, media-as needed, and local residences/businesses if there is a public health risk. The RDCU will notify the Communications Division when necessary.

1.3.7 NDOT ROW Division

The ROW Division Manager and ROW Design Engineer will be notified by the RDCU representative that potential unexpected materials have been discovered. The ROW staff will coordinate with the RDCU representative and then coordinate with affected landowners if there is a need to gain access to adjacent properties to contain or cleanup the unexpected waste discovery. If the situation is not an emergency (i.e., not a threat to public health and safety), the ROW staff will acquire rights-of-entry and temporary/permanent easements as required to complete the assessment and clean-up work. In an emergency situation (i.e., threat to public health and safety), the ROW staff or the HPM will attempt to secure a (written or verbal) right-of- entry, but NDOT, the contractor at NDOT's direction, or a hazmat consultant/contractor will proceed to investigate and/or contain the

potential hazmat material if required per Nebraska Statute § 39-1324 which allows entry to public and private property.

1.3.8 Nebraska State Fire Marshal

The Flammable Liquid Storage Tank (FLST) Division of the Nebraska State Fire Marshal's Office will provide assistance if there is discovery of an unknown underground storage tank containing flammable or combustible material. The FLST Division will determine if the discovery is a threat to safety and, if so, will direct activities to eradicate the threat. The FLST Division will also inform NDOT of the documentation and reporting that must be done to satisfy its needs.

1.3.9 Local Agencies

Police/Sheriff/State Patrol: The Police department within the city jurisdiction, the Sheriff's office within the county jurisdiction, or the Nebraska State Patrol for the interstate shall be notified if an emergency situation occurs, such as a threat to human health and safety, or if the discovery is made after normal business hours. The local Police department or Sheriff's Office is responsible for addressing any emergency situation.

Fire: The Fire department shall be notified if an emergency situation occurs, such as a threat to human health and safety, or if the discovery is made after normal business hours. The Fire department is responsible for normal response to any emergency situation.

1.3.10 NDOT Environmental Consultant/Contractor

The NDOT Environmental Consultant/Contractor responds to the RDCU representative's request for services, as needed for possible contamination (either non-hazardous or hazardous) that occurs during NDOT construction activities.

If it is determined that contamination is present, the NDOT Environmental Consultant/Contractor will be responsible for the following:

1. Developing a sampling and analysis plan
2. Developing or adapting a Health and Safety Plan to address risk posed by contamination
3. Characterizing the waste through sampling and analysis and estimating volume of waste material
4. Developing steps to mitigate contamination
5. Determining disposal options and documentation needs for the disposal facility

6. Documenting disposal of the waste to support NDOT HPM as needed
7. Providing documentation to NDOT RDCU representative and other appropriate agencies for review.

1.3.11 Federal Highway Administration (FHWA)

The FHWA Transportation Engineer shall be contacted by the HPM within 48 hours of discovery if federal funds are being used on the project or will need to be used to assist in cleanup of contaminated material. The NDOT Hazmat PQS will be responsible for reporting the discovery to FHWA in the event the HPM is unavailable. Alternate contacts provided on Figures 3-1 to 3-6 shall respond as needed. If NDOT seeks additional federal funds for response actions, NDOT State Construction Engineer will provide FHWA Transportation Engineer with due diligence documentation and rationale for actions taken. This documentation shall include justification regarding why federal funds should be available for costs associated with the identification and removal of contaminated soils, wastes or hazardous materials. Such requests and associated documentation will follow the guidelines and policies outlined in the FHWA's *Interim Guidance-Hazardous Waste Sites Affecting Highway Project Development*, 1988 and the *Supplemental Hazardous Waste Guidance*, 1997.

1.3.12 Environmental Protection Agency (EPA)

EPA has delegated authority to NDEE; however, EPA would become involved in certain situations, such as contamination associated with a superfund site. EPA will inform NDOT of any testing or other possible reporting that may need to be done to satisfy EPA's regulatory requirements.

1.4 Unexpected Waste Action Plan Organization

This Plan is organized in the following way:

- Section 1.0 – Introduction
- Section 2.0 – Recognition and Identification of Unexpected Waste or Contamination
- Section 3.0 – Unexpected Waste Discovery Procedures
- Section 4.0 – Unexpected Waste Characterization Procedures
- Section 5.0 – Waste Disposal
- Section 6.0 – Documentation and Reporting

SECTION 2.0 RECOGNITION AND IDENTIFICATION OF UNEXPECTED WASTE OR CONTAMINATION

Identification and evaluation of unexpected waste and/or possibly contaminated materials is the first step in the response action. The terms unexpected waste and contaminated materials are intended to refer to either solids or liquids.

2.1 Unexpected Waste Types

During construction, typical unexpected wastes may be encountered, that may or may not be contaminated. These waste types include, but are not limited to, the following:

- Construction and demolition debris
- Municipal solid waste
- Contaminated waste
- Other wastes

Descriptions of each waste type are provided in the following subsections. Photographic examples of each waste type are included as Attachment 2.

2.1.1 Construction and Demolition (C&D)

C&D waste is defined and regulated by NDEE Title 132 - Integrated Solid Waste Management Regulations.

C&D waste is defined as waste that results from land clearing; the demolition of buildings, roads, or other structures; or construction projects per NDEE Environmental Guidance Document, Construction and Demolition Waste in Nebraska (see Attachment 3.1). C&D waste includes, but is not limited to the following:

- Fill materials
- Wood (including painted and treated wood)
- Land-clearing debris other than yard waste
- Wall coverings (including wallpaper, paneling, and tile)
- Drywall, plaster, and non-asbestos insulation
- Roofing shingles and other roof coverings
- Pipe, metals, and plumbing fixtures
- Glass and plastic

- Carpeting
- Electrical wiring

Fill materials are solid waste that consist only of one or more of the following: sand, gravel, stone, soil, rock, brick, concrete rubble, asphalt rubble, or similar material.

C&D waste does not include:

- Friable asbestos waste, which is discussed further in subsection 2.1.3.1
- Hazardous waste, which is discussed further in subsection 2.1.3.2
- Household waste and appliances, which are discussed further in subsection 2.1.4.1
- Tires, which are discussed further in subsection 2.1.4.2
- Special waste, which is discussed further in subsection 2.1.4.3
- Liquid waste, which is discussed further in subsection 2.1.4.4
- Fuel tanks, which are discussed further in subsection 3.6.2.1
- Drums, which are discussed further in subsection 3.6.2.2
- Putrescible waste, which is a solid waste that contains organic matter capable of being decomposed by microorganisms, and of such a character and proportion as to cause obnoxious odors and to be capable of attracting or providing food for birds or animals.
- Individual solid waste
- Corrugated cardboard
- Waste that contains polychlorinated biphenyls (PCBs)

2.1.2 Municipal Solid Waste

Municipal solid waste is defined and regulated by NDEE Title 132 – Integrated Solid Waste Management Regulations. Municipal solid waste is any household waste and/or the combination of household waste with industrial or commercial solid waste. Solid waste, as defined in Nebraska regulations, means any garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility, and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, and mining operations as well as from community activities.

Household waste is defined and regulated by NDEE Title 132 - Integrated Solid Waste Management Regulations, Chapter 1, Section 049. Household waste is defined by NDEE as any material (including garbage, trash, and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

2.1.3 Contaminated Waste

Contamination refers to the presence of any material or chemical contained within the soil, surface water, or groundwater that may require assessment, remediation, or special handling, or that has a potential for liability. This category includes a wide variety of wastes whose characteristics may indicate possible contamination:

- Drums, barrels, or sealed containers of varying sizes
- Underground storage tanks
- Stained or discolored earth in contrast with adjoining soil
- Petroleum hydrocarbon odors or other chemical odors that emanate when the earth is disturbed
- Oily residue or sludge intermixed with earth
- Sheen on groundwater/surface water
- Unknown viscous or liquid substances
- Cinders, slag, and other combustion products like ash

2.1.3.1 Asbestos (*both friable and non-friable*)

Friable asbestos is asbestos in a form that can be crumbled, pulverized, or reduced to powder by hand pressure. Asbestos has been used in commercial products such as the following: pipe and boiler insulation; sprayed-on acoustical and decorative textures; vinyl floor tile and linoleum; and cementations, transite, or slate siding and roofing per NDEE Environmental Fact Sheet, General Asbestos Information (NDEE, 2000) (see Attachment 3.2). Guidance on asbestos removal and disposal can be found in Nebraska Department of Health and Human Services Title 178, Chapter 22.

2.1.3.2 Hazardous Waste

Hazardous waste is defined as a solid waste or a combination of solid wastes, which because of their quantity, concentration, physical, chemical, or infectious characteristics, or is defined as a hazardous waste by Title 128- Nebraska Hazardous Waste Regulations, may:

- Cause, or significantly contribute to, an increase in mortality or an increase in serious, irreversible, or incapacitating reversible illness; or
- Pose a substantial present or potential hazard to human health or animal health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

2.1.4 “Other” Wastes

2.1.4.1 Household Appliances

Discarded household appliances, as defined in the NDEE Environmental Guidance Document (see Attachment 3.3), shall mean clothes washers and dryers, water heaters, heat pumps, air conditioners, dehumidifiers, refrigerators, freezers, trash compactors, dishwashers, conventional ovens, ranges, stoves, and wood stoves. Guidance on disposal can be found in NDEE Title 132 - Integrated Solid Waste Management Regulations, Chapter 1.

2.1.4.2 Waste Tires

Waste tires are defined and regulated by NDEE Title 132 - Integrated Solid Waste Management Regulations, Chapter 14. A waste tire is a tire that is no longer suitable for its general intended purpose because of wear, damage, or defect.

2.1.4.3 Special Waste

Special wastes are defined as solid waste, with the exception of waste that is regulated as a hazardous waste, that possesses physical, chemical, or biological characteristics that make it different from general household, or C&D waste, and that requires special handling, treatment, or disposal methodologies in order to protect public health, safety, and the environment. Wastes are classified as special wastes by NDEE on a case-by-case basis. Examples could be landfills containing animal parts from slaughtering operations or soils contaminated by industrial

operations. Further information pertaining to special waste can be found in NDEE Title 132 - Integrated Solid Waste Management Regulations, Chapter 13.

2.1.4.4 Liquid Waste

Liquid waste is defined as any waste that contains free liquids that will readily separate from the solid portion of a waste under ambient temperature and pressure as determined by the Paint Filter Liquids Test Method 9095B (test method dated November 2004) included in “*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*” (Environmental Protection Agency Publication SW-846, Update IIIB).

