



Environmental Chemical Corporation

TRANSMITTAL LETTER

1125 Rt. 22 West
Suite 310
Bridgewater, NJ 08807
908-595-1777phone
908-595-1776 fax

TO: [REDACTED]
U.S. Army Corps of Engineers Buffalo District
1776 Niagara Street
Buffalo, N. Y. 14207

DATE: 26 August 2010 PROJECT NO.: 5210.004
RE: Niagara Falls Storage Site (NFSS) - for the
Transportation and Disposal of Remedial Investigation
Derived and Legacy Waste

SENDING:

- Attached AND Under separate cover via MAIL the following items:
- Shop drawings Prints Plans Samples
- Copy of letter Change order Cert Payroll Specifications

COPIES	DESCRIPTION
1	Final Waste Management, Transportation and Disposal Plan

TRANSMITTED:

Submittal Schedule	Submittal Type Required	Classification
S Prior to Shipment	O Original	FIO For information only
A Per S/C Schedule	P Print/Photocopy	R1 PDT Review and Accept.
M Prior to Mobilization	E Electronic Format	R2 CX/LRD/HQ Rev./Accept.
W Prior to Commencing Work	M Microfilm	
Y Prior to Progress Payment	PH Photograph	

REMARK(S): If you have any questions please do not hesitate to call me at [REDACTED] or email me at [REDACTED]. My cell phone number is [REDACTED]

CC:

SIGNED:

[REDACTED]
Digitally signed by [REDACTED]
Date: 2010.08.26 17:08:24
-04'00'
[REDACTED]
Project Manager

SUBMITTAL REQUIREMENTS SUMMARY

NOTICES

1. To each item submitted, the Contractor shall attach a copy of this form and circle the title of the item being submitted.
2. Failure to submit required submittals as delineated on this form may result in withholding of payment in accordance with provisions of the Contract.
3. The Contract Administrator is responsible for distributing submittals to the requesting Department (e.g., Construction). The Department is responsible for further distributions (e.g., Site Superintendent).

Submittal		Scope of Work (SOW) Paragraph	Classification	ITR Required	Submittal Schedule (Calendar Days after NTP)	Submittal (No.) and Type
1	Draft Sampling and Analysis Plan	5.1.1	R1	Yes	14	E, O
2	Draft Health, Safety and Radiation Protection Plan	5.1.2	R1	Yes	14	E, O
3	Draft Quality Control Plan and ITR documentation	5.1.3	R1	Yes	14	E, O
4	Draft Waste Management, Transportation, and Disposal Plan	5.1.4	R1	Yes	14	E, O
5	Final Work Plans	5.1	R1	Yes	35	E, O
6	IDW and Legacy Waste Manifests and Shipping Documents	5.5.2	R1	Yes	7 days prior to waste shipments	E, O
7	Draft Close Out Report	5.6.1	R1	Yes	As Specified in 5.6.1 and 6.1	E, O
8	Final Close Out Report	5.6.1	R1	Yes	As Specified in 5.6.1 and 6.1	E, O

FINAL WASTE MANAGEMENT, TRANSPORTATION, AND DISPOSAL PLAN

Niagara Falls Storage Site Transportation and Disposal of Remedial Investigation Derived and Legacy Waste

Lewiston, NY

August 2010

Prepared for:



**US Army Corps
of Engineers** ®
Buffalo District

U.S. Army Corps of Engineers
Buffalo District

Prepared by:



Environmental Chemical Corporation (ECC)
1125 Route 22 West
Bridgewater, NJ 08807

Prepared under:

**Contract No.: W91ZLK-05-D-0009
Delivery Order 0004**

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1-1
2.0	PROJECT ORGANIZATION.....	2-1
2.1	ORGANIZATION AND RESPONSIBILITIES	2-1
2.1.1	ECC Project Manager	2-1
2.1.2	Site Superintendent	2-1
2.1.3	Site Safety and Health Officer/ Health Physicist.....	2-1
2.1.4	On-Site Transportation Coordinator	2-3
3.0	TRANSPORTATION AND DISPOSAL SUBCONTRACTORS	3-1
3.1	TRANSPORTATION SUBCONTRACTOR	3-1
3.2	DISPOSAL FACILITIES.....	3-1
4.0	TRANSPORTATION.....	4-1
4.1	TRANSPORTATION PREPARATION.....	4-2
4.1.1	Packaging or Repackaging of Investigation Derived Waste and Legacy Waste	4-2
4.1.2	Transportation Documentation	4-2
4.1.3	Container Labeling.....	4-3
4.1.4	Container Placarding.....	4-4
4.1.5	Empty Vehicle Inspections and Surveys.....	4-4
4.1.6	Vehicle Loading.....	4-4
4.1.7	Vehicle Release.....	4-4
4.1.8	Loaded Vehicle Inspection	4-5
4.2	WASTE TRACKING	4-6
4.3	TRANSPORTATION ROUTES AND SPILL PREVENTION AND CONTROL	4-6
4.4	PROJECT SCHEDULE	4-6
5.0	SPILL PREVENTION AND CONTROL	5-1
5.1	POTENTIAL SPILL SOURCES AND PREVENTION.....	5-1
5.2	SPILL RESPONSE	5-1

TABLES

Table 3-1	Waste Packages and Transporter and Disposal Options
Table 4-1	Radiation Dose and Contamination Limits

FIGURES

Figure 4-1	Project Schedule
-------------------	------------------

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF ACRONYMS AND ABBREVIATIONS

uCi/cm²	micro Curies per square centimeter
mrem/hr	milli rems per hour
ALARA	As Low as Reasonably Achievable
APP	Accident Prevention Plan
Bq/cm²	Becquerel per square centimeter
CFR	Code of Federal Regulations
CO	Contracting Officer
COR	Contracting Officer Representative
CQCP	Contractor Quality Control Plan
DOE	Department of Energy
DOT	Department of Transportation
DPM/cm²	disintegrations per minute per square centimeter
ECC	Environmental Chemical Corporation
ESQM	Environmental, Safety and Quality Manager
EZ	Exclusion Zone
FUSRAP	Formerly Utilized Sites Remedial Action Program
Hazmat	HazMat Environmental Group, Inc.
HMMP	Hazardous Material Management Plan
HMTA	Hazardous Materials Transportation Act
HPT	Health Physics Technician
I.C.E.	I.C.E. Services Group, Inc.
IDW	Investigation Derived Waste
Landstar	Landstar Systems, Inc.
LSA	Low Specific Activity
m	meter
NFSS	Niagara Falls Storage Site
NRC	Nuclear Regulatory Commission
Optech	OP-TECH Environmental Services, Inc.
OSTC	On-Site Transportation Coordinator
pCi/g	pico Curie per gram
PHP	Project Health Physicist
PPE	personal protective equipment
QC	quality control
RI	Remedial Investigation
RPP	Radiation Protection Plan
RSO	Radiation Safety Officer
RWP	Radiation Work Permit

