Waste Management, Transportation, and Disposal Plan

Volume 2 – Transportation and Disposal Plan

Niagara Falls Storage Site
Building 401 Demolition
Lewiston, New York

Contract No. W912P4-07-D-0003-0002

Prepared by:

TPMC-Energy*Solutions* Environmental Services, LLC

Prepared for:

U.S. Army Corps of Engineers (USACE)
Buffalo District
Buffalo, New York

US Army Corps of Engineers®
Buffalo District

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Transportation and Disposal Plan

Niagara Falls Storage Site
Building 401 Demolition
Lewiston, New York

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CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

COMPLETION OF INDEPENDENT TECHNICAL REVIEW

TES, LLC (TES) has DRAFTED the *Transportation and Disposal Plan* (volume 2 of the *Waste Management, Transportation, and Disposal Plan*) for the Niagara Falls Storage Site Building 401 Demolition Project located in Lewiston, New York. Notice is hereby given that an independent technical review has been conducted that is appropriate to address all regulatory and compliance issues appropriate to ensure transportation of materials to and from the Niagara Falls Storage Site Facility is completed in the safest manner possible, as defined in the Transportation and Disposal Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with existing USACE policy.

Signature/TES Report Preparer Date 20 JULY 2010

[redacted]

Signature/TES Independent Technical Reviewer Date 20 JULY 2010

[redacted]

Signature/TES Independent Technical Reviewer Date 20 JULY 2010

[redacted]

Independent Technical Review Team Members:

CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows:

Item	Technical Concerns	Possible Impact	Resolutions
Transportation and Disposal Plan			
1	See attached sheets		

As noted above, all concerns resulting from independent technical review of the plan have been resolved.

[redacted]

Signature/[redacted] Date 20 JULY 2010

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ACRONYMS

AHA	Activity Hazard Analysis
BDP	Building Demolition Plan
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EPA	Environmental Protection Agency
ESH&Q	Environmental Safety and Health Officer
FMCSR	Federal Motor Carrier Safety Regulations
FSP	Field Sampling Plan
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
LLRW	Low Level Radioactive Waste
NFSS	Niagara Falls Storage Site
NRC	Nuclear Regulatory Commission
NYSDEC	New York State Department of Environmental Conservation
O	DOE Order
PM	Project Manager
QAP	Quality Assurance Plan
QCP	Quality Control Plan
QA/QC	Quality Assurance/Quality Control Program
RAP	Radiological Assistance Program
SAP	Sampling Analysis Plan
SCP	Spill Contingency Plan
SME	Subject Matter Expert
SSHO	Site Safety and Health Officer
STR	Subcontract Technical Representative
TES	(TPMC/Energy Solutions Services, Inc.)
TSDRF	Treatment, Storage, Disposal and Recycle Facility
USACE	United States Army Corps of Engineers
WAC	Waste Acceptance Criteria

1.0 INTRODUCTION

The Transportation Plan is applicable to TES (TPMC/Energy Solutions Environmental Services, LLC.) performing transportation work as part of the Niagara Falls Storage Site Building 401 Demolition (NFSS) Project. Its purpose is to aid the assigned project staff in performing transportation-related work on behalf of TES, assuring that compliance with motor carrier regulations are understood and adhered to for applicable transportation activities performed by employees and lower tier subcontractors.

TES or its sub-contractors shall implement the Transportation Plan in concurrence with existing procedures to ensure that the transportation of hazardous materials on-site and off-site will be performed in accordance with all applicable federal and state rules and regulations.

1.1 TRANSPORTATION SAFETY POLICY

TES guarantees quality performance and full compliance during transportation duties in regards to the project operations. The safety of employees and subcontractors shall not be jeopardized in any way in regards to production, contract, or regulatory schedule pressure. Management is responsible for addressing conditions that can lead to accidents and/or injuries by implementing appropriate administrative and engineering controls in order to provide a safe work environment. Project team members will avoid work conditions and activities that are deemed unsafe. Safety briefings will be regularly conducted by the supervisory staff in order to address any Activity Hazard Analysis applicable to the job tasks being performed, and to reiterate the emphasis on overall safety for all project personnel.

Project employees and subcontractors are encouraged to report transportation safety concerns to their management team. In no way shall employees or sub-contractors be disciplined for reporting safety concerns. If safety concerns are not resolved by the employee's management, they may be brought to the Project Manager's attention either informally through verbal communication, or formally by filing a written notification.

2.0 PURPOSE AND SCOPE

2.1 PURPOSE

In support of Contract Number; W912P4-07-D-0003-0002, TES shall ensure that all waste and material shipments are performed in compliance with Department of Transportation (DOT) regulations. Shipments under this plan will include waste and material originating from the Niagara Falls Storage Site (NFSS) Building 401 Demolition Site in Lewiston, NY. The implementation of this plan allows TES to demonstrate full compliance with all applicable standards and contractual commitments. At a minimum, this plan addresses transportation of materials for disposal or recycle, samples, and

wastes on private haul roads and public highways for analysis and disposal at on-site and off-site locations.

This document defines the process for shipment of waste and material shipments, as well as incident response during transit. TES personnel are responsible for the proper identification, classification, communication, containment, and controls in accordance with the U.S. Department of Energy (DOE), U.S. Department of Transportation (DOT), New York State Department of Environmental Conservation (NYSDEC), U.S. Nuclear Regulatory Commission (NRC), and U.S. Environmental Protection Agency (EPA) regulations.

2.2 SCOPE

The scope of this work encompasses waste and material that is transported outside the NFSS Building 401 demolition project area. This includes solids, liquids, non-radioactive, radioactive, hazardous, industrial, waste, and material items. In addition, these items may include shipping to destinations such as the Modern Landfill, Waste Management, Lockport Waste Water Treatment Plant, Clive Bulk Waste Facility, and off-site analytical laboratories. Formal DOT compliance documentation is required for all offsite moves. Onsite moves will be tracked using a straight Bill of Lading.

This plan will be used by TES and TES subcontractors to ensure compliant implementation of transportation activities. Project team members and sub-contractors shall be responsible for contractual agreements and for identification and full compliance with all applicable standards of the Department of Transportation (DOT) regulations and associated licenses and permits, applicable client procedures and, U.S. Department of Energy (DOE) Orders (O) that are applicable to transportation. All onsite and offsite packaging and transportation of material will be conducted in a manner that:

- Protects public and worker health and safety and the environment;
- Maintains compliance with all applicable, relevant, and appropriate requirements; DOE orders; and federal, state, and local regulations
- Minimizes waste; and
- Meets the criteria of the disposal location.

3.0 GENERAL

3.1 RESPONSIBILITIES

3.1.1 Project Manager (PM)

The PM is responsible for management and control of all activities associated with the NFSS Building 401 Demolition. The PM will ensure that personnel assigned to perform waste management activities do so in accordance with this plan and all appropriate procedures. In the event of an emergency, the PM, or designee, will make all appropriate notifications.

3.1.2 Waste Manager

The designated waste manager is responsible for all transportation and transportation related-work activities associated with the NFSS Building 401 Demolition. The individual will have met the prerequisites and training requirements outlined in 49 CFR 172 Subpart H (Hazmat Employee Training), Reference 2.31 and are authorized to ship certain hazardous materials as defined in Sections 5.3-5.4. The waste manager is responsible for providing the support needed to adequately identify, classify, contain, control, and communicate the hazards for waste being shipped off-site.

3.1.3. Site Safety and Health Officer (SSHO)

The SSHO will be responsible for the implementation of NFSS ESH&Q polices and procedures to ensure appropriate consistency, accountability and compliance when engaging in any transportation or transportation related-work activities.

3.2 CODES, STANDARDS, LAWS, AND REGULATIONS

Unless otherwise indicated, the following codes, standards, laws, and regulations establish the minimum requirements for transportation-related work.

- 10 CFR 830- Nuclear Safety Management
- 10 CFR 835- Occupational Radiation Protection
- DOE Order 460.1B- Packaging and Transportation Safety
- DOE Order 460.2- Department Materials Transportation and Packaging Management
- DOE Order 441.1- Radiological Protection for DOE Activities

- DOE Notice 473.6- Security Conditions
- DOE Notice 471.3- Reporting Incidents of Security Concern
- ICAO/IATA- Dangerous Goods Regulations
- ISO 9001- Quality Management Standard
- FMCSR- Federal Motor Carrier Safety Regulations
- NYCRR- New York Codes, Rules, Regulations
- TDEC Rule 1200-1-7
- Title 29 CFR 1910- Occupational Safety and Health Standards
- Title 40 CFR 61, 262-263 and 700-789
- Title 49 CFR, 100-185, 325 and 355-399

TES shall perform on-site and off-site transportation and transportation-related work in accordance with the above listed and applicable regulatory requirements and DOE Orders.

3.3 REFERENCES

- Section 11e. (2) Atomic Energy Act of 1954
- CP-PG-WI-002, Container Inspection
- CP-SR-PR-202, Transportation Incident Notification and Response
- ES-AD-PR-005, First Notifications
- Nuclear Waste Policy Act of 1982
- Title 49 Code of Federal Regulations

3.4 DEFINITIONS

3.4.1 Disposition- The activities that follow generation of a waste and that constitute completion of the life cycle of management of the waste, including, but not limited to, stabilization, deactivation, disposal, decommissioning, dismantlement, and/or reuse. [Adapted from DOE O 430.1 (DOE 2003b)]

3.4.2 Emergency- An emergency or potential emergency is defined as an unplanned event that endangers the health and safety of individuals, environment or equipment.

3.4.3 Material- Refers to anything being moved, removed or transported. This includes, but is not limited to, chemical and/or radiological contaminated materials, discarded material, equipment, material to be recycled, supplies, samples, and/or waste.

3.4.4 Non-hazardous Waste- Any discarded material that is not recycled and does not meet the definition of a hazardous waste, as defined in 40 CFR 261. A subset of non-hazardous waste includes Special Waste. [Source: 49 CFR 261 and TDEC Rule 1200-1-7]

3.4.5 Hazardous Material- A substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under Section 5103 of Federal Hazardous Materials Transportation Law (49 U.S.C. 5103). The term includes temperature materials, materials designated as hazardous in the Hazardous Materials Table (see 49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions in part 173 of subchapter C of this chapter.

3.4.6 Hazardous Waste- A waste that exhibits one or more of the characteristics of hazardous waste in 40 CFR 261, Subpart D.