Leachate is any liquid, including any suspended components in the liquid that has percolated through or drained from either non-hazardous or hazardous waste. Further information regarding liquid waste can be found in NDEE Environmental Guidance Document Liquid Waste Restricted from Landfills (see Attachment 3.4) and Title 132 - Integrated Solid Waste Management Regulations, Chapters 1 and 3.

SECTION 3.0 UNEXPECTED WASTE DISCOVERY PROCEDURES

The initial steps to be taken when unexpected waste or possible contamination (either non-hazardous or hazardous) is encountered within the right-of-way or LOC of a project are outlined in the following sections and are summarized in Figures 3-1 through 3-6. Most, if not all, of the actions described below will be initiated by the NDOT HPM. If the NDOT Inspector (or the on-site authorized representative) or the Field Crew contractor (or his/her subcontractors) discovers unexpected waste or possible contamination, he/she shall stop work immediately and notify the NDOT HPM or the on-site authorized representative.

3.1 Stop Work

When unexpected waste or possible contamination (non-hazardous or hazardous) is discovered any involved party (i.e., prime Field crew contractor, Field crew subcontractors or NDOT staff) shall be responsible to immediately report the waste discovery to the NDOT HPM and suspend construction activities in that area.

The prime Field Crew contractor, Field Crew subcontractors, or NDOT personnel shall not be allowed to handle or disturb the contaminated material or the surrounding soil until further direction from the NDOT HPM

3.2 Secure the Site

The area where the wastes are discovered shall be secured to protect worker and public safety. In addition, the NDOT HPM and/or the Field Crew contractor shall determine whether worker safety and public exposure concerns (for example, odors, liquids, or other physical characteristics) exist.

3.3 Notify NDOT HPM

The Field Crew contractor or NDOT employee who discovers the waste shall immediately notify the NDOT HPM. The NDOT HPM shall refer to Figure 3-1 for guidance on notification procedures and initial site evaluation activities. The NDOT HPM shall notify the NDOT RDCU to begin the chain of communication regarding documentation, notification of appropriate agencies, and identification of an NDOT Environmental Consultant/Contractor, if needed.

3.4 Document Site and Nature of Discovery

The NDOT HPM shall generate an entry into Site Manager to initiate documentation of the discovery in the project log. Initial reporting shall provide basic information about the site and specific nature of the discovery or possible contamination, such as the following:

- Date and time of discovery
- Site location
- Type of material discovered
- Possible contamination present
- Estimated quantity of discovery
- Documentation on how the site was secured
- Photographs

The HPM shall complete the NDOT Form 691 and it will become part of the Construction Contract's records entered into Site Manager.

3.5 Conduct Initial Evaluation of Waste Types

An initial site evaluation shall be completed by the NDOT HPM with assistance from the RDCU representative to determine the type of contamination or unexpected waste encountered (as identified in Section 2.0). NDOT HPMs will receive scheduled and on-going training to assist in determining the waste types. Final determination of the waste characteristics will typically be based upon analytical results. The type of waste encountered will determine the requirements for notification, characterization, and disposal.

3.5.1 Non-Contaminated Material

If the material is determined by the NDOT HPM or RDCU representative not to exhibit characteristics of contamination, a normal disposal process for solid waste can be followed, per NDEE Title 132 – Integrated Solid Waste Management and NDOT Standard Specifications. Characterization procedures for verifying that the material is non-contaminated are described in Section 4.1. Refer to Figure 3-2 for notification, characterization and disposal of construction and demolition debris and municipal waste.

3.5.2 Potentially Contaminated Material

If the NDOT HPM or RDCU representative identifies any of the contaminant characteristics described in Section 2.0, the following notifications will be made:

- The NDOT HPM shall notify emergency personnel if needed, the District Construction Engineer (DCE), and the NDOT RDCU representative.
- The RDCU representative shall notify NDEE and all other affected agencies.
- The NDOT HPM shall, if possible or practical, identify and notify the party responsible for the unexpected waste or contamination to engage them in the recovery and disposal process and to support recovery of expenses associated with the actions to be performed by NDOT or NDOT's Environmental Consultant/Contractor.
- Refer to Figures 3-2 through 3-6 for notification, characterization, and disposal procedures (characterization procedures for contaminated material are described in Section 4.2).

3.6 Agency Coordination

The NDOT RDCU representative will perform and document all agency coordination for the project file unless regulatory agencies direct otherwise.

3.6.1 Release Notification Requirements - NDEE

NDOT will report to NDEE any unexpected waste that is evaluated as regulated. The procedures outlined in this section do not apply to spills or releases during construction projects that are the responsibility of the Contractor. The Contractor's spill response procedures shall follow all laws and regulations per NDOT Standard Specifications.

It is the duty of NDOT to notify NDEE of any release or suspected release of an oil or hazardous substance as a result of discovery of unexpected waste. The NDOT RDCU representative is responsible for NDEE notification. Notification will be completed as summarized below from the NDEE regulations.

Immediate notification is required per "NDEE Title 126 – Rules and Regulations Pertaining to the Management of Waste, Chapter 18, Section 2.01 for the following situations:

- Release which occurs beneath the surface of the land or impacts or threatens waters of the state or threatens the public health and welfare, regardless of the quantity of an oil or hazardous substance.
- Release upon the surface of the land of an oil in a quantity that exceeds 25 gallons, or of a hazardous substance which equals or exceeds 100 pounds or its reportable quantity under Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended (40 [Code of Federal Regulations] CFR 302) and Section 329(3) of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 355), whichever is less.
- Discharge of oil, in any amount that causes a sheen or discoloration on the surface of a body of water; violates applicable water quality standards; and/or causes a sludge or emulsion to be deposited beneath the surface of the water or on adjoining shorelines.

Notification is not required per NDEE Title 126 – Rules and Regulations Pertaining to the Management of Waste, Chapter 18, Section 2, for a release if any of the following conditions are met:

- The release is confined and expected to stay confined within a building or otherwise wholly enclosed structure, owned by the responsible party, in which the floors and walls are adequately impervious to the released substance(s) and is cleaned up within 24 hours of its discovery
- The release is in compliance with conditions established in State statutes, regulations or permits
- Any release upon the surface of the land of oil or hazardous substances that do not exceed the reportable 25-gallon quantity for oil or for a hazardous substance less than 100 pounds or its reportable quantity under Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (discussed above) and which will not constitute a threat to public health and welfare, the environment, or a threat of entering the waters of the state and provided that the release is cleaned up.

NDEE retains full authority to require further actions of the responsible party although the release or suspected release is not reportable under the above conditions.

3.6.2 Tanks, Drums, Other

Agency contacts, in the event of the discovery of an unknown underground storage tank, drums and containers, and/or hazardous waste are discussed in the following subsections:

3.6.2.1 Unknown or Unregistered Underground Storage Tanks

Existing underground storage tanks will typically be identified during the preliminary design phase of a project, when a Hazardous Material Assessment is completed. “Unknown” tanks are those tanks not identified on the drawings or specifications but encountered during a project. Upon finding an unknown tank, the RDCU representative shall notify the following agencies:

- NDEE at (402) 471-2186 – Ask for the Emergency Response Program Coordinator during office hours (from 8:00 a.m. to 5:00 p.m. Monday through Friday) or (402) 471-4545 to reach the Nebraska State Patrol Dispatch after office hours
- State Fire Marshal’s Office – Flammable Liquid Storage Tank Division at (402) 471-9465

Refer to Figure 3-3 for notification, characterization, and disposal procedures for unknown tank discoveries. Title 159 – State Fire Marshal Rules and Regulations for Underground Storage Tanks, Chapters 2 and 19 and the NDOT 2002 Construction Manual Division 1100.20 – Underground Tanks provides the necessary guidance for tank closure activities. If a release occurs or evidence of contamination is apparent, follow the procedure outlined in Section 4.2.

No NDEE-required site assessment activities are necessary for Tanks holding 110 gallons or less. In the event such a tank is identified during construction activities, the ESM shall notify the Nebraska State Fire Marshal’s Office of the discovery and removal activities. If product remains in the tank, a release occurs, or contamination is apparent, follow the procedure outlined in Section 4.2.

3.6.2.2 Drums and Containers

Abandoned, buried drums and smaller sealed containers on the NDOT right-of-way or within the LOC shall not be handled or disposed of by NDOT or the Field Crew contractor until the contents are verified. Extreme caution should be exercised around drums or containers of unidentified contents. Upon finding an unknown drum or container the guidelines identified in Figure 3-4 shall be followed, and the RDCU representative shall do the following:

- Contact NDEE at (402) 471-2186 during office hours (from 8:00 a.m. to 5:00 p.m. Monday through Friday) or (402) 471-4545 to reach the Nebraska State Patrol Dispatch after office hours.
- Arrange for an NDOT Environmental Consultant/Contractor to identify contents of the containers and determine if the contents are hazardous. If contents are determined to not be hazardous, proper disposal procedures for solid waste, per Title 132 – Integrated Solid Waste Management Regulations and NDOT Standard Specifications, shall be followed. If contents are determined to be hazardous, procedures in Section 3.6.2.3 shall be followed.

3.6.2.3 Hazardous Waste

It shall be the duty of the RDCU representative to immediately notify NDEE of any discovery of a hazardous substance, regardless of the quantity, which occurs beneath the surface of the land or impacts or threatens waters of the state or the public health and welfare.

Notification shall be made by telephone to NDEE during office hours, from 8:00 a.m. to 5:00 p.m. Monday through Friday. After hours and holidays, reports shall be made to the Nebraska State Patrol. All information known at the time of discovery is to be included, such as time of occurrence, quantity and type of material, location, and any corrective or cleanup actions presently being taken.

- NDEE's Hazardous Waste Compliance Assistance Specialist at (402) 471-8308
- Nebraska State Patrol at (402) 471-4545

3.6.2.3 “Other” Wastes

In the event waste tires, asbestos, household appliances, special waste, or liquid waste is discovered, the following agencies shall be notified:

- NDOT – ESM at (402) 479-4418
- As needed, NDEE at (402) 471-2186

Refer to Figure 3-5 for notification, characterization, and disposal of “other unexpected waste types.

3.7 Figures

The following pages include Figure 3-1 through Figure 3-6.