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

SAP	Sampling and Analysis Plan
SOW	Statement of Work
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
SPCCP	Spill Prevention Control and Countermeasures Plan
SS	Site Superintendent
USACE	United States Army Corps of Engineers
USEI	US Ecology- Idaho
EPA	United States Environmental Protection Agency
WAC	Waste Acceptance Criteria
WCS	Waste Control Specialists LLC
WMTDP	Waste Management Transportation and Disposal Plan

1.0 INTRODUCTION

The United States Army Corps of Engineers (USACE) is completing the Remedial Investigation (RI) of the Formerly Utilized Sites Remedial Action Program (FUSRAP) Niagara Falls Storage Site (NFSS). The USACE has prepared a Statement of Work (SOW) to prepare, package, load, transport, and properly dispose of two waste streams. The two waste streams are legacy waste left on-site by the United States Department of Energy (DOE) and investigation derived wastes (IDW) generated during multiphase RI activities and RI addendum activities.

Environmental Chemical Corporation (ECC) has been selected by the USACE – Buffalo District under Contract Number W912P4-07-D-0005 Delivery Order 0004 (hereafter referred to as the “Contract”), to provide transportation and disposal services in support of the NFSS FUSRAP Site (hereafter referred to as the “Site”) located in Lewiston, New York. This remediation is being completed under the USACE’s FUSRAP which was established to identify, investigate, and clean up or control sites previously used by the Atomic Energy Commission and its predecessor, the Manhattan Engineer District. This Site has been identified as containing various concentrations of residual radioactive material in soil and debris from previous operations, including Thorium-232, Thorium-230, Radium-226 and Uranium-238.

The primary objective of the transportation described in this plan is the timely and effective waste management and transportation activities to support the clean up of the Site. The selected transportation strategy provides for the complete off-site transportation of material specified by the USACE. This alternative meets the evaluation criteria while protecting human health and the environment. This Waste Management, Transportation, and Disposal Plan (WMTDP) and is part of a set of plans including the Sampling and Analysis Plan (SAP), Contractor Quality Control Plan (CQCP), and the Accident Prevention Plan (APP)/Site Safety and Health Plan (SSHP).

Waste management and transportation activities will be conducted in such a manner to provide a level of protection to the public and remediation workers that is consistent with applicable radiation exposure guidelines and with the objective of achieving as low as reasonably achievable (ALARA) exposure levels.

The following sections will outline the methodology and procedures that ECC will utilize to safely and compliantly load containers and perform off-site transportation of the NFSS FUSRAP radiologically impacted waste materials.

2.0 PROJECT ORGANIZATION

This section of the WMTDP describes the roles and responsibilities of the ECC personnel and its subcontractors performing the work scheduled for the NFSS project.

2.1 Organization and Responsibilities

This Section describes the project organization and responsibilities for the functional roles for the handling, loading and transportation of the NFSS FUSRAP material.

2.1.1 ECC Project Manager

ECC's Project Manager for this effort will be [REDACTED]. She is responsible for evaluating the appropriateness and adequacy of the technical services provided for the project, and for developing the technical approaches and level of effort required to address each task. She is also responsible for the integration of input from supporting disciplines, USACE and subcontractors. She will work closely with the Site Superintendent (SS) during implementation of the field program. Specific responsibilities include:

- Initiating project planning and directing project activities;
- Ensuring that qualified technical personnel are assigned to various tasks, including subcontractors;
- Identifying and fulfilling equipment and other resource requirements;
- Monitoring project activities to ensure compliance with established scopes, schedules and budget;
- Ensuring overall technical quality and consistency of all project activities and deliverables; and
- Serving as the primary ECC POC with the USACE prior to mobilization.

2.1.2 Site Superintendent

[REDACTED] will serve as the SS (Site Superintendent) for this project. He is responsible for the overall direction and management of field project tasks associated with completing the handling and packaging of materials on-site as well as for transportation to the waste disposal site. This includes oversight of field staff and subcontractors and ensuring that procedures for field activities are executed in the proper manner, activities are properly documented, the prescribed SOW is completed and communication protocols are followed.

Specifically [REDACTED] will be responsible for managing the handling, loading and transportation in accordance with this and supporting project plans. [REDACTED] will monitor work progress, schedule, and advise the USACE of variances. He will assist in the preparation of work progress schedules, project reports, drawings and required compliance submittals.

2.1.3 Site Safety and Health Officer/ Health Physicist

For this project, [REDACTED] will serve as both Site Safety and Health Officer (SSHO) and Health Physicist Technician (HPT). In this dual role [REDACTED] will take direction primarily from the Site Superintendent but will consult with the Project Health Physicist and Environment, Safety, and Quality Manager (ESQM) for specific issues related to radiation and/or environmental health and safety. As SSHO, [REDACTED] will be responsible for ensuring site personnel have the proper training, safety-related licenses, and are medically-qualified to perform the work.

The SSHO works with the SS in performing daily health and safety briefings to site personnel in the field such as; coordinates additional site-specific safety training with the SS, works with the SS to ensure sufficient safety-related equipment, instruments, Personal Protective Equipment (PPE) and other materials are available to support safe field remediation, leads field air quality and other safety-related monitoring activities, and verifies the SSHP is followed. The SSHO is a focal point, along with the SS for safety-related communications with field personnel and answering safety-related questions for field personnel. The SSHO has authority to issue stop work orders on tasks that he/she believes may be unsafe. When stopped, work will not recommence until the ESQM and SS approve the restart.

The SSHO is also responsible for maintaining personnel training certificates, medical monitoring files (as needed) and preparing accident investigation forms (USACE Form ENG 3394) in accordance with the accident avoidance and reporting procedures of the SSHP. Qualifications of the SSHO will meet the requirements for a Radiation Safety Officer (RSO) as outlined in USACE Engineer Manual EM 385-1-1, which includes but is not limited to formal and “hands-on” training in radiation protection and knowledge of radiation physics, use of monitoring instruments, and knowledge of applicable regulations.

