

Class 1 Permit Modification

Revise Permit to Correct References, Inconsistencies and Figures

**Waste Isolation Pilot Plant
Carlsbad, New Mexico**

WIPP HWFP #NM4890139088-TSDF

Table of Contents

Transmittal Letter	
Table of Contents	i
Acronyms and Abbreviations	ii
Overview of the Permit Modification Notification	1
Attachment A	A-1
Table 1. Table of Changes for the Class 1 Hazardous Waste Facility Permit Modification Notification	A-2
Item 1	A-5
Description	A-5
Basis	A-5
Discussion	A-5
Revised Permit Text	A-5
Attachment B	B-1
Revised Figures	

Acronyms and Abbreviations

CBFO	Carlsbad Field Office
CFR	Code of Federal Regulations
DOE	Department of Energy
HWFP	Hazardous Waste Facility Permit
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
PMN	Permit Modification Notification
RCRA	Resource Conservation and Recovery Act
TSDf	Treatment, Storage or Disposal Facility
WIPP	Waste Isolation Pilot Plant
WTS	Washington TRU Solutions LLC

Overview of the Permit Modification Notification

This document contains a Class 1 Permit Modification Notification (**PMN**) to the Hazardous Waste Facility Permit (**HWFP**) at the Waste Isolation Pilot Plant (**WIPP**), Permit Number NM4890139088-TSDF hereinafter referred to as the WIPP HWFP.

This PMN is being submitted by the U.S. Department of Energy (**DOE**), Carlsbad Field Office (**CBFO**) and Washington TRU Solutions LLC (**WTS**), collectively referred to as the Permittees, in accordance with the WIPP HWFP, Condition I.B.1 (20.4.1.900 New Mexico Administrative Code (**NMAC**) incorporating Title 40 of the Code of Federal Regulations (40 **CFR**) §270.42(a)). The PMN in this document is necessary for the following reasons:

- to resolve inconsistencies, incorrect references and correct various figures in the HWFP issued by the New Mexico Environment Department on November 16, 2006.

This change does not reduce the ability of the Permittees to provide continued protection to human health and the environment.

The modification to the WIPP HWFP and related supporting documents are provided in this PMN. The modification to the text of the WIPP HWFP has been identified using a double underline and revision bar in the right hand margin for added information, and a ~~strikeout~~ font for deleted information. All direct quotations are indicated by italicized text.

Attachment A

Description of the Class 1 Permit Modification Notification

Table 1. Table of Changes for the Class 1 Hazardous Waste Facility Permit Modification Notification

No.	Affected Permit Section	Item	Category
1	a. Module II.C.1.g	Revise reference	A.1
2	a. Attach B, TOC b. Attach B, Sect B-0 c. Attach B, Sect B-3c d. Attach B, Sect B-4a(6) e. Attach B, Sect B-5a f. Attach B, Sect B-5a(1) g. Attach B, Sect B-5b h. Attach B, Table B-5 i. Attach B, Figure B-1 j. Attach B, Figure B-1 k. Attach B, Figure B-2 l. Attach B, Figure B-3	Delete sections Revise section references Change “codes” to “numbers” Revise section reference Delete duplicated language Delete duplicated language Correct misspelling Delete language in “Rationale” column Change “codes” to “numbers” Add new text under “Acceptable Knowledge” Revise section reference Revise section reference	A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1
3	a. Attach B1, Sect B1-1a(1) b. Attach B1, Sect B1-1a(4)(ii) c. Attach B1, Sect B1-1b d. Attach B1, Sect B1-4	Revise section reference Revise section reference Change SPQAO to SPM Revise language to make requirements for VE and VET consistent	A.1 A.1 A.1 A.1
4	a. Attach B2, Sect B2-1a b. Attach B2, Sect B2-1b c. Attach B2, Sect B2-1b d. Attach B2, Figure B2-1 e. Attach B2, Figure B2-1	Revise equation numbers Delete “both the available and unavailable portions” Change “available” to “accessible” Change “Update WSPF” to “Generate WSPF” Change “available” to “accessible”	A.1 A.1 A.1 A.1 A.1
5	a. Attach B3, Sect B3-2 b. Attach B3, Sect B3-3 c. Attach B3, Sect B3-9 d. Attach B3, Sect B3-10 e. Attach B3, Sect B3-10b f. Attach B3, Sect B3-10b(3) g. Attach B3, Sect B-11a h. Attach B3, Sect B3-12b	Change SPQAO to SPM Change SPQAO to SPM Revise section reference and add the word “of” Delete the word “Procedures” Delete SPQAO Revise section reference Remove previously deleted requirement Change SPQAO to SPM	A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1

6	a. Attach B4, Sect B4-2 b. Attach B4, Sect B4-3e	Revise section reference Add "of" before "EPA F-listed"	A.1 A.1
7	a. Attach B5, Sect B5-2	Delete "and the site project QA officer"	A.1
8	a. Table B6-1, Item 30 b. Table B6-1, Item 32 c. Table B6-1, Item 40 d. Table B6-2, Item 75 e. Table B6-2, Item 121 f. Table B6-3, Item 155 g. Table B6-3, Item 161 h. Table B6-4, Item 182 i. Table B6-4, Item 220 j. Table B6-5, Item 247 k. Table B6-5, Item 253a l. Table B6-5, Item 266 m Table B6-5, Item 279	Change text to read "to resolve the assignment of hazardous waste numbers" Retain "analysts or the technical supervisor" Add reference at end "(B3-10(b)(1))" Revise reference from B1-2 to B-0b and add reference at end "Section B-3d(1)(a)" Revise reference to B1-6 Revise reference to B4-3e Retain "e" in reference Delete "Except for waste containers belonging to the LANL sealed source waste stream" Add space between "requiringsuccessful" Add "are" between "personnel" and "allowed" Remove row for item 253a Revise 2 nd and 3 rd sentences to be complete. Revise reference to B3-10b	A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1 A.1
9	a. Section B7, Footnote b. Section B7	Delete footnote Delete sentence referring to Figure B7-2	A.1 A.1
10	a. Attach D, Table D-1a	Change procedure number to WP05-WH1713	A.1
11	a. Attach F, Figure F-8b b. Attach F, Figure F-8c c. Attach F, Figure F8-d	Add evacuation route from manipulator room Removed reference to "Holding Area", removed airlock into TMF and moved fence line Add evacuation route for second floor	A.1 A.1 A.1

12	<p>a. Attach G, Figure G-2 b. Attach G, Figure G-3</p>	<p>Moved fence line Moved fence line, deleted shading on PAU airlocks, revised WHB transport routes and deleted listed square footage</p>	<p>A.1 A.1</p>
13	<p>a. Attach M1, Sect M1-1e(2) b. Attach M1, Figure M1-1b</p>	<p>Modify sentence as indicated: “At that time the Contact-Handled or Remote-Handled Packages will be moved into the WHB...” Added figure to show second floor</p>	<p>A.1 A.1</p>

Item 1

Description:

Revise the HWFP to correct references, remove inconsistencies and update figures.

Basis:

These changes are administrative and informational in nature and therefore is a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion:

On October 16, 2006, the NMED approved a modified permit as a result of a Class 3 modification request, negotiations with stakeholders, a public hearing and a final report from the Hearing Officer. This modified permit contains inconsistencies, incorrect references and incorrect figures which, if not corrected, will impact the procedures which must be revised by the generator/storage sites.

The Permittees are not requesting any change which would impact the Stipulated Agreement executed by the NMED, the Permittees and the stakeholders nor will any of these changes impact any Findings of Fact or Conclusions of Law issued by either the Hearing Officer or the NMED. These changes are simply administrative and informational in nature.

Revised Permit Text:

Item 1 Module II

Item 1a Module II.C.1.g

WIPP Waste Information System (WWIS) database - the Permittees shall provide the Secretary access to the WWIS database as necessary to determine compliance with the WAP. The WWIS shall meet all requirements presented in Section ~~B-4b(1)(i)~~ B-5a(1) of the WAP, Permit Attachment B, prior to acceptance of TRU mixed waste. The Secretary's access to the WWIS shall be direct, read-only (via modem or Internet) to all query and reporting functions of the Characterization, Certification, Shipping, and Inventory modules of the WWIS database.

Item 2 Attachment B

Item 2a Attachment B, Table of Contents

TABLE OF CONTENTS

List of Tables	B-iii
List of Figures	B-iii
B-0 Introduction and Attachment Highlights	B-1
B-0a <u>Waste Characterization</u>	B-3
B-0b <u>AK Sufficiency Determination</u>	B-5
B-0c <u>Waste Stream Profile Form Completion</u>	B-8

B-0d <u>Waste Confirmation</u>	B-9
B-1 <u>Identification of TRU Mixed Waste to be Managed at the WIPP Facility</u>	B-9
B-1a <u>Waste Stream Identification</u>	B-9
B-1b <u>Waste Summary Category Groups and Hazardous Waste Accepted at the WIPP Facility</u>	B-9
B-1c <u>Waste Prohibited at the WIPP Facility</u>	B-10
B-1d <u>Control of Waste Acceptance</u>	B-12
B-1e <u>Waste Generating Processes at the WIPP Facility</u>	B-12
B-2 <u>Waste Characterization Program Requirements and Waste Characterization Parameters</u>	B-12
B-3 <u>Generator Waste Characterization Methods</u>	B-14
B-3a <u>Sampling and Analytical Methods</u>	B-15
B-3a(1) <u>Headspace Gas Sampling and Analysis</u>	B-15
B-3a(1)(i) <u>Reduced Sampling Requirements for Homogeneous Solid or Soil/Gravel Waste Streams with no VOC-Related Hazardous Waste Codes</u>	B-16
B-3a(1)(ii) <u>Reduced Sampling Requirements for Thermally Treated Waste Streams</u>	B-16
B-3a(1)(iii) <u>Sampling Requirements for Waste Containers of LANL Sealed Sources Waste Streams</u>	B-16
B-3a(2) <u>Homogeneous and Soil/Gravel Waste Sampling and Analysis</u>	B-18
B-3a(3) <u>Laboratory Qualification</u>	B-18
B-3b <u>Acceptable Knowledge</u>	B-19
B-3c <u>Radiography and Visual Examination</u>	B-19
B-3d <u>Characterization Techniques and Frequency for Newly Generated and Retrievably Stored Waste</u>	B-20
B-3d(1) <u>Newly Generated Waste</u>	B-22
B-3d(1)(a) <u>Sampling of Newly Generated Homogeneous Solids and Soil/Gravel</u>	B-23
B-3d(1)(b) <u>Sampling of Newly Generated Soils/Gravels</u>	B-25
B-3d(2) <u>Retrievably Stored Waste</u>	B-25
B-4 <u>Data Verification and Quality Assurance</u>	B-26
B-4a <u>Data Generation and Project Level Verification Requirements</u>	B-27
B-4a(1) <u>Data Quality Objectives</u>	B-27
B-4a(2) <u>Quality Assurance Objectives</u>	B-28
B-4a(3) <u>Sample Control</u>	B-29
B-4a(4) <u>Data Generation</u>	B-30
B-4a(5) <u>Data Verification</u>	B-31
B-4a(6) <u>Data Transmittal</u>	B-31
B-4a(7) <u>Records Management</u>	B-31
B-5 <u>Permittee Level: Waste Screening and Verification of TRU Mixed Waste</u>	B-32
B-5a <u>Phase I Waste Stream Screening and Verification</u>	B-32
B-5a(1) <u>WWIS Description</u>	B-34
B-5a(2) <u>Examination of the Waste Stream Profile Form and Container Data Checks</u>	B-36
B-5a(3) <u>Permittees' Audit and Surveillance Program</u>	B-37
B-5b <u>Phase II Waste Shipment Screening and Verification</u>	B-38
B-5b(1) <u>Examination of the EPA Uniform Hazardous Waste Manifest and Associated Waste Tracking Information</u>	B-39