Figure 3-1
Procedure for Identification and Notification of Unexpected Waste

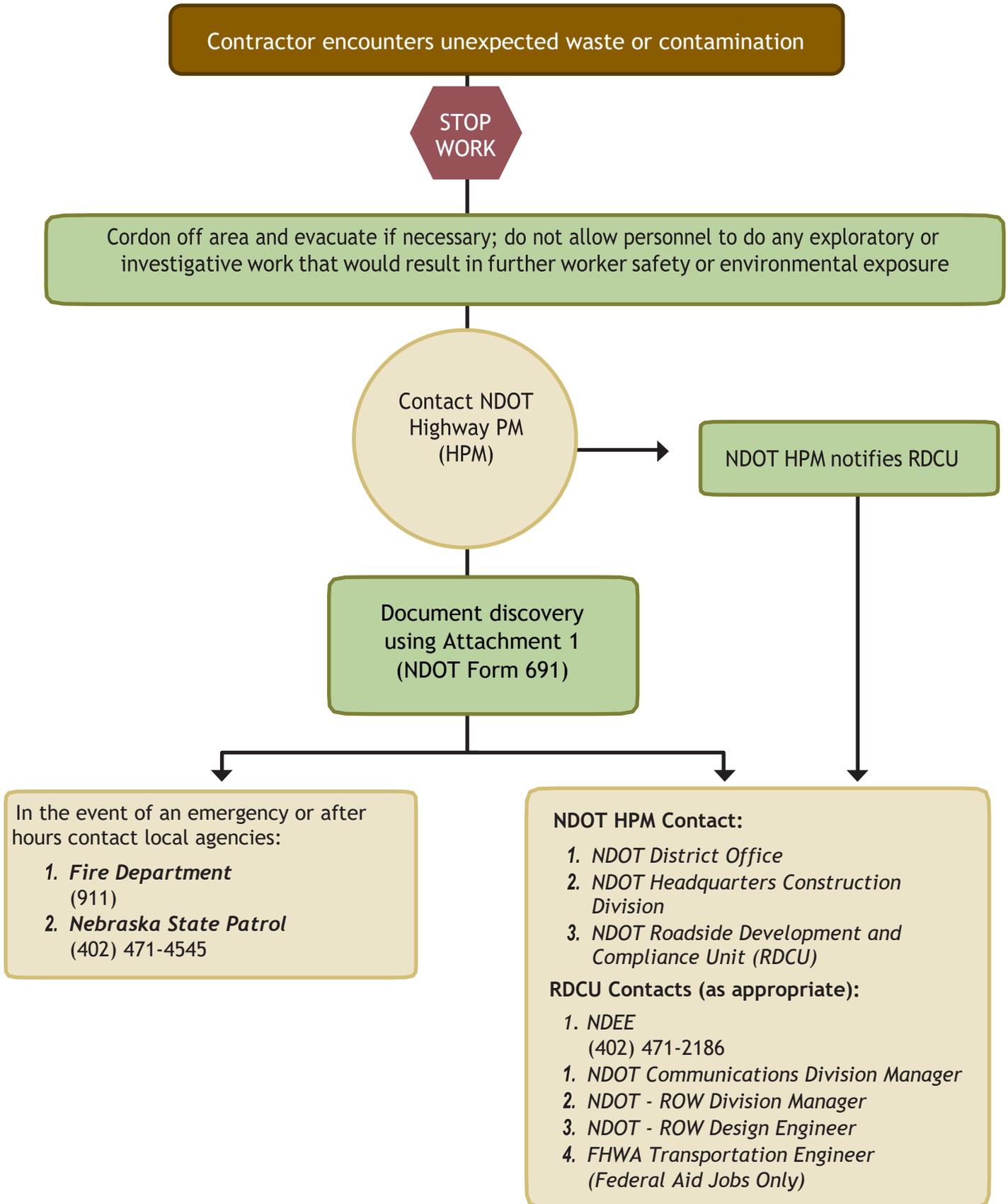


Figure 3-2
Procedure for Characterization and Disposal of
Construction and Demolition Debris and Municipal Waste

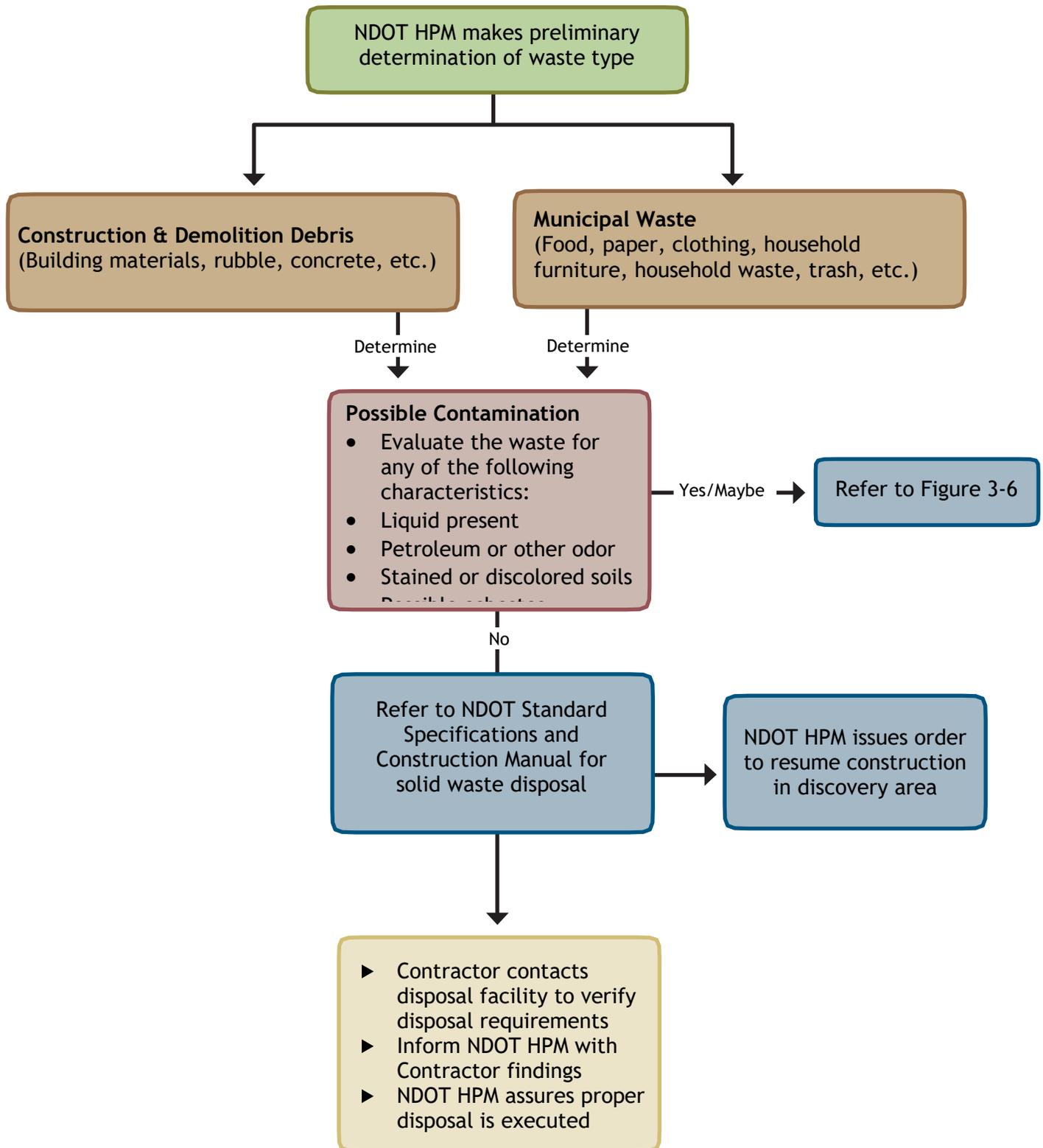
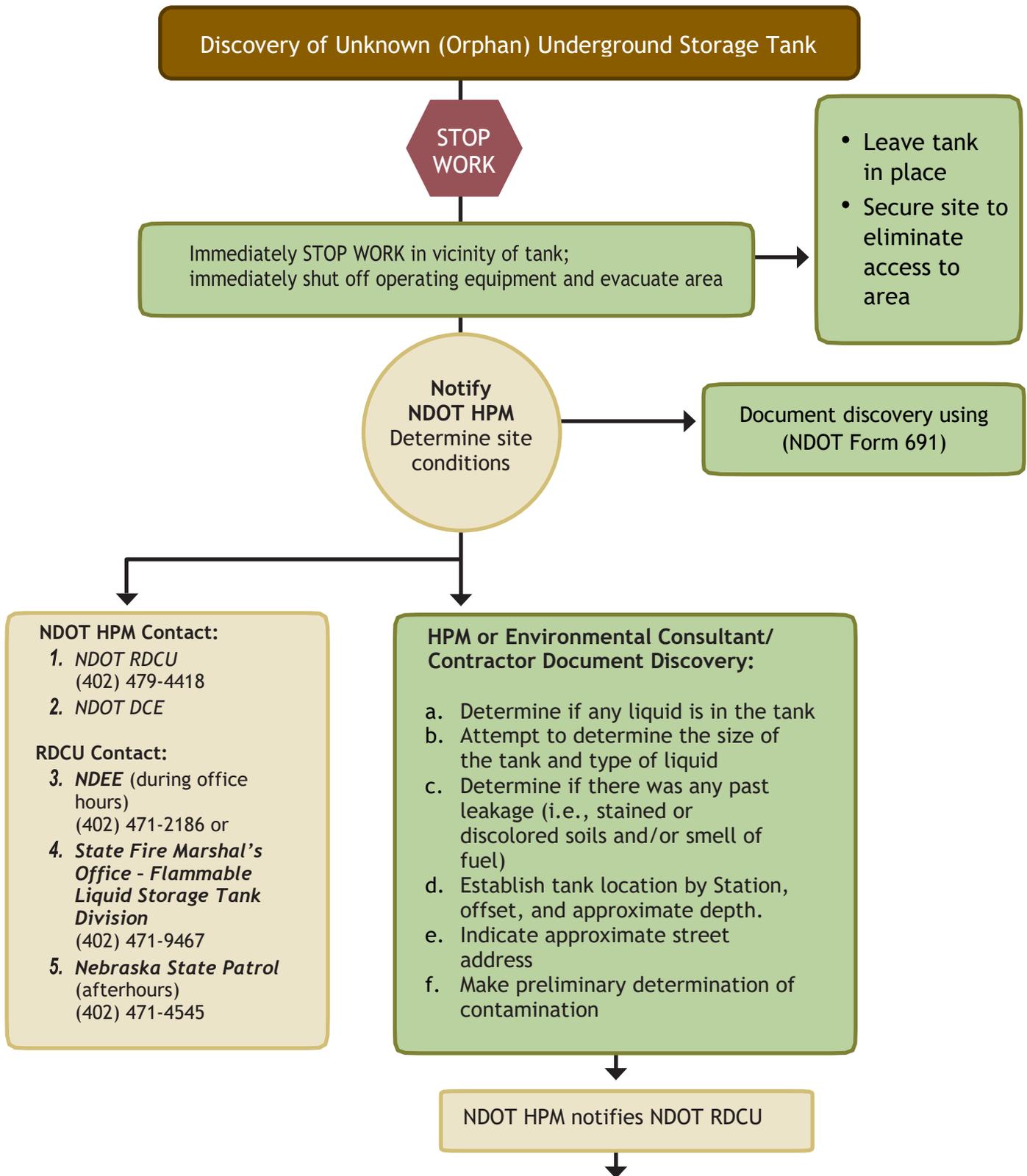
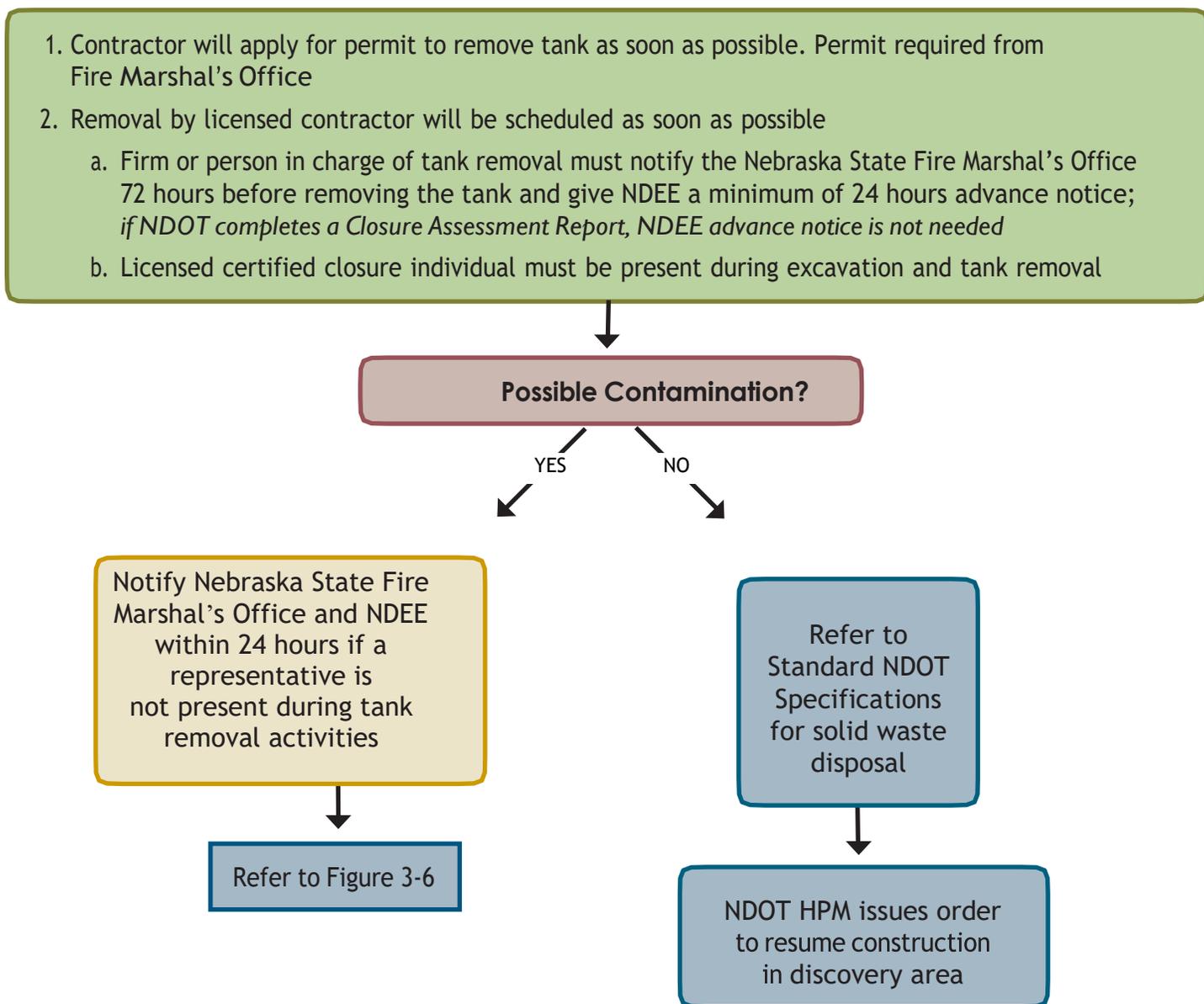