3.4.7 Low-Level (radioactive) Waste- A radioactive waste that is not high-level radioactive waste, spent nuclear fuel, transuranic waste, byproduct material [as defined in Section 11e.(2) of the Atomic Energy Act of 1954, as amended], or naturally occurring radioactive material. [Adapted from Nuclear Waste Policy Act of 1982, as amended]

3.4.8 Radioactive Waste- Any garbage, refuse, sludge, and other discarded material, including solid, liquid, semi-solid, or contained gaseous material, that must be managed for its radioactive content. [Adapted from 40 CFR Part240]

3.4.9 Record- A completed document or other media that provides objective evidence of an item, service, or process. [Source: 10 CFR 830.3]

3.5.0 Recyclable Material- A material that can be used, reused, or reclaimed. A material is used or reused if it is either: 1) employed as an ingredient (including use as an intermediate) in an industrial process to make a product; or 2) employed as a substitute for a commercial product. A material is reclaimed if it is processed to recover a useable product or if it is regenerated. [Source: "Identification and Listing of Hazardous Waste," 40 CFR, Part 261]

3.5.1 Special Waste- A waste that is difficult or dangerous to manage and may include bulky waste, industrial waste, or friable asbestos waste. [Source: TDEC Rule 1200-1-7 for "Solid Waste Processing and Disposal"]

3.5.2 Transportation-related Work- Includes, but is not limited to, identifying, classifying, containerizing, marking, labeling, placarding, preparing shipping papers, offering for shipment, or transporting client and/or USACE material, or TES material having chemical or radiological contamination as a result of work performed pursuant to this subcontract.

3.5.3 Qualified Shipper- Personnel or subcontractor qualified to identify and classify material, determine packaging requirements, complete shipping papers and perform pre-shipment reviews. The minimum qualifications for the qualified shipper is at least three (3) years of experience in hazardous materials shipping activities with advanced training in transportation, covering air, highway, and rail shipment of hazardous materials, and including radioactive materials, hazardous waste and mixed waste.

3.5.4 Waste Acceptance Criteria- The technical and administrative requirements that a waste must meet in order for it to be accepted at a storage, treatment or disposal facility.

4.0 TRANSPORTATION PLAN

TES shall ensure the integrity of the transportation plan by conducting oversight of employees and subcontractors who perform transportation and transportation-related work in an effort to guarantee compliance with all applicable requirements and regulations. Offsite transportation programmatic elements are also covered in the various TES policies and procedures which provide instruction and guidance to ensure that hazardous materials, including but not limited to, Low Level Radioactive Waste(LLRW) and hazardous substances are offered for transport, safely and in compliance with all applicable federal/ state regulations, vendor specifications, and site Waste Acceptance Criteria (WAC).

As there is no on-site rail access, waste shipments will be transported by truck to the approved disposal/recycling facility. TES will ensure that each waste shipment will be accompanied by properly completed shipping documents and use appropriate documents as required by Federal, State, and local laws and regulations.

The NRC Uniform Low Level Radioactive Waste Manifest (540/541 forms) will be completed for each qualifying NFSS waste container.

Final shipping documents will be submitted to a USACE representative for review and approval a minimum of five calendar days prior to the first shipment of waste, and seven calendar days for subsequent shipments. All completed manifests requiring shipper's certifications will be signed by a USACE representative prior to release of each shipment.

The project shall conduct self-assessments, independent assessments, and audits to control the quality of identification, classification, containerization, communication (marking, labeling, placarding), and documentation/records management in accordance with the NFSS Quality Assurance Plan (QAP).

4.1 TRAINING REQUIREMENTS

TES shall comply with the training requirements of 49 CFR 172.700 for all "HAZMAT" employees. "HAZMAT" employees are defined as any person who in the course of employment directly affects hazardous materials transportation safety. This term includes any employee whom:

- Loads, unloads, or handles hazardous materials
- Tests, reconditions, repairs, modifies, marks, or otherwise represents containers, drums, or packaging as qualified for use in the transportation of hazardous materials
- Prepares hazardous materials for transportation
- Is responsible for safety of transporting hazardous materials
- Operates a vehicle used to transport hazardous materials

4.1.1 <u>HAZMAT Employees-</u> TES shall ensure only qualified personnel perform transportation and transportation-related work. As a minimum, "HAZMAT" employees are to be trained in accordance with 49 CFR 172.700 (Subpart H) requirements.

4.1.2 Shippers- For TES shipping activities, qualified shippers shall have a minimum of three (3) years of experience and advanced training in transportation covering air, highway, and rail shipment of hazardous, radioactive and mixed wastes. Duties will include transportation-related work such as identifying and classifying material, determining packaging requirements, completing shipping papers, and performing pre-shipment reviews.

4.2 TRANSPORTERS

The specific Transporter requirements for shipments are as follows:

- Verify that the transporter can provide the required authorities, insurance, license permits, and/or registrations for the material to be transported;
- Receive certification from the transporter that there is no administrative action, or license, permit, authority, and/or registration revocation proceeding pending; and
- Verify that the transporter has an acceptable rating through the DOE Motor Carrier Evaluation Program if transporting hazardous material, substances, waste or material having chemical or radiological contamination as a result of work performed, or
- For non-DOE approved carriers, TES shall evaluate carriers in accordance with the DOT regulations and, where applicable, request client to arrange for a DOE "Motor Carrier Evaluation Program" assessment. A copy of the evaluation document shall be provided to TES by the client within (20) days of completion of the carrier evaluation.
- Verify that the transporter has a Security Plan in place if needed when transporting hazardous materials.
- Verify that the transporter has a DOT Motor Carrier Rating of "satisfactory", if rated.

4.3 PROCUREMENT OF CONTAINERS

All containers procured for use in the performance of work shall be procured by TES in accordance with the project's Construction Quality Management (CQM) Program.

Prospective suppliers of containers shall be evaluated and selected based on the specified container criteria. All waste transportation containers shall be used for sole source, and an exclusive use agreement shall be obtained from the transporter. When required, a supplier evaluation shall be performed by the SME (Subject Matter Expert) to establish the supplier's capability to adhere to stated quality requirements.

Programs to ensure suppliers continue to provide acceptable containers shall be implemented in accordance with the CQM program where containers to be used for transportation of hazardous materials shall be procured from an approved supplier and shall undergo receipt inspection, as required. Informal surveillance inspections may be performed at any time, without notice by the project staff.

4.4 SHIPMENT SCHEDULE REQUIREMENTS

A written schedule of planned shipments of material shall be provided to USACE prior to the shipment activity allowing USACE sufficient review time. The written schedule of planned shipments shall include the shipment date(s), originating date(s), quantities of material reported according to DOT category, placarding requirements, and intended receiving facility. Updates shall be provided to the schedule when changes are made.

4.5 WASTE SHIPMENTS

All waste shipments will be in accordance with all applicable federal, state, and local regulations, as well as disposal site requirements. All required documents will meet the requirements in 49 CFR, 10 CFR20, in addition to all of the receiving facility WAC requirements.

Table 1 outlines the accepted and certified disposal site to which all waste and materials generated as a result of this project will be sent. Table 2 below outlines the suspected waste streams and estimated volumes and container requirements, respectively.

Table 1 - Waste Disposition Paths

Waste Stream	Disposition Pathway	Packaging and Transportation/Applicable Waste Profile
Construction and Demolition Debris (C&D)		
LLRW Demolition Debris	**Energy*Solutions*- Clive, UT** Interstate 8o, Exit 49 Clive, UT 84029 (433)884-0155	**Hittman Trucking; Clive Waste Profile (Attachment 4)**
Non-contaminated Demolition Debris	**Modern Landfill** 4746 Model City Road Model City, NY 14107 (716)754-8226	**Modern to perform transportation; Modern Waste Profile (Attachment 5)**
Recycled Metals		
Sheet, structural, and scrap metal	**Niagara Metals** 4861 Packard Road Niagara Falls, NY 14304 (716)282-6200	**Niagara to perform transportation**

Waste Stream	Disposition Pathway	Packaging and Transportation/Applicable Waste Profile
RCRA Waste		
Listed/coded Hazardous Waste	**Waste Management- CWM Chemical Services, LLC** 1550 Balmer Road Model City, NY 14107 (716)754-8231	**CWM to perform transportation; CWM Waste Profile (Attachment 7)**
ACM		
Asbestos Contaminated Material	**Modern Landfill** 4746 Model City Road Model City, NY 14107 (716)754-8226	**Modern to perform transportation; Modern Waste Profile (Attachment 5)**
Waste Water		
Waste Water from Demo Activities	**City of Lockport Wastewater Treatment Plant** 611 West Jackson Street Lockport, NY 14094 (716)433-1612	**Transportation will be contracted through the facility; Lockport Waste Profile (Attachment 9)**

Table 2 - Waste Estimates

Waste Stream Classification	Description	Estimated Waste Volume	Packing Methods	Estimated Container Needs	TSDRF
Debris – Clean	Construction and Demolition Debris	3000 tons + 3600 tons for beneficial reuse	Dump Truck	275 covered dump trucks	Modern Landfill
ACM/Asbestos – Non-friable	Transite siding and interior ACM	600 tons	Intermodal	21 x 40' intermodal	Modern
Waste Water – Clean	Contact/Surface/ and Decon. Water	~2000 gal.	Poly. Frac. Tank/Vac. Truck	4 x 500gal tanks	City of Lockport POTW
LLRW – Class A	Contaminated Steel and Debris	90 tons	Intermodal	4 x 20' intermodal	Clive Bulk Waste Fac.
Steel – Clean	Steel for recycle	4800 tons	Intermodal	165 x 40' intermodal	Niagara Metals
Universal Waste/RCRA	Hazardous light ballasts, switches, etc.	6 tons	B-25 container	2 x B-25 boxes	CWM Model City

4.5.1 Samples

Sampling will be limited to a few waste characterization samples and investigation derived wastewater (water used and collected during demolition activities). *TestAmerica* will provide analytical data for the samples. All sample containers will be sealed and labeled in accordance with CS-FO-PR-003. All samples will be packaged and shipped following regulatory compliance as addressed in Table-5 of the QAPP and SAP, section 6.5.

4.5.2 Asbestos Containing Material

ACM will be removed and loaded directly into double 6 mil poly lined skid pans. The wrapped ACM will then be transferred to a roll off container for offsite disposal. All ACM waste shall be placed in DOT approved disposal containers and manifested for legal disposal. Additional details regarding the ACM and its packaging and disposal can be found in the Building Demolition Plan (BDP).

4.6 IDENTIFICATION AND CLASSIFICATION OF DOT HAZARDOUS MATERIALS

Based on the characterization data, a qualified shipper shall:

- Properly identify the hazardous material offered for transport in accordance with 49 CFR 171.8 based on the characterization data (physical form, chemical form, technical name, quantity, history, characteristics of hazard class, etc.)

- Properly classify the material for transportation in accordance with 49 CFR 173.2, 173.2a, and 172.101.

4.7 CONTAINER SELECTION PROCESS

4.7.1 The package shall be selected based on the criteria specified in 49 CFR 172.101 and 173.24, General Packaging Requirements.

4.7.2 The container requirements shall be developed following the methods to manage designs to conform to the requirements of 10 CFR 830 Subpart A, 10 CFR 830 Subpart B, ISO 9001, 10 CFR 835, and DOE Order 441.1, s appropriate. Note: This shall not certify the package as a DOT Specification Package.