B-5b(2) <u>Examination of the Land Disposal Restriction (LDR) Notice</u>	B-41
B-5b(3) <u>Verification</u>	B-41
B-6 <u>Permittees' Waste Shipment Screening QA/QC</u>	B-42
B-7 <u>Records Management and Reporting</u>	B-42
B-4b(2)(vi)7a <u>General Requirements</u>	B-43
B-4b(2)(vii)7b <u>Records Storage</u>	B-43
B-7a <u>General Requirements</u>	B-44
B-7b <u>Records Storage</u>	B-44
B-8 <u>Reporting</u>	B-44
B-9 <u>List of References</u>	B-45

Item 2b Attachment B, Section B-0

B-0 Introduction and Attachment Highlights

This waste analysis plan (**WAP**) has been prepared for management, storage, or disposal activities to be conducted at the Waste Isolation Pilot Plant (**WIPP**) facility to meet requirements set forth in 20.4.1.500 NMAC (incorporating 40 CFR §264.13). Guidance in the most recent U.S. Environmental Protection Agency (**EPA**) manual on waste analysis has been incorporated into the preparation of this WAP (EPA, 1994). This WAP includes test methods, details of planned waste sampling and analysis for complying with the general waste analysis requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.13), a description of the waste shipment screening and verification process, and a description of the quality assurance (**QA**)/quality control (**QC**) program. Before the Permittees manage, store, or dispose transuranic (**TRU**) mixed waste from a generator/storage site (**site**), the Permittees shall require that site to implement the applicable requirements of this WAP.

TRU mixed waste that may be stored or disposed at WIPP are or were generated at DOE generator/storage sites by various specific processes and activities. Examples of the major types of operations that generate this waste include:

- Production of Nuclear Products—Production of nuclear products includes reactor operation, radionuclide separation/finishing, and weapons fabrication and manufacturing. The majority of the TRU mixed waste was generated by weapons fabrication and radionuclide separation/finishing processes. More specifically, wastes consist of residues from chemical processes, air and liquid filtration, casting, machining, cleaning, product quality sampling, analytical activities, and maintenance and refurbishment of equipment and facilities.
- Plutonium Recovery—Plutonium recovery wastes are residues from the recovery of plutonium-contaminated molds, metals, glass, plastics, rags, salts used in electrorefining, precipitates, firebrick, soot, and filters.
- Research and Development (**R&D**)—R&D projects include a variety of hot cell or glovebox activities that often simulate full-scale operations described above, producing similar TRU mixed wastes. Other types of R&D projects include

metallurgical research, actinide separations, process demonstrations, and chemical and physical properties determinations.

- Decontamination and Decommissioning—Facilities and equipment that are no longer needed or usable are decontaminated and decommissioned, resulting in TRU mixed wastes consisting of scrap materials, cleaning agents, tools, piping, filters, Plexiglas™, gloveboxes, concrete rubble, asphalt, cinder blocks, and other building materials. These materials are expected to be the largest category by volume of TRU mixed waste to be generated in the future.

TRU mixed waste contains both TRU radioactive and hazardous components, as defined in 20.4.1.800 NMAC (incorporating 40 CFR, §268.35(d)), and in the Federal Facility Compliance Act, Public Law 102- 386, Title 1, §3021(d). It is designated and separately packaged as either contact-handled (**CH**) or remote-handled (**RH**), based on the radiological dose rate at the surface of the waste container.

The hazardous components of the TRU mixed waste to be managed at the WIPP facility are designated in Table B-9. Some of the waste may also be identified by unique state hazardous waste codes or numbers. These wastes are acceptable at WIPP as long as the Treatment, Storage, and Disposal Facility Waste Acceptance Criteria (**TSDF-WAC**) in Module II are met. This WAP describes the measures that will be taken to ensure that the TRU mixed wastes received at the WIPP facility are within the scope of Table B-9 as established by 20.4.1.500 NMAC (incorporating 40 CFR §264), and that they comply with unit-specific requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.600), Miscellaneous Units.

Some TRU mixed waste is retrievably stored at the DOE generator/storage sites. Additional TRU mixed waste will be generated and packaged into containers at these generator/storage sites in the future. TRU mixed waste will be retrieved from storage areas at a DOE generator/storage site. Retrievably stored waste is defined as TRU mixed waste generated after 1970 and before the New Mexico Environment Department (**NMED**) notifies the Permittees, by approval of the final audit report, that the characterization requirements of the WAP at a generator/storage site have been implemented. Newly generated waste is defined as TRU mixed waste generated after NMED approves the final audit report for a generator/storage site. Acceptable knowledge (**AK**) information is assembled for both retrievably stored and newly generated waste. Waste characterization of retrievably stored TRU mixed waste will be performed on an ongoing basis, as the waste is retrieved. Waste characterization of newly generated TRU mixed waste is typically performed as it is generated, although some characterization occurs post-generation. Waste characterization requirements for retrievably stored and newly generated TRU mixed wastes differ, as discussed in Sections ~~B-3d(1)~~ and ~~B-3d(2)~~: B-3d(2) and B-3d(1).

Item 2c

Attachment B, Section B-3c

B-3c Radiography and Visual Examination

Radiography is a nondestructive qualitative and quantitative technique that involves X-ray scanning of waste containers to identify and verify waste container contents. Visual examination (VE) constitutes opening a container and physically examining its contents. Generator/storage sites shall perform radiography or VE on 100 percent of CH TRU mixed waste containers in waste streams except for those waste streams for which the Permittees approve a Scenario 1 or Scenario 2 Determination Request. No RH TRU mixed waste will be shipped to WIPP for storage or disposal without documentation of radiography or VE of 100 percent of the containers as specified in Permit Attachment B1. Radiography and/or visual examination will be used, when necessary, to examine a waste container to verify its physical form. These techniques can detect liquid wastes and containerized gases, which are prohibited for WIPP disposal. The prohibition of liquids and containerized gases prevents the shipment of corrosive, ignitable, or reactive wastes. Radiography and/or VE are also able to confirm that the physical form of the waste matches its waste stream description (i.e. Homogeneous Solids, Soil/Gravel, or Debris Waste [including uncategorized metals]). If the physical form does not match the waste stream description, the waste will be designated as another waste stream and assigned the preliminary hazardous waste codes ~~codes~~ **numbers** associated with that new waste stream assignment. That is, if radiography and/or VE indicates that the waste does not match the waste stream description arrived at by acceptable knowledge characterization, a non-conformance report will be completed and the inconsistency will be resolved as specified in Permit Attachment B4. The proper waste stream assignment will be determined (including preparation of a new WSPF), the correct hazardous waste codes will be assigned, and the resolution will be documented. Refer to Permit Attachment B4 for a discussion of acceptable knowledge and its verification process.

Item 2d Attachment B, Section B-4a(6)

B-4a(6) Data Transmittal

BDRs will include the information required by Section B3-10 and will be transmitted by hard copy or electronically (provided a hard copy is available on demand) from the data generation level to the project level.

The generator/storage site will transmit waste container information electronically via the WIPP Waste Information System (**WWIS**). Data will be entered into the WWIS in the exact format required by the database. Refer to Section B-5a(1) for WWIS reporting requirements and the *WIPP Waste Information System User's Manual for Use by Shippers/Generators* (DOE, 2001) for the WWIS data fields and format requirements.

Once a waste stream is fully characterized, the Site Project Manager will also submit to the Permittees a WSPF (Figure B-1) accompanied by the CIS for that waste stream which includes reconciliation with DQOs (Sections **B3-12b(1)** and **B3-12b(2)**). The WSPF, the CIS, and information from the WWIS will be used as the basis for acceptance of waste characterization information on TRU mixed wastes to be disposed of at the WIPP.

Item 2e Attachment B, Section B-5a

If discrepancies regarding hazardous waste number assignment or Waste Matrix Code designation arise as a result of the Phase I review, the generator/storage sites will be contacted

by the Permittees and required to provide the necessary additional information to resolve the discrepancy before that waste stream is approved for disposal at the WIPP facility. If the discrepancy is not resolved, the waste stream will not be approved. The Permittees will notify NMED in writing of any discrepancies identified during WSPF review and the resulting discrepancy resolution prior to waste shipment. The Permittees will not manage, store, or dispose the waste stream until this discrepancy is resolved in accordance with this WAP.

~~If discrepancies regarding hazardous waste number assignment or Waste Matrix Code designation arise as a result of the Phase I review, the generator/storage sites will be contacted by the Permittees and required to provide the necessary additional information to resolve the discrepancy before that waste stream is approved for disposal at the WIPP facility. If the discrepancy is not resolved, the waste stream will not be approved.~~

Item 2f

Attachment B, Section B-5a(2)

B-5a(2) Examination of the Waste Stream Profile Form and Container Data Checks

The Permittees will be responsible for the verification of completeness and accuracy of the Waste Stream Profile Form (Section B3-12b(1)). Figure B-2 includes the waste characterization and Permittees' waste stream approval process. The assignment of the waste stream description, Waste Matrix Code Group, and Summary Category Groups; the results of waste analyses, as applicable; the acceptable knowledge summary documentation; the methods used for characterization; the Carlsbad Field Office (**CBFO**) certification, and appropriate designation of EPA hazardous waste number(s) will be examined. If the WSPF is inaccurate, efforts will be made to resolve discrepancies by contacting the generator/storage site in order for the waste stream to be eligible for shipment to the WIPP facility. If discrepancies in the waste stream are detected at the generator/storage site, the generator/storage site will implement a non-conformance program to identify, document, and report discrepancies (Permit Attachment B3).

The WSPF shall pass all verification checks by the Permittees in order for the waste stream to be approved for shipment to the WIPP facility. The WSPF check against waste container data will occur during the initial WSPF approval process (Section B-5a).

The EPA hazardous waste numbers for the wastes that appear on the Waste Stream Profile Form will be compared to those in Table B-9 to ensure that only approved wastes are accepted for management, storage, or disposal at WIPP. Some of the waste may also be identified by unique state hazardous waste codes or numbers. These wastes are acceptable at WIPP as long as the TSDF-WAC are met. The CIS will be reviewed by the Permittees to verify that the waste has been classified correctly with respect to the assigned EPA hazardous waste numbers. Any analytical method used will be compared to those listed in Tables B-2, B-3, and B-4 to ensure that only approved analytical methods were used for analysis of the waste. The Permittees will verify that the applicable requirements of the TSDF-WAC have been met by the generator/storage site.