Figure 3-3

Procedure for Notification, Characterization, and Disposal of Unknown Underground Storage Tank



**Figure 3-3
(continued)**



Notes:

1. For more information refer to Nebraska Title 159, Rules and Regulations for Underground Storage Tanks

Figure 3-4
Procedure for Notification, Characterization, and Disposal of
Drums or Containers

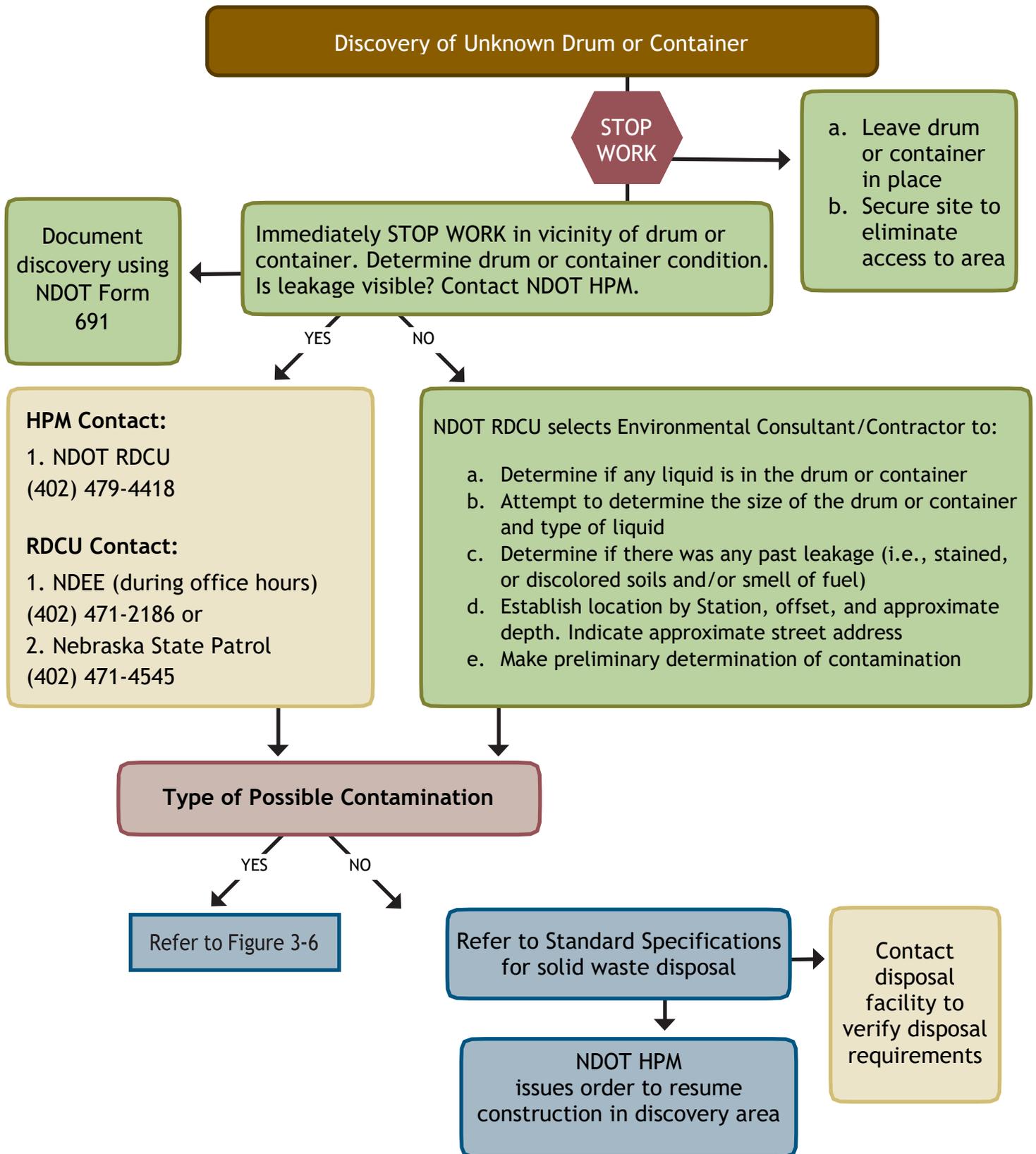


Figure 3-5

Procedure for Notification, Characterization, and Disposal of “Other” Unexpected Waste Types