4.7.3 When required, a supplier or subcontractor evaluation shall be performed

by TES to establish the supplier or subcontractor's capability to adhere to stated quality requirements. Processes to ensure suppliers continue to provide acceptable containers shall be established and implemented by methods such as:

- Inspection of containers upon receipt
- Programmatic self assessments
- Supplier or subcontractor surveillance/audit, as appropriate

4.7.4 Containers to be used for transportation of hazardous materials shall undergo a receipt inspection, as required, as well as an inspection prior use. If circumstances warrant, informal surveillance inspections may be performed at any time, without notice.

4.8 DOCUMENTATION AND SHIPPING PAPERS

4.8.1 The qualified shipper shall be responsible for completing shipping papers in accordance with 49 CFR 172.200. The qualified shipper shall have a qualified person perform a peer review of the documentation prior to the shipment leaving the site.

4.8.2 Based on characterization data:

- The qualified shipper shall identify hazardous materials offered for transport in accordance with 49 CFR 171.8.
- The qualified shipper shall classify the material in accordance with 49 CFR 173.2 and 173.2a.
- The qualified shipper shall assign the most appropriate shipping name in accordance with 49 CFR 171.101.

4.8.3 When shipping and/or transporting USACE materials, the shipping papers shall be executed and signed by a USACE Appointed Trained Employee.

4.8.4 The qualified shipper shall provide the Emergency Response information required in accordance with 49 CFR 172.602 and shall verify the Emergency Response information is included with the shipping papers. And Emergency Contact number shall be included on the shipping paper in accordance with 49 CFR 262.

4.8.5 If shipping TSCA, Hazardous or Mixed Waste, EPA form 8700-22 UHWM shall be used.

4.8.6 Upon request by USACE and TES, the qualified shipper shall provide copies of shipping papers and supporting documentation a minimum of two (2) days prior to shipment. All supporting documentation such as inventory sheets, analytical data, worksheets, calculations, etc. shall be provided to the client upon request.

4.8.7 The qualified shipper shall have a documented, reviewed and approved radiological survey prior to offering an off-site shipment of a material meeting the definition of DOT Class 7 Radioactive Material (49 CFR 173.403). The radiological survey shall be maintained with the record copy of shipping papers.

4.8.8 The qualified shipper shall provide all appropriate shipping documentation to the driver prior to making the shipment. Whenever required, additional copies of the shipping documents shall be provided by Waste Characterization/Waste Operations Support staff and/or transmitted to the receiving facility electronically or by mail.

4.8.9 The qualified shipper shall complete the disposal facilities' or processors' Radioactive Waste Shipment forms and/or Prior Notification forms, and provide copies to the Waste Characterization/Waste Operations Support staff. The shipper shall also mail, e-mail or fax a copy to the receiving facility in accordance with their notification policy, as required.

4.9 MARKING, LABELING, AND PLACARDING

The waste manager shall:

- Ensure that each package is marked in accordance with 49 CFR 172.300
- Ensure that each package is labeled in accordance with 49 CFR 172.400.
- Ensure that each package and/or load is placarded in accordance with 49 CFR 172.500.
- Ensure that the USACE Required non-DOT FUSRAP Label is applied to all four sides and top on each bulk container of waste if considered a FUSRAP Site per EP 415-1-266 (Page 7-11, Fig 7.1, 3"x5" min.)

4.10 CONTAINER LOADING

Waste Characterization/Waste Operations Support staff and/or the qualified shipper shall comply with the Hazardous Materials Regulations for on-site hazardous materials transfers.

4.10.1 The type of transport to be used shall be determined by the qualified shipper based on evaluation of several factors such as:

- Waste constituent evaluation and analysis
- Classification of a material having more than one hazard (49 CFR 173.2a)
- Compliance with EPA regulations (RCRA/TSCA) for waste shipment
- Receiving facility waste acceptance criteria (WAC)
- Mode of transportation (highway/air) and type of transport
- Size, dimensions, weights, and number of containers of material to be shipped.
- All waste transportation containers shall be inspected, radiologically surveyed, and decontaminated, if required upon arrival and prior to leaving the loading area.
- Exemptions to be used to transport material, if applicable

4.10.2. Portable truck scales will be used to weigh single, dual or triple axle vehicles load capacities up to 80,000 lbs.

4.10.3 In preparation of containerized waste transportation, applicable leak and spill protection and prevention will be referenced in the Spill Contingency Plan (SCP).

4.10.4 The qualified shipper shall verify that the material to be shipped is loaded and segregated in accordance with 49 CFR 177.842, 177.848 and FMCSR 393.100-114.

4.10.5 The qualified shipper shall ensure that the load being shipped is braced, blocked or otherwise secured to prevent movement during transport in accordance with an approved bracing and blocking plan, when provided, and all applicable requirements in 49 CFR 177.834, 393.100 through 393.106.

4.10.6 The qualified shipper shall ensure that the specific loading and tie down

requirements or restrictions shall be met for the type of transport and equipment to be selected for shipment.

4.10.7 For loads that exceed 20,000 lbs, a specified rigging plan will be followed (Rigging Plan).

4.11 EXCLUSIVE USE SHIPMENT

TES will be handling and transporting offsite exclusive use radioactive sample material packages in accordance with DOT regulations. TES will demonstrate the proper methods for monitoring radiation and contamination levels of radioactive material packages and their offsite exclusive use transport vehicles in accordance with DOT regulations, 49 CFR 173.441 and 173.443

Packaging is the essential component in the safe transport of dangerous goods. TES will follow all applicable regulations and procedures in reference to IATA, Dangerous Goods Regulations, specifically Section 10.0, Transport of Radioactive Material.

4.12 INCIDENT NOTIFICATION REQUIREMENT

The project team shall notify USACE NFSS as soon as practical, or at maximum of within 30 minutes of any incident, spills, or releases that occur while the material is in transit and shall make any required notification to the appropriate local, state and federal regulatory agencies. TES shall promptly remediate any situation arising from an incident, spill or release resulting from project transportation activities, or its lower-tier subcontractors, in accordance with all local, state and federal laws. Shipments will be tracked through EnergySolutions, LLC Bear Creek security office and spill containment and clean-up will be self-performed, nation-wide, through the Bear Creek facility.

4.13 EMERGENCY RESPONSE PLAN

When accidents and incidents involving hazardous material transportation occur, local police officers and fire fighters are usually first on the scene. Accident remediation is based on emergency response training that responders have received and information made available with the shipment. DOT shipping papers and Emergency Response Guide identification, as required, are the key to effective initial response actions.

Transportation-related emergencies involving hazardous material require accident and spill reporting. Regulations and requirements mandating the reporting of hazardous material accidents and spills are as follows:

- 49 CFR 171.15, Immediate Notice of Certain Hazardous Materials Incidents – This section requires each carrier who transports hazardous materials to give, at

the earliest practicable moment, notice to the DOT concerning specific listed incidents.

- 49 CFR 171.16, Detailed Hazardous Materials Incidents Reports – This section requires each carrier who transports a hazardous material to report in writing, in duplicate, on DOT Form F, 5800.1 to DOT within 30 days of each incident identified in 49 CFR 171.15(a) or any unintentional release that occurs during the course of transportation or that occurs as a result of an unintentional release of hazardous materials from a package, or any quantity of hazardous waste discharged during transportation.
- 49 CFR 176.45, Emergency Situations – This section identifies adoption of procedures for accidents occurring aboard a maritime vessel.
- 49 CFR 176.48, Situations Requiring Reporting – This section identifies incident reporting requirements for accidents occurring aboard a maritime water vessel, including those identified in 49 CFR 171.15 and 171.16.
- 40 CFR 302.6, Notification Requirements – This section requires persons in charge of facilities (including transport vehicles, vessels, and aircraft) to report any release of a hazardous substance greater than or equal to a reportable quantity to the U.S. Coast Guard National Response Center (toll free) at 1-800-424-8802.

40 CFR 355.40, Emergency Release Notification – This section requires that transportation-related releases of reportable quantities be reported to the 911 Operator.

The project will be committed to ensuring that operations involving transportation or transportation-related work have minimal impact on worker and public health, the environment, or to public or government property. The transportation staff will work with the Town of Niagara, State of New York, and other appropriate agencies when selecting road routes and preferred shipping time tables, as appropriate.

The NFSS Emergency Response Plan provides guidance to handle transportation emergencies in accordance with 49 CFR 171.15, “Immediate Notice of Certain Hazardous Materials Incidents”. Rigid compliance with DOT-required packaging and transportation regulations, advanced emergency response planning, selection of qualified carriers, and providing detailed information, will help minimize the hazard from any incident involving project hazardous materials.

Each shipping paper covering the transportation of hazardous materials will include an emergency telephone number as required by 49 CFR 172.604, where a first responder can obtain specific information about the material hazards and the appropriate response and recovery steps. This telephone must be monitored at all times, even when the material is in storage incident to transportation, by an individual who is knowledgeable about the hazardous material being shipped and has access to comprehensive emergency response and incident mitigation information. This telephone number can be that of the qualified shipper or an agent who has the current information on the material.

The project team shall forward emergency response information, as required in 49 CFR 172.602, for every shipment of hazardous materials to the appropriate approved vendor. The vendor will maintain the specific emergency response information provided by the project and provide it over the telephone when requested to do so by any authorized first response organization responding to a transportation incident involving project shipments. The approved vendor will immediately contact appropriate transportation personnel regarding any transportation incident involving project material. Additionally, if the transportation incident demands emergency response support, the ES&H Manager will notify the USACE and arrange for Radiological Assistance Program (RAP) Team response, if necessary.

Many of the hazardous materials shipments will involve local transportation within the Town of Niagara. Project personnel will respond to any local transportation incident involving project material. This support will include transportation specialists and SME's to explain the specific hazards of the materials beign transported and radiological controls personnel to determine if hazardous or radioactive materials have been released.

4.14 TRANSPORTATION SAFEGUARDS AND SECURITY

Transportation safeguards and security shall be ensured by performing the following for truck shipments:

- Obtain a list of drivers that will be entering NFSS and/or USACE facilities
- Verify that each driver is a citizen of the United States (no dual citizenship allowed)
- Verify the transporter has a Security Plan in effect and that the driver knows how to implement it, should the need arise.
- Require a copy of the driver's Commercial Driver's License with proper hazardous materials endorsement and medical card, and attach to the record copy of the shipping papers
- Ensure that safety/security inspections of all incoming and outgoing shipments are being conducted as detailed in Measure 18 of DOE Notice 473.6, Security Conditions, and
- Verify the transport vehicle has tracking (i.e. Qualcomm, etc.) and/or two-way voice communication that allows for daily monitoring for any vehicle that is used for transporting material during interstate transport.