~~The EPA hazardous waste numbers for the wastes that appear on the Waste Stream Profile Form will be compared to those in the WIPP Hazardous Waste Permit Application Part A, Permit Attachment O, to ensure that only approved wastes are accepted for storage or disposal at WIPP. Some of the waste may also be identified by unique state hazardous waste numbers. These wastes are acceptable at WIPP as long as the TSDF-WAC are met. The CIS will be reviewed by the Permittees to verify that the waste has been classified correctly with respect to~~

~~the assigned EPA hazardous waste numbers. The Permittees will verify that the applicable requirements of the TSDF-WAC compliance has have been met by the generator/storage site.~~

Item 2g Attachment B, Section B-5b

B-5b Phase II Waste Shipment Screening and Verification

As presented in Figure B-3, Phase II of the waste shipment screening and verification process begins with confirmation of the waste as required by Permit Attachment B7 after waste shipments are configured. After the waste shipment has arrived, the Permittees will screen the shipments to determine the completeness and accuracy of the EPA Hazardous Waste Manifest and the land disposal restriction notice completeness. The Permittees will verify there are no waste shipment irregularities and the waste containers are in good condition. Only those waste containers that are from shipments that have been confirmed as required by Permit Attachment B7 and that pass all Phase II waste screening and verification determinations will be emplaced at WIPP. For each container shipped, the Permittees shall ensure that the generator/storage sites provide the following information:

Item 2h Attachment B. Table B-5

Waste Matrix Code Summary Categories	Waste Matrix Code Groups	Characterization Parameter	Method	Rationale
S5000–Debris Waste	<ul style="list-style-type: none"> • Uncategorized metal (metal waste other than lead/cadmium) • Lead/cadmium waste • Inorganic nonmetal waste • Combustible waste • Graphite waste • Heterogeneous waste • Composite filter waste 	Physical waste form	Acceptable knowledge, radiography, and/or visual examination	<ul style="list-style-type: none"> • Determine waste matrix • Demonstrate compliance with waste acceptance (e.g., no free liquids, no incompatible wastes, no compressed gases)
		Hazardous constituents •Characteristic •Listed	Statistical gas sampling and analysis; ^a (see Table B-2)	<ul style="list-style-type: none"> • Resolve the assignment of EPA hazardous waste numbers
		Hazardous constituents •Characteristic	Acceptable knowledge	<ul style="list-style-type: none"> • Determine characteristic metals and organics • Determine total quantity of metals, VOCs, and semi-VOCs

Item 2i Attachment B, Figure B-1

Changed “List Applicable Hazardous Waste Codes” to “List Applicable Hazardous Waste Numbers”

A revised Figure B-1 is attached.

Item 2j Attachment B, Figure B-1

Added Line under “Acceptable Knowledge Information” to read “Estimated Material Parameter Weights”

A revised Figure B-1 is attached.

Item 2k Attachment B, Figure B-2

Revise reference in footnotes 1 and 3 to read (B3-12(b)(2))

A revised Figure B-2 is attached.

Item 2I Attachment B, Figure B-3

Revise reference to read "Phase I Section B-5b"

A revised Figure B-3 is attached.

Item 3 Attachment B1

Item 3a Attachment B1, Section B1-1a(1)

B1-1a(1) General Requirements

The determination of packaging configuration consists of identifying the number of confinement layers and the identification of rigid poly liners when present. Generator/storage sites shall use either the default conditions specified in Tables B1-7 through B1-40⁹ for retrievably stored waste or the data documented during packaging, repackaging, and/or venting (Section B1-1a[4][ii]) for determining the appropriate DAC for each container from which a headspace gas sample is collected. These drum age criteria are to ensure that the container contents have reached 90 percent of steady state concentration within each layer of confinement (Lockheed, 1995; BWXT, 2000). The following information must be reported in the headspace gas sampling documents for each container from which a headspace gas sample is collected:

- sampling scenario from Table B1-5 and associated information from Tables B1-6 and/or Table B1-7;
- the packaging configuration from Table B1-8 and associated information from Tables B1-9 or B1-10, including the diameter of the rigid liner vent hole, the number of inner bags, the number of liner bags, the presence/absence of drum liner, and the filter hydrogen diffusivity,
- the permit-required equilibrium time,
- the drum age,
- for supercompacted waste, both
 - the absence of rigid liners in the compacted 55-gallon drums which have not been headspace gas sampled in accordance with this permit prior to compaction, and
 - the absence of layers of confinement must be documented in the WWIS if Packaging Configuration Group 7 is used.

Item 3b Attachment B1, Section B1-1a(4)(ii)

B1-1a(4)(ii) Sampling Through the Drum Lid By Drum Lid Punching

Sampling through the drum lid at the time of drum punching or thereafter may be performed as an alternative to sampling through the drum's filter if an airtight seal can be maintained. To sample the drum headspace-gas through the drum lid at the time of drum punching or thereafter, the lid shall be breached using an appropriate punch. The punch shall form an airtight seal between the drum lid and the manifold or direct canister sampling equipment. To assure that the sample collected is representative, all of the general method requirements, sampling apparatus requirements, and QC requirements specified in EPA's Compendium Method TO-14 (EPA 1988) as appropriate, shall be met in addition to the following requirements:

- The seal between the drum lid and sampling head shall be designed to minimize intrusion of ambient air.
- All components of the sampling system that come into contact with sample gases shall be purged with humidified zero air, nitrogen, or helium prior to sample collection.
- Equipment blanks and field reference standards shall be collected through all the components of the punch that contact the headspace-gas sample.
- Pressure shall be applied to the punch until the drum lid has been breached.
- Provisions shall be made to relieve excessive drum pressure increases during drum-punch operations; potential pressure increases may occur during sealing of the drum punch to the drum lid.
- The lid of the drum's 90-mil rigid poly liner shall contain a hole for venting to the drum headspace. A representative sample cannot be collected from the drum headspace until the 90-mil rigid poly liner has been vented. If the DAC for Scenario 1 is met, a sample may be collected from inside the 90-mil rigid poly liner. If headspace-gas samples are collected from the drum headspace prior to venting the 90-mil rigid poly liner, the sample is not acceptable and a nonconformance report shall be prepared, submitted, and resolved. Nonconformance procedures are outlined in Permit Attachment B3.
- During sampling, the drum's filter, if present, shall be sealed to prevent outside air from entering the drum.
- While sampling through the drum lid using manifold sampling, a flow-indicating device or pressure regulator to verify flow of gases shall be pneumatically connected to the drum punch and operated in the same manner as the flow-indicating device described above in Section ~~B1-1a(4)~~ B1-1a(2).

Item 3c Attachment B1, Section B1-1b

B1-1b Quality Control

For manifold and direct canister sampling systems, field QC samples shall be collected on a per sampling batch basis. A sampling batch is a suite of samples collected consecutively using the

same sampling equipment within a specific time period. A sampling batch can be up to 20 samples (excluding QC samples), all of which shall be collected within 14 days of the first sample in the batch. For on-line integrated sampling/analysis systems, QC samples shall be collected and analyzed on a per on-line batch basis. Holding temperatures and container requirements for gas sample containers are provided in Table B1-1. An on-line batch is the number of headspace-gas samples collected within a 12-hour period using the same on-line integrated analysis system. The analytical batch requirements are specified by the analytical method being used in the on-line system. Table B1-2 provides a summary of field QC sample collection requirements. Table B1-3 provides a summary of QC sample acceptance criteria.

For on-line integrated sampling analysis systems, the on-line batch QC samples serve as combined sampling batch/analytical batch QC samples as follows:

- The on-line blank replaces the equipment blank and laboratory blank
- The on-line control sample replaces the field reference standard and laboratory control sample
- The on-line duplicate replaces the field duplicate and laboratory duplicate

The acceptance criteria for on-line batch QC samples are the same as for the sampling batch and analytical batch QC samples they replace. Acceptance criteria are shown in Table B1-3. A separate field blank shall still be collected and analyzed for each on-line batch. However, if the results of a field blank collected through the sampling manifold meets the acceptance criterion, a separate on-line blank need not be collected and analyzed.

The Permittees shall require the site project manager ~~Quality Assurance (QA) officer~~ to monitor and document field QC sample results and fill out a nonconformance report if acceptance or frequency criteria are not met. The Permittees shall require the site project manager to ensure appropriate corrective action is taken if acceptance criteria are not met.

Item 3d Attachment B1, Section B1-4

B1-4 Visual Examination

In lieu of radiography, the waste container contents may be verified directly by visual examination of the waste container contents. Visual examination may be performed on waste containers to verify to verify that the container is properly included in the appropriate waste stream.

Visual examination shall be conducted to describe all contents of a waste container, clearly identifying all discernible waste items, residual materials, packaging materials, or waste material parameters. All visual examination activities shall be documented on video/audio media, or alternatively, by using a second operator to provide additional verification by reviewing the contents of the waste container to ensure correct reporting. The results of all visual examination shall be documented on visual examination data forms.

Visual examination recorded on video/audio media shall meet the following minimum requirements:

- The video/audio media shall record the waste packaging event for the container such that all waste items placed into the container are recorded in sufficient

detail and shall contain an inventory of waste items in sufficient detail that another trained visual examination expert can identify the associated waste material parameters that another trained visual examination expert can determine what the waste items are and their associated waste material parameter.

- The video/audio media shall capture the waste container identification number.
- The personnel loading the waste container shall be identified on the video/audio media or on packaging records traceable to the loading of the waste container.
- The date of loading of the waste container will be recorded on the video/audio media or on packaging records traceable to the loading of the waste container.

Visual examination performed using two generator site personnel shall meet the following minimum requirements:

- At least two generator site personnel shall approve the data forms or packaging logs attesting to the contents of the waste container.
- The data forms or packaging logs shall contain an inventory of waste items in sufficient detail that another trained visual examination expert can identify the associated waste material parameters.
- The waste container identification number shall be recorded on the data forms or packaging logs.

Item 4 Attachment B2

Item 4a Attachment B2, Section B2-1a

All equations need be re-numbered beginning with Equation B2-5 which becomes B2-1, B2-6 becomes B2-2 and so on throughout this Attachment.

Item 4b Attachment B2, Section B2-1b

The generator/storage site will also randomly select the calculated number of sample locations from the waste stream as a whole, ~~both the available and unavailable portions~~. A minimum of ten randomly selected sample locations will be selected from the waste stream as a whole. As those randomly selected locations (e.g., buried or newly generated waste containers) become available for sampling, samples will be obtained and analyzed.

Item 4c Attachment B2, Section B2-1b

The generator/storage site will also randomly select the calculated number of sample locations from the waste stream as a whole, ~~both the available and unavailable portions~~. A minimum of ten randomly selected sample locations will be selected from the waste stream as a whole. As those randomly selected locations (e.g., buried or newly generated waste containers) become available accessible for sampling, samples will be obtained and analyzed.

Item 4d Attachment B2, Figure B2-1

Change box which reads “Update WSPF” to read “Generate WSPF”
A revised Figure B2-1 is attached.

Item 4e Attachment B2, Figure B2-1

Change footnote language to delete “available” and insert “accessible”
A revised Figure B2-1 is attached.