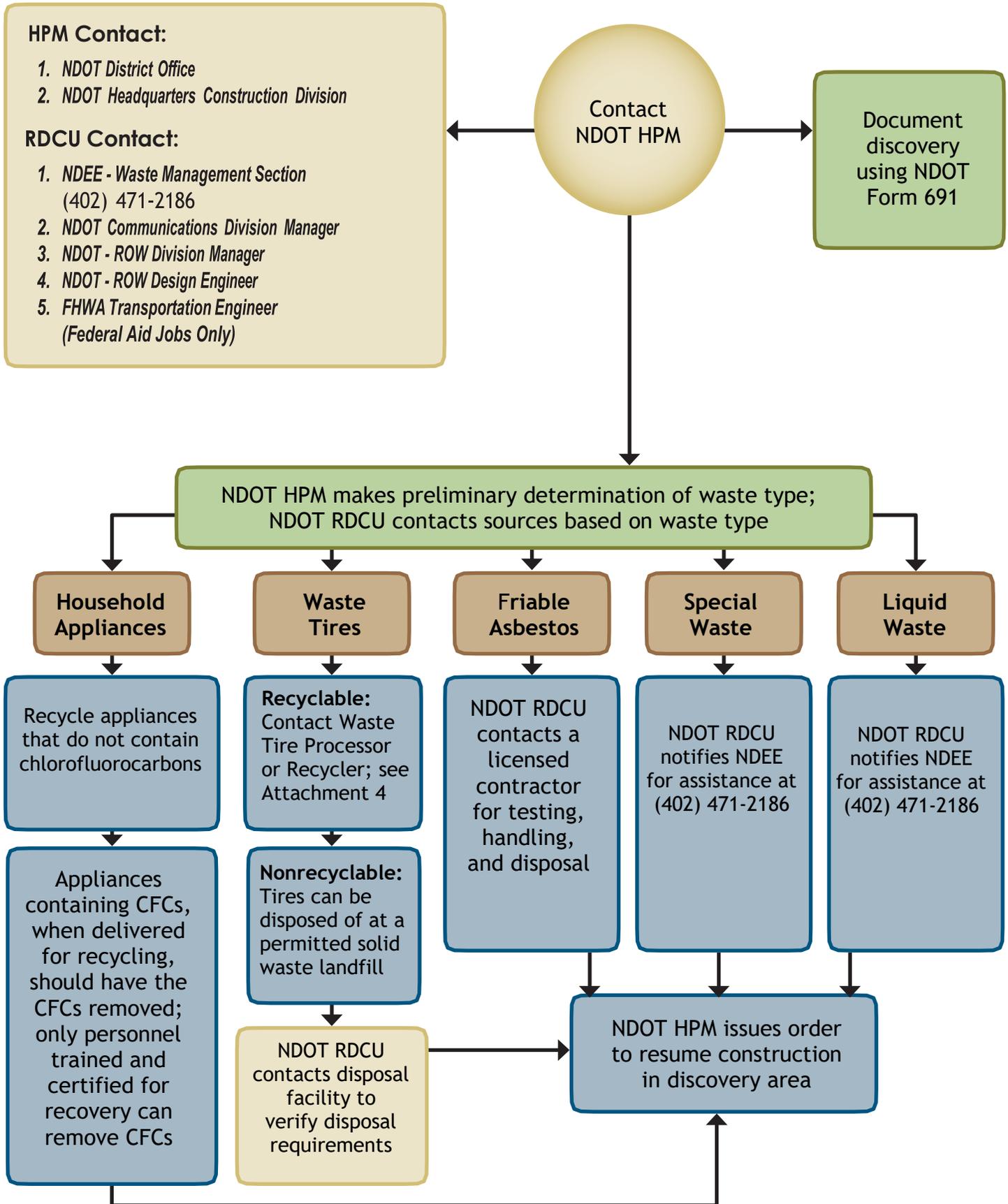


Figure 3-6

Procedure for Notification, Characterization, and Disposal of Contaminated Material

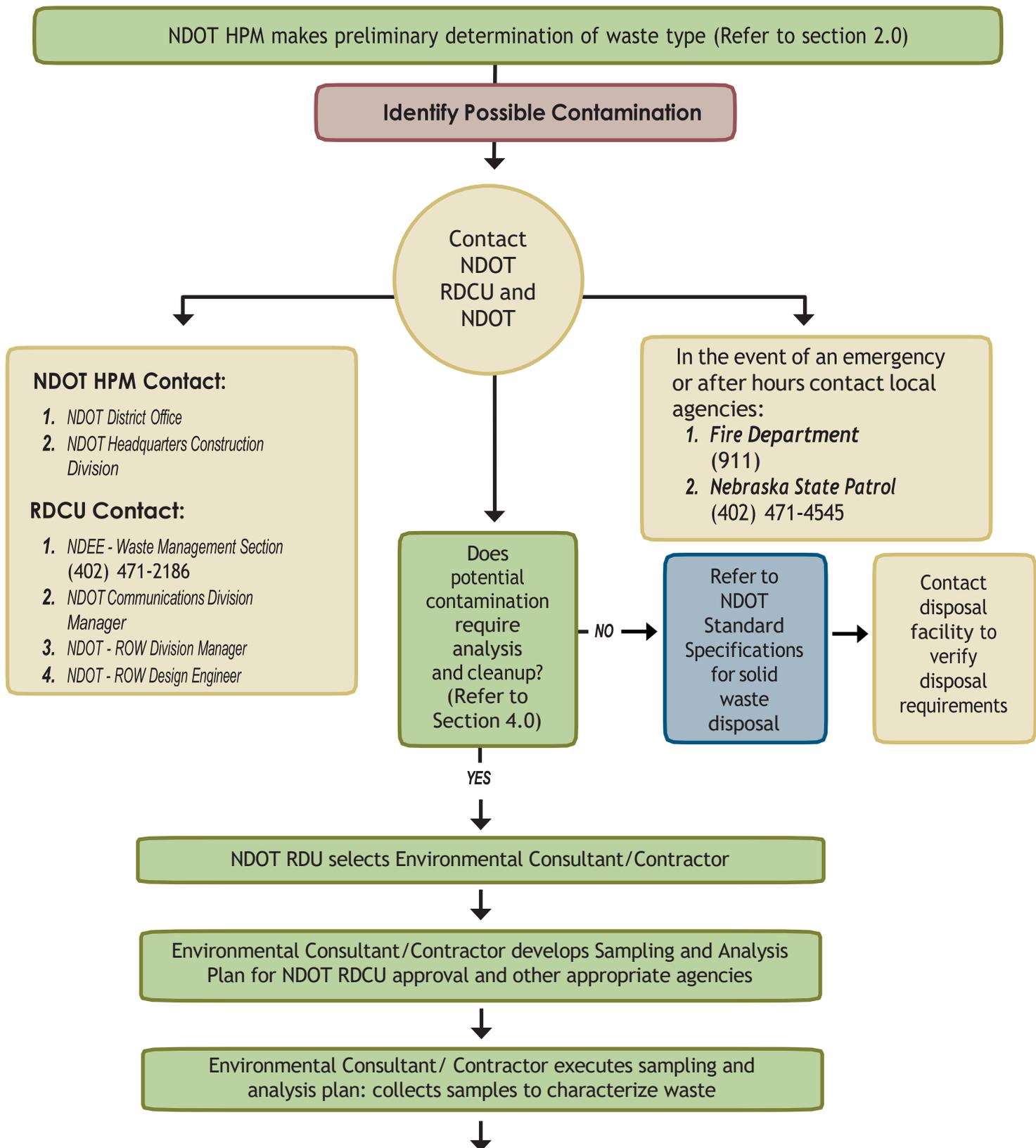
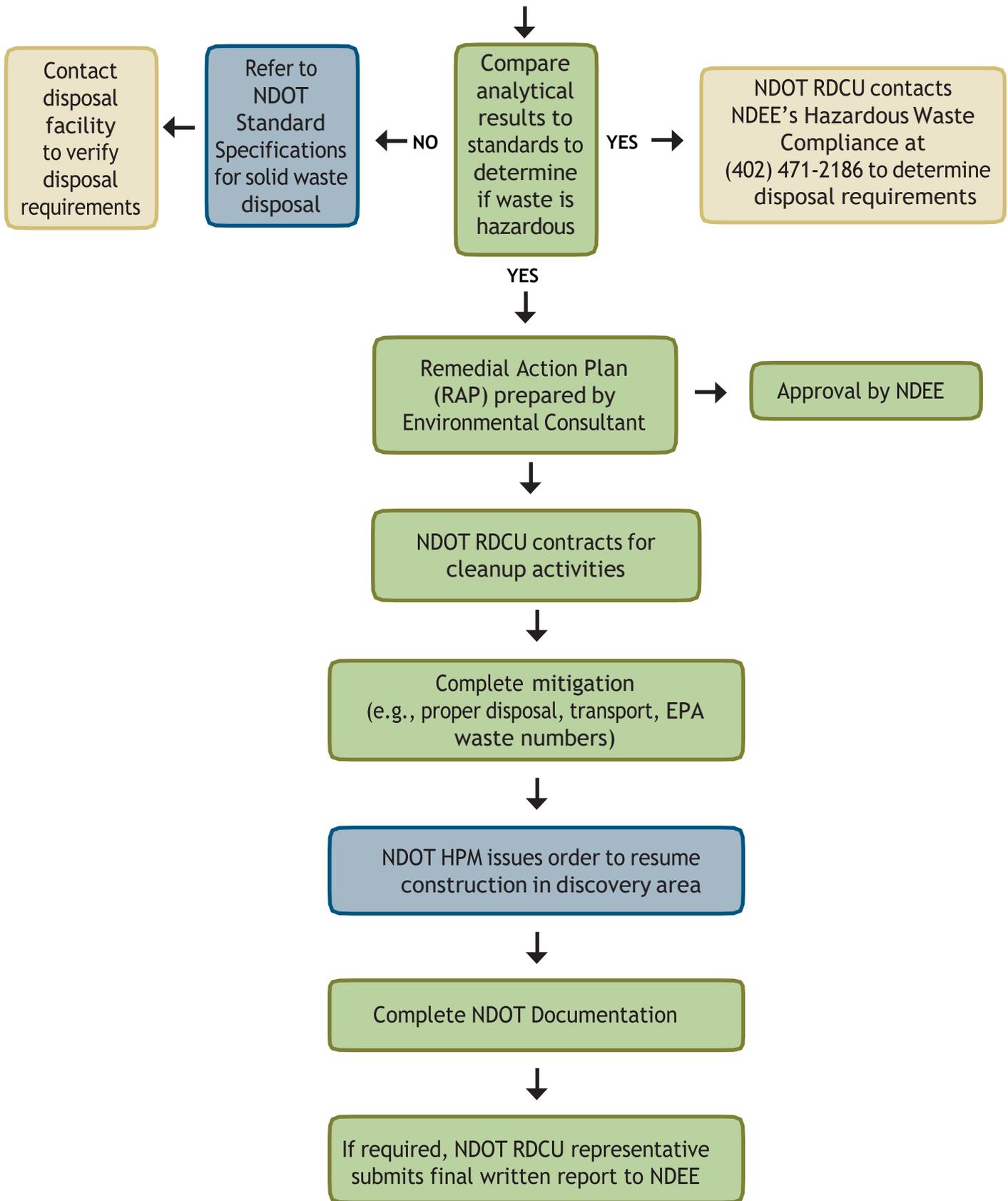


Figure 3-6
(continued)



SECTION 4.0
UNEXPECTED WASTE CHARACTERIZATION PROCEDURES

4.1 Non-Contaminated Material Characterization

Contamination is not always readily visible; thus, samples may need to be collected and analyzed to verify that the material is uncontaminated and meets the criteria for disposal as a solid waste. The NDOT HPM or the NDOT Environmental Consultant/Contractor shall contact the anticipated disposal facility where the wastes will be transported to determine what sampling requirements are necessary for disposal. Each facility may have its own analytical documentation requirements. A typical sampling program for waste characterization is provided in Table 4-1.