5.0 RECORDS

5.1 TRACKING LETTER OF ACKNOWLEDGEMENT

The Waste Characterization / Transportation Lead shall track the receipt of all acknowledgement letters of outbound shipments sent to a disposal site.

5.1.1 In the event of a non-receipt, the Waste Characterization/Transportation Lead shall confirm receipt of shipment and send a written request for an acknowledgement letter.

5.1.2 In the event that a shipment has not been received within 20 days from the date of the shipment, the Waste Characterization/Transportation Lead shall investigate. Rail Shipments are tracked from the date of delivery at the disposal facility, which can normally include a two week transport time.

5.1.3 In the event that a signed Asbestos Waste Shipment Record is not received within 35 days of release of the shipment, contact the carrier and/or the disposal site to determine the status of the shipment.

5.1.4 In the event that a signed EPA Hazardous Waste Manifest is not received within 35 days of the release of the shipment, the Waste Characterization/Transportation Lead shall confirm receipt of the shipment and send a written request for the signed manifest.

5.1.5 If the EPA Hazardous Waste Manifest is not received within 45 days, an Exception Report shall be submitted to the EPA Regional Administrator in Accordance with 40 CFR 262.42(2).

ATTACHMENTS

Attachment 1, Straight Bill of Lading

This is to certify that the herein named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

STRAIGHT BILL OF LADING-SHORT FORM
ORIGINAL-NOT NEGOTIABLE

Shipper's No.

Carrier's No. _____

(Name of Carrier) (SCAC)

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

at 20 From

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classifications or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Consigned to _____
(Mail or street address of consignee - For purpose of notification only.)

Destination _____ State _____ County _____ Delivery Address ★ _____
(★ To be filled in only when shipper desires and governing tariffs provide for delivery thereat.)

Route _____

Truck # Trailer #

Delivering Carrier _____ Car or Vehicle Initials _____ No. _____

No. Packages	★ HM	Kind of Package, Description of Articles, Special Marks, and Exceptions	*WEIGHT (Subject to Correction)	Class or Rate	Check Column

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee, without recourse on the consignor the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor.)

If the charges are to be prepaid, write or stamp here. "To be prepaid."

Rec'd $ _____ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per _____
(The signature here acknowledges only the amount prepaid.)

Charges Advanced:

$ _____

* If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."
NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

† The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of the Consolidated Freight Classification.

† Shipper's imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission.

_____ Shipper, Per _____ Agent, Per _____

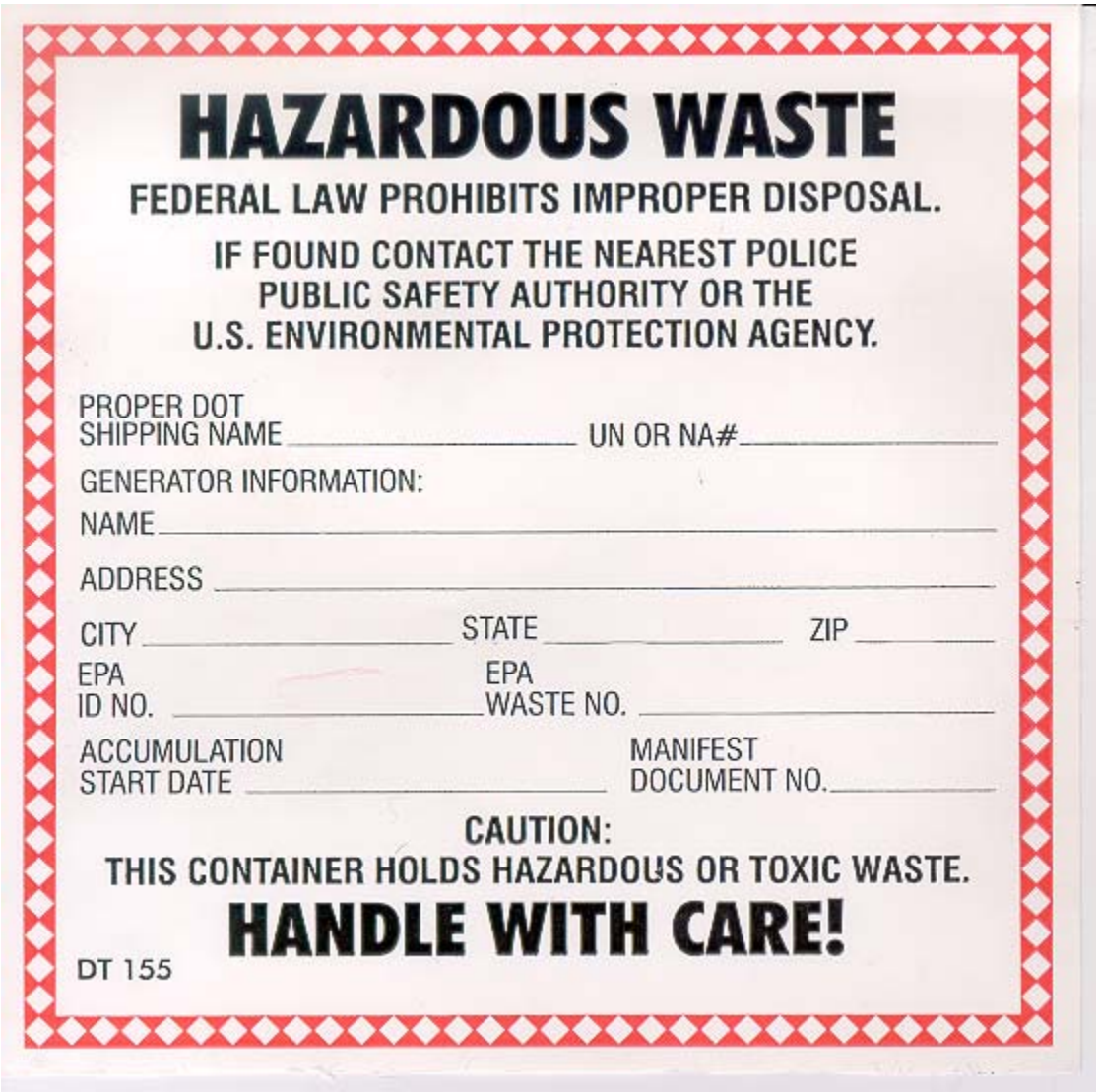
Driver _____

Permanent post-office address of shipper: _____

Mark with "X" to designate Hazardous Material as defined in Title 49 of the Code of Federal Regulations.

1

Attachment 2, DOT Hazardous Waste Label (Example)



HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL.

IF FOUND CONTACT THE NEAREST POLICE
PUBLIC SAFETY AUTHORITY OR THE
U.S. ENVIRONMENTAL PROTECTION AGENCY.

PROPER DOT
SHIPPING NAME _____ UN OR NA# _____

GENERATOR INFORMATION:

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

EPA
ID NO. _____ EPA
WASTE NO. _____

ACCUMULATION
START DATE _____ MANIFEST
DOCUMENT NO. _____

CAUTION:
THIS CONTAINER HOLDS HAZARDOUS OR TOXIC WASTE.

HANDLE WITH CARE!

DT 155

Attachment 3, PCB Label (Example)

Attachment 4, Uniform Hazardous Waste Manifest (8700-22)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number 002226758 JJK

5. Generator's Name and Mailing Address | Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name | U.S. EPA ID Number

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address | U.S. EPA ID Number

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1.							
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

GENERATOR

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

INT'L

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

TRANSPORTER

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Attachment 4, Uniform Hazardous Waste Manifest (8700-22) & Continuation Sheet (8700-22A) (Example)

U.S. EPA Form 8700-22

Read all instructions before completing this form.

1. This form has been designed for use on a 12-pitch (elite) typewriter which is also compatible with standard computer printers; a firm point pen may also be used—press down hard.
2. Federal regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, and disposal facilities to complete this form (EPA Form 8700–22) and, if necessary, the continuation sheet (EPA Form 8700–22A) for both inter- and intrastate transportation of hazardous waste.

Public reporting burden for this collection of information is estimated to average: 30 minutes for generators, 10 minutes for transporters, and 25 minutes for owners or operators of treatment, storage, and disposal facilities. This includes time for reviewing instructions, gathering data, completing, reviewing and transmitting the form. Any correspondence regarding the PRA burden statement for the manifest must be sent to the Director of the Collection Strategies Division in EPA's Office of Information Collection at the following address: U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW., Washington, DC 20460. Do not send the completed form to this address.

i. Instructions for Generators

Item 1. Generator's U.S. EPA Identification Number

Enter the generator's U.S. EPA twelve digit identification number, or the State generator identification number if the generator site does not have an EPA identification number.

Item 2. Page 1 of ___

Enter the total number of pages used to complete this Manifest (*i.e.*, the first page (EPA Form 8700-22) plus the number of Continuation Sheets (EPA Form 8700-22A), if any).

Item 3. Emergency Response Phone Number

Enter a phone number for which emergency response information can be obtained in the event of an incident during transportation. The emergency response phone number must:

1. Be the number of the generator or the number of an agency or organization who is capable of and accepts responsibility for providing detailed information about the shipment;
2. Reach a phone that is monitored 24 hours a day at all times the waste is in transportation (including transportation related storage); and
3. Reach someone who is either knowledgeable of the hazardous waste being shipped and has comprehensive emergency response and spill cleanup/incident mitigation information for the material being shipped or has immediate access to a person who has that knowledge and information about the shipment.

Note: Emergency Response phone number information should only be entered in Item 3 when there is one phone number that applies to all the waste materials described in Item 9b. If a situation (*e.g.*, consolidated shipments) arises where more than one Emergency Response phone number applies to the various wastes listed on the manifest, the phone numbers associated with each specific material should be entered after its description in Item 9b.

Item 4. Manifest Tracking Number

This unique tracking number must be pre-printed on the manifest by the forms printer.

Item 5. Generator's Mailing Address, Phone Number and Site Address

Enter the name of the generator, the mailing address to which the completed manifest signed by the designated facility should be mailed, and the generator's telephone number. Note, the telephone number (including area code) should be the normal business number for the generator, or the number where the generator or his authorized agent may be reached to provide instructions in the event the designated and/or alternate (if any) facility rejects some or all of the shipment. Also enter the physical site address from which the shipment originates only if this address is different than the mailing address.

Item 6. Transporter 1 Company Name, and U.S. EPA ID Number

Enter the company name and U.S. EPA ID number of the first transporter who will transport the waste. Vehicle or driver information may not be entered here.

Item 7. Transporter 2 Company Name and U.S. EPA ID Number

If applicable, enter the company name and U.S. EPA ID number of the second transporter who will transport the waste. Vehicle or driver information may not be entered here.

If more than two transporters are needed, use a Continuation Sheet(s) (EPA Form 8700-22A).

Item 8. Designated Facility Name, Site Address, and U.S. EPA ID Number

Enter the company name and site address of the facility designated to receive the waste listed on this manifest. Also enter the facility's phone number and the U.S. EPA twelve digit identification number of the facility.

