Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

DEC 3 0 2010

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Subject: Notification of a Class 1 Permit Modification to Permit Number NM4890139088-TSDF

Dear Mr. Bearzi:

Enclosed is a Class 1 Permit Modification Notification:

- Editorial Corrections to the New Permit Issued November 30, 2010

We certify under penalty of law that this document and the enclosure were prepared under our direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions regarding this notification, please contact George T. Basabilvazo at (575) 234-7488.

Sincerely,

Original Signatures on File

Edward Ziemianski, Acting Manager
Carlsbad Field Office

M. F. Sharif, General Manager
Washington TRU Solutions LLC

Enclosure

cc: w/enclosure
S. Zappe, NMED *ED
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*ED denotes electronic distribution

CBFO:OESH:GTB:MDA:10-2504:UFC 5487.00

Class 1 Permit Modification Notifications

Editorial Corrections to the new Permit issued November 30, 2010

Waste Isolation Pilot Plant
Carlsbad, New Mexico

Permit #NM4890139088-TSDF

January 2011

Table of Contents

Overview of the Permit Modification Notification

This document contains some Class 1 Permit Modification Notifications (**PMNs**) to modify the Hazardous Waste Facility Permit (**Permit**) at the Waste Isolation Pilot Plant (**WIPP**), Permit Number NM4890139088-TSDF hereinafter referred to as the Permit.

This PMN is being submitted by the U.S. Department of Energy (**DOE**) and Washington TRU Solutions LLC (**WTS**), collectively referred to as the Permittees, in accordance with Permit Part 1.3.1 (20.4.1.900 New Mexico Administrative Code (**NMAC**) incorporating Title 40 of the Code of Federal Regulations (40 **CFR**) §270.42(a)). The PMNs in this document are necessary to notify the New Mexico Environment Department (**NMED**) of some changes which impact the WIPP facility. This change does not reduce the ability of the Permittees to provide continued protection to human health and the environment.

The requested modifications to the Permit and any related supporting documents are provided in this PMN. The proposed modification to the text of the Permit has been identified using red text and double underline and a ~~strikeout~~ font for deleted information. All direct quotations are indicated by italicized text.

Attachment A

Description of the Class 1 Permit Modification Notifications

Table 1. Class 1 Hazardous Waste Facility Permit Modification Notification

Affected Permit Section	Change Description	Category	Attachment A Page #
1. Attachment C6, Items 37, 40, and 149a.	Revise the ITR definition in Attachment C6, checklist items 37 and 40 to be consistent with the definition in Attachment C3, Section C3-10b(1). Also, change Attachment C6, Item149a to be consistent with the language regarding justification for combining waste historically managed separately as TRU mixed and non-mixed waste streams in a single waste stream in Attachment C4, Section C4-3b.	A.1	A-5
2. Attachment C3, Table C3-2	Delete (cis) 1,2-dichloethylene in Attachment C3, Table C3-2 to be consistent with Attachment C, Tables C-1 and C-2.	A.1	A-9
3. Attachment C, Sections C-0, C-0a, Attachment E, Section E-1b(1)	Revise Attachment C, Sections C-0, and C-0a as well as Attachment E, Section E-1b(1) to change the references to Module 1, Module II, and Module III to Part 1, Part 2, and Part 3.	A.1	A-11
4. Attachment C, Figures C-2, C-3, Attachment C1, Figure C1-1, Attachment C4, Figure C4-1	Correct the figures in Attachment C, C1, and C4 (Figures C-2, C-3, C1-1 and C4-1) to the respective “C” sections of the new Permit nomenclature.	A.1	A-14
5. Attachment C1, Section C1-3	Change language in Attachment C1, Section C1-	A.1	A-20

	3, from “documented in the WSPF” to “documented in the AK Summary” to be consistent with Attachment C1. During waste characterization the WSPF has not yet been generated and therefore the appropriate location for this information is the AK Summary Report.		
6. Attachment A2, Section A2-2b,	In Attachment A2, Section A2-2b, pg A2-12 line 21, change the reference from Figure M2-16 to A2-16 and in the same section change the references to figures M1-26 and M1-27 to A1-26 and A1-27 respectively.	A.1	A-21
7. Attachment A2, Figure A2-1, Attachment B3, Figure B3-2, Attachment D, Figures D-3, D-5, and D-9, Attachment G, Figure G-1, Attachment G2, Figure G2-1, Attachment G, Figure G-6, Attachment N, Figure N-1.	Revise figures in the Permit to indicate that Panel 6 has been approved by the NMED. The designation on the figures is being changed from “planned” to “existing” hazardous waste disposal unit (HWDU).	A.1	A-23
8. Attachment G, Section G-1a(1) Attachment K, Table K-4.	Change Attachment G, Section G-1a(1) to list the correct reference where solid waste management units are listed (Permit Attachment, Table K-4). Add Panel 6 to Table K-4.	A.1	A-24
9. Attachment A, Section A-1 Attachment B, Part A	Revise the Permit Attachment B, Hazardous Waste Permit Application Part A (Part A Application) to change the Department of Energy, Carlsbad Field	A.1	A-26

	Office Manager from Dr. Dave Moody to Mr. Edward J. Ziemianski, effective October 10, 2010. This permit modification notification also revises the Part A Application to delete the information regarding non-Permit regulated magnesium oxide, correct references to Section 8 B, revise hazardous waste management unit Figure references due to the new Permit format, correct Panel 8 capacities, update Appendix B1 “List of Environmental Permits,” and update some photographs.		

Item 1

Description:

Revise the ITR definition in Attachment C6, checklist items, 37 and 40 to be consistent with the definition in Attachment C3, Section C3-10b(1). Also, change Attachment C6, Item149a to be consistent with the language regarding justification for combining waste historically managed separately as TRU mixed and non-mixed waste streams in a single waste stream in Attachment C4, Section C4-3b.

Basis:

The change is classified as "*Administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Revised Permit Text:

	WAP Requirement[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
37	Are procedures in place to ensure that 100 % of batch data reports are subject to independent technical review by an individual qualified to review the data who was not involved in the generation or recording of the data under review ~~characterization of the waste or the generation of data~~. The reviewer shall release the data through signature with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. The review shall ensure the following, as applicable: Data generation and reduction were conducted according to the methods used and reported in the proper units and significant figures Calculations have been verified by a valid calculation program, a spot check of verified calculation programs, and/or a 100 percent check of all hand calculations The data have been reviewed for transcription errors The testing, sampling, and analytical QA documentation for BDRs is complete and includes, as applicable, raw data, DAC and equilibrium calculations and times, calculation records, chain of custody forms, calibration records, QC sample results and copies or originals of gas canister sample tags. All QC sample results are within established control limits, and if not, the data has been appropriately qualified Reporting flags were assigned correctly Sample holding times and preservation requirements were met, or exceptions documented Radiography tapes are reviewed on a waste container basis at a minimum of once per testing batch or once per day of operation, whichever is less frequent. The radiography tape will be reviewed against the data on the radiography form to ensure that data are complete and correct Field sampling records are complete QAOs have been met (Section C3-10a(1))					