The SSHO is responsible for ensuring that radiation health and safety procedures designed to protect field personnel and the public are maintained throughout the project. The SSHO coordinates the establishment of radiologically controlled areas, monitoring radiation exposure levels and inspecting all material/equipment entering or leaving the Exclusion Zone (EZ) or compliance with the Radiation Protection Plan (RPP) and other applicable requirements. The SSHO is also responsible for overseeing the maintenance and quality control (QC) check of the on-site radiological instruments. The SSHO, who reports directly to the SS and coordinates with the SS, has the following project responsibilities:

- Support the on-site implementation of the SSHP and ensure that all project personnel follow the radiological requirements of the SSHP;
- Assist the SS in the daily tailgate safety meetings and report any incidents that occur onsite to the SS and ESQM;
- Develop and maintain the Radiation Work Permit (RWP) procedures for applicable areas of the Site;
- Note changes in site conditions or procedures and suggest revisions to the SSHP and site procedures as necessary to ensure adequate safety precautions are in place;
- Acquire and implement input from the ESQM, as necessary, to maintain the site radiological safety program;
- Provide on-site administration of the personnel exposure monitoring procedures for onsite personnel;
- Ensure compliance with all applicable regulations concerning the handling and transportation of radioactive material; and
- Provide radiation training to all on-site personnel who may be exposed to ionizing radiation.

As the project HPT, [REDACTED] will perform periodic instrument checks, radiological surveys including; scans of waste containers, transport vehicles, and site equipment; and collect and prepare samples for on-site and off-site laboratories' analysis. He will also maintain radiological zones and controls, perform surveys of personnel and equipment, and complete instrument and data records, with oversight by the Project Health Physicist (PHP).

2.1.4 On-Site Transportation Coordinator

The On-Site Transportation Coordinator (OSTC), [REDACTED] reports directly to the SS. The OSTC communicates and coordinates with the SS. The OSTC is responsible for the ensuring handling and loading tasks are conducted in accordance with this WMTDP, and supporting SSHP. The OSTC will assist with the day-to-day compliance with the SOTP, including records filing and archiving, and the provision of operational support to the SS. [REDACTED] is an employee of I.C.E. Services Group Inc. (I.C.E.) who will add to the efficiency of operations and ensure compliance with transportation and disposal requirements.

3.0 TRANSPORTATION AND DISPOSAL SUBCONTRACTORS

The following sections summarize the companies and facilities performing the transportation and disposal functions of the NFSS project.

3.1 Transportation Subcontractor

ECC has selected I.C.E. as the transportation subcontractor for the NFSS project. I.C.E. will provide transport vehicles, including tanker trucks and semi tractor trailers, drivers, and the OSTC for the project.

Transportation subcontractors to I.C.E. are as follows:

Landstar Systems, Inc. (Landstar) PO Box 19137 Jacksonville, FL 32245 EPA ID# FLR000067157 Phone # 800-872-9625	HazMat Environmental Group, Inc. (Hazmat) New Village Industrial Park 60 Commerce Drive Lackawanna, NY 14218-1040 EPA ID# NYD980769947 Phone # 716-827-7200	OP-TECH Environmental Services, Inc. (Optech) 6392 Deere Road Syracuse, NY 13206 EPA ID# NYD986980753 Phone # 607-565-8891
--	---	---

Landstar will be the transporter for the solid materials transported to Waste Control Specialists LLC (WCS). No materials will be bulked for transport. Hazmat will transport the non-oil liquids to WCS. The non-oil liquids will be bulked into one vacuum truck for transport. Optech will transport the laboratory pack materials to Cycle Chem, Inc.

3.2 Disposal Facilities

Waste disposal options have been identified for the disposal of the RI and legacy waste materials. The following potential waste disposal facilities have been identified based on available data for the waste streams:

Waste Control Specialists LLC (WCS) Three Lincoln Centre 5430 LBJ Freeway, Ste. 1700 Dallas, Texas 75240 EPA ID# TXD988088464	US Ecology – Idaho (USEI) 300 E Mallard Drive, Suite 300 Boise, Idaho 83706 EPA ID# IDD073114654	Cycle Chem, Inc. 201 South First Street (Corp) Elizabeth, NJ 07206 EPA ID# PAD067098822
--	---	---

WCS had performed a preliminary review of the data for the liquid and solid waste streams, and has indicated all materials are acceptable with the exception of three Low Specific Activity (LSA) shipping containers. These boxes do not have radioanalytical results due to the matrix of the contents (steel). The Waste Acceptance Criteria (WAC) of WCS requires radioanalytical results in the form of pico Curie per gram (pCi/g), and WCS cannot convert results of health physics surveys into pCi/g concentrations.

USEI has been contacted to dispose of these three LSA containers. USEI has indicated the ability to accept the materials based upon modeling activity concentrations and total activity inventories of the contents using external dose rate measurements. Cycle Chem, Inc. has been selected to dispose of the laboratory pack materials. Table 3-1 presents each waste package and the transporter and disposal facility for each package. Table 3-1 presents the waste inventory in a reduced fashion, the Attachments of the SOW will be consulted for the contents of the waste containers to confirm that Table 3-1 is accurate.

4.0 TRANSPORTATION

This section describes the procedures for off-site transportation of radiologically contaminated solid and liquid wastes for the NFSS project. ECC will utilize an OSTC from I.C.E. certified as a hazardous materials shipper having extensive knowledge and experience with waste transportation regulations. The OSTC will assist ECC in ensuring that waste is packaged, marked, labeled, documented, and offered for off-site waste in accordance with applicable regulations.

The OSTC is responsible for preparing waste shipping documents, and ensuring that the waste is packaged, marked, and labeled for off-site transport in accordance with applicable Department of Transportation (DOT), US Army, Department of Defense, U.S. Environmental Protection Agency (EPA), State and local regulations. The OSTC will typically perform the following functions, as needed and based upon the type of waste;

- Accurate identification and classification of regulated materials;
- Determination of proper shipping names;
- Preparation of shipping documents for all materials transported using language concurred with by the USACE;
- Completion of all exception and discrepancy reports;
- Identification and compliance with marking, labeling, packaging and placarding requirements;
- Preparation and submission of Daily Status Tracking Reports;
- Visually inspect, along with the SS and HPT, incoming and filled transport vehicles prior to leaving the Site; to bring any issues to the attention of the SS;
- Review radiological surveys performed of all incoming and filled transport vehicles prior to leaving the site;
- Review field radiological laboratory results and dose rate surveys (per Code of Federal Regulations [CFR] 173.441) of filled transport vehicles to bring to the attention of the SS and HPT issues regarding compliance with DOT hazardous materials shipping regulations;
- Coordination with USACE, USACE representatives, disposal facility, and transportation agencies as applicable; and
- Preparation and submission of any other documents required by Federal, State or Local laws and regulations, or by the USACE, or the disposal facility.