Item 9. U.S. DOT Description (Including Proper Shipping Name, Hazard Class or Division, Identification Number, and Packing Group)

Item 9a. If the wastes identified in Item 9b consist of both hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in this Item next to the corresponding hazardous material identified in Item 9b.

Item 9b. Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UN/NA) and Packing Group for each waste as identified in 49 CFR 172. Include technical name(s) and reportable quantity references, if applicable.

Note: If additional space is needed for waste descriptions, enter these additional descriptions in Item 27 on the Continuation Sheet (EPA Form 8700-22A). Also, if more than one Emergency Response phone number applies to the various wastes described in either Item 9b or Item 27, enter applicable Emergency Response phone numbers immediately following the shipping descriptions for those Items.

Item 10. Containers (Number and Type)

Enter the number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of container.

TABLE I.--TYPES OF CONTAINERS

BA = Burlap, cloth, paper, or plastic bags.	DT = Dump truck.
CF = Fiber or plastic boxes, cartons, cases.	DW = Wooden drums, barrels, kegs.
CM = Metal boxes, cartons, cases (including roll-offs).	HG = Hopper or gondola cars.
CW = Wooden boxes, cartons, cases.	TC = Tank cars.
CY = Cylinders.	TP = Portable tanks.
DF = Fiberboard or plastic drums, barrels, kegs.	TT = Cargo tanks (tank trucks).
DM = Metal drums, barrels, kegs.	

Item 11. Total Quantity

Enter, in designated boxes, the total quantity of waste. Round partial units to the nearest whole unit, and *do not* enter decimals or fractions. To the extent practical, report quantities using appropriate units of measure that will allow you to report quantities with precision. Waste quantities entered should be based on actual measurements or reasonably accurate estimates of actual quantities shipped. Container capacities are not acceptable as estimates.

Item 12. Units of Measure (Weight/Volume)

Enter, in designated boxes, the appropriate abbreviation from Table II (below) for the unit of measure.

TABLE II.--UNITS OF MEASURE

G = Gallons (liquids only).	N = Cubic Meters.
K = Kilograms.	P = Pounds.
L = Liters (liquids only).	T = Tons (2000 Pounds).
M = Metric Tons (1000 kilograms).	Y = Cubic Yards.

Note: Tons, Metric Tons, Cubic Meters, and Cubic Yards should only be reported in connection with very large bulk shipments, such as rail cars, tank trucks, or barges.

Item 13. Waste Codes

Enter up to six federal and state waste codes to describe each waste stream identified in Item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes which are most representative of the properties of the waste.

Item 14. Special Handling Instructions and Additional Information

1. Generators may enter any special handling or shipment-specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as waste profile numbers, container codes, bar codes, or response guide numbers. Generators also may use this space to enter additional descriptive information about their shipped materials, such as chemical names, constituent percentages, physical state, or specific gravity of wastes identified with volume units in Item 12.
2. This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest; and the specification of PCB waste descriptions and PCB out-of-service dates required under 40 CFR 761.207. Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.

Item 15. Generator's/Offeror's Certifications

1. The generator must read, sign, and date the waste minimization certification statement. In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements. The Generator's Certification also contains the required attestation that the shipment has been properly prepared and is in proper condition for transportation (the shipper's certification). The content of the shipper's certification statement is as follows: "I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent." When a party other than the generator prepares the shipment for transportation, this party may also sign the shipper's certification statement as the offeror of the shipment.
2. Generator or Offeror personnel may preprint the words, "On behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator/offeror certification, to indicate that the individual signs as the employee or agent of the named principal.

Note: All of the above information except the handwritten signature required in Item 15 may be pre-printed.

Attachment 5, Modern Landfill Waste Acceptance Criteria

MODERN LANDFILL, INC
PO BOX 209
MODEL CITY, NY 14107
GENERATOR WASTE CHARACTERIZATION REPORT

To The Waste Generator:

This package contains the forms required to gain approval for disposal of acceptable waste at Modern Landfill, Inc. If you should require assistance completing this form, please contact this office.

1. **If the facility you are wishing to dispose of waste from is an industrial or chemical site, please do not fill out the generic approval portion of this form (page 4). You must fill out pages 2-3 and contact our sales department at 716-754-8226 for further instructions.**
2. Fully complete this Generator Waste Characterization Form and sign the certifications.
3. Return completed form along with the proper analytical data to this office. Please note: a NYS Certified Laboratory must complete all analysis, **and package must contain all QA/QC information along with the chain of custody**. As of June 15, 1993, Matrix Spike information is no longer necessary to obtain an approval.
4. Modern Landfill must be in receipt of the Hauler's Certificate of Insurance and copy of approved Part 364 prior to waste shipment.
5. Out of State Generators using the NYS Hazardous Waste Manifest must have the manifest approved by this office prior to shipment.
6. A copy of the 47-19-7 Application will be forwarded to you upon approval of the waste by Modern Landfill. The application number provided on the approved 47-19-7 form is necessary to schedule at Modern Landfill.
7. Faxed copies of applications will not be accepted. Original Signatures only!!
8. Annual updates are required for on-going waste streams only and should include this form and analysis. One-time only approvals, generic or 47-19-7 applications are not required to be updated. The paperwork should be submitted 30 days prior to the expiration of the approval (one year from date approved) to insure no lapse in approval occurs. To further assist you, we will enclose a copy of the 47-19-7 application that requires updating.

Scheduling: To schedule an approved waste into the landfill, please contact the Landfill Scalehouse at (716) 754-8226. Please provide the approval number located in the upper right hand corner of the approved 47-19-7 application when scheduling.

If you are not an existing customer or need assistance with transportation, please contact our Sales Department prior to scheduling.

TELEPHONE: (716) 754-8226 FAX: (716) 754-2355
(800) 662-0012

Page 1

GENERATOR WASTE CHARACTERIZATION REPORT

INSTRUCTIONS: The following form is required for disposal of nonhazardous industrial/commercial wastes at Modern Landfill. Please complete all sections of this report. Send completed report along with the analytical, chain of custody and the Application for Disposal of an Industrial Waste Stream (47-19-7) to this office. A separate form is required for each waste stream.

GENERATOR INFORMATION:

Generator Name: _____

Generating Facility Address: _____

Technical Contact: _____ Phone: _____

Alternate Contact: _____ Phone: _____

INVOICING INFORMATION:

Contracting Firm: _____

Contact: _____ Phone: _____

Do you have an existing account with Modern Landfill? [ ] Yes [ ] No

Billing Address: _____

_____

TRANSPORTER INFORMATION:

Hauler Name: _____ NYSDEC Permit No. _____

Contact Person: _____ Phone No. _____

Is Modern Landfill currently on your Transporter Permit: [ ] Yes [ ] No
If no, please enclose a Part C Application to cover this waste stream.

Transporters need to have the following. NOTE: You must have all the required items below to enter the landfill. Please check the box to state you have read the following.

[ ] Reflective vests, work boots (preferably steel toe), long pants and eye protection must be worn at all times. Vehicles must have 2 tow hooks (front and back) and Insurance Certificates on file with Modern Landfill.

Drivers must obey all landfill regulations, including all posted signs and use the onsite wheel wash prior to leaving the landfill. Failure to comply will result in immediate removal.

WASTE INFORMATION:

Common name of waste: _____

Description of process generating this waste: _____

_____

Is this waste hazardous under US EPA Guidelines & 6NYCRR Part 371 (d)? [ ] Yes [ ] No

Indicate the category which best describes this waste stream:

[ ] Industrial Waste
[ ] Household Waste
[ ] Commercial Solid Waste
[ ] Construction & Demolition Debris
[ ] Other (Please Specify) _____

Page 2

PHYSICAL CHARACTERISTICS OF WASTE

The waste is at least 20% solid and contains no free liquid	YES [ ]	NO [ ]
The Flashpoint of the waste is >140°f	YES [ ]	NO [ ]
The pH level of the waste is between 2.0 and 12.5	YES [ ]	NO [ ]
Is the waste reactive (Cyanide/Sulfide)?	YES [ ]	NO [ ]
,Is the waste free of PCBs	YES [ ]	NO [ ]
Color:	Odor: [ ] Strong [ ] Mild [ ] None	

TCLP TESTING AND CERTIFICATION

Metals

Constituent	Nonhazardous Limit (mg/l)	Present	Not Present
Arsenic	5.0		
Barium	100.0		
Cadmium	1.0		
Chromium	5.0		
Lead	5.0		
Mercury	0.2		
Selenium	1.0		
Silver	5.0		

Herbicides / Pesticides

Constituent	Nonhazardous Limit (mg/l)	Present	Not Present
2,4-D	10.0		
2,4,5-TP silvex	1.0		
Endrin	0.02		
Lindane	0.4		
Methoxychlor	10.0		
Toxaphene	0.5		
Chlordane	0.03		
Heptachlor	0.008		

Acid Extractables

Constituent	Nonhazardous Limit (mg/l)	Present	Not Present
O-Creosol	200.0		
M-Creosol	200.0		
P-Creosol	200.0		
Pentachlorophenol	100.0		
2,4,5-Trichlorophenol	400.0		
2,4,6-Trichlorophenol	2.0		

Base Neutrals Extractables

Constituent	Nonhazardous Limit (mg/l)	Present	Not Present
1,4-Dichlorobenzene	7.5		
2,4-Dinitrotoluen	0.13		
Hexachlorobenzene	0.13		
Hexachlorobutadiene	0.5		
Hexachloroethane	3		
Nitrobenzene	2		
Pyridine	5		

Volatile Organics

Constituent	Nonhazardous Limit (mg/l)	Present	Not Present
1,1-Dichloroethylene	0.7		
,Methyl Ethyl Ketone	200.0		
Tetrachloroethylene	0.7		
Vinyl Chloride	0.2		
Benzene	0.5		
Carbon Tetrachloride	0.5		
Chlorobenzene	100.0		
Chloroform	6.0		
Trichloroethylene	0.5		
1,2-Dichloroethane	0.5		

CERTIFICATION

I certify that all information contained within this Generator Waste Characterization Report, including all attached information, is complete and actual and is an accurate representation of known or suspected hazards described herein.

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Date: _____

GENERIC APPROVAL

INSTRUCTIONS: The following sections should only be sued if you are disposing of Virgin Petroleum Contaminated Solid Waste. Virgin Petroleum material disposal requirements are divided into two (2) categories, lighter than #2 Fuel Oil and #2 Fuel Oil and Higher. Material resulting from Underground Storage Tanks (UST) and Tank Bottoms from storage and Crude Oil are also included in this program. The tables below indicate the minimum testing requirements for the waste stream. All conditions set forth in the preceding waste characterization report must also be met and certified by the generator.