	WAP Requirement[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
40	Are procedures in place to ensure that 100 percent of all batch data reports receive a Site Project Manager signature release with an associated review checklist prior to characterization of the associated waste and shipment to the WIPP. This release shall ensure the following: The Site Project Manager or designee shall determine the validity of the drum age criteria (**DAC**) assignment made at the data generation level based upon an assessment of the data collection and evaluation necessary to make the assignment. Testing batch QC checks were properly performed. Radiography data are complete and acceptable based on evidence of videotape review of one waste container per day or once per testing batch, whichever is less frequent Sampling batch QC checks were properly performed, and meet the established QAOs and are within established data usability criteria Analytical batch QC checks were properly performed and meet the established QAOs and are within established data usability criteria Online batch QC checks were properly performed and meet the established QAOs and are within established data usability criteria Proper procedures were followed to ensure representative samples of headspace gas and homogeneous solids and soil/gravel were taken Data generation level independent technical review, validation, and verification have been performed as evidenced by the completed review checklists and appropriate signature releases. Independent technical reviewers were not involved in the original ~~characterization of the waste container or the~~ generation or recording of data under review. Batch Data review checklists are complete Batch Data Reports are complete and data properly reported Verify that data are within established data assessment criteria and meet all applicable QAOs (Section C3-10b(1))					

	WAP Requirement[1]	Procedure Documented		Example of Implementation/ Objective Evidence, as applicable		Comment (e.g., any change in procedure since last audit, etc.)
		Location	Adequate? Y/N (Why?)	Item Reviewed	Adequate? Y/N	
149a	E. Sites must prepare and implement a written procedure to identify hazardous wastes and assign the appropriate hazardous waste numbers to each waste stream. The following are minimum baseline requirements/standards that site-specific procedures must include to ensure comparable and consistent characterization of hazardous waste: 1. Compile all of the required information in an auditable record. 2. Review the compiled information and delineate ~~TRU mixed and TRU non-mixed~~ waste streams. Delineation of waste streams must comply with the ~~WAP~~ definition in Permit Attachment C, Section C-0a and justify combining waste historically managed separately as TRU mixed and TRU non-mixed waste streams into a single waste stream.~~: a waste stream is defined as waste material that 1) is similar in material, physical form, and hazardous constituents, and 2) is or was generated from a single process or activity.~~ 3. Review the compiled information to determine if the waste stream is compliant with the TSDF-WAC 4. Review the required information to determine if the waste is listed under 20.4.1.200 NMAC (incorporating 40 CFR § 261), Subpart D. Assign all listed hazardous waste numbers, unless the site chooses to justify an alternative assignment and document the justification in the auditable record. 5. Review the required information to determine if the waste exhibits a hazardous characteristic or may contain hazardous constituents included in the toxicity characteristics specified in 20.4.1.200 NMAC (incorporating 40 CFR § 261, Subpart C. If a toxicity characteristic contaminant is identified and is not included as a listed waste, sites may evaluate available data and assign the toxicity characteristic hazardous waste number consistent with RCRA requirements. All data examined to reach the hazardous waste number determination must be placed in the auditable record and must present a clear justification for the hazardous waste number analyses. 6. Review the compiled information to provide an estimate of the material parameter weights for each container to be stored or disposed of at WIPP. For newly generated waste, procedures shall be developed and implemented to characterize hazardous waste using acceptable knowledge prior to packaging.					

Item 2

Description:

Delete (cis) 1,2-dichloethylene in Attachment C3, Table C3-2 to be consistent with Attachment C, Tables C-1 and C-2.

Basis:

The change is classified as "*Administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Revised Permit Text:

Table C3-2
Gas Volatile Organic Compounds Target Analyte List and Quality Assurance Objectives

Compound	CAS Number	Precision [a] (%RSD or RPD)	Accuracy [a] (%R)	MDL [b, d] (ng)	FTIRS MDL [b] (ppmv)	PRQL (ppmv)	Completeness (%)
Benzene	71-43-2	≤25	70-130	10	5	10	90
Bromoform	75-25-2	≤25	70-130	10	5	10	90
Carbon tetrachloride	56-23-5	≤25	70-130	10	5	10	90
Chlorobenzene	108-90-7	≤25	70-130	10	5	10	90
Chloroform	67-66-3	≤25	70-130	10	5	10	90
1,1-Dichloroethane	75-34-3	≤25	70-130	10	5	10	90
1,2-Dichloroethane	107-06-2	≤25	70-130	10	5	10	90
1,1-Dichloroethylene	75-35-4	≤25	70-130	10	5	10	90
~~cis-1,2-Dichloroethylene~~	~~156-59-2~~	~~≤25~~	~~70-130~~	~~10~~	~~5~~	~~10~~	~~90~~
trans-1,2-Dichloroethylene	156-60-5	≤25	70-130	10	5	10	90
Ethyl benzene [d]	100-41-4	≤25	70-130	10	10	10	90
Ethyl ether	60-29-7	≤25	70-130	10	5	10	90
Methylene chloride	75-09-2	≤25	70-130	10	5	10	90
1,1,2,2-Tetrachloroethane	79-34-5	≤25	70-130	10	5	10	90
Tetrachloroethylene	127-18-4	≤25	70-130	10	5	10	90
Toluene	108-88-3	≤25	70-130	10	5	10	90
1,1,1-Trichloroethane	71-55-6	≤25	70-130	10	5	10	90
Trichloroethylene	79-01-6	≤25	70-130	10	5	10	90
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	≤25	70-130	10	5	10	90
m-Xylene [c]	108-38-3	≤25	70-130	10	5	10	90
o-Xylene	95-47-6	≤25	70-130	10	5	10	90
p-Xylene [c]	106-42-3	≤25	70-130	10	5	10	90
Acetone	67-64-1	≤25	70-130	150	50	100	90
Butanol	71-36-3	≤25	70-130	150	50	100	90
Methanol	67-56-1	≤25	70-130	150	50	100	90
Methyl ethyl ketone	78-93-3	≤25	70-130	150	50	100	90
Methyl isobutyl ketone	108-10-1	≤25	70-130	150	50	100	90

[a] Criteria apply to PRQL concentrations.
[b] Values based on delivering 10 mL to the analytical system.
[c] These xylene isomers cannot be resolved by GC/MS.
[d] The ethyl benzene PRQL for FTIRS is 20 ppm

CAS = Chemical Abstract Service
%RSD = Percent relative standard deviation
RPD = Relative percent difference
%R = Percent recovery
MDL = Method detection limit (maximum permissible value), for GC/MS and GC/FID; total number of nanograms delivered to the analytical system per sample (nanograms); for FTIRS based on 1 m sample cell
PRQL = Program required quantitation limit (parts per million/volume basis)

Item 3

Description:

Revise Attachment C, Sections C-0, and C-0a as well as Attachment E, Section E-1b(1) to change the references to Module 1, Module II and Module III to Part 1, Part 2 and Part 3.