Table 4-1
Non-Hazardous Waste Analytical Methodology

Matrix	Analyte	Analytical Method ¹	Container ²	Preservative	Holding Time
Soil	TCLP ³ Metals	1311/SW6010B	1- 8 oz jar	4° C	6 months
Soil	TCLP Volatiles	1311SW/8260	1- 8 oz jar	4° C	6 months
Soil	Ignitability	40 CFR §261.21	1- 4 oz jar	4° C	6 months
Soil	Reactivity	40 CFR §261.23	1- 4 oz jar	4° C	6 months

Notes:

¹ SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*

² The laboratory will supply the appropriately sized containers for each analyte according to SW-846.

³ Toxicity Characteristic Leaching Procedure (TCLP)

Hazardous wastes can be either listed wastes or characteristic wastes. Listed wastes are wastes from common manufacturing and industrial processes, specific industries or can be generated from discarded commercial products containing specific chemicals. Listed wastes are determined to be a hazardous waste if they are specifically listed on one of four lists (the F, K, P and U lists) found in title 40 of the Code of Federal Regulations (CFR) in section 261. Discovery of listed wastes on a project site is unlikely. An On-Call Environmental Consultant/Contractor should be contacted to assist in making this determination for these types of waste. Wastes discovered on a project site that are hazardous are most likely to be characteristic wastes. Characteristic wastes are wastes that exhibit any one or more of the following characteristic properties: ignitability, corrosivity, reactivity or toxicity. The analytical results will be compared to 40 CFR 261, Toxicity Characteristics.

4.2 Contaminated Material Characterization

NDOT may use one of the On-Call Environmental Consultants/Contractors to identify and characterize potentially contaminated material through sampling and analytical testing. The RDCU representative will be responsible for approving all Contractor/Consultant plans and proposed corrective actions.

The Environmental Consultant's/Contractor's investigation should include the following:

- Assessment of worker safety and public exposure concerns
- Development of a sampling and analysis plan to characterize the waste type
- Determination of the handling, treatment, and/or disposal requirements for any contaminated media unearthed as part of the construction process
- Recommendations for a preventative action plan to avoid additional issues and to minimize NDOT liability
- Determination of corrective actions (i.e., soil and/or groundwater cleanup, environmental monitoring or implementation of engineering or institutional controls) necessary to be in place that allow the prime construction contractor to resume work

The NDOT Environmental Consultant/Contractor may need to develop additional specifications to complete portions of construction within contaminated areas to address handling, storage, treatment, and disposal requirements for the contaminated waste.

The following subsections identify a course of action that may be followed by the selected NDOT Environmental Consultant/Contractor in the event of the discovery of contaminated material.

4.2.1 Sampling and Analysis Plan

If contamination is suspected, NDEE may require NDOT to develop and submit a written sampling and analysis plan (SAP) in accordance with a schedule and format established by NDEE to characterize and manage the contaminated waste. The SAP (approved by NDOT's RDCU) would be subject to NDEE's review and approval. The NDOT Environmental Consultant/Contractor will prepare the SAP, and upon approval of the SAP, or as directed by NDEE, NDOT shall implement the approved activities.

4.2.1.1 Petroleum-Contaminated Material

The type of analysis conducted, and the sampling procedures used are dependent on the matrix (soil or water) and type of contaminant involved. A typical sample analytical program for petroleum-contaminated material is provided in Table 4-2.

**Table 4-2
Petroleum-Contaminated Material Analytical Methodology**

Matrix	Analyte ⁴	Analytical Method	Container	Preservative	Holding Time
Soil	TPH - DRO ¹	Modified 8015	1- 4 oz jar	4° C	6 months
Soil	TPH - GRO ¹	Modified 8015	1- 4 oz jar	4° C	6 months
Soil	BTEX ²	8020	1- 4 oz jar	4° C	6 months
Soil	TCLP Metals ³	1311/SW6010B	1- 8 oz jar	4° C	6 months

¹ Analytical results will be compared to NDEE Voluntary Cleanup Program (VCP) values.

² Analytical results will be compared to U.S. Environmental Protection Agency Regional Screening Levels (RSL) and NDEE VCP values.

³ Analytical results will be compared to 40 CFR 261, Toxicity Characteristics.

⁴ Acronyms: Total Petroleum Hydrocarbon (TPH); Diesel Range Organics (DRO); Gasoline Range Organics (GRO); Benzene, toluene, ethylbenzene, and xylenes (BTEX); Toxicity Characteristic Leaching Procedure (TCLP).

4.2.1.2 Hazardous Material

A waste is characterized as hazardous if that waste is ignitable, corrosive, reactive, or toxic. The waste is assigned the waste code(s) associated with the characteristic(s) making it hazardous.

A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

- It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has a flashpoint less than 60°C (140°F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79, or D-93-80, or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78.
- It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

- It is an ignitable compressed gas, as defined in 49 CFR Part 173 and as determined by the test methods determined in that regulation (i.e., any material or mixture having in the container an absolute pressure exceeding 40 p.s.i. at 70°F or, regardless of the pressure at 70°F having an absolute pressure exceeding 104 p.s.i. at 130°F; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100°F as determined by ASTM Test D-323) or equivalent test methods.
- An oxidizer is a substance such as a chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter.

A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

- It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method 9040C in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" EPA Publication SW-846.
- It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by Method 1110A in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846.

A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

- It is normally unstable and readily undergoes violent change without detonating.
- It reacts violently with water.
- It forms potentially explosive mixtures with water.
- When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
- It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5 can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

- It is capable of detonation or explosive reaction if it is subjected to a strong initiating source, or it is heated under confinement.
- It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
- It is a forbidden explosive or Class 1.1, 1.2, or 1.3 explosive as defined in 49 CFR Part 173.

A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure, Test Method 1311 in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, the extract from a representative sample of the waste contains any of the contaminants at the concentration equal to or greater than the respective value listed in 40 CFR 261.24.

Chemical analysis or physical testing is generally used for the determination of hazardous waste characteristics. A typical sample analytical program for hazardous determinations is provided in Table 4-3.

**Table 4-3
Hazardous Waste Analytical Methodology**

Matrix	Analyte	Analytical Method ¹	Container ²	Preservative	Holding Time
Soil	TCLP Metals	1311/SW6010B	1- 8 oz jar	4° C	6 months
Soil	TCLP Volatiles	1311SW/8260	1- 8 oz jar	4° C	6 months
Soil	Ignitability (Flashpoint)	40 CFR §261.21	1- 4 oz jar	4° C	6 months
Soil	Corrosivity (pH)	40 CFR §261.22	1- 4 oz jar	4° C	6 months
Soil	Reactivity	40 CFR §261.23	1- 4 oz jar	4° C	6 months

¹ SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*

² The laboratory will supply the appropriately sized containers for each analyte according to SW-846.

The analytical results will be compared to 40 CFR 261, Toxicity Characteristics. If the analytical results indicate that the material is non-hazardous, the material can be disposed of by the normal processes for solid waste described in Section 5.0.

4.3 Remedial Action Plan (RAP)

Remedial action will be dependent on the results of the analytical analyses. A RAP would be prepared by the NDOT Environmental Consultant/Contractor. The HPM will be responsible for oversight of the execution of the RAP. Actions such as, but not limited to, environmental monitoring and limiting public access may be included as remedial action responsibilities. NDOT's ESM will submit the RAP to NDEE for approval. Upon NDEE's approval of the RAP, NDOT will arrange for the appropriate contractor to implement the plan. The remedial action for an oil or hazardous substance release shall proceed in a timely and diligent manner. Actions such as, but not limited to, soil and/or groundwater cleanup and/or disposal, environmental monitoring and limiting public access may be included as remedial action responsibilities.

Cleanup shall be to the extent that will prevent a hazard to human health, to human safety, and to the land and waters of the state as stated in the approved RAP. The Voluntary Clean-up Program (VCP) approach may be used to clean up contaminated properties while maintaining compliance with all applicable state and federal environmental regulations. The Nebraska Voluntary Clean-up Program, established by the Remedial Action Plan Monitoring Act (Section 1, Attachment 1-5 RAPMA Statute), allows NDEE to review and oversee efforts by property owners, prospective buyers, developers, lending institutions, or others wishing to initiate voluntary environmental clean-up activities. Clean-up criteria will be determined with guidance from NDEE. Clean-up standards may be obtained from different programs and/or regulations. This may include follow-on sampling or monitoring, by NDOT staff, environmental staff or as appropriate, contractor, to verify completion.

4.3.1 Permitting

Prior to implementing the RAP, NDEE shall be contacted to determine if a permit is necessary to complete remedial work. In the event the NDEE finds an imminent and substantial endangerment to human health and the environment, the Director may issue a temporary emergency permit without notice and hearing. An emergency permit may be issued for a non-permitted activity. It may also be issued for an activity where an existing permit does not include the authority for which the emergency permit application is being made. Refer to Title 126 – Rules and Regulations Pertaining to Management of Waste, Chapter 2 for permit application and procedures.

The emergency permit:

- May be oral or written. If oral, it shall be followed in 5 days by a written emergency permit;
- Shall not exceed 120 days in duration but may be renewed for an additional 60 days where the permittee can demonstrate that the circumstances justify such extension and that the permittee made good faith efforts to complete the permitted activity or operation within the 120 days;
- Shall clearly specify the wastes to be handled and the manner and location of their disposal; and
- May be terminated by the Director of NDEE at any time without process if he or she determines that termination is appropriate to protect human health and the environment.

SECTION 5.0 WASTE DISPOSAL

The various options for disposal of solid waste and contaminated waste in landfill and recycling facilities are described below. In some construction scenarios, waste may be left in place. This would include non-contaminated waste and NDOT would receive documented approval from NDEE regarding the necessary conditions to leave waste in place.

In other situations, waste materials will need to be excavated and properly disposed of. If unexpected wastes must be removed from the construction area and properly disposed of, there are a number of considerations that must be examined. For example, the following items are banned from landfills statewide:

- Waste oil
- Lead acid batteries (car batteries)
- Household appliances
- Unregulated hazardous waste (except household quantities)
- Recyclable waste tires

Therefore, it is possible that some wastes that are removed from the construction area must be segregated and taken to different locations. The options and considerations for disposal of unexpected and/or contaminated waste are described below.