Provide in detail the process or incident producing this waste on your Company's letterhead. Modern Landfill must have the original on file and the letter must clearly state that this was indeed a virgin product spill or otherwise and the resulting debris/cleanup material is free of prior residue or spill and free of industrial or chemical contamination. This letter must also state the type of material spilled, i.e. #2 fuel oil, gasoline, mineral oil, etc.

Note: This page is only for generic approvals. Please do not fill it out for waste coming from industrial/chemical sites. Contact the sales department for additional information.

LIGHTER THAN #2 FUEL OIL
Include all attachments detailed above.

CONSTITUENT	PRESENT (VALUE)	NOT PRESENT
TCLP Lead		
TCLP Benzene		
Flashpoint		

#2 FUEL OIL & HIGHER
Include all attachments detailed above.

CONSTITUENT	PRESENT (VALUE)	NOT PRESENT
TCLP Benzene		
Flashpoint		

NYS SPILL NUMBER _____ ESTIMATED TONS: _____

CERTIFICATION

I certify that all information contained within this Generator Waste Characterization Report, including all attached information is complete and actual and is an accurate representation of known or suspected hazards described herein.

Signature: _____ Date: _____

Printed Name: _____ Title : _____

Page 4

Attachment 6, CWM Waste Profile Sheet

WM WASTE MANAGEMENT

Generator's Hazardous Waste Profile Sheet

Service Agreement on file? ❑ Yes ❑ No Profile Number

❑ Check here if there are multiple generating locations for his waste. Attach addition locations.

❑ Check here if a Certificatie of Destruction or Disposal is required.

Requested Disposal Facility: _____

❑ Renewal for Profile Number: _____ Waste Approval Expiration Date: _____

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: _____
2. Site Address: _____
3. City/ZIP: _____
4. State: _____
5. County: _____
6. Contact Name/Title: _____
7. Email Address: _____
8. Phone: _____
9. FAX: _____
10. NAICS Code: _____
11. Generator USEPA ID #: _____
12. State ID# (if applicable): _____

B. Customer Information ❑ same as above P. O. Number: _____

1. Customer Name: _____
2. Billing Address: _____
3. City, State and ZIP: _____
4. Contact Name: _____
5. Contact Email: _____
6. Phone: _____ FAX: _____
7. Transporter Name: _____
8. Transporter ID # (if appl.): _____
9. Transporter Address: _____
10. City, State and ZIP: _____

C. Waste Stream Information ❑ USEPA Hazardous ❑ State Hazardous ❑ TSCA

1. Description
   a. Name of Waste: _____
   b. Process Generating Waste:
   c. Color: _____
   d. Strong Odor (describe): _____
   e. Physical State at 70°F: ❑ Solid ❑ Liquid ❑ Gas ❑ Sludge ❑ Other: _____
   f. Layers? ❑ Single layer ❑ Multi- layer
   g. Free Liquid Range (%) _____ to _____ Specific Gravity: _____ Viscosity: _____ BTU/lb: _____
   h. pH Range: _____ to _____ ❑ NA (Solid)
   i. Liquid Flash Point: ❑ < 140°F ❑ 140°- 199°F ❑ ≥ 200°F ❑ NA(solid)
2. Is this a USEPA hazardous waste (40 CFR Part 261)? If the answer is no, skip to question f. ❑ Yes ❑ No
   a. If yes, identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U).
   b. If a characteristic hazardous waste, do underlying hazardous constituents (UHCs) apply (40 CFR 268.48)? ❑ Yes ❑ No (if yes, list in Section C.2.j)
   c. Is the waste subject to RCRA Subpart CC Controls (40 CFR 264.1083 & 265.1084)? ❑ ? Click for Add'l Info ❑ Yes ❑ No
      1. If no, does the waste meet the organic LDR Exemption? ❑ Yes ❑ No
      2. If no, does the waste contain <500 ppm volatile organic (VOC's)? ❑ Yes ❑ No
      3. Volatile organic concentration _____ ppm.
   d. Is the waste predominately debris subject to the Alternate Debris Standards (40 CFR 268.45)? ❑ Yes ❑ No
   e. Is the waste predominately soil subject to the Alternate Soil Treatment Standards (40 CFR 268.49)? ❑ Yes ❑ No
      1. If yes, will Underlying Hazardous Constituents apply? (list in C.2.j) ❑ Yes ❑ No
   f. Does the waste represented by this profile contain asbestos? ❑ Yes ❑ No
      2. If yes: ❑ Friable ❑ Non-Friable
   g. Does the waste represented by this profile contain benzene? ❑ Yes ❑ No
      1. Is this subject to Benzene Operations Waste NESHAP (40 CFR Part 61 Subpart FF)? ❑ Yes ❑ No
         If yes, complete Benzene Waste Operations NESHAP (BWON) questionnaire.

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WASTE MANAGEMENT

Generator's Hazardous Waste Profile Sheet

Profile Number

C. Waste Stream Information (continued)

h. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ❑ Yes ❑ No

1. If yes, does the waste contain <500 ppm VOHAPs at the point of determination? ❑ Yes ❑ No

i. Does the waste represented by this waste profile sheet contain Polychlorinated Biphenyls (PCBs)? ❑ Yes ❑ No
(If yes, list in Chemical Composition - C.2.j)

1. If yes, are the PCBs regulated by 40 CFR 761? ❑ Yes ❑ No
2. If yes, is it remediation waste from a project being performed under the Self-Implementing option provided in 40 CFR 761.61(a)? ❑ Yes ❑ No
3. If yes, were the PCBs imported into the US? ❑ Yes ❑ No

j. Chemical Composition (List all constituents [includin g halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis): ❑ (See Attached - for entering additional constituents)

Constituents (Total Composition Must be ≥ 100%)	Lower Range	Unit of Measure	Upper Range	Unit of Measure
1.				
2.				
3.				
4.				
5.				
6.				

k. Check any that apply: ❑ Pyrophoric ❑ Water Reactive ❑ OSHA Carcinogen ❑ Shock Sensitive ❑ Oxidizer ❑ Infectious

l. Is the waste subject to controls as a Group 1 wastewater or residual under the Hazardous Organic NESHAP? ❑ Yes ❑ No

1. If yes, is it a Table 8 _____ or Table 9 _____ compound?

m. Does the waste represented by this waste profile sheet contain radioactive material? ❑ Yes ❑ No

1. Is disposal regulated by the Nuclear Regulatory Commission? ❑ Yes ❑ No
2. If NORM, identify isotopes and concentration, _____ pCi/g.

n. Is the waste from a CERCLA (40 CFR 300, Appendix B) or state mandated clean-up? ❑ Yes ❑ No

1. If yes, attach Record of Decision (ROD), 104/106 or 122 order or court order that governs site clean-up for activity. For state mandated clean-up, provide relevant documentation.

o. Is this a State Hazardous Waste? ❑ Yes ❑ No

1. If yes, please list applicable codes: _____
If NY waste codes B001-B007 apply, please complete question C.2.c on page 1.

D. DOT Information and Shipping Volume

1. Quantity of Waste
   a. ❑ One Time Event ❑ Base ❑ Repeat Event
   b. Estimated Annual Quantity: _____ ❑ Tons ❑ Yards ❑ Drums ❑ Other (specify) _____
   c. Shipping Frequency: Units: _____ Per: ❑ Month ❑ Quarter ❑ Year ❑ One Time ❑ Other _____
2. Shipping Information
   a. Packaging:
      ❑ Roll off/End dump: _____ ❑ Other: _____
      ❑ Drum Type/Size: _____ ❑ Vacuum Box
      ❑ Tanker ❑ Super Sack ❑ Tote Bin ❑ Cubic Yard Boxes
   b. Is this a U.S. Department of Transportation (USDOT) Hazardous Material (If no, skip c, d and e)? ❑ Yes ❑ No
   c. Reportable Quantity (lbs.; kgs.): _____ d. Primary/Subsidiary Hazard Class(es)/ID#: _____
   e. USDOT Shipping Name: _____ PG: _____

E. Generator Certification (Please read and certify by signature below)

I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this wastestream. Any sample submitted is a representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. I authorize WMI to obtain a sample from any waste shipment for purposes of recertification. If this certification is made by a broker, the undersigned signs as authorized agent of the generator and has confirmed the information contained in this Profile Sheet from information provided by the generator and additional information as it has determined to be reasonably necessary. If approved for management, Contractor has all the necessary permits and licenses for the waste that has been characterized and identified by this approved profile. All revelant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste will be disclosed to the contractor. All changes which occur in the character of the waste will be identified by the Generator and be disclosed to the Contractor prior to providing the waste to the Contractor.

Certification: _____ Title: _____

Company Name: _____ Name (Print): _____

Date: _____

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May 2010

WASTE MANAGEMENT

HAZARDOUS WASTE PROFILE ADDENDUM

Profile Number:

F. Addendum to Waste Stream Information

1. If this is USEPA hazardous waste (40 CFR Part 261), identify ALL USEPA listed and characteristic waste code numbers (D, F, K, P, U):

2. Chemical Composition (List all constituents [including halogenated organics, debris, and UHC's] present in any concentration and submit representative analysis):

Constituents *(Total Composition Must be > 100%)*	Lower Range	Unit of Measure	Upper Range	Unit of Measure
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

3. Is this a State Hazardous Waste? ☐ Yes ☐ No

If yes, please list applicable codes

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Page 1 of 1

August 2008

Attachment 7, City of Lockport Wastewater Treatment Plant Acceptance Criteria

APR-29-2010 12:23 FROM:LKPT WWTP 716 433 1397 TO:18654812555 P.2

§ 150-17 SEWERS § 150-17

event, in no case shall a wastewater discharge have a flow rate or contain concentration or mass quantities of pollutants that exceed for any time period longer than fifteen (15) minutes more than five (5) times the average daily flow, pollutant concentration or pollutant loading during normal operation.

L. Any substance which may cause the POTW treatment plant effluent or any other product of the POTW treatment plant, such as residues, sludges or scums, to be unsuitable for reclamation and reuse or which might interfere with the disposal process. In no case shall a substance discharged to the POTW cause the POTW treatment plant to be in noncompliance with applicable sludge use, sludge disposal criteria, guidelines or regulations developed by the NYSDEC or the USEPA.

M. Any substance which will cause the POTW treatment plant to violate its SPDES permit or the receiving water quality standards.

N. Any wastewater which causes a hazard to human life or, in the opinion of the Director of Utilities, creates a public nuisance.

O. Wastewater containing pollutants which have a concentration in excess of those listed below. These concentrations shall be applied to wastewater effluents at a point just prior to discharge into the city sewer system.