Prior to shipment of any IDW and Legacy Waste off site, the OSTC will provide written certification to the Contracting Officer (CO) and or his/her authorized Contracting Officer Representative (COR) that the hazardous materials have been properly packaged, labeled, marked, loaded, and placarded in accordance with all applicable Federal, State, Regional, County and Local laws and regulations, including but not limited to the requirements of the USACE, DOT, Nuclear Regulatory Commission (NRC), EPA, disposal contractor, State or local regulatory agencies, and the Contract.

Contaminated solid and liquid wastes will be transported to the WCS or US Ecology Idaho (USEI) facilities. The OSTC will assist ECC in ensuring that applicable Federal and State regulations are followed to ensure proper preparation, transportation and tracking the waste material. Table 3-1 presents the anticipated transportation and disposal companies and facilities for each package or shipment. Non-oil liquids (water) will be bulked. All other materials are anticipated not to be bulked for shipment.

Off-site transportation of radioactive materials (including wastes) is regulated in accordance with 49 CFR 171 through 178. The classifications of radioactively contaminated materials will typically be classified as Class 7 or Class 9, and are subject to specific regulations found throughout DOT requirements in Title 49 of the CFR.

Radioactive materials or waste may qualify for certain exceptions and may be transported off-site using less stringent requirements for packaging, marking, labeling, and placarding, based on criteria such as specific activities and quantities of the material. These exceptions will be evaluated and exercised based on the judgment of the ECC in consultation with the USACE field personnel.

ECC, in consulting with the OSTC, will determine final waste classifications and transport marking, labeling, placarding, and manifesting in the field based on results of provided radiological analysis and surveys. Review of the available data indicates the bulk solids and liquids will be shipped as DOT non-hazardous materials.

4.1 Transportation Preparation

This subsection describes the packaging, transport documentation, and vehicle labeling, placarding, inspection, loading and release procedures to be followed for the NFSS project.

4.1.1 Packaging or Repackaging of Investigation Derived Waste and Legacy Waste

ECC will identify any containers which are deteriorated or are non-DOT compliant for shipping and will transfer the contents or overpack the containers for shipment. The SS and OSTC will visually inspect each shipping container to identify containers which will require transfer of contents or overpacking. Through consultation with the disposal facilities, ECC will also add absorbent to containers and size reduce any oversize debris, as necessary.

Pumping of the liquid waste from the AST's will be performed in a controlled manner. Prior to pumping liquid into the tanker ECC will confirm that the tanker is empty and has been decontaminated. All hoses that will be used to transfer the liquids into the tanker will have Cam-Loc fittings. The tanker operator will identify any location (i.e., valves, hose sections) that has the potential for leaks to occur. Any defective valves or connections will be repaired or replaced. The field team and the tanker operator will have readily available containers to collect any quantities of liquid that may be released during the uncoupling of hoses. Drainage of all hose sections will be accomplished so liquids are captured in a container. Any liquid that accumulates in the container will then be deposited into the tanker.

Table 3-1 presents the anticipated transportation and disposal companies and facilities for each package. Non-oil liquids (water) will be bulked. All other materials are anticipated not to be bulked for shipment.

4.1.2 Transportation Documentation

Prior to off-site transportation, the OSTC will prepare a sample package, including all applicable shipping documentation, for review and concurrence and signature by USACE. The USACE will be provided a copy of the approved WCS and US Ecology applications prior to mobilizing on-site to transport the waste off-site. Shipping documents that may apply to certain wastes include:

- State Non-Hazardous Waste Manifest – accompanies transport of non-hazardous waste;

- Bill-of-Lading – accompanies transport of DOT-regulated hazardous materials which otherwise do not require a manifest under NRC, EPA, or State regulations; and
- Chain-of-Custody Documentation – accompanies shipments not classified as hazardous materials according to DOT (this document is required by USACE for the purposes of tracking waste, although not specifically required by Federal or State regulations).

Included in the documentation will be the completed waste profiles for all materials to be disposed off-site. Also included will be a letter from each accepting facility and its regulating authority acknowledging that the anticipated waste stream can be accepted, and the offsite rule compliance letter from the EPA Regional Offsite Coordinator (ROC) (60-day rule is in effect.). If shipments do not commence within 60 days a new "Offsite Rule" verification will be made before commencing shipments.

Radioactive materials or waste may qualify for certain exceptions and may be transported offsite using less stringent requirements for packaging, marking, labeling, and placarding, based on criteria such as specific activities and quantities of the material. These exceptions will be evaluated and exercised based on the judgment of the OSTC in consultation with the USACE field personnel.

The OSTC will determine final waste classifications and transport marking, labeling, placarding, and manifesting in the field based on results of on-site radiological laboratory analysis and radiological surveys, and in accordance with the above-referenced regulations. The shipping documents will be completed in accordance with DOT, USACE requirements and ECC Procedures. The DOT has oversight responsibilities of transportation of all goods and commerce over Federal highway, air, railroad, and maritime routes. ECC will ensure that shipping documents are compliant with regulations that apply to the packaging, labeling, and all intrastate and interstate shipment of hazardous wastes. In addition, the Hazardous Materials Transportation Act (HMTA), as amended by the Hazardous Materials Transportation Uniform Security Act, 49 USC §§ 1801-1819 will apply to any NFSS waste shipments that may meet the definition of a hazardous waste.

The HMTA provides requirements for the transportation of hazardous materials, including procedures and requirements for classification, packaging, labeling, marking, shipping, and placarding of hazardous materials. Based on an assessment of the available information, ECC does not anticipate that the radiologically-contaminated solid wastes will require the use of a Hazardous Waste Manifest. Instead, ECC anticipates that the shipments will be accompanied by either a Non-Hazardous Waste Manifest or a Bill of Lading and a Chain-of-Custody Document. ECC will promptly address any comments regarding the sample shipping documents and will incorporate the changes into the final shipping documents prior to release of the first shipment.

4.1.3 Container Labeling

Labels will be applied to containers according to the container contents and hazard classification. It is anticipated most, if not all, of the bulk materials will be shipped as DOT non-hazardous. At a minimum, all containers will have a secondary non-DOT communication "marking sticker" on all bulk containers of radioactive materials regardless of whether the material is a DOT hazardous material or not. The sticker indicates the destination of the shipment and a telephone number of a USACE Point of Contact with knowledge of the shipment. This additional marking sticker duplicates existing information that is required on shipping documents when the shipment is a DOT hazardous material.