Item 5 Attachment B3

Item 5a Attachment B3, Section B3-2

Completeness

Sampling completeness shall be expressed as the number of valid samples collected as a percent of the total number of samples collected for each waste stream. A valid sample is defined as a sample collected in accordance with approved sampling methods and the container was properly prepared for sampling (e.g., the polyliner was vented to the container headspace). The Permittees shall require participating sampling facilities to achieve a minimum 90 percent completeness. The amount and type of data that may be lost during the headspace-gas sampling operation cannot be predicted in advance. The Permittees shall require the Site Project Manager ~~Quality Assurance (QA) Officer~~ to evaluate the importance of any lost or contaminated headspace-gas samples and take corrective action as appropriate.

Item 5b Attachment B3, Section B3-3

Precision

Sampling precision must be determined by collecting and sampling field duplicates (e.g., co-located cores or co-located samples as described in Permit Attachment B1-2b(1)) once per sampling batch or once per week during sampling operations, whichever is more frequent. A sampling batch is a suite of homogeneous solids and soil/gravel samples collected consecutively using the same sampling equipment within a specific time period. A sampling batch can be up to 20 samples (excluding field QC samples), all of which must be collected within 14 days of the first sample in the batch. The Permittees shall require the site Project Manager ~~QA Officer~~ to calculate and report the RPD between co-located core/samples.

Item 5c Attachment B3, Section B3-9

- Comparability - Data are considered comparable when one set of data can be compared to another set of data. Comparability is ensured through sites meeting the training requirements and complying with the minimum standards outlined for procedures that are used to implement the acceptable knowledge process. All sites must assign hazardous waste numbers in accordance with Permit

Attachment B4-4 B3-3b and provide this information regarding its waste to other sites who store or generate a similar waste stream.

- Representativeness - Representativeness expresses the degree to which sample data accurately and precisely represent characteristics of a population. Representativeness is a qualitative parameter that will be satisfied by ensuring that the process of obtaining, evaluating, and documenting acceptable knowledge information is performed in accordance with the minimum standards established in Permit Attachment B4. Sites also must assess and document the limitations of the acceptable knowledge information used to assign hazardous waste numbers (e.g., purpose and scope of information, date of publication, type and extent to which waste parameters are addressed).

The Permittees shall require each generator/storage site to comply with the nonconformance notification and reporting requirements of Section B3-13 if the results of sampling and analysis specified in Permit Attachment B are inconsistent with acceptable knowledge documentation.

Item 5d Attachment B3, Section B3-10

~~Procedures~~ Procedures shall be developed for the review, validation, and verification of data at the data generation level; the validation and verification of data at the project level; and the verification of data at the Permittee level. Data review determines if raw data have been properly collected and ensures raw data are properly reduced. Data validation verifies that the data reported satisfy the requirements of this WAP and is accompanied by signature release. Data verification authenticates that data as presented represent the sampling and analysis activities as performed and have been subject to the appropriate levels of data review. The requirements presented in this section ensure that WAP records furnish documentary evidence of quality.

Item 5e Attachment B3, Section B3-10b

The Site Project Manager ~~and Site Project QA Officer~~ shall ensure that a repeat of the data generation level review, validation, and verification is performed on the data for a minimum of one randomly chosen waste container quarterly (every three months). This exercise will document that the data generation level review, validation, and verification is being performed according to implementing procedures.

Item 5f Attachment B3, Section B3-10b(3)

In the event the Permittees request detailed information on a waste stream, the Site Project Manager will provide a Waste Stream Characterization Package. The Site Project Manager must ensure that the Waste Stream Characterization Package (Section B3-12b(23)) will support waste characterization determinations.

Item 5g Attachment B3, Section B3-11a

The requirement to determine “potential flammability of TRU mixed waste headspace gases” was deleted as a requirement in Table B-5. This requirement was inadvertently left in Section B3-11a. This modification makes B3-11a consistent with Table B-5.

For each waste stream characterized, the Permittees shall require each Site Project Manager to determine if sufficient data have been collected to determine the following WAP-required waste parameters, as applicable:

- Waste matrix code
- Waste material parameter weights
- If each waste container of waste contains TRU radioactive waste
- Mean concentrations, UCL₉₀ for the mean concentrations, standard deviations, and the number of samples collected for each VOC in the headspace gas of waste containers in the waste stream
- ~~The potential flammability of TRU waste headspace gases~~

Item 5h Attachment B3, Section B3-12b

The site project office shall prepare a WSPF for each waste stream certified for shipment to WIPP based on information obtained from acceptable knowledge and Batch Data Reports, if applicable. In addition, the site project office must ensure that the Characterization Information Summary and the Waste Stream Characterization Package (when requested by the Permittees) are prepared as appropriate. The Site Project ~~Manager~~ ~~QA Officer~~ must also verify these reports are consistent with information found in analytical batch reports. Summarized testing, sampling, and analytical data are included in the Characterization Information Summary. The contents of the WSPF, Characterization Information Summary, and Waste Stream Characterization Package are discussed in the following sections.

Item 6 Attachment B4

Item 6a Attachment B4, Section B4-2

The Permittees shall obtain from each Department of Energy (**DOE**) TRU mixed waste generator/storage site (**site**) a logical sequence of acceptable knowledge information that progresses from general facility information (TRU Mixed Waste Management Program Information) to more detailed waste-specific information (TRU Mixed Waste Stream Information). Traceability of acceptable knowledge information for a selected container in the audited Waste Summary Category Group(s) will be examined during the Permittees' audit of a site (Section ~~B4-3f~~ **B4-3g**). The consistent presentation of acceptable knowledge documentation among sites in auditable records¹ will allow the Permittees to verify the completeness and adequacy of acceptable knowledge for TRU mixed waste characterization during the audit process. The

Permittees shall implement the acceptable knowledge process as specified in this Permit to characterize TRU mixed wastes and obtain sufficient waste characterization data to demonstrate compliance with the Permit. The New Mexico Environment Department (**NMED**) may independently validate the implementation of and compliance with applicable provisions of the WAP at each generator/storage site by participation in the Permittees Audit and Surveillance Program (Permit Attachment B6). The Permittees shall provide NMED with current audit schedules and notify NMED in writing no later than thirty (30) calendar days prior to each audit. NMED may choose to accompany the Permittees on any audit of the WAP implementation.

Item 6b Attachment B4, Section B4-3e

The Permittees shall require sites to use acceptable knowledge to identify spent solvents associated with each TRU mixed waste stream or waste stream lot. Headspace-gas data will be used to resolve the assignment of EPA F-listed hazardous waste numbers to debris waste streams when waste streams do not have an AK Sufficiency Determination approved by the Permittees. In this case, sites shall assign F-listed hazardous waste numbers (20.4.1.200 NMAC, incorporating 40 CFR §261.31) by evaluating the average concentrations of each VOC detected in container headspace gas for each waste stream or waste stream lot using the upper 90 percent confidence limit (**UCL₉₀**).

Item 7 Attachment B5

Item 7a Attachment B5, Section B5-2

The Permittees shall ensure that QAPjPs include a detailed description of the reporting and approval requirements for changes to approved QA documents and SOPs, including procedures for implementing changes to these documents. All members of the site project staff are responsible for reporting any obsolete or superseded information to the site project manager. All site-specific changes shall be evaluated and approved by the site project manager ~~and the site project QA officer~~ before implementation. The site project manager shall notify the appropriate personnel and the affected documents shall be revised as necessary.

Item 8 Attachment B6

Item 8a Attachment B6, Item 30

Are procedures in place to ensure that the following Data Quality Objectives are met:

- Use Acceptable Knowledge to delineate TRU mixed waste streams, assess whether TRU mixed wastes comply with the applicable requirements of the TSDF-WAC, assess whether TRU mixed wastes exhibit a hazardous characteristic, assess whether TRU mixed wastes are listed and to estimate waste material parameter weights
- Use Headspace gas sampling and analysis, as necessary, to identify and quantify VOCs in waste containers to resolve the assignment of EPA ~~hazardous~~ hazardous waste numbers

- Perform totals analyses of homogeneous solids and soils/gravel wastes to establish if the waste is hazardous based on the toxicity characteristics levels in 20.4.1.200 NMAC through a comparison of the upper confidence limits (UCL₉₀) of the mean concentrations to resolve the assignment of hazardous waste number S assignment

Item 8b Attachment B6, Item 32

With respect to data generation, are procedures in place to ensure that the generator/storage site's waste characterization program meets the following general requirements:

- Analytical data packages and batch data reports must be reported accurately in a pre-approved format, must be maintained in permanent files, and must be traceable?
- All data must receive a technical review by another qualified analysts or the technical supervisor, and the laboratory QA officer?

Item 8c Attachment B6, Item 40

Add reference at bottom of Item 30 "(Section B3-10(b)(1))"

Item 8d Attachment B6, Item 75

Are procedures documented that adequately ensure that when a Determination Request has not been approved, sampling and analysis of newly generated homogeneous solid and soil/gravel waste streams shall be conducted in accordance with the requirements specified in Attachment B1, Section B-0b B1-2.

(Section B-3d(1)(a))

Item 8e Attachment B6, Item 121

Are procedures in place to ensure that appropriate blank samples are included with each shipment container containing VOC samples? (Section B1-5 B1-6)

Item 8f Attachment B6, Item 155

Does the generator site have procedures for reevaluating acceptable knowledge if the results of the waste confirmation indicate that the waste to be shipped does not match the approved waste stream or if the data from radiography or visual examination for waste streams without an AK Sufficiency Determination exhibit this discrepancy? Does this procedure describe how the waste is reassigned, acceptable knowledge reevaluation, and appropriate hazardous waste codes are assigned?

(Section B4-3e B4-3d)

Item 8g Attachment B6, Item 161

Do site procedures ensure that headspace gas and solid/soil analytical data are used to resolve AK assignments for hazardous waste, as necessary? If a constituent is detected in headspace gas that the site believes isn't from the waste process, the site must provide documentation to support any determination that organic constituents are associated with packaging materials, radiolysis, or other uses not consistent with solvent use. If the source of the detected headspace gas solvents cannot be identified, the appropriate F listing will be assigned. If a constituent in a listed waste is present in solid/soil analytical results, the appropriate listed waste shall be added to the waste stream. F-listed waste assigned by acceptable knowledge shall not be removed based on confirmatory headspace gas or solids analysis. In the case of totals/TCLP analysis, do procedures reflect the allowance for concentration assessments, wherein sites may add or remove total/TCLP and non-toxic F003 constituents found in headspace and solid/soil analyses? (Section B4-3e)

Item 8h Attachment B6, Item 182

Are procedures in place to ensure that randomly selected retrievably stored and newly generated waste containers ~~except for waste containers belonging to LANL sealed sources waste streams~~ will undergo headspace gas sampling and analysis as required to augment AK? (Section B-3a)

Item 8i Attachment B6, Item 220

Added space between "requiringsuccessful".

Item 8j Attachment B6, Item 247

Do site procedures ensure that only trained personnel are allowed to operate radiography equipment? (Section B1-3)

Item 8k Attachment B6, Item 253a

253a					
-------------	--	--	--	--	--

Item 8l Attachment B6, Item 266

Are independent replicate scans performed on one waste container per day or per testing batch of 20 samples , which ever is less frequent? Are independent observations of one scan (not the replicate scan) performed once per day or per testing batch , which ever is less frequent, by a qualified radiography operator (other than the individual who performed the first examination)?