5.1 Non-Contaminated Waste Disposal

Following discovery and characterization of the waste material, if the analytical results indicate the waste material is non-hazardous, the waste can be disposed of by the normal processes for solid waste, per NDEE Title 132 – Integrated Solid Waste Management Regulations and NDOT Standard Specifications. The disposal facility that will be used shall be contacted by the NDOT HPM or NDOT Environmental Consultant/Contractor to verify disposal requirements. The following subsections identify examples of solid waste processing facilities, which are described in Title 132 – Integrated Solid Waste Management Regulations, Chapter 1, as any facility where solid wastes are processed, and shall include, but not be limited to, solid waste, compost sites, materials recovery facilities, recycling centers, and solid waste transfer stations.

5.1.1 Municipal Solid Waste Disposal Area

Municipal Solid Waste Disposal Area is defined as a publicly or privately owned discrete area of land or excavation that receives household waste, alone or in combination with other types of wastes, such as commercial solid waste, industrial waste, non-hazardous sludge, or conditionally exempt small-quantity generator waste, and that is not a land application unit, surface impoundment, injection well, or waste pile. The term “landfill” may be used interchangeably with Municipal Solid Waste Disposal Area. The Integrated Waste Management List of Permitted Facilities can be found at ndot.info/IWMLPF (see Municipal Solid Waste Landfill) and is also provided in Attachment 4. Check website for most current information.

5.1.2 Materials Recovery Facility

Materials Recovery Facility is defined as any facility at which solid waste is processed for the purpose of resource recovery (such as a tire recycling facility). Certain types of recovered waste can be hauled to an appropriate recovery facility. The facility shall be contacted to determine minimum quantities or waste restrictions. The Integrated Waste Management List of Permitted Facilities can be found at ndot.info/IWMLPF (see Materials Recovery Facility) and is also provided in Attachment 4. Check website for most current information.

5.1.3 Construction and Demolition Disposal Facility

A Construction and Demolition Disposal Facility is defined as any facility where the following waste types are disposed: waste which results from land clearing; the demolition of buildings, road, or other structures; or construction projects. The Integrated Waste Management List of Permitted Facilities can be found at ndot.info/IWMLPF (see Construction and Demolition Waste Landfill Facility) and is also provided in Attachment 4. Check website for most current information. The Construction and Demolition Waste in Nebraska brochure can be found at www.deq.state.ne.us under Publications & Forms, Guidance Documents and is provided as Attachment 3.1. Check website for most current information.

5.2 Contaminated Materials Waste Disposal

5.2.1 Petroleum-Contaminated Materials

Petroleum-contaminated materials are solid wastes when actively managed as wastes (excavated for treatment and disposal). All contaminated materials are required to have a hazardous waste determination. The type of analysis conducted, and the sampling procedures used are dependent on the matrix (soil, water) and type of contamination involved. For assistance on making a hazardous waste determination, refer to Title 128 – Nebraska Hazardous Waste Regulations, Chapter 3 and 4.

Treatment and disposal requirements are dependent on different types of petroleum-contaminated materials. If the contaminated material is determined to be hazardous, refer to Section 5.2.2.

Non-hazardous petroleum-contaminated materials can be disposed of at a municipal solid waste landfill. Each municipal solid waste landfill may have its own sampling and analysis disposal requirements. The disposal facility that will be used shall be contacted by the NDOT HPM or NDOT Environmental Consultant/Contractor, to verify disposal requirements.

An alternative treatment to disposal in a municipal solid waste landfill is disposal by land application. A permitted land application facility is defined as a site where contaminated materials are repeatedly land applied onto the sample plot(s) of land or incorporated into the soil surface for agricultural purposes, for treatment and disposal.

For further information regarding municipal solid waste and/or land application disposal for petroleum-contaminated material, refer to Title 132 – Integrated Solid Waste Management Regulations. NDEE Environmental Guidance Documents *Management of Petroleum-Contaminated Materials* and *Oil and Petroleum Related Wastes* are provided as Attachment 3.5.

5.2.2 Hazardous Wastes

Wastes generated from the cleanup of hazardous substances shall be disposed of in accordance with Title 128 – Nebraska Hazardous Waste Regulations.

Following the data collection and characterization identified in Section 4.2.1.2, NDEE shall be contacted by the NDOT HPM or Environmental Consultant/Contractor to discuss disposal options and requirements, which will be documented by notes, e-mail or phone log in the project file. Each Subtitle C hazardous waste landfill may have differing analytical and disposal requirements and will need to be contacted prior to shipment.

5.3 “Other” Wastes

The following wastes have special handling and disposal requirements as solid waste.

5.3.1 Household Appliances

Appliances that cannot be disposed of in landfills include clothes washers and dryers, water heaters, heat pumps, air conditioners, dehumidifiers, refrigerators, freezers, trash compactors, dishwashers, conventional ovens, ranges, stoves, and wood stoves.

NDEE recommends household appliances be recycled, with special consideration given to appliances that contain CFCs, such as air conditioners, refrigerators, and freezers. Appliances containing CFCs, when delivered for recycling, should have the CFCs removed, or arrangement must be made to have the CFCs removed. NDEE recommends that appliances containing CFCs be segregated and stored to aid in the proper removal of CFCs. Only those persons who are trained and certified for recovery can remove CFCs. Contact the U.S. Environmental Protection Agency Stratospheric Ozone Protection Hotline at 1-800-296-1996 for further information regarding disposal of any appliances containing CFCs. For more information regarding CFCs and household appliances, refer to Title 132 – Integrated Solid Waste Management Regulations, Chapter 1. A Nebraska Recycling Directory can be found at www.deq.state.ne.us. An NDEE Environmental Guidance Document *CFCs and Household Appliances/Vending Machines* can be found at www.deq.state.ne.us under Publications & Forms, Guidance Documents, and is provided as Attachment 3.3. Check website for most current information.

5.3.2 Asbestos

NDOT shall contact a licensed contractor to remove, handle, and dispose of all asbestos containing material (ACM) waste in accordance with the requirements of Title 129 – Nebraska Air Quality Regulations. For information regarding licensed contractors and further information regarding asbestos removal and disposal, contact the Nebraska Asbestos Control Program (HHS).

- Regulation and Licensure – (402) 471-0548
- Inspection and Notification – (402) 471-6507

For additional information go the HHS website <https://www.hhs.gov/> and type in ‘asbestos’ as a keyword in the search.

The NDEE Environmental Guidance Document *General Asbestos Information* can be found at www.deq.state.ne.us under Publications & Forms, Guidance Documents, and is provided as Attachment 3.2. Check website for most current information.

5.3.3 Waste Tires

5.3.3.1 Recyclable Waste Tires

Land disposal of recyclable waste tires in any form is prohibited. Recyclable waste tires are managed by a Waste Tire Processor or Recycler or a Tire Retailer for the purpose of reusing, recycling, or shipping the waste tires out of state. A list of approved Waste Tire Haulers and Recyclers is included as Attachment 5. A list of waste tire haulers and recyclers can be found at www.deq.state.ne.us. Check website for most current information.

5.3.3.1 Non-recyclable Tires

A non-recyclable tire means a press-on solid tire, a solid pneumatic shaped tire, or a foam pneumatic tire. Non-recyclable tires may be disposed of at a permitted solid waste landfill.

5.3.4 Special Wastes

Special waste, such as waste containing animal parts from slaughtering operations or soils contaminated by industrial operations, shall not be disposed of at any place except a permitted solid waste disposal area that is operated and maintained in compliance with

NDEE regulations and authorizations, unless NDEE grants prior written approval for an alternate location and management method. The Integrated Waste Management List of Permitted Facilities can be found at ndot.info/IWMLPF. Check the website for the most current information. For more information, refer to Title 132- Integrated Solid Waste Management Regulations, Chapter 1 and Chapter 13.

5.3.5 Liquid Wastes

Bulk or non-containerized liquids cannot be disposed of in a permitted solid waste landfill. In addition, any waste or special waste that contains free liquid is banned from permitted landfills.

The following liquid waste may be disposed of in a permitted municipal solid waste landfill by the following methods:

- Liquid waste in a small container (similar in size to that normally found in a household).
- Liquid waste in a container designed to hold liquids for use or personal consumption rather than bulk storage.
- Liquids or wet wastes that fail the Paint Filter Test may be mixed with soil or other dry wastes prior to disposal at the solid waste landfill.

Any liquid waste containerized or bulk, that is also a special waste, must be pre-approved by NDEE before disposal by the Field Crew contractor. The RDCU representative will provide approval for disposal to the NDOT Contractor PM. The solid waste landfill manager may set regulations addressing liquid wastes that are more stringent than state or federal regulations.

For more information, refer to Title 132 – Integrated Solid Waste Management Regulations, Chapter 1 and Chapter 3. An NDEE Environmental Guidance Document *Liquid Wastes Restricted from Landfills* is provided as Attachment 3.4.

SECTION 6.0 DOCUMENTATION AND REPORTING

Regardless of the type of waste discovered, the location, the volume, or the disposition, each occurrence shall be documented using the NDOT Form 691 form in Attachment 1 (filed in the construction project's Site Manager database).

The NDOT HPM, with the support of the RDCU Representative, has the primary responsibility to generate and maintain a thorough record of the unexpected waste discovery and the necessary response actions. Documentation includes noting all actions taken from the time the initial notification was received up to closure with regulatory agencies as well as any tests of waste materials, plans generated for disposal, and documentation of disposal volumes. The NDOT HPM shall ensure that all requirements are fulfilled to meet sampling, handling, disposal, and reporting procedures.

If the waste is contaminated, a copy of the required sampling, analysis, and disposal report(s) must be submitted to NDEE for documentation that appropriate assessment and cleanup activities were performed. Should contamination be allowed to remain in place or contaminated soils are reused as fill material, volumes and locations shall be noted on the final as-built drawings.

The NDOT HPM shall complete the NDOT Form 691 documentation in Site Manager by carefully noting all actions taken from the time of initial discovery through proper disposal, reporting, and resumption of work in the area. A copy of the completed NDOT Form 691 will be sent to the RDCU representative.