Marking stickers will be placed in visible locations on the exterior sides of transport vehicles, and the top of the container liner (e.g., burrito bag for bulk shipment) as applicable to ensure that workers observe the information prior to emptying the container or vehicle. A bulk container shall have the marking sticker on all four sides and if the transport vehicle is an open truck, there will be at least two stickers on top of the closed liner. An example of the marking sticker may be found on page A-64 and A-65 of USACE Engineering Pamphlet 200-1-2.

4.1.4 Container Placarding

ECC will provide primary and secondary placards consistent with the requirements of 49 CFR 172, Subpart F as required. Placards shall be provided for each side and each end of bulk packaging, freight containers, and transport vehicles requiring such placarding. Placards may be plastic, metal or other material capable of withstanding, without deterioration, a 30-day exposure to open weather conditions and shall meet design requirements specified in 49 CFR 172, Subpart F.

4.1.5 Empty Vehicle Inspections and Surveys

I.C.E. is providing transportation vehicles to the project from its fleet. Vehicles to be provided will be free of residual waste material and meet US DOT Criteria. Upon arrival at the loading site at the start of the project, ECC will conduct a radiological survey of empty vehicles to confirm the vehicles meet the DOT release criteria. If a vehicle does not meet the acceptance criteria upon completion of the arrival survey, ECC will reject the vehicle.

4.1.6 Vehicle Loading

ECC will utilize a forklift to load drums and LSA boxes into trailers. Pallet jacks and drum dollies will be utilized inside the trailer to position the packages within the conveyance. Periodically throughout and once all the packages for the conveyance are loaded, the load will be blocked and braced as necessary.

Except for the liquid waste stream, all waste containers will be loaded onto permitted transportation vehicles in their current container type. Drums will be banded together on pallets and loaded directly onto enclosed trailers. LSA boxes will also be loaded onto enclosed trailers. Upon placing the containers onto the transport vehicle, pallet jacks may be used to locate the palletized containers to a specific area within the transport vehicle.

4.1.7 Vehicle Release

ECC will conduct a radiological survey of the loaded transport vehicles to ensure that the dose rate and removable contamination levels are in compliance with Table 4-1. Vehicles will be released for transport to designated disposal facility(s) following review/approval of the surface contamination and dose rate surveys by the SSHO/HPT, preparation of shipping documents by the OSTC, and USACE approval/signature of shipping documents. Manifests and shipping instructions will be completed ahead of time to ensure the appropriate USACE signatures and approval is received prior to transport.

**Table 4-1
 Radiation Dose and Contamination Limits
 Niagara Falls Storage Site
 Lewiston, New York**

Package Dose Rates for Transportation		49 CFR 173.441	
Non-Exclusive Use		Exclusive Use (in closed transport vehicle)	
Contact	< 200 mrem/hr	Contact	1,000 mrem/hr
Transport Index	<10	Radiation level at 2 m	< 10 mrem/hr
		Radiation level in any normally occupied area	< 2 mrem/hr
Non-Fixed External Radioactive Contamination Limits for Packages		49 CFR 173.443	
	Maximum Permissible Limits		
Contaminant	Bq/cm ²	uCi/cm ²	DPM/cm ²
1. Beta and gamma emitters and low toxicity alpha emitters	4	10 ⁻⁴	220
2. All other alpha emitting radionuclides	0.4	10 ⁻⁵	22

Notes:
 mrem/hr = milli rems per hour
 m = meter(s)
 Bq/cm² = per square centimeter
 uCi/cm² = micro Curies per square centimeter
 DPM/cm² = disintegrations per minute per square centimeter

4.1.8 Loaded Vehicle Inspection

Once the vehicles are loaded, the OSTC and SS will review the shipping paperwork for accuracy and completeness and conduct an inspection of the loaded vehicle to determine the degree of readiness and condition for overall compliance with project and DOT requirements.

The inspection will include at a minimum the following:

- Vehicle Identification
- Manifest Number
- Net Weight
- Physical Condition of the Vehicle
- Cleanliness of the Vehicle
- Verify all Labels and Placards, including the FUSRAP non-DOT Stickers are in place
- Completion of Radiological Surveys (per 49 CFR 173.441)
- Completeness of Shipping Documentation
- Statement of Proper Waste Classification and Packaging.

Any deficiencies or discrepancies noted will be corrected immediately prior the off-site transport of the vehicle.

4.2 Waste Tracking

All waste shipments will have either Bill-of-Lading or Manifests accompanying the shipment from point of origin to disposal facility. Copies of the typical shipping papers that will be used on the project are in Attachment 2 of the Hazardous Material Management Plan (HMMP) (Attachment SP-5 of the APP). Manifests and Bill-of-Lading documentation will be prepared by ECC and submitted to the USACE for review and authorization. Once the waste shipment is received at the designated disposal facility, a signed copy of the manifest and Certificate of Disposal will be forwarded from the facility to the USACE.

The trucks will be equipped with either satellite tracking systems or drivers will have cell phones and check in periodically with the 24 hour per day manned dispatch center. The onsite transportation coordinator will be in direct contact with the dispatch center for constant update. ECC has requested the disposal facilities to contact our OSTC the day the waste shipment arrives at the disposal facility. A waste tracking spreadsheet will be generated to document the status of the waste shipments.

4.3 Transportation Routes and Spill Prevention and Control

Transportation routes are shown in Attachment 3 of the Hazardous Material Management Plan (Attachment SP-5 of the APP). Procedures and responsibilities for spill prevention, response activities and cleanup associated with the handling and loading of containerized wastes is presented in the ECC APP/SSHP and in this WMTDP. During transportation of waste shipments from the site to the designated disposal facility, I.C.E. will have the lead responsibility to manage any releases that may occur while in transport. Attachment 4 of the HMMP provides a copy of the I.C.E. Transportation Spill Prevention Control and Countermeasures Plan (SPCCP).

4.4 Project Schedule

A project schedule is included as Figure 4-1. ECC will be tracking project progress using a comprehensive Project Schedule. The schedule includes detailed activities that enable USACE to measure project progress and monitor the achievement of performance. Updates will be performed on a monthly basis and will be submitted with the project monthly progress report.

5.0 SPILL PREVENTION AND CONTROL

Procedures and responsibilities for spill prevention, response activities and cleanup associated with the remediation and waste transportation at the Site are presented in the ECC Accident Prevention Plan/Site Safety and Health Plan. This section briefly identifies the potential sources of spills during transloading activities, and the methods that ECC will implement to prevent spills, limit impact to the environment in the event of a spill and protect personnel and the public from exposure or injury.

5.1 Potential Spill Sources and Prevention

Given the relatively short duration of the activities, on-site storage of hazardous materials will be minimal. Fuel oil (diesel or propane) for refueling equipment is not anticipated to be utilized. No waste oil or hydraulic fluid will be stored on-site.