Item 8m Attachment B6, Item 279

Do procedures ensure that all applicable project-level signatory releases and DQO's (Section B3-11) as specified in the WAP are performed. (Section B3-10b)

Item 9 Attachment B7

Item 9a Section B7, Footnote

~~† "Auditable records" mean those records which allow the Permittees to conduct a systematic assessment, analysis, and evaluation of the Permittees compliance with the WAP and this Permit.~~

Item 9b Section B7

~~Figure B7-2 presents the waste examination process at the generator /storage sites (or off-site facilities):~~

Item 10 Attachment D

Item 10a Attachment D, Table D-1a

Facility Cask	Waste Operations	Pre- evolution ^{c,d,e,f} See list 1	WP05- WH1753 <u>1713</u> PM041201 (Annual) PM041203 (Annual)	Yes	NA	Pre-evolution Checks and Operating Instructions. Mechanical Inspection for Wear and Lubrication. Electrical PM.
------------------	---------------------	--	--	-----	----	---

Item 11 Attachment F

Item 11a Attachment F, Figure F-8b

Added evacuation route from manipulator room.
A revised Figure F-8b is attached.

Item 11b Attachment F, Figure F-8c

Removed reference to "Holding Area", removed airlock into TMF and moved fence line.
A revised Figure F-8c is attached.

Item 11c Attachment F, Figure F-8d

Added evacuation route for second floor.
A revised Figure F-8d is attached.

Item 12 Attachment G

Item 12a Attachment G, Figure G-2

Moved fence line.
A revised Figure G-2 is attached.

Item 12b Attachment G, Figure G-3

Moved fence line, deleted shading on PAU airlocks, revised WHB transport routes and deleted listed square footage.
A revised Figure G-3 is attached.

Item 13 Attachment M1

Item 13a Attachment M1, Section M1-1e(2)

~~At that time the Contact-Handled or Remote-Handled Package~~ will be moved into the WHB and the TRU mixed waste containers removed and placed in one of the permitted storage areas in the WHB Unit. If there is no additional space within the permitted storage areas of the WHB Unit, the DOE will discuss an emergency permit with the NMED for the purposes of storing the waste elsewhere in the WHB Unit.

Item 13b Attachment M1, Figure M1-1b

Added figure to show second floor.
Figure M1-1b is attached.

Attachment B
Revised Figures

WASTE STREAM PROFILE FORM

Waste Stream Profile Number: _____
 Generator Site Name: _____ Technical Contract: _____
 Generator Site EPA ID: _____ Technical Contact Phone Number: _____
 Date of audit report approval by NMED: _____
 Title, version number and date of documents used for WAP Certification: _____

Did your facility generate this waste? Yes No
 If no, provide the name and EPA ID of the original generator: _____

WIPP ID: _____ Summary Category Group: _____
 Waste Stream Name: _____
 Description from the WTWBIR: _____

Defense Waste: Yes No Check one: CH RH
 Number of SWBs _____ Number of Drums _____ Number of Canisters _____
 Batch Data Report numbers supporting this waste stream characterization: _____
 List applicable EPA Hazardous Waste Numbers ⁽²⁾ _____
 Applicable TRUCON Content Numbers: _____

Acceptable Knowledge Information⁽¹⁾

(For the following, enter supporting documentation used (i.e., references and dates))

Required Program Information

- Map of site: _____
- Facility mission description: _____
- Description of operations that generate waste: _____
- _____
- Waste identification/categorization schemes: _____
- Types and quantities of waste generated: _____
- Correlation of waste streams generated from the same building and process, as applicable: _____
- _____
- Waste certification procedures: _____

Required Waste Stream Information

- Area(s) and building(s) from which waste stream was generated: _____
- Waste stream volume and time period of generation: _____
- Waste generating process description for each building: _____
- Waste process flow diagrams: _____
- _____
- Material inputs or other information identifying chemical/radionuclide content and physical waste form: _____
- _____
- Waste material parameter estimates per unit of waste: _____
- Which Defense Activity generated the waste: (check one)
 - Weapons activities including defense inertial confinement fusion
 - Naval reactors development
 - Verification and control technology
 - Defense research and development
 - Defense nuclear waste and material by products management
 - Defense nuclear material production
 - Defense nuclear waste and materials security and safeguards and security investigations

WASTE STREAM PROFILE FORM

Supplemental Documentation

Process design documents: _____

Standard operating procedures: _____

Safety Analysis Reports: _____

Waste packaging logs: _____

Test plans/research project reports: _____

Site data bases: _____

Information from site personnel: _____

Standard industry documents: _____

Previous analytical data: _____

Material safety data sheets: _____

Sampling and analysis data from comparable/surrogate waste: _____

Laboratory notebooks: _____

Confirmation Information⁽²⁾

{For the following, when applicable, enter procedure title(s), number(s), and date(s)}

Radiography: _____

Visual Examination: _____

Waste Stream Profile Form Certification

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature of Site Project Manager_____
Printed Name and Title_____
DateNOTE:

- (1) Use back of sheet or continuation sheets, if required.
- (2) If, radiography, visual examination were used to confirm EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination.