Pollutant	Maximum Pollutant Concentration Limits (milligrams per liter)
Arsenic	0.05 50 µg/L
Cadmium	0.10 100 µg/L
Chromium	1.50 1500 µg/L
Copper	1.00 1000 µg/L
Cyanide	0.50 500 µg/L
Lead	0.20 200 µg/L
Mercury	0.007 7 µg/L

15021 2-25-96

Pollutant	Maximum Pollutant Concentration Limits (milligrams per liter)
Molybdenum	0.03 30 µg/L
Nickel	0.30 300 µg/L
Phosphorus	5.00
Selenium	0.06 60 µg/L
Silver	1.20 1200 µg/L
Zinc	2.80 2800 µg/L

P. Any trucked or hauled pollutants, except at discharge points designated by the POTW. Unless otherwise authorized by the director, the only acceptable discharge point for such wastes is at the Lockport POTW septic well discharge pit on the south side of the grit/screen building.

§ 150-18. Grease, oil and sand interceptors.

A. Grease, oil and sand interceptors shall be provided when, in the opinion of the Plumbing Inspector, they are necessary for the proper handling of liquid wastes containing grease in excess of that indicated in § 150-17B or any flammable wastes, sand and other harmful ingredients, except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the city and shall be constructed such that they are readily and easily accessible for cleaning and inspection. Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight and equipped with easily removable covers which when bolted in place shall be gastight and watertight.

APR-29-2010 12:24 FROM:LKPT WWTP 716 433 1397 TO:18654812555 P.4

B. Where installed, all grease, oil and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times.

§ 150-19. Pretreatment of specific pollutants.

biochemical oxygen demand

The admission into the public sewers of any waters or wastes containing five-day BOD greater than two hundred fifty (250) parts per million by weight (mg/l) or containing more than three hundred fifty (350) parts per million by weight (mg/l) of suspended solids or containing any quantity of substances having the characteristics described in § 150-17 or having any average daily flow greater than two percent (2%) of the average total daily sewage flow of the city shall be subject to review and approval of the Director of Utilities. Additionally, the Director of Utilities reserves the right to alternatively impose mass pollutant discharge limitation on one (1) or more of the regulated pollutants on any user that he deems appropriate. Where necessary in the opinion of the city, the owner shall provide, at his expense, such treatment or pretreatment as may be necessary to reduce the five-day BOD to two hundred fifty (250) parts per million by weight (mg/l) or to reduce objectionable characteristics or constituents to within the maximum limits provided for in § 150-17 or control the quantities and rates of discharge of such waters or wastes. Plans, specifications and other pertinent information relating to proposed treatment or pretreatment facilities shall be prepared and submitted by a registered professional engineer for the approval of the Director of Utilities, and no construction of such facilities shall be commenced until said approvals are obtained in writing.

§ 150-20. Additional charges.

Where the strength of wastewater from an industrial, commercial or institutional establishment exceeds that of normal strength wastewater, which is defined for this section to be wastewater that has two hundred fifty (250) parts per

million by weight (mg/l) of BOD or three hundred fifty (350) parts per million by weight (mg/l) of suspended solids or fifteen (15) parts per million by weight (mg/l) of chlorine demand, and where such wastes are permitted to be discharged to the POTW by the Director of Utilities, an added charge will be assessed against the user. The amount and terms of payment of the additional charges shall be determined by the city. These additional charges shall be based on the additional cost of operation, maintenance, administration, depreciation, amortization plus other additional costs related to the increased cost of the conveyance, storage and treatment of this wastewater over and above that of normal strength wastewater. The strength of such wastes shall be determined by composite samples taken over a sufficient period of time to ensure a representative sample. The cost of taking and analyzing the first of these samples shall be borne by the city. The cost of any subsequent sampling and analysis shall be borne by the industry or establishment, whether the owner or lessee. Tests shall be made by an independent analytical laboratory or at the POTW treatment plant.

§ 150-21. Maintenance of treatment facilities.

Where treatment, pretreatment or flow equalization facilities are provided for any waters or wastes prior to discharges to the POTW, such facilities shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

§ 150-22. Manholes.

When required by the Director of Utilities, the owner of any property served by a building sewer carrying industrial wastes shall install a suitable control manhole in the building sewer to facilitate observation, sampling and measurement of the wastes. Such manhole, when required, shall be accessible and safely located and shall be constructed in accordance with plans approved by the Director of Utilities. The manhole shall be

Attachment 8, Energy Solutions- Clive Facility Waste Acceptance Profile

RADIOACTIVE WASTE PROFILE RECORD

A. GENERATOR AND WASTE STREAM INFORMATION

GENERAL: Complete this form for one waste stream. Contact EnergySolutions at (801) 532-1330 if you have any questions while completing this form.
Please indicate "N/A" if a category does not apply.

1. GENERATOR INFORMATION

Generator _____ EPA ID_____

Generator _____ Title:_____

Mailing _____

_____ Utah Site Access Permit_____

Phone:_____ Fax:_____ Email:_____

Contractor _____ Location of Waste (City,_____

Name & Title of Person _____ Phone:_____ Email:_____

2. WASTE STREAM INFORMATION

Waste Stream_____Waste Stream _____State of _____

Revision:_____ Date:_____ Volume (ft^3):_____ Delivery Date:_____

CHECK APPROPRIATE BOXES BELOW. Please verify the required forms requested below are completed and submitted with the Radioactive Waste Profile Record.

HAZARDOUS WASTE: Is the waste classified as hazardous waste as defined by 40 CFR 261?

N ☐ If **NO**, complete and attach the **"Low-Level Radioactive Waste Certification Attachment"**.
Y ☐ If **YES**, complete and attach the **"Hazardous Waste Certification Attachment"** and check applicable box below.
Has the waste been treated to meet applicable treatment standards per 40 CFR 268? Y ☐ N ☐
Is the waste to be treated by EnergySolutions? Y ☐ N ☐

LOW-LEVEL RADIOACTIVE WASTE: Is the radioactive waste defined as Low-Level Radioactive Waste in accordance with the Low-Level Radioactive Waste Policy Amendments Act of 1985 or in DOE Order 435.1?

Y ☐ If **YES**, a current copy of a LLRW Compact Export letter authorizing export must be submitted if applicable. This authorization is applicable for non-DOE LLRW (i.e., Mixed Waste, NORM/NARM, 11e.(2) material, and waste from DOE do not require a Compact Export Letter).
N ☐ If **NO**, check appropriate box: NORM/NARM ☐ 11e.(2) Byproduct Material ☐ Other: _____

SPECIAL NUCLEAR MATERIAL: Does the waste stream contain material with uranium enriched in U-235 or any of the following radionuclides:
U-233, Pu-236, Pu-238, Pu-239, Pu-240, Pu-241, Pu-242, Pu-243, or Pu-244?

Y ☐ N ☐ If Yes, complete and attach the "SNM Exemption Certification" form (EC-0230-SNM). Supporting statements, analytical results, and documentation must be included with the submittal.

PCB WASTE: Does the waste contain Polychlorinated Biphenyls (PCB) that are regulated for disposal per 40 CFR 761?

Y ☐ N ☐ If Yes, complete and attach the "PCB Waste Certification" form (EC-98279).

ASBESTOS: Does the waste contain Asbestos Containing Material?

Y ☐ N ☐ If Yes, Asbestos Containing Material must be managed in accordance with applicable federal regulations. Provide a detailed description of the waste containing asbestos in Section B.5 of the waste profile.

RADIOACTIVE WASTE PROFILE RECORD

B. WASTE PHYSICAL PROPERTIES & PACKAGE INFORMATION

1. GENERAL CHARACTERISTICS

Does the waste contain free liquids? Y ☐ N ☐ If **Yes**, what is the percent of free liquid by waste volume? _____ %

If **Yes**, is the liquid aqueous (water-based)? Y ☐ N ☐

Does the waste contain absorbent? Y ☐ N ☐ Density range of the waste:_____-_____ g/cc ☐ lb/ft^3 ☐

List percentage of waste type by volume: Soil _____% Concrete & Metal _____% DAW _____% Resins _____% Sludge _____%

Other constituents and percentage by volume? _____

2. MATERIAL SIZE

Gradation of Material: Indicate the percentage of waste material that would **pass through** the following grid sizes. For example, 95% of the material would pass through a 12" square, 90% passes through a 4" square, 80% passes through a 1" square, etc.

12" _____ % 4" _____ % 1" _____ % 1/4" _____ % 1/40" _____ % 1/200" _____ %

Does the waste stream contain oversize debris (i.e., no dimension < 10 inches and any dimension > 12 feet)? Y ☐ N ☐
If Yes, include a detailed description (i.e., weight, size, drawings, etc.) of the oversize debris in the narrative of Section B.5.

3. MOISTURE CONTENT

For soil or soil-like materials, please use **Std. Proctor Method ASTM D-698** to determine the optimum moisture content. The waste material must not exceed 3 percentage points above optimum moisture upon arrival at EnergySolutions' disposal facility unless approved by EnergySolutions.

Optimum Moisture Content: _____% at Maximum Dry Density (lb/ft^3): _____

Average Moisture Content: _____% Moisture Content Range: _____% - _____%

4. WASTE SHIPPING & PACKAGING

Transportation Mode: ☐ Highway ☐ Rail

Shipping & Container Packages: ☐ Drums* (≤ 85 gallons) ☐ Boxes (≤ 100 ft^3) ☐ Soft-Sided Bags (≤ 10 yd^3)
(Check all that apply)

☐ Intermodal ☐ Sealand ☐ Gondola** ☐ Box Car

Other:

*Palletized drums are preferred by the disposal site. Please specify in the "Other" field if drums will not be palletized.
**Dimensions of gondola railcars must be between 48 to 65 feet in length and 8.5 to 12.5 feet in height as measured from the top of the rail to the top of the railcar unless approved by EnergySolutions.

5. NARRATIVE DESCRIPTION AND HISTORY OF WASTE

Please submit a narrative description and history of the waste as an attachment to the Radioactive Waste Profile Record. This attachment should include the following:

- Process that generated the waste
- Waste material physical composition and characteristics
- Radiological and chemical characterization method
- Basis for determining manifested radionuclide concentrations
- Description and amounts of absorbents, if applicable
- Basis of non-hazardous or hazardous waste determinations
- Treatment processes, if applicable
- Product information or Material Safety Data Sheets associated with the waste as applicable
- Information requested in other sections of this form

RADIOACTIVE WASTE PROFILE RECORD

Waste Stream ID: ____ *Revision:* ____ *Date of Revision:*

C. RADIOLOGICAL INFORMATION

Obtain sufficient samples to adequately determine a range and weighted average of activity in the waste. Attach the gamma spectroscopy or radiochemistry data supporting the radionuclide information listed below.

1. Does the waste material contain accessible surfaces with contact dose rates greater than 500 mR/hr? Y ☐ N ☐

2. Does the waste material contain any of the following isotopes: Aluminum-26, Berkelium-247, Calcium-41, Californium-250, Chlorine-36, Rhenium-187, Terbium-157, or Terbium-158? Y ☐ N ☐

3. Please list the following information for each isotope associated with the waste. Provide an explanation in the narrative description of Section B.5 if the waste contains localized "hot spots" or elevated concentrations that significantly exceed the upper concentration range. If additional space is needed, provide an Attachment C.3 to this profile record formatted as below.