A potential spill source could occur during the loading of the packaged waste material if a container was to have an undetected hole or if a mechanical failure occurred during lifting. Prior to the lifting of any container, ECC will inspect the container for physical condition and integrity. Potential spills may also occur during transloading liquids into the tanker truck. ECC and I.C.E will monitor the transloading operation for leaking or spillage.

5.2 Spill Response

ECC has established a comprehensive emergency spill response procedure which is addressed in the Accident Prevention Plan.

TABLES

THIS PAGE INTENTIONALLY LEFT BLANK

**Table 3-1
Waste Packages and Transporter and Disposal Options
Niagara Falls Storage Site
Lewiston, New York**

Container Identification	Matrix	Container Construction	Container Type	Content 1	Content 2	Anticipated Transporter	Anticipated Disposal Facility
WC-001	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-002	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-003	SOLID	Steel	Drum	PVC/Plastic	PPE	Landstar Systems, Inc	WCS
WC-004	SOLID	Steel	Drum	PVC/Plastic	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-005	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-006	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-007	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-008	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-009	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-010	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-011	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-012	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-013	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-014	SOLID	Steel	Drum	PVC/Plastic	PPE	Landstar Systems, Inc	WCS
WC-015	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-016	SOLID	Steel	Drum	PVC/Plastic	PPE	Landstar Systems, Inc	WCS
WC-017	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-018	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-019	SOLID	Steel	Drum	PPE	Trash	Landstar Systems, Inc	WCS
WC-020	SOLID	Steel	Drum	PPE	Trash	Landstar Systems, Inc	WCS
WC-021	SOLID	Steel	Drum	PPE	Trash	Landstar Systems, Inc	WCS
WC-022	SOLID	Steel	Drum	PPE	Trash	Landstar Systems, Inc	WCS
WC-023	SOLID	Steel	Drum	PPE	Trash	Landstar Systems, Inc	WCS
WC-024	SOLID	Steel	Drum	PPE	Trash	Landstar Systems, Inc	WCS
WC-025	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-026	SOLID	Steel	Drum	Plastic Tubing	Pump Material	Landstar Systems, Inc	WCS
WC-027	SOLID	Steel	Drum	Plastic Tubing	Pump Material	Landstar Systems, Inc	WCS
WC-028	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-029	SOLID	Steel	Drum	PVC/Plastic	PPE	Landstar Systems, Inc	WCS
WC-030	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-031	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-032	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-033	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-034	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-035	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-036	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-037	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-038	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-039	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS
WC-040	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-041	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-042	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-043	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-044	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-045	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-046	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-047	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-048	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-049	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-050	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-051	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-052	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-053	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-054	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-055	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-056	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-057	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-058	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-059	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-060	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-061	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-062	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-063	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-064	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-065	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-066	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-067	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS

**Table 3-1
Waste Packages and Transporter and Disposal Options
Niagara Falls Storage Site
Lewiston, New York**

Container Identification	Matrix	Container Construction	Container Type	Content 1	Content 2	Anticipated Transporter	Anticipated Disposal Facility
WC-068	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-069	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-070	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-071	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-072	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-073	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-074	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-075	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-076	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-077	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-078	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-079	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-080	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-081	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-082	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-083	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-084	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-085	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-086	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-087	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-088	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-089	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-090	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-091	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-092	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-093	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-094	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-095	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-096	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-097	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-098	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-099	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-100	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-101	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-102	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-103	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-104	SOLID	Poly	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-105	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-106	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-107	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-108	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-109	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-110	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-111	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-112	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-113	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-114	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-115	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-116	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-117	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-118	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-119	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-120	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-121	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-122	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-123	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-124	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-125	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-126	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-127	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-128	SOLID	Steel	Drum	PVC/Plastic	Metal	Landstar Systems, Inc	WCS
WC-129	SOLID	Steel	Drum	Metal	PVC/Plastic	Landstar Systems, Inc	WCS
WC-130	SOLID	Steel	Drum	Canvas	Tarp	Landstar Systems, Inc	WCS
WC-131	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS
WC-132	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS
WC-133	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS
WC-134	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS
WC-135	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS
WC-136	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS