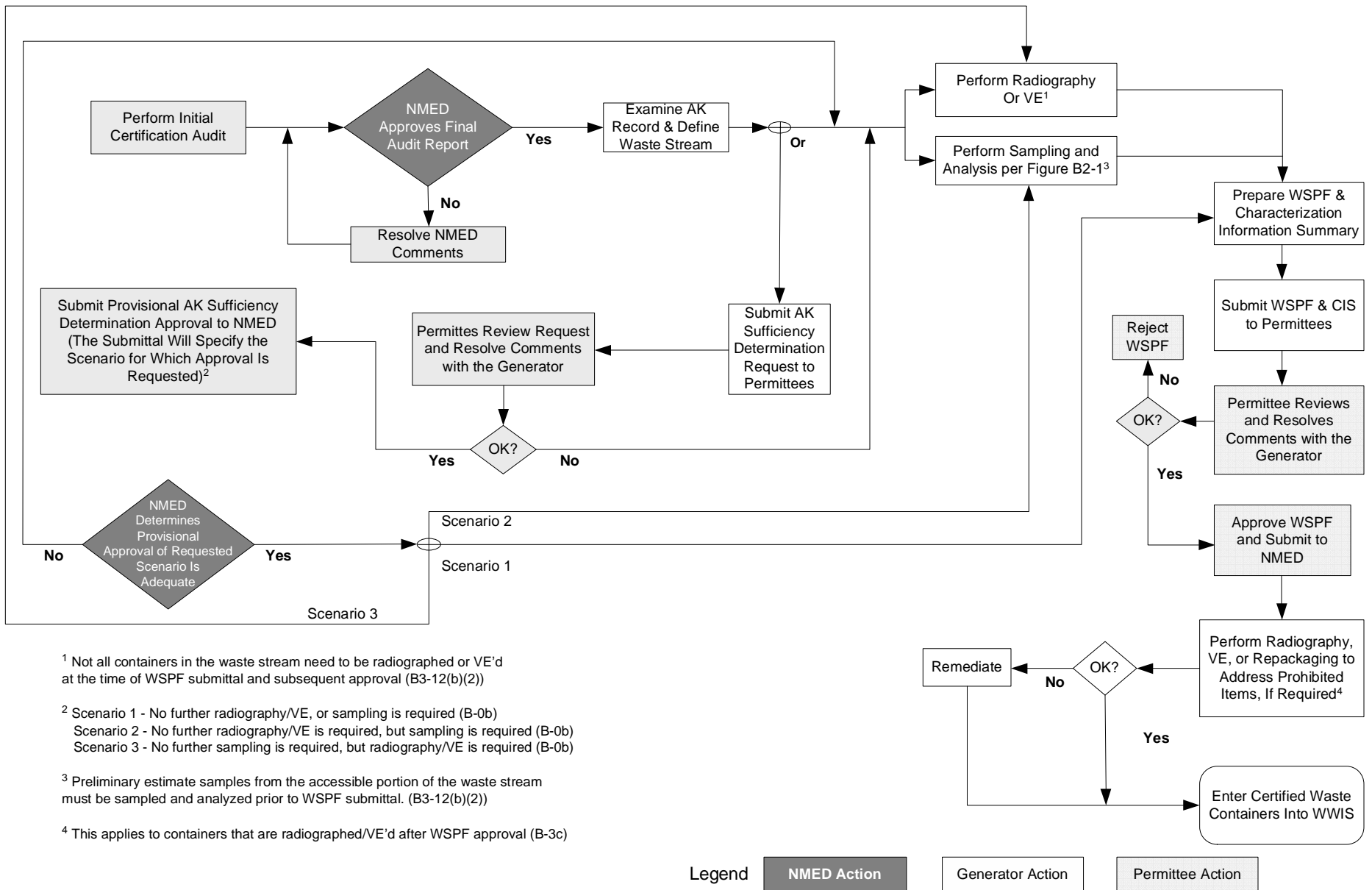


Figure B-2
 WASTE CHARACTERIZATION PROCESS

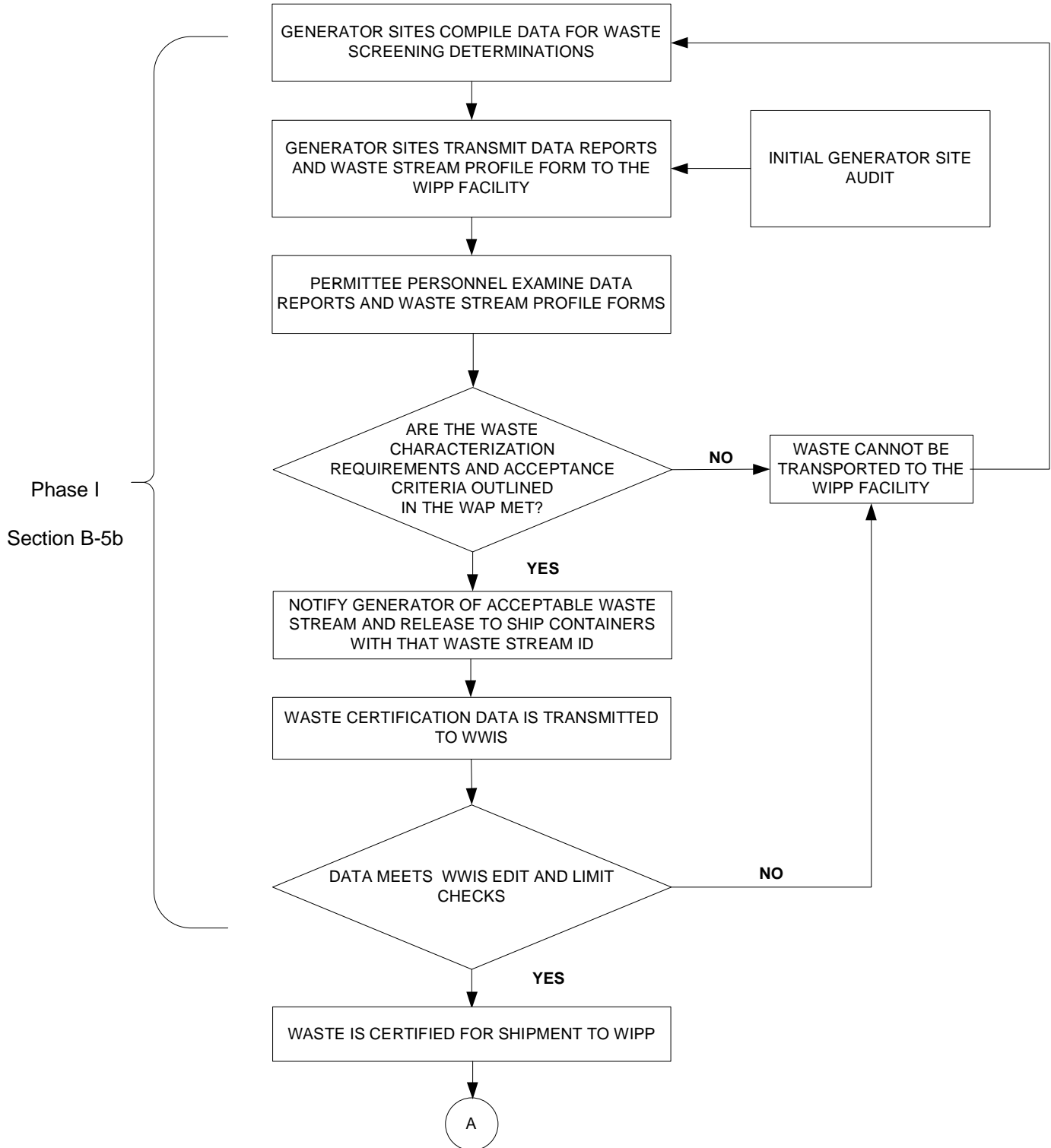


Figure B-3
TRU Mixed Waste Screening and Verification

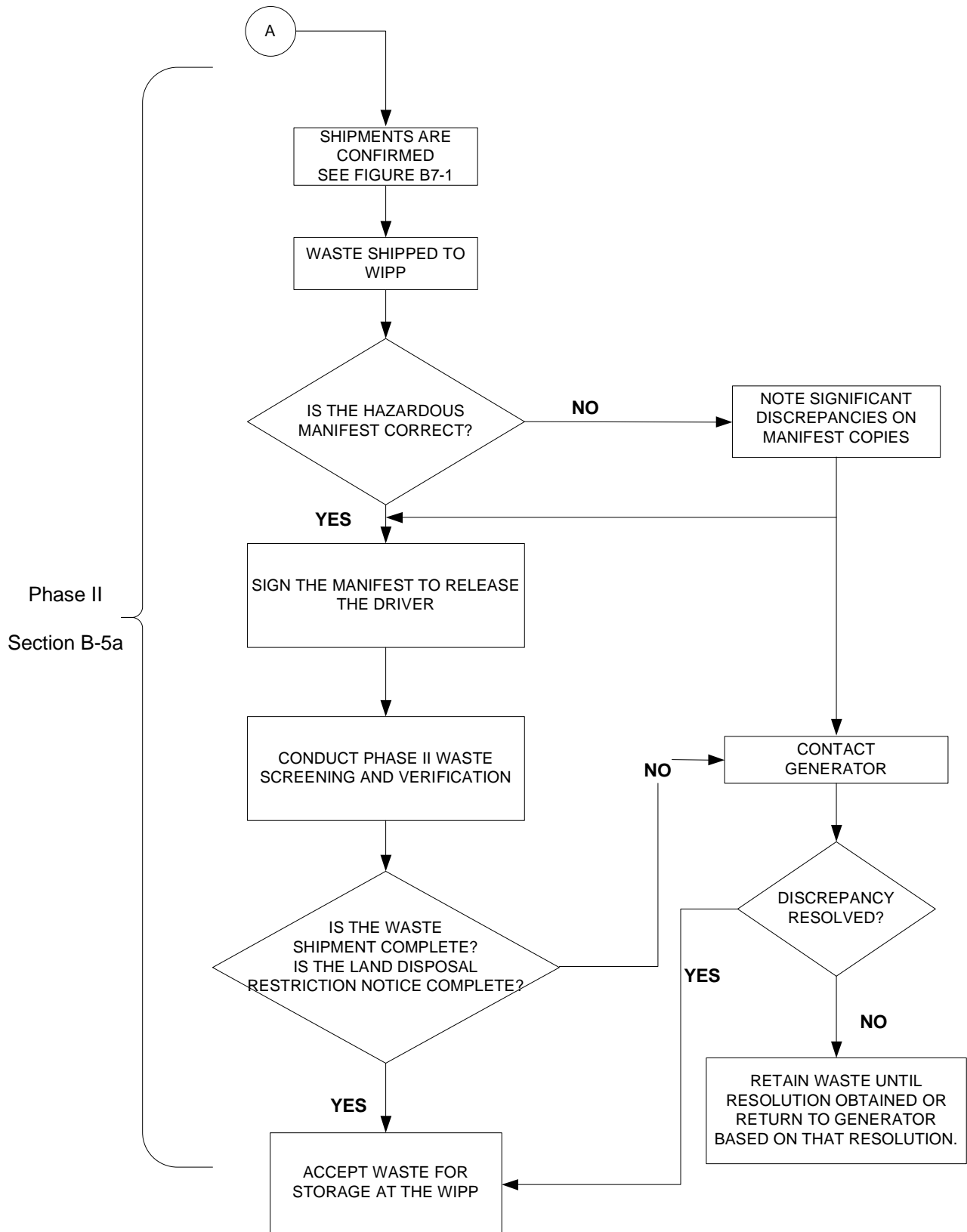
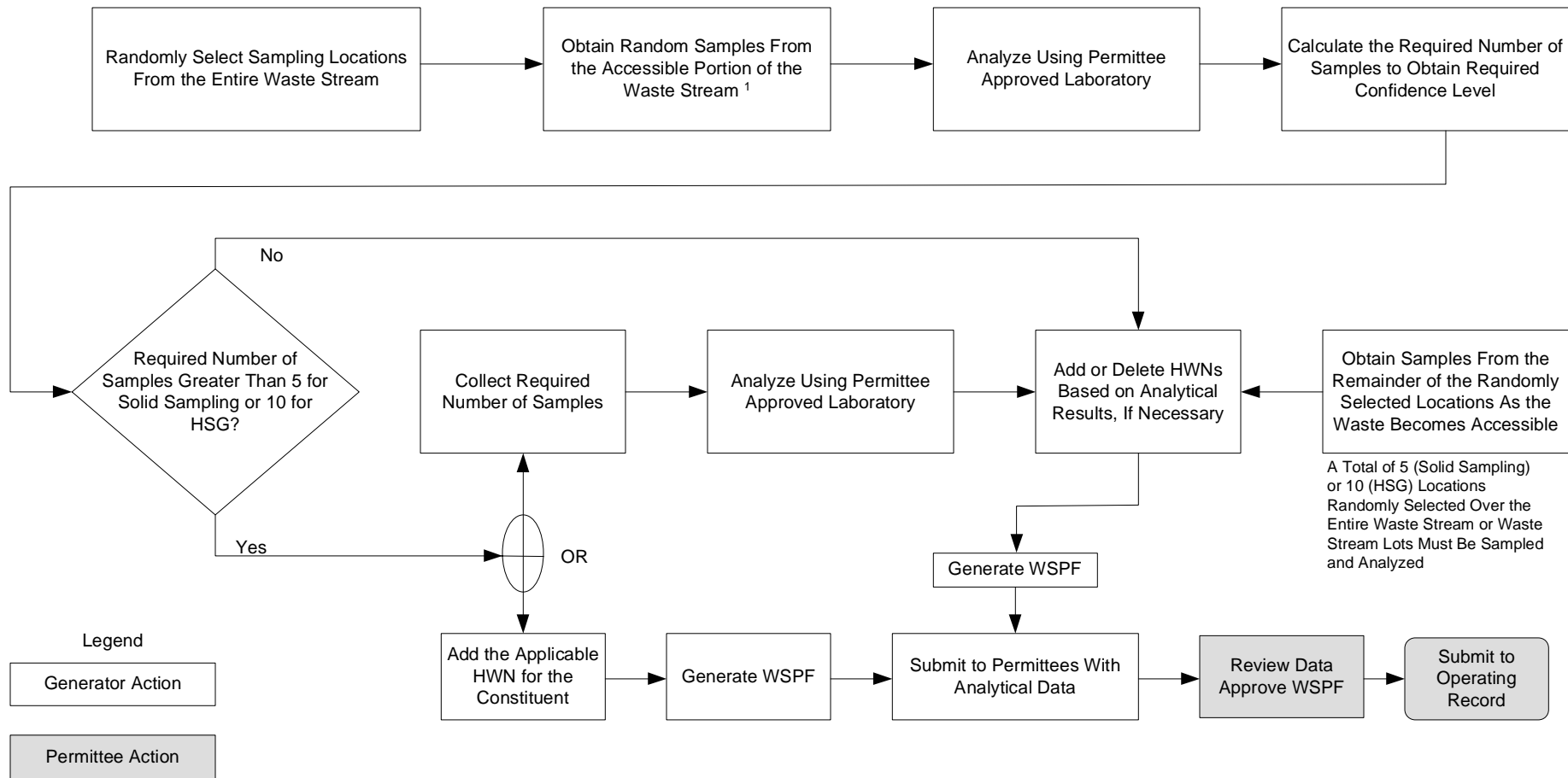


Figure B-3
TRU Mixed Waste Screening and Verification (continued)



¹ Samples Are Obtained From the First Five Accessible Random Locations for Solid Sampling and the First Ten Accessible Random Locations for Headspace Gas Sampling

Figure B2-1
 Approach for Solid and Headspace Gas Sampling and Analysis to Obtain Additional Waste Characterization Information