Isotope	Manifested Upper Concentration (pCi/g)	Weighted Avg. per Container (pCi/g)	Isotope	Manifested Upper Concentration (pCi/g)	Weighted Avg. per Container (pCi/g)

RADIOACTIVE WASTE PROFILE RECORD

HAZARDOUS WASTE CERTIFICATION ATTACHMENT

This form is required only if the checkbox for Hazardous Waste on page one has been checked YES. Otherwise, complete the Low-Level Radioactive Waste Certification Attachment instead of this attachment. EnergySolutions may waive the chemical laboratory analyses if the material is not amenable to chemical sampling and analysis (e.g., debris items including metal pieces, concrete, plastic, etc.). Justification for waiving the chemical analyses must be provided in Section B.5.

D. MINIMUM REQUIRED CHEMICAL ANALYSIS

The following parameters must be analyzed by a Utah or NELAC certified laboratory. Typical SW-846 analytical methods have been listed. Other approved methods are acceptable. Attach the most recent or applicable chemical analytical results representing the waste.

1. GENERAL CHEMICAL PARAMETERS

SW-846 Analytical Methods

pH (Liquid only):_____ **Method 9045** Please provide the range of the pH analyses performed.

PFLT:_____Pass / Fail **Method 9095** Not applicable for liquid radioactive waste streams.

Analyze the waste for volatile or semi-volatile constituents (Methods 8260 & 8270), and attach the data.

Any distinguishing color or odor? Y ☐ N ☐ If Yes, color: _____; odor: _____

2. HAZARDOUS WASTE CODES AND TREATMENT STANDARDS (40 CFR 268)

List all hazardous waste codes and treatment standards. Include hazardous waste codes that have been removed through treatment and indicate "Former" in the second column. Worst-case concentrations only need to be provided for concentration based treatment standards. If additional space is needed, provide an Attachment D.2 to this profile record formatted as below. Include a description of hazardous waste determinations and any variances, exclusions, etc. in the narrative requested in Section B.5.

EPA HW Codes	Description, Constituent of Concern, or Subcategory	Treatment Standard (mg/kg unless noted as mg/L TCLP or Technology Code)	Worst-Case Concentration (mg/kg unless noted as mg/L TCLP)

3. UNDERYLYING HAZARDOUS CONSTITUENTS (40 CFR 268.48)

List all underlying hazardous constituents (UHCs) and treatment standards. Include UHCs that have been removed through treatment. Worst-case concentrations only need to be provided for concentration based treatment standards. If additional space is needed, provide an Attachment D.3 to this profile record formatted as below.

Underlying Hazardous Constituents	**Treatment Standard** (mg/kg unless noted as mg/L TCLP or Technology Code)	**Worst-Case Concentration** (mg/kg unless noted as mg/L TCLP)

D. 4. OTHER CHEMICAL CONSTITUENTS

List any other chemical constituents of concern (e.g., PCBs, chelating agents, etc.) and worst-case concentrations. If additional space is needed, provide an Attachment D.4 to this profile record formatted as below.

Other Chemical Constituents	**Worst Case Concentration** (mg/kg unless noted as mg/L TCLP)	**Other Hazardous Constituents**	**Worst-Case Concentration** (mg/kg unless noted as mg/L TCLP)

5. LABORATORY CERTIFICATION INFORMATION

☐ **UTAH or NELAC CERTIFIED**
The Utah or NELAC certified laboratory holds a current certification for the applicable chemical test methods insofar as such official certifications are given. Please provide a copy of the laboratory's current certification letter for each parameter analyzed and each method used for chemical analyses required by this form.

☐ **OTHER LABORATORY CERTIFICATION** (Describe below)

_____

6. CERTIFICATION

I certify that sample results representative of the waste described in this profile were or shall be obtained using state- and EPA-approved analytical methods. I also certify that where necessary representative samples were or shall be provided to EnergySolutions and to qualified laboratories for the analytical results reported herein. I further certify that the waste described in this record is not prohibited from land disposal in 40 CFR 268 (unless prior arrangements are made for treatment at EnergySolutions) and that all applicable treatment standards are clearly indicated on this form. I also certify that the information provided on this form is complete, true, and correct and is accurately supported and documented by any laboratory testing as required by EnergySolutions. I certify that the results of any said testing have been submitted to EnergySolutions. I certify that the waste does not contain any prohibited items listed in EnergySolutions' Radioactive Material License or RCRA Permit.

Generator's Signature: _____ Title: _____ Date: _____

RADIOACTIVE WASTE PROFILE RECORD

LOW-LEVEL RADIOACTIVE WASTE CERTIFICATION ATTACHMENT

This form is required only if the checkbox for Hazardous Waste on page one has been checked No. **Otherwise, complete the Hazardous Waste Certification Attachment instead of this attachment.**

EnergySolutions may waive the chemical laboratory analyses if the material is not amenable to chemical sampling and analysis (e.g., debris items including metal pieces, concrete, plastic, etc.). Justification for waiving the chemical analyses must be provided in Section B.5.

D. MINIMUM REQUIRED CHEMICAL ANALYSIS

The following parameters must be analyzed by a Utah or NELAC certified laboratory. Typical SW-846 analytical methods have been listed. Other approved methods are acceptable. Attach the most recent or applicable chemical analytical results representing the waste.

1. GENERAL CHEMICAL PARAMETERS

SW-846 Analytical Methods

PFLT:_____Pass / Fail **Method 9095** Not applicable for liquid radioactive waste streams.

2. 40 CFR 261.24 Table 1 – Contaminants of Toxicity Characteristic

Metals: Methods 6010 & *7470 ☐ TCLP (mg/L) or ☐ Total (mg/kg)

Arsenic_____	Chromium_____	Selenium_____
Barium_____	Lead_____	Silver_____
Cadmium_____	*Mercury_____	

Organics, Pesticides/Herbicides: Methods 8081/*8151 ☐ TCLP (mg/L) or ☐ Total (mg/kg)

Endrin_____	Toxaphene_____	Chlordane_____
Lindane_____	*2,4-D_____	Heptachlor_____
Methoxychlor_____	*2,4,5-TP Silvex_____	

Organics, Semi-Volatile: Method 8270 ☐ TCLP (mg/L) or ☐ Total (mg/kg)

o-Cresol_____	Hexachlorobenzene_____	Pentachlorophenol_____
m-Cresol_____	Hexachlorobutadiene_____	Pyridine_____
p-Cresol_____	Hexachloroethane_____	2,4,5-Trichlorophenol_____
Total Cresol_____	Nitrobenzene_____	2,4,6-Trichlorophenol_____
2,4-Dinitrotoluene_____		

Organics, Volatile: Method 8260 ☐ TCLP (mg/L) or ☐ Total (mg/kg)

Benzene_____	1,4-Dichlorobenzene_____	Methyl ethyl keytone_____
Carbon Tetrachloride_____	1,2-Dichloroethane_____	Tetrachloroethylene_____
Chlorobenzene_____	1,1-Dichloroethylene_____	Trichloroethylene_____
Chloroform_____	Vinyl Chloride_____	

3. Was the waste at the point of generation a RCRA hazardous waste per 40 CFR 261? Y ☐ N ☐

If Yes, list former hazardous waste codes and former underlying hazardous constituents. List worst-case concentrations for each hazardous constituent. If additional space is needed, provide an Attachment D.3 to this profile record formatted as below. Attach the most recent chemical analytical results demonstrating compliance with applicable treatment standards.

If No, indicate "N/A" in Section D.3 below.

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RADIOACTIVE WASTE PROFILE RECORD

D. 3.

Former EPA HW Codes or Underlying Hazardous Constituents	Treatment Standard (mg/kg unless noted as mg/L TCLP or Technology Code)	Worst Case Concentration (mg/kg unless noted as mg/L TCLP)

4. OTHER CHEMICAL CONSTITUENTS

List any other chemical constituents of concern (e.g., PCBs, chelating agents, etc.) and worst-case concentrations. If additional space is needed, provide an Attachment D.4 to this profile record formatted as below.

Other Chemical Constituents	Worst-Case Concentration (mg/kg unless noted as mg/L TCLP)	Other Hazardous Constituents	Worst-Case Concentration (mg/kg unless noted as mg/L TCLP)

5. LABORATORY CERTIFICATION

☐ **UTAH or NELAC CERTIFIED**
The Utah or NELAC certified laboratory holds a current certification for the applicable chemical test methods insofar as such official certifications are given. Please provide a copy of the laboratory's current certification letter for each parameter analyzed and each method used for chemical analyses required by this form.

☐ **OTHER LABORATORY CERTIFICATION** (Describe below)

_____

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6. CERTIFICATION

I certify that sample results representative of the waste described in this profile were or shall be obtained using state- and EPA-approved analytical methods. I also certify that where necessary representative samples were or shall be provided to EnergySolutions and to qualified laboratories for the analytical results reported herein. I further certify that the waste described in this record is not prohibited from land disposal in 40 CFR 268 (unless prior arrangements are made for treatment at EnergySolutions) and that all applicable treatment standards are clearly indicated on this form. I also certify that the information provided on this form is complete, true, and correct and is accurately supported and documented by any laboratory testing as required by EnergySolutions. I certify that the results of any said testing have been submitted to EnergySolutions. I certify that the waste does not contain any prohibited items listed in EnergySolutions' Radioactive Material License.

Generator's Signature: _____ Title:_____ Date:_____

Generator Name:_____ Waste Stream ID:_____

Revision #:_____ Revision Date:_____

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OVERWRITE THIS SECTION TO COMPLETE YOUR NARRATIVE

Items to include in this attachment as applicable:

- Process that generated the waste
- Waste material physical composition and characteristics
- Radiological and chemical characterization method
- Basis for determining manifested radionuclide concentrations
- Description and amounts of absorbents, if applicable
- Basis of non-hazardous or hazardous waste determinations
- Treatment processes, if applicable
- Product information or Material Safety Data Sheets associated with the waste as applicable
- Information requested in other sections of this form

For waste streams with SNM, please include the information requested in items 3a through 3d of the SNM Exemption Certification (form EC-0230-SNM) including:

- How the waste was generated
- Physical forms in the waste
- Uranium chemical composition (if applicable)
- How the waste was characterized
- The range of SNM concentrations
- Analytical results with error values
- Spatial distribution uniformity of SNM
- Determination of manifested concentrations

For waste streams containing PCBs regulated for disposal, please provide a description of the PCB waste categories listed on the PCB Waste Certification form (EC-98279)

For profiles containing large components (e.g., single items > 20,000 lbs), please provide the following information:

- Drawings illustrating dimension, weight, access ports to void spaces and lifting points
- Photographs of the object
- Radiological characterization and surveys including dose rates and surface contamination levels
- Packaging, rigging, loading and transportation plans

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