Basis:

The change is classified as "*Administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Revised Permit Text:

C-0 Introduction and Attachment Highlights

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 C-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 Part 2 ~~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 C-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 newly generated and retrievably stored TRU mixed wastes differ, as discussed in Sections C-3d(1) and C-3d(2).

Waste characterization is defined in Part 1 ~~Module I~~ as the activities performed by the waste generator to satisfy the general waste analysis requirements of 20.4.1.500 NMAC (incorporating 40 CFR §264.13(a)) before waste containers have been certified for disposal at WIPP. The

characterization process for WIPP waste is presented in Figure C-2. Generator site waste characterization programs are first audited by DOE, with NMED approving the final audit report. After this, generator sites determine whether AK alone is sufficient for characterization, or whether a sampling and analysis program in conjunction with AK is necessary to adequately characterize wastes. If an AK Sufficiency Determination is sought, information is provided to the Permittees for their review and DOE's provisional approval; NMED determination of adequacy of the AK information is required before final approval by DOE. If the sampling and analysis route is chosen, sites proceed to sample and analyze waste in conjunction with AK and in accordance with this WAP. Once an AK Sufficiency Determination is obtained, or when required sampling and analysis data are obtained, sites would then prepare and submit the Waste Stream Profile Form for DOE's approval. Once the WSPF is approved, a site may ship waste to WIPP. The Permittees will perform waste confirmation prior to shipment of the waste from the generator/storage site to WIPP pursuant to Permit Attachment C7, by performing radiography or visual examination of a representative subpopulation of certified waste containers, to ensure that the wastes meet the applicable requirements of the TSDF-WAC.

C-0a Waste Characterization

Metals

Some of the TRU mixed waste to be emplaced in the WIPP facility contains metals for which 20.4.1.200 NMAC (incorporating 40 CFR §261.24), toxicity characteristics were established (EPA hazardous waste numbers D004 through D011). Cadmium, chromium, lead, mercury, selenium, and silver are present in discarded tools and equipment, solidified sludges, cemented laboratory liquids, and waste from decontamination and decommissioning activities. A large percentage of the waste consists of lead-lined gloveboxes, leaded rubber gloves and aprons, lead bricks and piping, lead tape, and other lead items. Lead, because of its radiation-shielding applications, is the most prevalent toxicity-characteristic metal present.

Halogenated Volatile Organic Compounds

Some of the TRU mixed waste to be emplaced in the WIPP facility contains spent halogenated volatile organic compound (**VOC**) solvents identified in 20.4.1.200 NMAC (incorporating 40 CFR, §261.31) (EPA hazardous waste numbers F001 through F005). Tetrachloroethylene; trichloroethylene; methylene chloride; carbon tetrachloride; 1,1,1-trichloroethane; and 1,1,2-trichloro-1,2,2-trifluoroethane (EPA hazardous waste numbers F001 and F002) are the most prevalent halogenated organic compounds identified in TRU mixed waste that may be managed at the WIPP facility during the Disposal Phase. These compounds are commonly used to clean metal surfaces prior to plating, polishing, or fabrication; to dissolve other compounds; or as coolants. Because they are highly volatile, only small amounts typically remain on equipment after cleaning or, in the case of treated wastewaters, in the sludges after clarification and flocculation. Radiolysis may also generate halogenated volatile organic compounds.

Nonhalogenated Volatile Organic Compounds

Xylene, methanol, and n-butanol are the most prevalent nonhalogenated VOCs in TRU mixed waste that may be managed at the WIPP facility during the Disposal Phase. Like the halogenated VOCs, they are used as degreasers and solvents and are similarly volatile. The same analytical methods that are used for halogenated VOCs are used to detect the presence of nonhalogenated VOCs. Radiolysis may also generate non-halogenated volatile organic compounds.

The generator/storage sites shall characterize their waste in accordance with this WAP and associated Permit Attachments, and ensure that waste proposed for storage and disposal at WIPP meets the applicable requirements of the TSDF-WAC in Part 2 ~~Module II~~. The generator/storage site shall assemble the Acceptable Knowledge (**AK**) information into an auditable record[1] for the waste stream as described in Permit Attachment C4. For those waste streams with an approved AK Sufficiency Determination (see below), sampling and analysis per the methods described in Permit Attachments C1 and C2 are not required.

E-1b(1) Container Inspection

Containers are used to manage TRU mixed waste at the WIPP facility. These containers are described in Permit Part 3 ~~Module III.~~ Off-site CH TRU mixed waste will arrive in 55-gallon drums arranged as seven (7)-packs, in Ten Drum Overpacks (**TDOP**), in 85-gallon drums arranged as four (4) packs, in 100-gallon drums arranged as three (3) packs, or in standard waste boxes (**SWB**). The waste containers will be visually inspected to ensure that the waste containers are in good condition and that there are no signs that a release has occurred. This visual inspection shall not include the center drums of 7-packs and waste containers positioned such that visual observation is precluded due to the arrangement of waste assemblies on the facility pallets. If CH TRU mixed waste handling operations should stop for any reason with containers located on the TRUPACT-II Unloading Dock (**TRUDOCK** storage area of the WHB Unit) in the Contact-Handled Packages, primary waste container inspections could not be accomplished until the containers of waste are removed from the shipping containers.

1 “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 4

Description:

Correct the figures in Attachment C, C1 and C4 (Figures C-2, C-3, C1-1 and C4-1) to the respective "C" sections of the new Permit nomenclature.

Basis:

The change is classified as "*Administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Revised Permit Text:

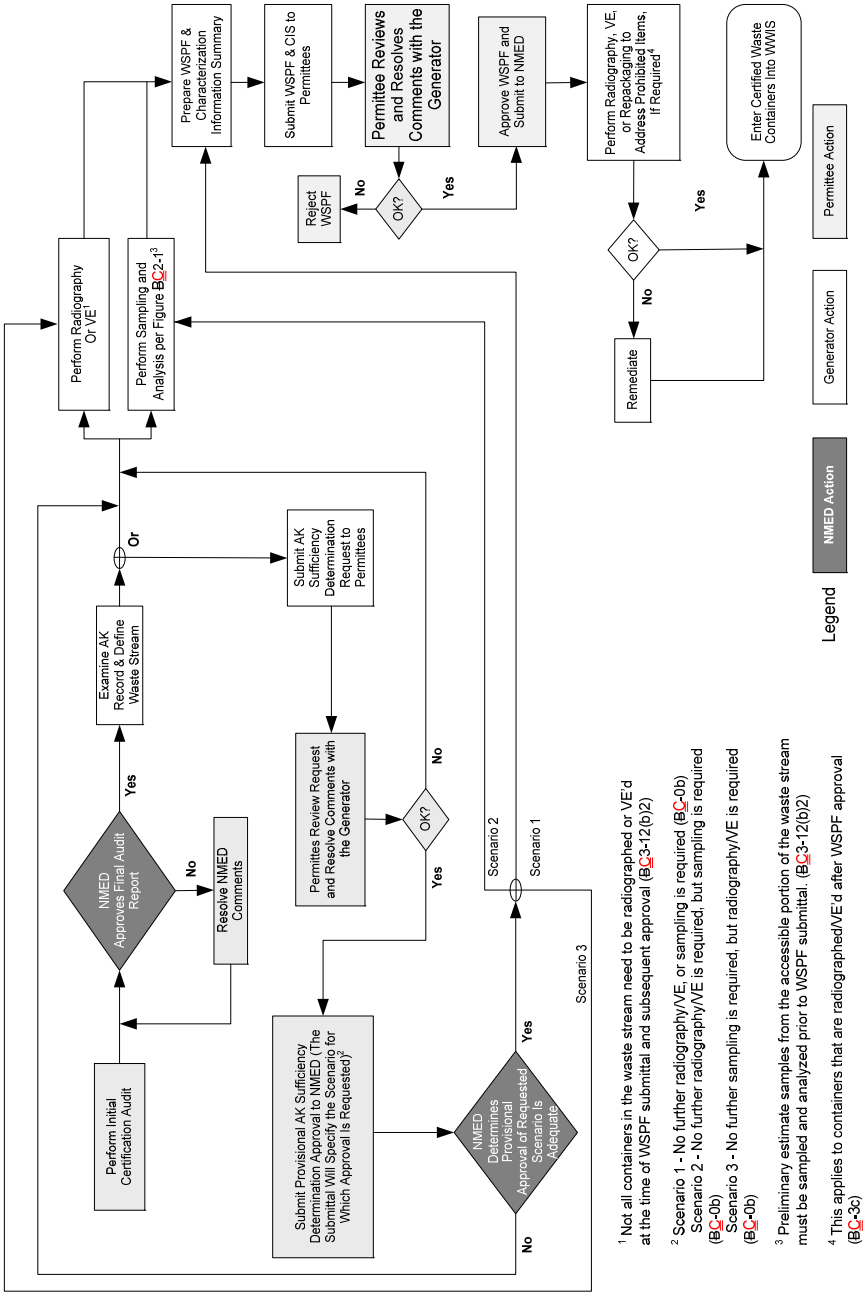

Figure C-2
Waste Characterization Process

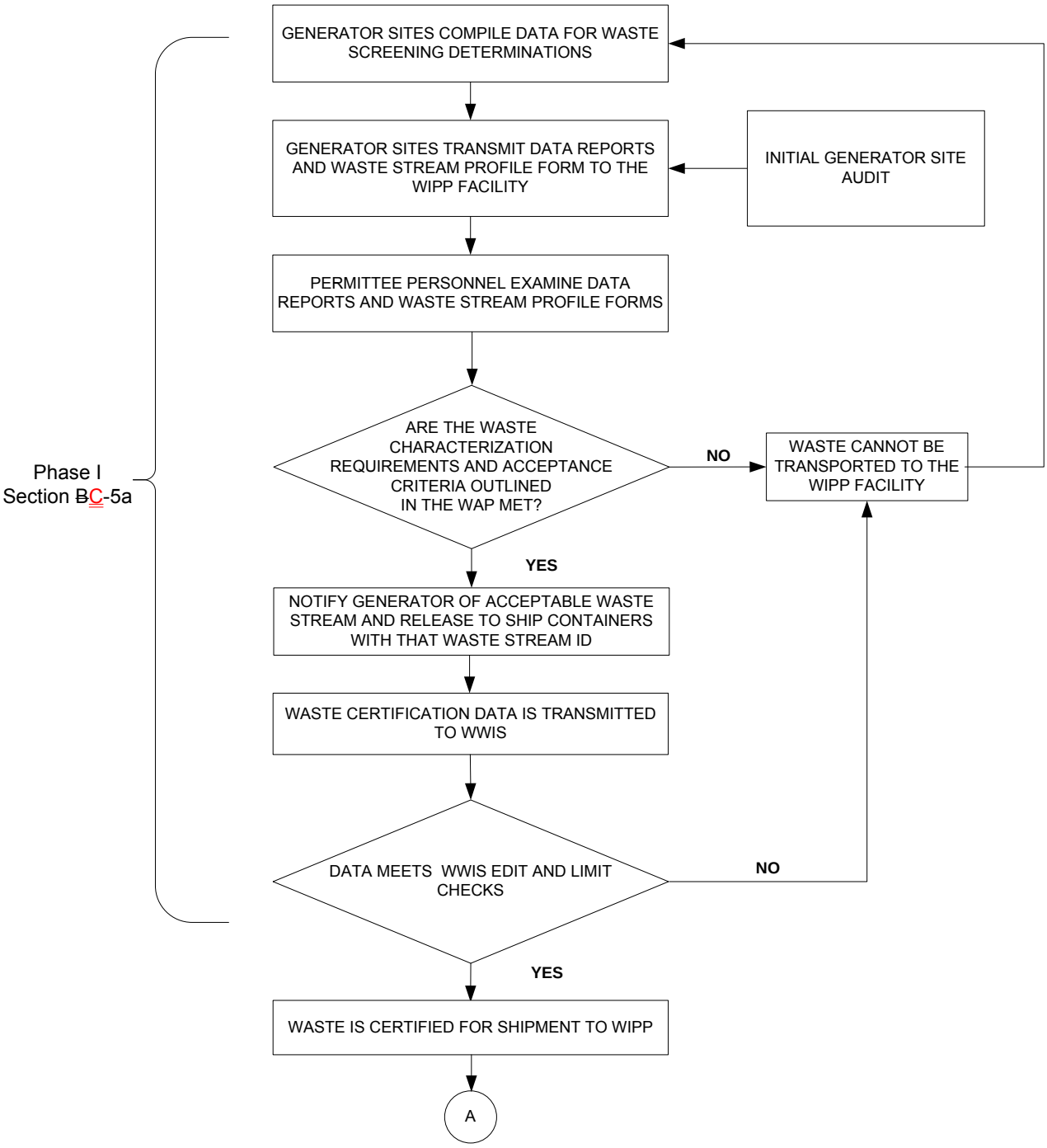

Figure C-3