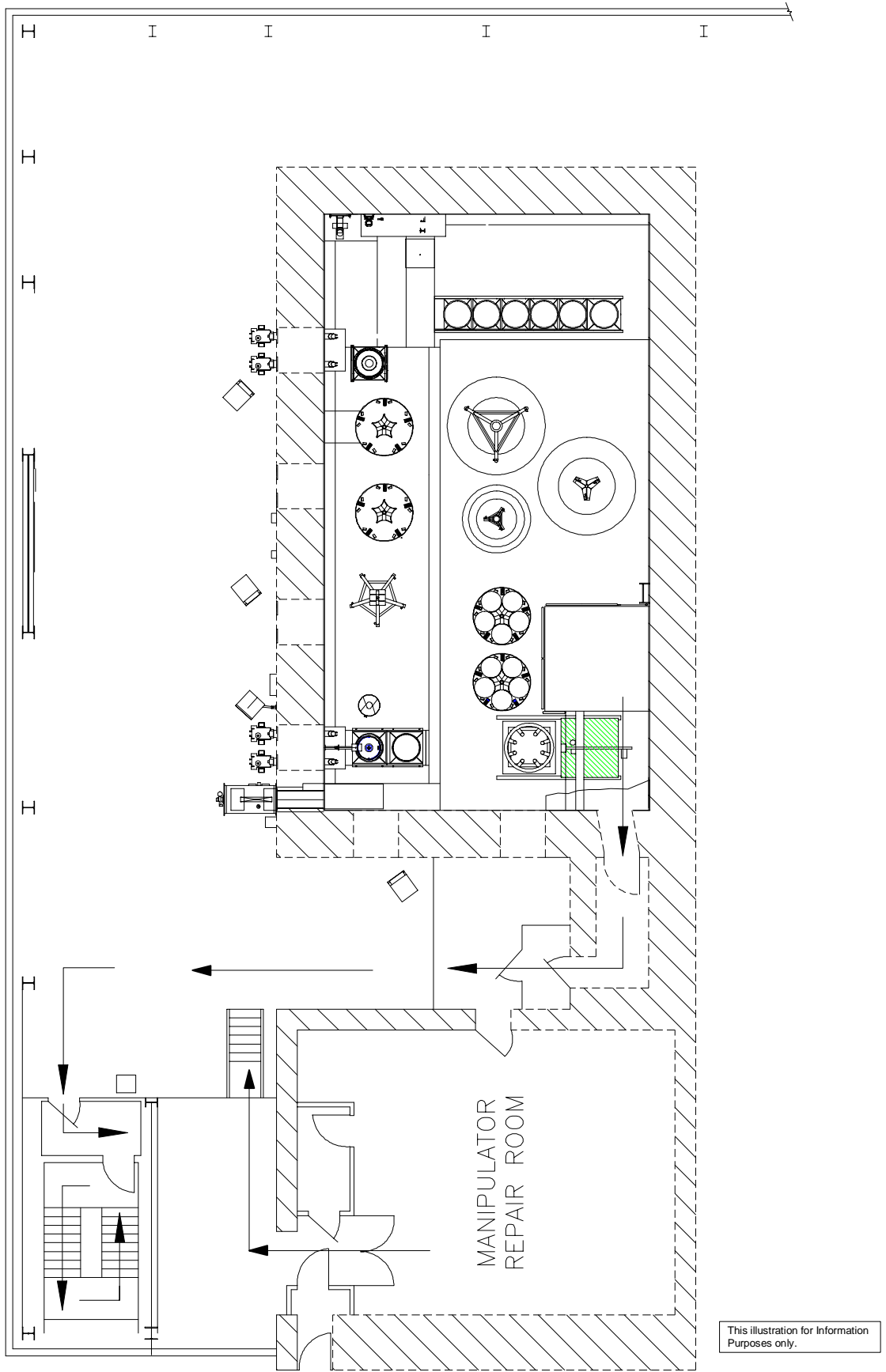


Figure F-8b
RH Bay Hot Cell Evacuation Route

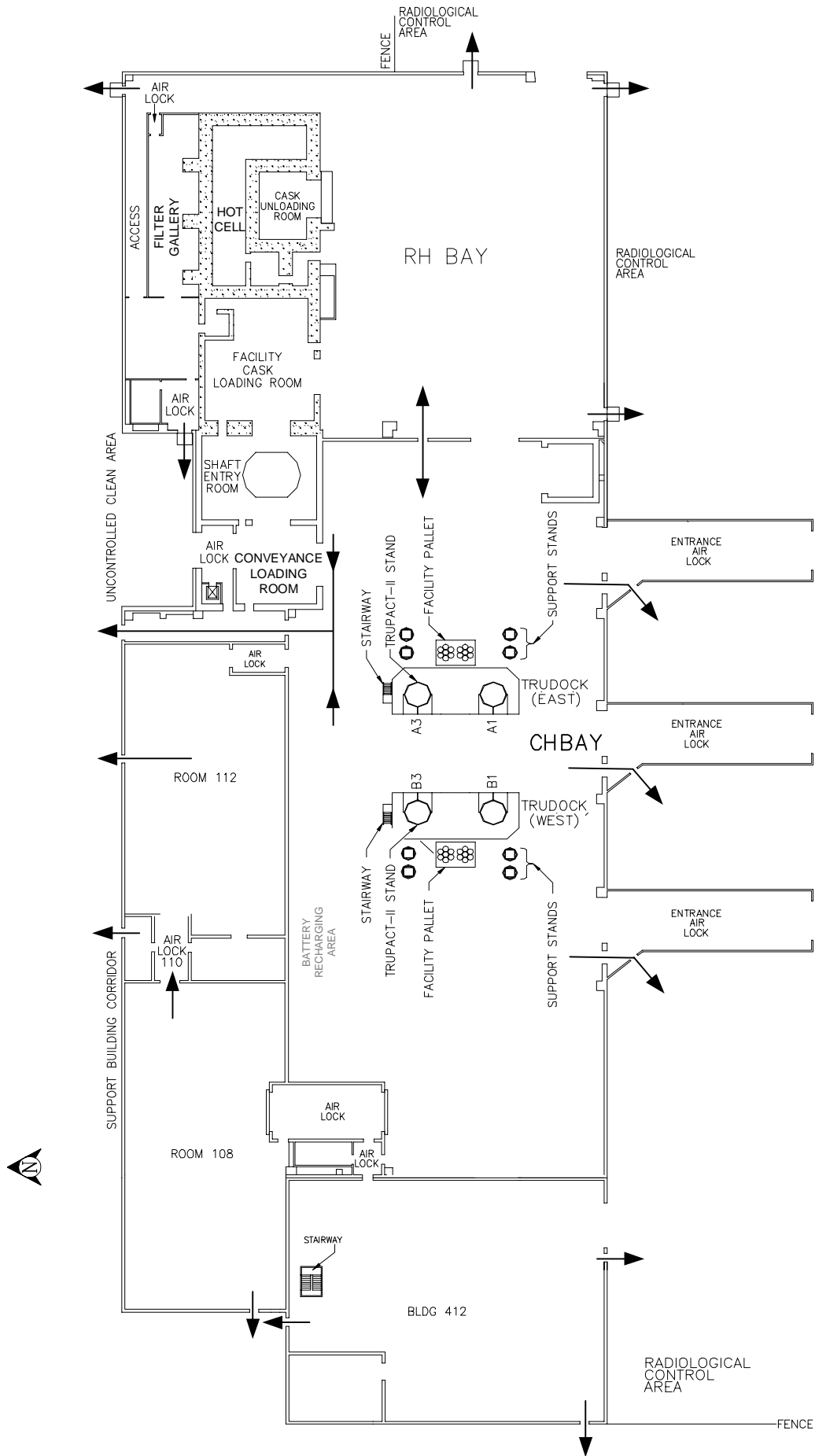


Figure F-8c
Evacuation Routes in Waste Handling Building

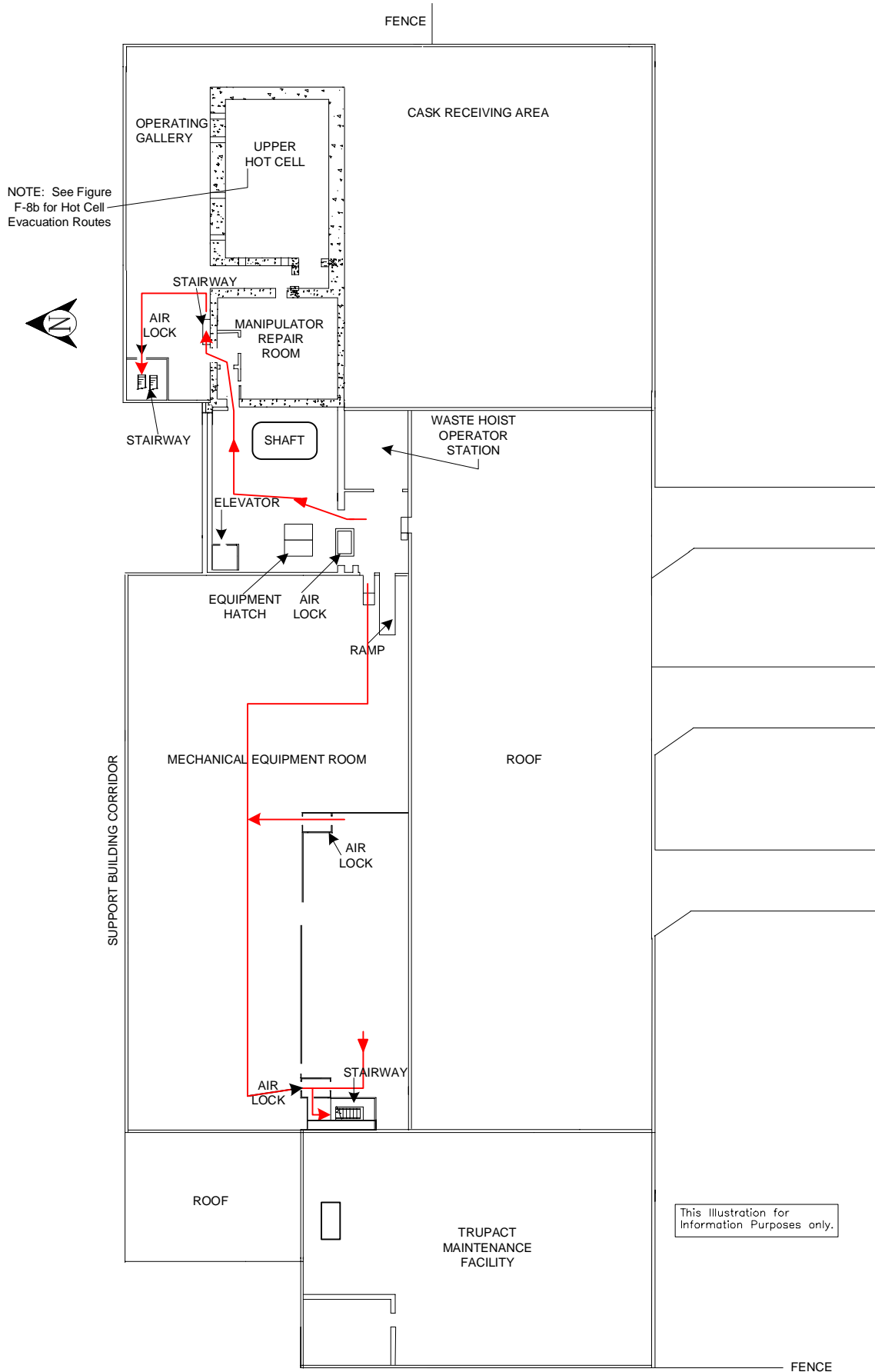
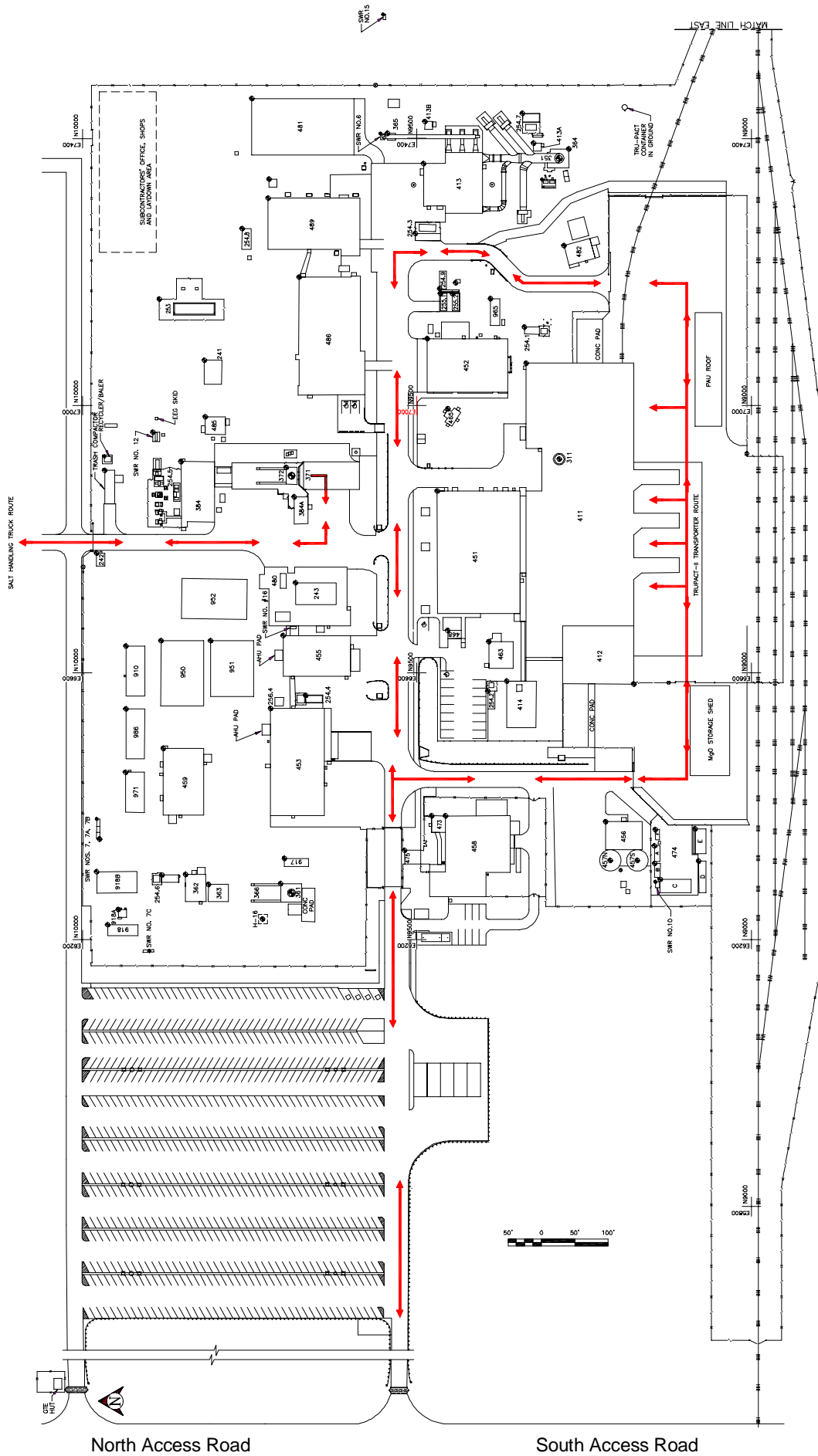