6.1 Reporting for Discovery of Hazardous Wastes

NDEE may require a written final report for all discoveries of petroleum-contaminated material or hazardous waste as stated in Title 126 – Nebraska Department of Environment & Energy, Chapter 18. NDEE will notify NDOT if a report is required. If required, the report will be due within 15 days after remedial action has been completed or, if no remedial action occurs, within 15 days of the discovery. The report shall contain, at a minimum, the following information:

- Date, time, and duration of the discovery
- Location of discovery
- Person or persons causing and responsible for the discovery
- Type and amount of oil or hazardous substance discovered

- Cause of the discovery
- Environmental damage caused by the discovery
- Actions taken to respond to, contain, and clean up the discovery
- Location and method of ultimate disposal of the oil or hazardous waste and other contaminated materials
- Any known or anticipated acute or chronic health risks associated with the discovery
- When appropriate, advice regarding medical attention necessary for exposed individuals

Attachment 1
NDOT Unexpected Waste
Notification Form (NDOT
Form 691)

NDOT UNEXPECTED WASTE NOTIFICATION FORM (NDOT Form 691)

Control Number		Date	
Project Name			
Project Discovery Location			
Date and Time of Discovery			
Contact Person		Phone Number	
Unexpected Waste Description			

Waste type:

<input type="checkbox"/>	Construction and demolition debris	<input type="checkbox"/>	Municipal (household) waste
<input type="checkbox"/>	Contaminated (petroleum-stained soil)	<input type="checkbox"/>	Other: _____

Procedures: *Were the following procedures following?*

1.	Stopped work	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
2.	Secured site in area of discovery	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
3.	Notified NDOT Construction Project Manager or Site Inspector of discovery	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
4.	Filed NDOT Unexpected Waste Notification Form with Environmental Section?	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No

Contamination determination: *Were any of the following characteristics identified?*

1.	Drums, barrels, or sealed containers of varying sizes	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
2.	Unknown underground storage tank(s)	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
3.	Stained or discolored soils	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
4.	Gasoline odor	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
5.	Other odor (description) _____	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
6.	Oily residue	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
7.	Sheen on groundwater	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
8.	Cinders, slag, or other combustion products like ash	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
9.	Asbestos	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No

If possible contamination was determined, which of the following regulatory agencies were contacted?

Agency notification for drums, barrels, or sealed containers, petroleum-contaminated materials, other contaminated materials:

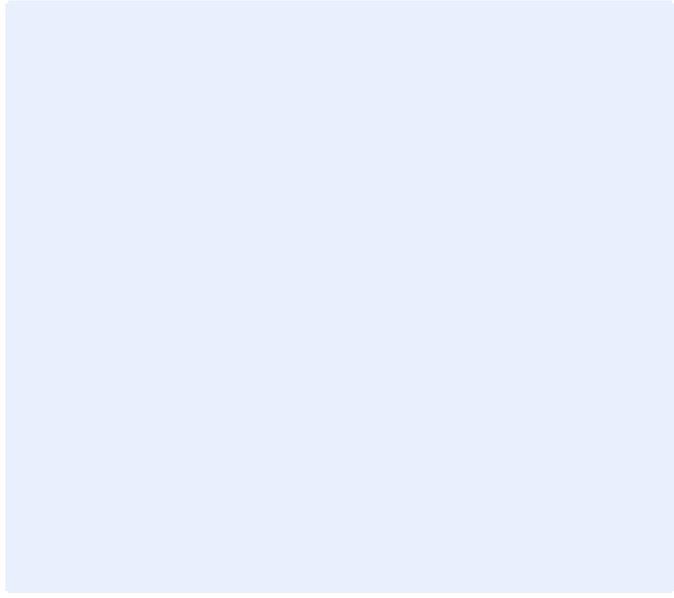
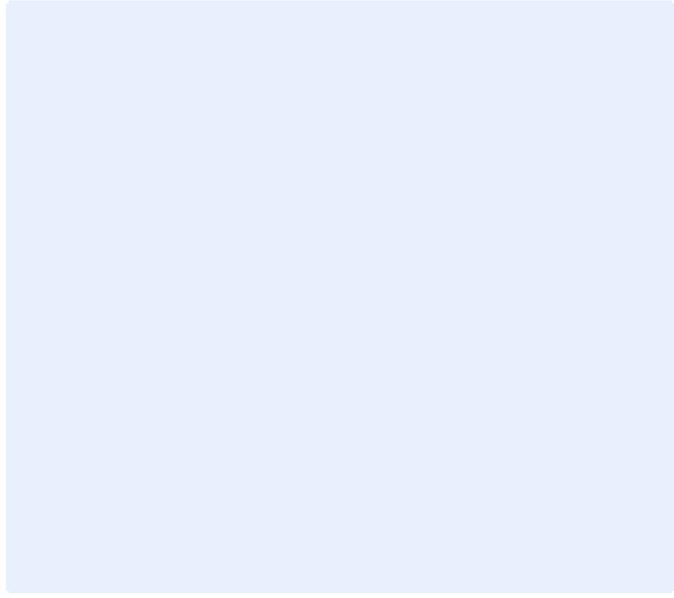
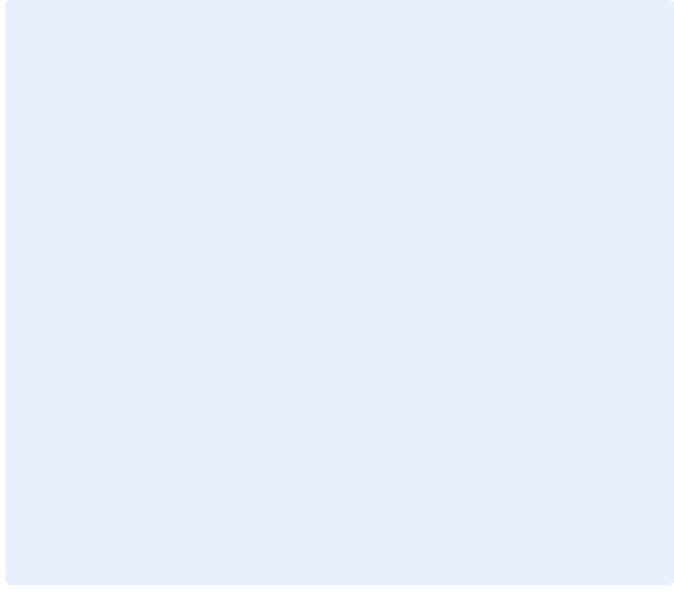
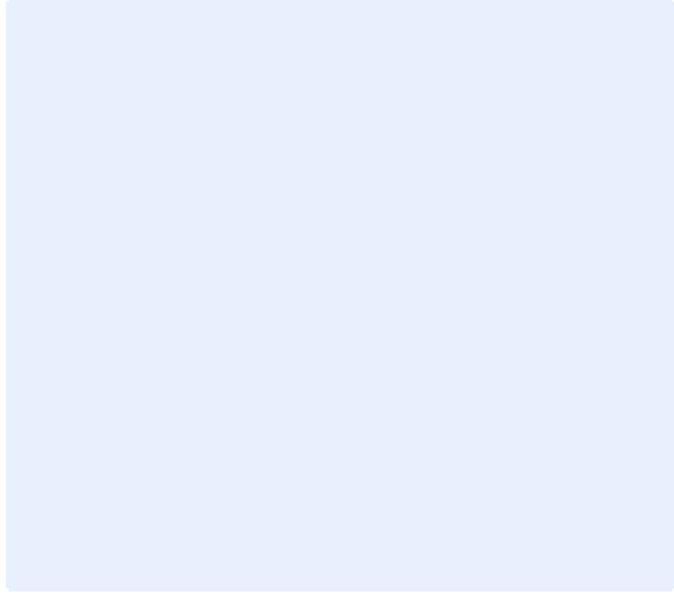
	NDOT - RDCU (402) 479-4766/4312	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
2a.	NDEE - (402) 471-2186 (during office hours)	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
2b.	Nebraska State Patrol (402) 471-4545 (after hours)	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
3.	NDOT-approved Environmental Contractor	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No

Agency notification for unknown underground storage tanks:

1.	NDOT - RDCU (402) 479-4766/4312	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
2a.	NDEE - (402) 471-2186 (during office hours)	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
2b.	Nebraska State Patrol (402) 471-4545 (after hours)	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
3.	State Fire Marshall's Office Flammable Liquid Storage Tank Division (402) 471-9467	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No

Documentation of discovery:

1.	Were photographs taken?	Location: _____	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No
2.	Were environmental samples collected?	Description: _____	<input type="checkbox"/>	Yes		<input type="checkbox"/>	No

Photo 1:	Photo 2:	
		
Photo 3:	Photo 4:	
		
NDOT Unexpected Waste Notification Form April 2022	Project Location:	
	Date:	

Attachment 2
Waste Type Photographs

NDOT Project

Unexpected waste material was encountered during construction activities for the I-80 and 24th Street to Missouri River Project. The unexpected waste appeared to be municipal waste and included fabric, tires, and trash.



Construction and Demolition Debris

C&D waste is defined as waste that results from land clearing; the demolition of buildings, roads, or other structures; or construction projects. C&D waste includes, but is not limited to:

- Fill materials
- Wood (including painted and treated wood)
- Land clearing debris other than yard waste
- Wall coverings (including wallpaper, paneling, and tile)
- Drywall, plaster, and non-asbestos insulation
- Roofing shingles and other roof coverings
- Pipe, metals, and plumbing fixtures
- Glass and plastic
- Carpeting
- Electrical wiring



Municipal Solid Waste

Municipal solid waste is any household waste and/or the combination of household waste with industrial or commercial solid waste. Solid waste, as defined in Nebraska regulations, means any garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, and mining operations, and from community activities.



Contaminated Waste

Contamination refers to the presence of any material/chemical contained within the soil, surface water, or groundwater that may require assessment, remediation, or special handling or that has a potential for liability.

This category includes a wide variety of wastes whose characteristics may indicate possible contamination:

- Drums, barrels, or sealed containers of varying sizes
- Underground storage tanks
- Stained or discolored earth in contrast with adjoining soil
- Petroleum hydrocarbon odors or other chemical odors that emanate when the earth is disturbed
- Oily residue or sludge intermixed with earth
- Sheen on groundwater
- Unknown viscous or liquid substances
- Cinders, slag, and other combustion products like ash
- Asbestos (both friable and non-friable)



Other Wastes

- **Household Appliances:** Vending machines, shall mean clothes washers and dryers, water heaters, heat pumps, air conditioners, dehumidifiers, refrigerators, freezers, trash compactors, dishwashers, conventional ovens, ranges, stoves, and wood stoves.
- **Friable Asbestos:** Asbestos in a form that can be crumbled, pulverized, or reduced to powder by hand pressure.
- **Waste Tires:** Tire that is no longer suitable for its general intended purpose because of wear, damage, or defect.



Other Wastes (cont'd)

- **Special Waste:** Solid waste, with the exception of waste that is regulated as a hazardous waste, that possesses physical, chemical, or biological characteristics that make it different from general household, or C&D waste, and that requires special handling, treatment, or disposal methodologies in order to protect public health, safety, and the environment.
- **Liquid Waste:** Any waste that contains free liquids that will readily separate from the solid portion of a waste under ambient temperature and pressure.