TRU Mixed Waste Screening and Verification

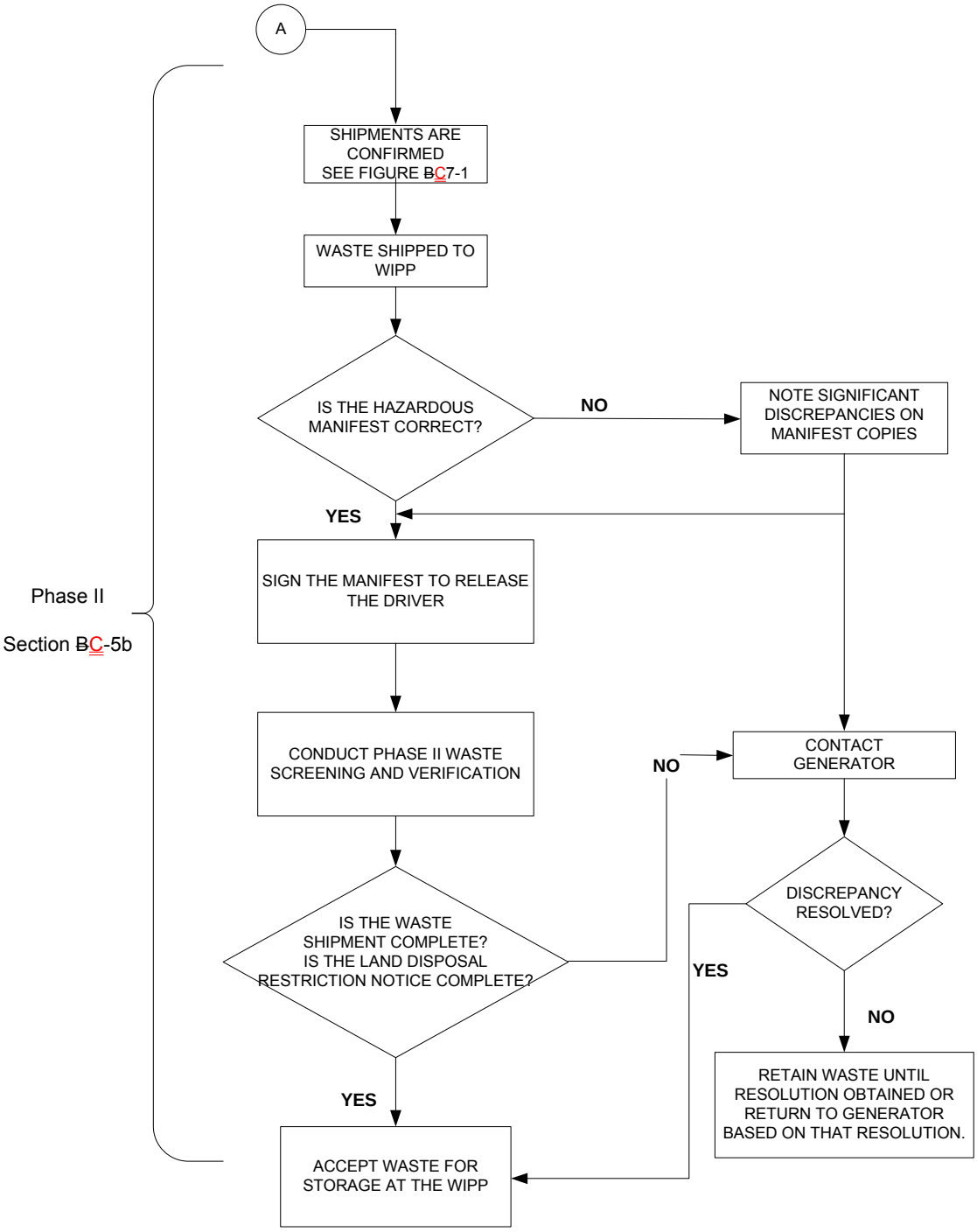

Figure C-3
TRU Mixed Waste Screening and Verification (Continued)