Figure F-8d
Waste Handling Building Plan Evacuation Routes (Second Floor)



North Access Road

South Access Road

Figure G-2
WIPP Traffic Flow Diagram

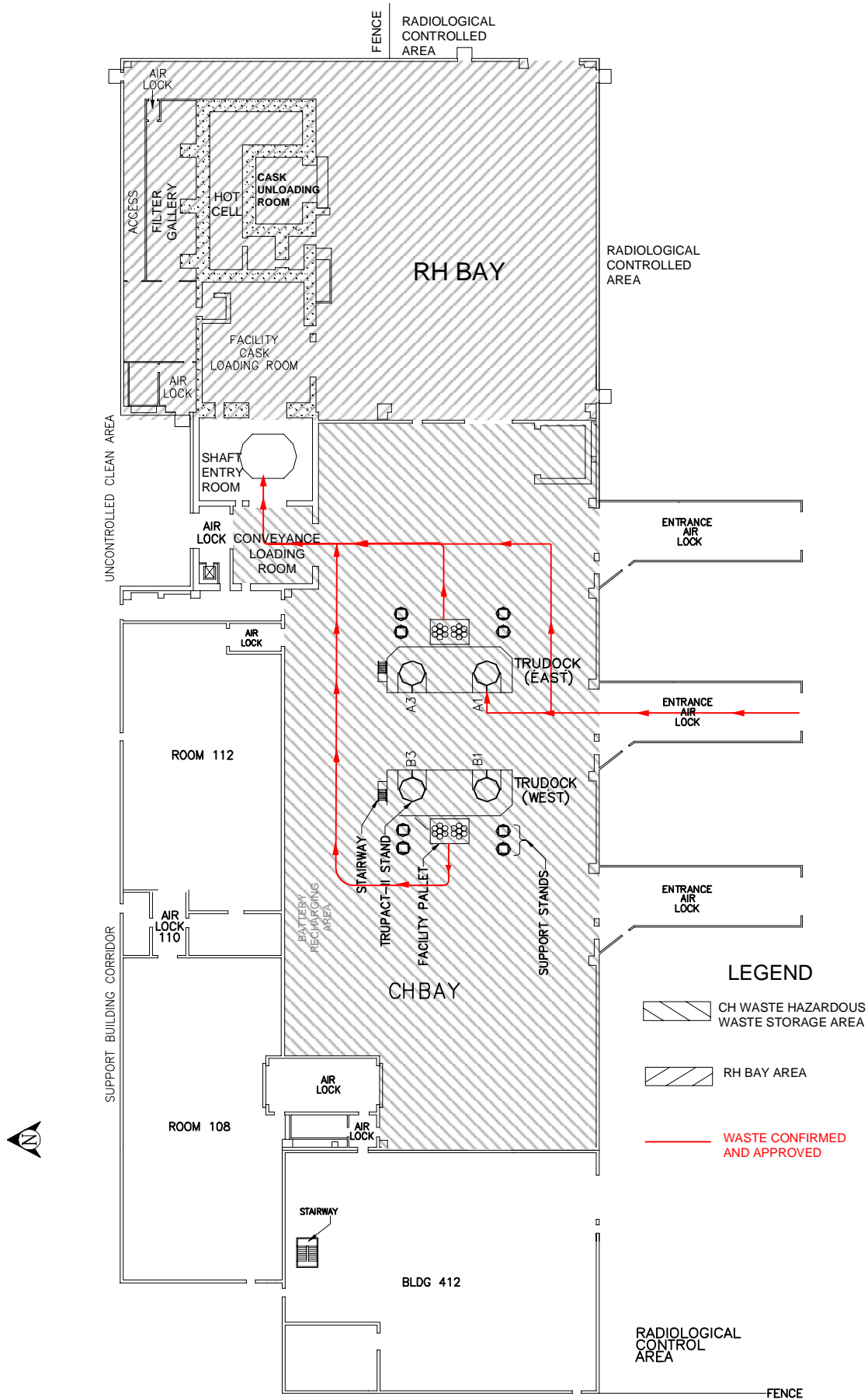


Figure G-3
 Typical Waste Transport Routes in Waste Handling Building - Container Storage Unit

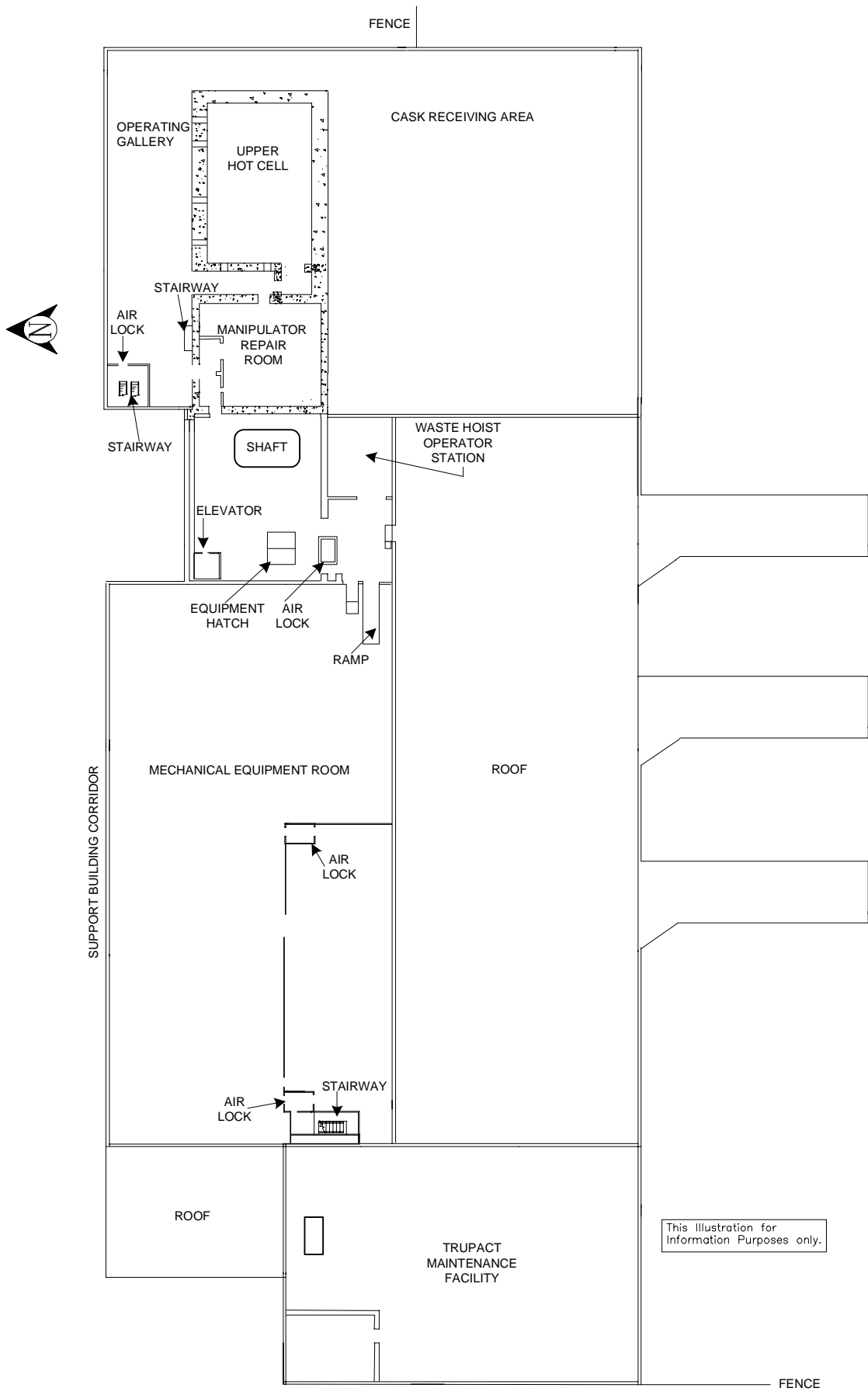


Figure M1-1b
 Waste Handling Building Plan (Second Floor)