**Table 3-1
Waste Packages and Transporter and Disposal Options
Niagara Falls Storage Site
Lewiston, New York**

Container Identification	Matrix	Container Construction	Container Type	Content 1	Content 2	Anticipated Transporter	Anticipated Disposal Facility
WC-137	SOLID	Poly	Drum	Soil/Soil-Like	Wood	Landstar Systems, Inc	WCS
WC-138	SOLID	Poly	Drum	Soil/Soil-Like	Wood	Landstar Systems, Inc	WCS
WC-139	SOLID	Poly	Drum	Soil/Soil-Like	Wood	Landstar Systems, Inc	WCS
WC-140	SOLID	Poly	Drum	Soil/Soil-Like	Wood	Landstar Systems, Inc	WCS
WC-141	SOLID	Poly	Drum	PVC/Plastic	PPE	Landstar Systems, Inc	WCS
WC-142	SOLID	Poly	Drum	Soil/Soil-Like	Wood	Landstar Systems, Inc	WCS
WC-143	SOLID	Poly	Drum	Soil/Soil-Like	Wood	Landstar Systems, Inc	WCS
WC-144	SOLID	Steel	Drum	PVC/Plastic	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-145	SOLID	Steel	Drum	PVC/Plastic	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-146	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-147	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-148	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-149	SOLID	Steel	Drum	Soil/Soil-Like	PVC/Plastic	Landstar Systems, Inc	WCS
WC-150	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-151	SOLID	Steel	Drum	Concrete	Concrete	Landstar Systems, Inc	WCS
WC-152	SOLID	Steel	Drum	Soil/Soil-Like	PVC/Plastic	Landstar Systems, Inc	WCS
WC-153	SOLID	Steel	Drum	Concrete	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-154	SOLID	Steel	Drum	PVC/Plastic	Metal	Landstar Systems, Inc	WCS
WC-155	SOLID	Steel	Drum	PVC/Plastic	Carboys	Landstar Systems, Inc	WCS
WC-156	SOLID	Steel	Drum	Soil/Soil-Like	PVC/Plastic	Landstar Systems, Inc	WCS
WC-157	SOLID	Steel	Drum	PVC/Plastic	Carboys	Landstar Systems, Inc	WCS
WC-158	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-159	SOLID	Steel	Drum	Soil/Soil-Like	PVC/Plastic	Landstar Systems, Inc	WCS
WC-160	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-161	SOLID	Steel	Drum	Absorbent	PPE	Landstar Systems, Inc	WCS
WC-162	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-163	SOLID	Steel	Drum	PPE		Landstar Systems, Inc	WCS
WC-164	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-165	SOLID	Steel	Drum	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-166	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-167	SOLID	LSA	Box	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-168	SOLID	LSA	Box	PPE	PVC/Plastic	Landstar Systems, Inc	WCS
WC-169	SOLID	LSA	Box	Metal		Landstar Systems, Inc	WCS
WC-170	SOLID	LSA	Box	Metal		Landstar Systems, Inc	USEI
WC-171	SOLID	LSA	Box	Metal		Landstar Systems, Inc	WCS
WC-172	SOLID	LSA	Box	Metal		Landstar Systems, Inc	WCS
WC-173	SOLID	LSA	Box	Metal	Wood	Landstar Systems, Inc	WCS
WC-174	SOLID	LSA	Box	Metal		Landstar Systems, Inc	WCS
WC-175	SOLID	LSA	Box	Metal		Landstar Systems, Inc	USEI
WC-176	SOLID	LSA	Box	Metal	Bentonite	Landstar Systems, Inc	WCS
WC-177	SOLID	LSA	Box	Metal		Landstar Systems, Inc	USEI
WC-179	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS
WC-180	SOLID	Steel	Drum	Soil/Soil-Like	Glass	Landstar Systems, Inc	WCS
WC-181	SOLID	Steel	Drum	Soil/Soil-Like	Glass	Landstar Systems, Inc	WCS
WC-182	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS
WC-183	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-184	SOLID	Steel	Drum	PPE	Cardboard	Landstar Systems, Inc	WCS
WC-185	SOLID	Steel	Drum	Soil/Soil-Like	Glass	Landstar Systems, Inc	WCS
WC-186	SOLID	Steel	Drum	Soil/Soil-Like	Glass	Landstar Systems, Inc	WCS
WC-187	SOLID	Steel	Drum	Soil/Soil-Like	Glass	Landstar Systems, Inc	WCS
WC-188	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-189	SOLID	Steel	Drum	Soil/Soil-Like	PPE	Landstar Systems, Inc	WCS
WC-190	SOLID	Steel	Drum	Soil/Soil-Like	PPE	Landstar Systems, Inc	WCS
WC-191	SOLID	Steel	Drum	Soil/Soil-Like	PPE	Landstar Systems, Inc	WCS
WC-192	SOLID	Steel	Drum	Soil/Soil-Like	PPE	Landstar Systems, Inc	WCS
WC-193	SOLID	Steel	Drum	Soil/Soil-Like	PPE	Landstar Systems, Inc	WCS
WC-194	SOLID	Steel	Drum	Soil/Soil-Like	Metal	Landstar Systems, Inc	WCS
WC-195	SOLID	Steel	Drum	Spongeblast		Landstar Systems, Inc	WCS
WC-196	SOLID	Steel	Drum	Spongeblast	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-197	SOLID	Steel	Drum	Spongeblast		Landstar Systems, Inc	WCS
WC-198	SOLID	Steel	Drum	Soil/Soil-Like	PVC/Plastic	Landstar Systems, Inc	WCS
WC-199	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-200	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-201	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-202	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-203	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-204	SOLID	Steel	Drum	Spongeblast		Landstar Systems, Inc	WCS
WC-205	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS

**Table 3-1
Waste Packages and Transporter and Disposal Options
Niagara Falls Storage Site
Lewiston, New York**

Container Identification	Matrix	Container Construction	Container Type	Content 1	Content 2	Anticipated Transporter	Anticipated Disposal Facility
WC-206	SOLID	Steel	Drum	Soil/Soil-Like	PVC/Plastic	Landstar Systems, Inc	WCS
WC-207	SOLID	Steel	Drum	Absorbent	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-208	SOLID	Steel	Drum	Styrofoam	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-209	SOLID	Steel	Drum	PVC/Plastic	Styrofoam	Landstar Systems, Inc	WCS
WC-210	SOLID	Steel	Drum	Styrofoam	PVC/Plastic	Landstar Systems, Inc	WCS
WC-211	SOLID	Steel	Drum	PVC/Plastic	Styrofoam	Landstar Systems, Inc	WCS
WC-212	SOLID	Steel	Drum	PVC/Plastic	Styrofoam	Landstar Systems, Inc	WCS
WC-213	SOLID	Steel	Drum	PVC/Plastic	Styrofoam	Landstar Systems, Inc	WCS
WC-214	SOLID	Steel	Drum	PVC/Plastic	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-215	SOLID	Steel	Drum	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-216	SOLID	Steel	Drum	PVC/Plastic		Landstar Systems, Inc	WCS
WC-217	SOLID	Steel	Drum	PVC/Plastic	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-218	WATER	Steel	Drum	Water		HazMat Environmental	WCS
WC-219	WATER	Steel	Drum	Water		HazMat Environmental	WCS
WC-220	OIL	Steel	Drum	Oil		OP-TECH Environmental	Cycle Chem
WC-221	OIL	Steel	Drum	Oil		OP-TECH Environmental	Cycle Chem
WC-222	SOLID	Steel	Drum	Soil/Soil-Like	PPE	Landstar Systems, Inc	WCS
WC-223	OIL	Steel	Drum	Oil	Metal	OP-TECH Environmental	Cycle Chem
WC-224	SOLID	LSA	Box	Wood	PPE	Landstar Systems, Inc	WCS
WC-225	MERCURY	Plastic	Jar	250	ML	OP-TECH Environmental	Cycle Chem
WC-226	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-227	SOLID	LSA	Box	PPE	Soil/Soil-Like	Landstar Systems, Inc	WCS
WC-600	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-601	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-602	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-603	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-604	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-605	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-606	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-607	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-608	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-609	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-610	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-611	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-612	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-613	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-614	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-615	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-616	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-617	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-618	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-619	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-620	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-621	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-622	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-623	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-624	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-625	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-626	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-627	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-628	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-629	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-630	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-631	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-632	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-633	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-634	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-635	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-636	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-637	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-638	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-639	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-640	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-641	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS
WC-642	SOLID	Steel	Drum	Soil/Soil-Like		Landstar Systems, Inc	WCS

Table 3-1
Waste Packages and Transporter and Disposal Options
Niagara Falls Storage Site
Lewiston, New York