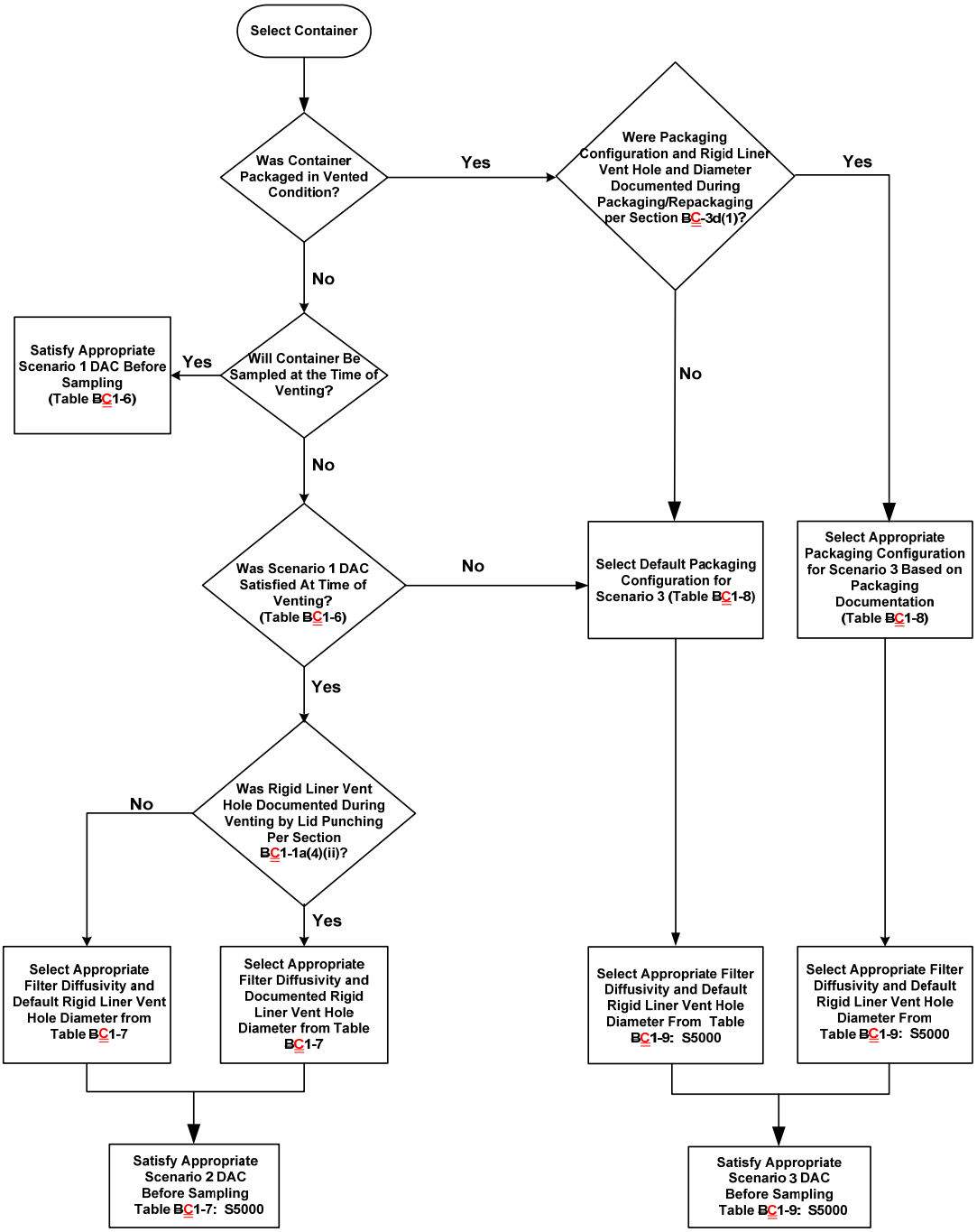

Figure C1-1
Headspace Gas Drum Age Criteria Sampling Scenario Selection Process

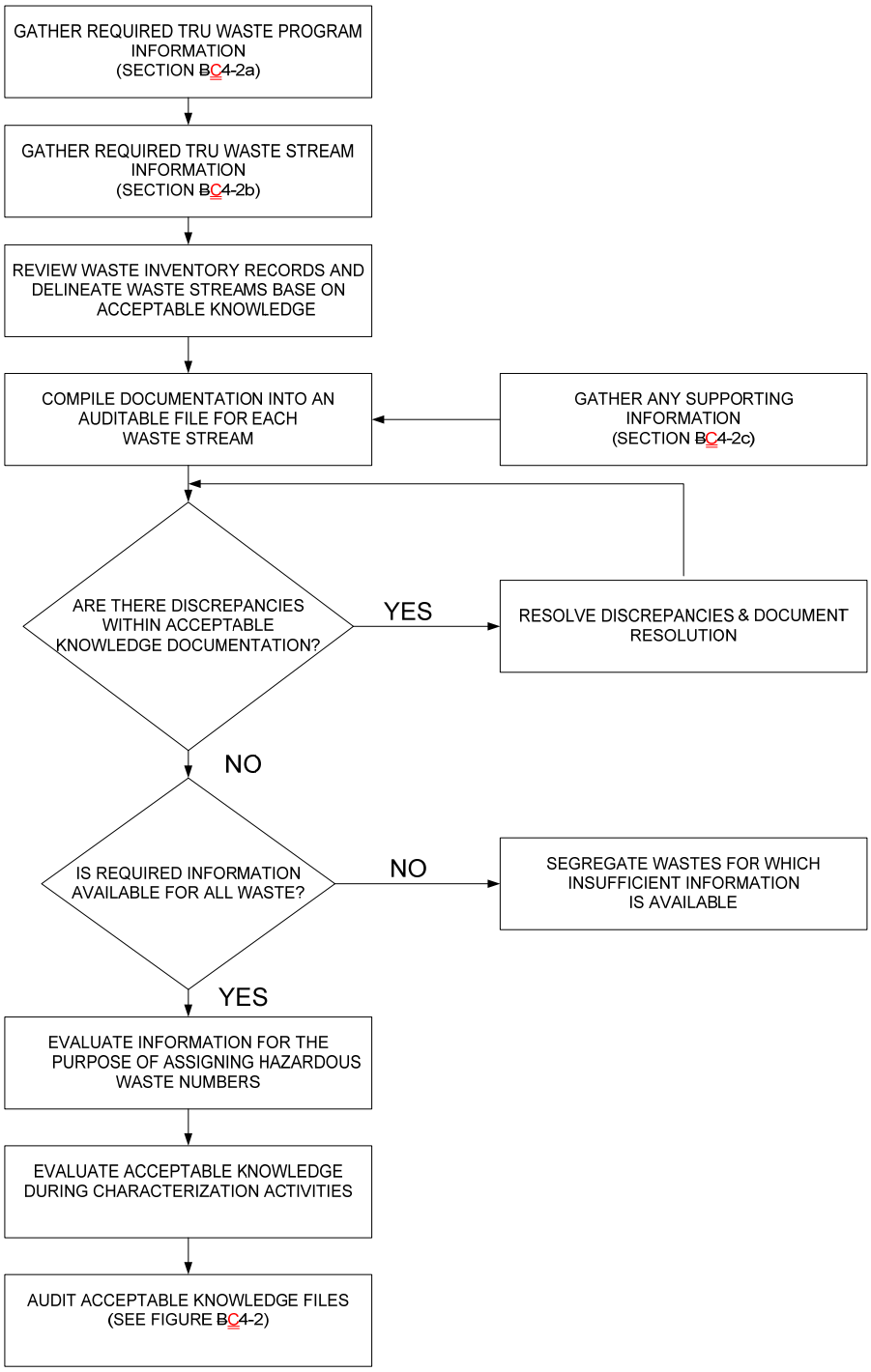

Figure C4-1
Compilation of Acceptable Knowledge Documentation

Item 5

Description:

Change language in Attachment C1, Section C1-3, from “documented in the WSPF” to “documented in the AK Summary” to be consistent with Attachment C1. During waste characterization the WSPF has not yet been generated and therefore the appropriate location for this information is the AK Summary Report.

Basis:

The change is classified as “*Administrative and informational change*” and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Revised Permit Text:

C1-3 Radiography

To perform radiography, the waste container is scanned while the operator views the television screen. A video and audio recording is made of the waste container scan and is maintained as a non-permanent record. A radiography data form is also used to document the Waste Matrix Code to ensure that the waste container contains no ignitable, corrosive, or reactive waste by documenting the absence of liquids in excess of TSDF-WAC limits or compressed gases, and verify that the physical form of the waste is consistent with the waste stream description documented in the AK Summary ~~on the WSPF~~. Containers whose contents prevent full examination of the remaining contents shall be subject to visual examination unless the site certifies that visual examination would provide no additional relevant information for that container based on the acceptable knowledge information for the waste stream. Such certification shall be documented in the generator/storage site’s record.

Item 6

Description:

In Attachment A2, Section A2-2b, change the references to figures M1-26 and M1-27 to A1-26 and A1-27 respectively.

Basis:

The change is classified as "*Administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Revised Permit Text:

A2-2b Geologic Repository Process Description

Prior to receipt of TRU mixed waste at the WIPP facility, waste operators will be thoroughly trained in the safe use of TRU mixed waste handling and transport equipment. The training will include both classroom training and on-the-job training.

RH TRU Mixed Waste Emplacement

The Facility Cask Transfer Car is loaded onto the waste shaft conveyance and is lowered to the waste shaft station underground. At the waste shaft station underground, the Facility Cask is moved from the waste shaft conveyance by the Facility Cask Transfer Car (Figure A2-16). A forklift is used to remove the Facility Cask from the Facility Cask Transfer Car and to transport the Facility Cask to the Underground HWDU. There, the Facility Cask is placed on the HERE (Figure A2-17). The HERE is used to emplace the RH TRU mixed waste canister into the borehole. The borehole will be visually inspected for obstructions prior to aligning the HERE and emplacement of the RH TRU mixed waste canister. The Facility Cask is moved forward to mate with the shield collar, and the transfer carriage is advanced to mate with the rear Facility Cask shield valve. The shield valves on the Facility Cask are opened, and the transfer mechanism advances to push the canister into the borehole. After retracting the transfer mechanism into the Facility Cask, the forward shield valve is closed, and the transfer mechanism is further retracted into its housing. The transfer mechanism is moved to the rear, and the shield plug carriage containing a shield plug is placed on the emplacement machine. The transfer mechanism is used to push the shield plug into the Facility Cask. The front shield valve is opened, and the shield plug is pushed into the borehole (Figure A2-18). The transfer mechanism is retracted, the shield valves close on the Facility Cask, and the Facility Cask is removed from the HERE.

A shield plug is a concrete filled cylindrical steel shell (Figure A2-21) approximately 61 in. long and 29 in. in diameter, made of concrete shielding material inside a 0.24 in. thick steel shell with a removable pintle at one end. Each shield plug has integral forklift pockets and weighs approximately 3,750 lbs. The shield plug is inserted with the pintle end closest to the HERE to provide the necessary shielding , limiting the borehole radiation dose rate at 30 cm to less than 10 mrem per hour for a canister surface dose rate of 100 rem/hr . Additional shielding is provided at the direction of the Radiological Control Technician based on dose rate surveys following shield plug emplacement. This additional shielding is provided by the manual emplacement of one or more shield plug supplemental shielding plates and a retainer (Figures A2-19 and A2-20).

The amount of RH TRU mixed waste disposal in each panel is limited based on thermal and geomechanical considerations and shall not exceed 10 kilowatts per acre as described in Permit Attachment A2-1. RH TRU mixed waste emplacement boreholes shall be drilled in the ribs of the panels at a nominal spacing of 8 ft (2.4 m) center-to-center, horizontally.

Figures ~~M~~A1-26 and ~~M~~A1-27 are flow diagrams of the RH TRU mixed waste handling process for the RH-TRU 72-B and CNS 10-160B casks, respectively.

Item 7

Description:

Revise figures in the Permit to indicate that Panel 6 has been approved by the NMED. The designation on the figures is being changed from “planned” to “existing” hazardous waste disposal unit (HWDU).

Basis:

The change is classified as “*Administrative and informational change*” and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion:

On October 6, 2010 the Permittees were notified by the NMED that Panel 6 had been constructed in compliance with the requirements in the Permit. Panel 6 has been certified in accordance with the Permit Condition I.E.II and is now available for waste emplacement. Figures A2-1, B3-2, D-3, D-5, D-9, G-1, G-6, G2-1, N-1 have been revised to show that Panel 6 is now approved for waste emplacement. The change removes the “dashed” lines and replaces them with “solid” lines in order to change the designation from “planned” HWDU to “existing” HWDU.

Revised Permit Text:

a.1. Figures A2-1, B3-2, D-3, D-5, D-9, G-1, G-6, G2-1, N-1 are included in Attachment B3.

Item 8

Description:

Change Attachment G, Section G-1a(1) to list the correct reference where solid waste management units are listed (Permit Attachment, Table K-4). Add Panel 6 to Table K-4.

Basis:

The change is classified as "*Administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion:

On October 6, 2010 the Permittees were notified by the NMED that Panel 6 had been constructed in compliance with the requirements in the Permit. Panel 6 has been certified in accordance with the Permit Condition I.E.II and is now available for waste emplacement.

Revised Permit Text:

G-1a(1) Container Storage Units

Final or partial closure of the permitted container storage units (the Waste Handling Building Unit and Parking Area Unit) will be accomplished by removing all waste and waste residues. Indication of waste contamination will be based, among other techniques, on the use of radiological surveys as described in Permit Attachment G3. Radiological surveys use very sensitive radiation detection equipment to indicate if there has been a potential release of TRU mixed waste, including hazardous waste components, from a container. This allows the Permittees to indicate potential releases that are not detectable from visible evidence such as stains or discoloration. Visual inspection and operating records will also be used to identify areas where decontamination is necessary. Contaminated surfaces will be decontaminated until radioactivity is below free release limits[2]. Once surfaces are determined to be free of radioactive waste constituents, they will be tested for hazardous waste contamination. These surface decontamination activities will ensure the removal of waste residues to levels protective of human health and the environment. The facility is expected to require no decontamination at closure because any waste spilled or released during operations will be contained and removed immediately. Solid waste management units listed in Attachment K, Table K-4 ~~associated described in Permit Part 8~~ will be subject to closure. In the event portions of these units which require decontamination cannot be decontaminated, these portions will be removed and the resultant wastes will be managed as appropriately.

Once the container storage units are decontaminated and certified by the Permittees to be clean, no further maintenance is required. The facilities and equipment in these units will be reused for other purposes as needed.

[2] The free release criteria for items, equipment, and areas is < 20 dpm/100 cm^2 for alpha radioactivity and < 200 dpm/100 cm^2 for beta-gamma radioactivity.

Table K-4
Hazardous Waste Management Units

Unit ID Number	Unit Description	Comments
SWMU 013a	Waste Handling Building Unit	
SWMU 013b	Parking Area Unit	
SWMU 013c	Underground HWDU - Panel 1	
SWMU 013d	Underground HWDU – Panel 2	
SWMU 013e	Underground HWDU – Panel 3	
SWMU 013f	Underground HWDU – Panel 4	
SWMU 013g	Underground HWDU – Panel 5	
SWMU 013h	Underground HWDU – Panel 6	

Item 9

Description:

Revise the Permit Attachment B, Hazardous Waste Permit Application Part A (Part A Application) to change the Department of Energy, Carlsbad Field Office Manager from Dr. Dave Moody to Mr. Edward J. Ziemianski, effective October 10, 2010. This permit modification notification also revises the Part A Application to delete the information regarding non-Permit regulated magnesium oxide, correct references to Section 8 B, revise hazardous waste management unit Figure references due to the new Permit format, correct Panel 8 capacities, update Appendix B1 "List of Environmental Permits," and update some photographs.

Basis:

The change is classified as "*Administrative and informational change*" and is therefore a Class 1 notification pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.42, Appendix I, A.1).

Discussion:

On October 10, 2010 Dr. Dave Moody, was replaced by Mr. Edward J. Ziemianski as the Acting Manager and responsible official for the Carlsbad Field Office. This Permit change is necessary as Mr. Ziemianski becomes the signatory authority for the Department of Energy, Carlsbad Field Office.

The Part A Application is also being revised to update the new Permit to delete the information regarding non-Permit regulated magnesium oxide to be consistent with the Part A Application submitted with the WIPP Hazardous Waste Facility Permit Amended Renewal Application in September 2009, correct references to "Section 8 B" from "Section XII", revise hazardous waste management unit Figure references (from Figure O3-2, O3-3 and O3-4 to Figure B3-2, B3-3, and B3-4) due to the new Permit format, correct Panel 8 capacities, update some photographs and to update Appendix B1 "List of Environmental Permits."