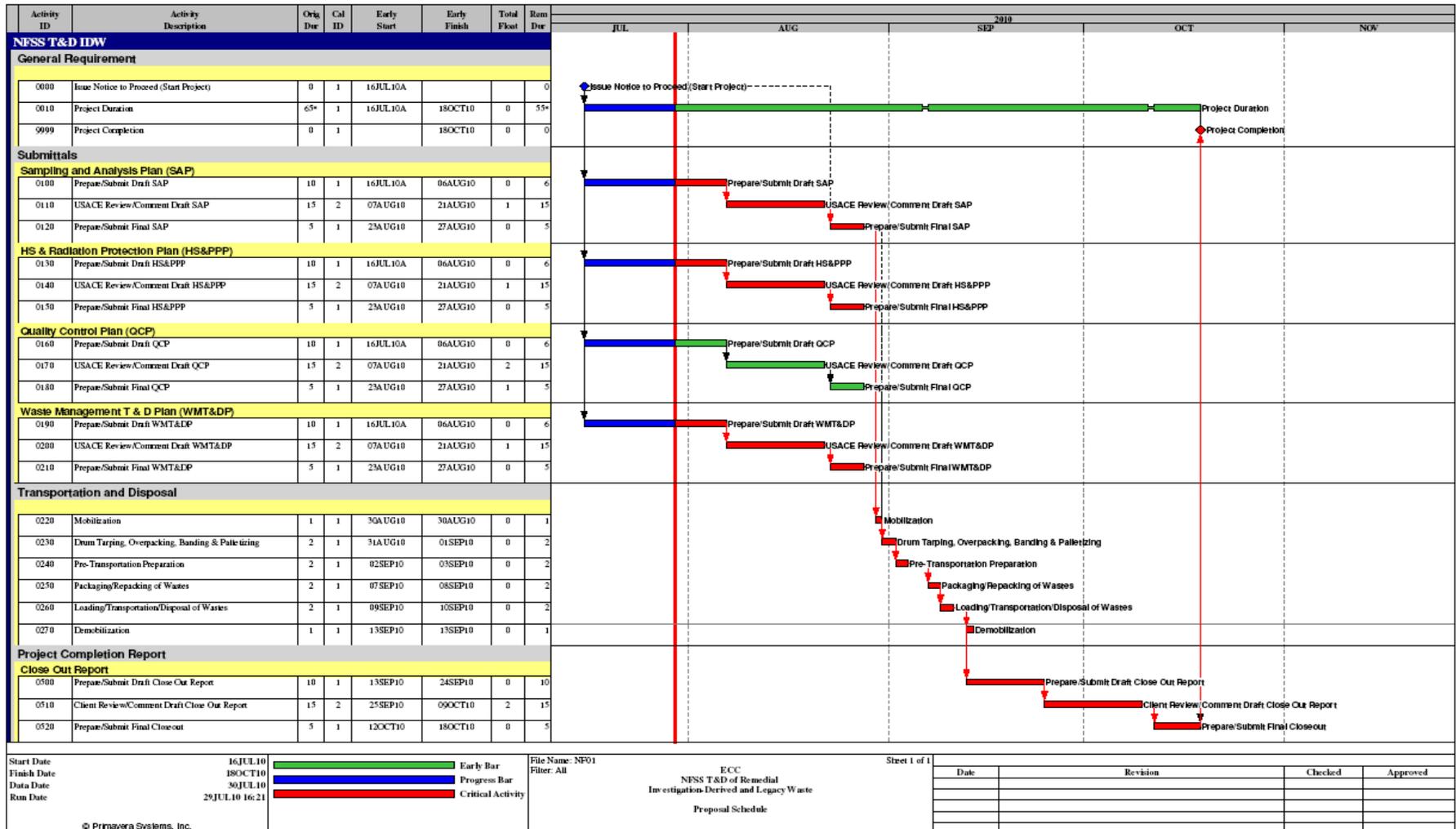
Container Identification	Matrix	Container Construction	Container Type	Content 1	Content 2	Anticipated Transporter	Anticipated Disposal Facility
WC-643	WATER	Steel	Drum	Water		HazMat Environmental	WCS
WC-644	WATER	Steel	Drum	Water		HazMat Environmental	WCS
WC-645	WATER	Steel	Drum	Water		HazMat Environmental	WCS
WC-646	WATER	Steel	Drum	Water		HazMat Environmental	WCS
TANK1	WATER	Poly	Tank	Water		HazMat Environmental	WCS
TANK2	WATER	Poly	Tank	Water		HazMat Environmental	WCS
TANK3	WATER	Poly	Tank	Water		HazMat Environmental	WCS
WC-TBD	SOLID	LSA	Box			Landstar Systems, Inc	USEI
WC-TBD	SOLID	LSA	Box			Landstar Systems, Inc	USEI
1			Box	HNO3		Landstar Systems, Inc	WCS
1A			Box	HNO3		Landstar Systems, Inc	WCS
2A			Box	H2SO4		Landstar Systems, Inc	WCS
2B			Box	H2SO4		Landstar Systems, Inc	WCS
3A			Cooler	HCL		Landstar Systems, Inc	WCS
3B			Box	HCL		Landstar Systems, Inc	WCS
4			Box	NaOH		Landstar Systems, Inc	WCS
5			Box	Sodium Bisulfate		Landstar Systems, Inc	WCS
6			Box	Expired Detector Tubes		Landstar Systems, Inc	WCS
7			Cooler	Methanol		Landstar Systems, Inc	WCS
8			Box	Acetone		Landstar Systems, Inc	WCS
9			Box	Sodium Azide (<0.01%)		OP-TECH Environmental	Cycle Chem
10			5 Gal Container	Kerosene		OP-TECH Environmental	Cycle Chem
11			5 Gal Container	AW-32 Hydraulic Oil		OP-TECH Environmental	Cycle Chem
12A		Metal	32 oz Can	Charcoal Lighter Fluid		OP-TECH Environmental	Cycle Chem
13			Box	Unknown Liquids		OP-TECH Environmental	Cycle Chem
14			Box	Aerosol Paint Cans		OP-TECH Environmental	Cycle Chem
15			Box	Explosives Detector Kit		OP-TECH Environmental	Cycle Chem
16			Box	Respirator Fit Test Chemicals		OP-TECH Environmental	Cycle Chem
17			Box	Hach Hardness Test Chemicals		OP-TECH Environmental	Cycle Chem
18			Box	Small sealed battery		OP-TECH Environmental	Cycle Chem
19			Box	Acid Spill Kit Chemicals		OP-TECH Environmental	Cycle Chem

THIS PAGE INTENTIONALLY LEFT BLANK

FIGURES

THIS PAGE INTENTIONALLY LEFT BLANK

Figure 4-1 Project Schedule



THIS PAGE INTENTIONALLY LEFT BLANK