Revised Permit Text:

A-1 Facility Description

Abstract

NAME OF FACILITY:	Waste Isolation Pilot Plant
OWNER and CO-OPERATOR:	U.S. Department of Energy P.O. Box 3090 Carlsbad, NM 88221
CO-OPERATOR:	Washington TRU Solutions LLC P.O. Box 2078 Carlsbad, NM 88221

RESPONSIBLE OFFICIALS:	~~David. C. Moody~~ Edward J. Ziemianski, Acting Manager DOE/Carlsbad Field Office Farok Sharif, General Manager Washington TRU Solutions LLC
FACILITY MAILING ADDRESS:	U.S. Department of Energy P.O. Box 3090 Carlsbad, NM 88221
FACILITY LOCATION:	30 miles east of Carlsbad on the Jal Highway, in Eddy County.
TELEPHONE NUMBER:	575/234-7300
U.S. EPA I.D. NUMBER:	NM4890139088
GEOGRAPHIC LOCATION:	32° 22′ 30″ N 103° 47′ 30″ W
DATE OPERATIONS BEGAN:	November 26, 1999

Attachment B1
Attachment B, Part A

ATTACHMENT B

HAZARDOUS WASTE PERMIT APPLICATION PART A

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ATTACHMENT B

HAZARDOUS WASTE PERMIT APPLICATION PART A

TABLE OF CONTENTS

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SEND COMPLETED FORM TO: The Appropriate State or EPA Regional Office.

United States Environmental Protection Agency

RCRA SUBTITLE C SITE IDENTIFICATION FORM

1. Reason for Submittal (See instructions on page 14.)

MARK ALL BOX(ES) THAT APPLY

Reason for Submittal:

- ☐ To provide Initial Notification of Regulated Waste Activity (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities)
- ☑ To provide Subsequent Notification of Regulated Waste Activity (to update site identification information)
- ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application
- ☑ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # 25)
- ☐ As a component of the Hazardous Waste Report

2. Site EPA ID Number (page 15)

EPA ID Number: NM4890139088

3. Site Name (page 15)

Name: Waste Isolation Pilot Plant

4. Site Location Information (page 15)

Street Address: 30 miles east of Carlsbad on Jal Highway

City, Town, or Village: Carlsbad **State:** NM

County Name: Eddy **Zip Code:** 88221

5. Site Land Type (page 15)

Site Land Type: ☐ Private ☐ County ☐ District ☑ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

6. North American Industry Classification System (NAICS) Code(s) for the Site (page 15)

A. 562211 **B.**

C. **D.**

7. Site Mailing Address (page 16)

Street or P. O. Box: P.O. Box 3090

City, Town, or Village: Carlsbad

State: NM

Country: USA **Zip Code:** 88221

8. Site Contact Person (page 16)

First Name: Edward **MI:** J **Last Name:** Ziemianski

Phone Number: (575) 234-7300 **Extension:** **Email address:** edward.ziemianski@wipp.ws

9. Operator and Legal Owner of the Site (pages 16 and 17)

A. Name of Site's Operator: U.S. Department of Energy **Date Became Operator (mm/dd/yyyy):** 05/18/1981

Operator Type: ☐ Private ☐ County ☐ District ☑ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

B. Name of Site's Legal Owner: U.S. Department of Energy **Date Became Owner (mm/dd/yyyy):** 05/18/1981

Owner Type: ☐ Private ☐ County ☐ District ☑ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other

9. Legal Owner (Continued) Address	**Street or P. O. Box:** P.O. Box 3090	
	City, Town, or Village: Carlsbad	
	State: NM	
	Country: USA	**Zip Code:** 88221

10. Type of Regulated Waste Activity
Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 18 to 21.)

A. Hazardous Waste Activities
Complete all parts for 1 through 6.

Y ☑ N ☐ **1. Generator of Hazardous Waste**
If "Yes", choose only one of the following - a, b, or c.

- ☑ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or
- ☐ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or
- ☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities.

Y ☐ N ☑ d. United States Importer of Hazardous Waste

Y ☑ N ☐ e. Mixed Waste (hazardous and radioactive) Generator

Y ☐ N ☑ **2. Transporter of Hazardous Waste**

Y ☑ N ☐ **3. Treater, Storer, or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

Y ☐ N ☑ **4. Recycler of Hazardous Waste (at your site)**

Y ☐ N ☑ **5. Exempt Boiler and/or Industrial Furnace**
If "Yes", mark each that applies.
- ☐ a. Small Quantity On-site Burner Exemption
- ☐ b. Smelting, Melting, and Refining Furnace Exemption

Y ☐ N ☑ **6. Underground Injection Control**

B. Universal Waste Activities

Y ☐ N ☑ **1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste generated and/or accumulated at your site. If "Yes", mark all boxes that apply:**

	Generate	Accumulate
a. Batteries	☐	☐
b. Pesticides	☐	☐
c. Thermostats	☐	☐
d. Lamps	☐	☐
e. Other (specify) _____	☐	☐
f. Other (specify) _____	☐	☐
g. Other (specify) _____	☐	☐

Y ☐ N ☑ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities
Mark all boxes that apply.

Y ☐ N ☑ **1. Used Oil Transporter**
If "Yes", mark each that applies.
- ☐ a. Transporter
- ☐ b. Transfer Facility

Y ☐ N ☑ **2. Used Oil Processor and/or Re-refiner**
If "Yes", mark each that applies.
- ☐ a. Processor
- ☐ b. Re-refiner

Y ☐ N ☑ **3. Off-Specification Used Oil Burner**

Y ☐ N ☑ **4. Used Oil Fuel Marketer**
If "Yes", mark each that applies.
- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

11. Description of Hazardous Wastes (See instructions on page 22.)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

F001	F002	F003	F004	F005	F006	F007
F009	D004	D005	D006	D007	D008	D009
D010	D011	D018	D019	D021	D022	D026

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (See instructions on page 22.)

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
For the RCRA Hazardous Waste Part A Permit Application, all operator(s) and owner(s) must sign (see 40 CFR 270.10 (b) and 270.11).
(See instructions on page 22.)

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	Edward J. Ziemianski, Acting Manager - DOE	12/30/2010
	Farok Sharif, President and General Manager - WTS	12/30/2010

Hazardous Waste Codes
(Continued)

EPA ID No.: NM4890139088
Hazardous Waste Numbers
D027
D028
D029
D030
D032
D034
D035
D036
D037
D038
D039
D040
D043
P015
U002
U019
U037
U043
U044
U052
U070
U072
U078
U079
U105
U122
U133
U151
U154
U159
U196
U209
U210
U220
U226
U228
U239
P120
U134
D033
P030
P098
P099
P106
U003
U103
U108

EPA ID NO: NM4890139088

OMB #: 2050-0034 Expires 11/30/2005

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact (See instructions on page 23)	**First Name:** Edward	**MI:** J.	**Last Name:** Ziemianski
	Phone Number: (575) 234-7300		**Phone Number Extension:**
2. Facility Permit Contact Mailing Address (See instructions on page 23)	**Street or P.O. Box:** P.O. Box 3090		
	City, Town, or Village: Carlsbad		
	State: NM		
	Country: USA		**Zip Code:** 88221
3. Operator Mailing Address and Telephone Number (See instructions on page 23)	**Street or P.O. Box:** P. O. Box 3090		
	City, Town, or Village: Carlsbad		
	State: NM		
	Country: USA	**Zip Code:** 88221	**Phone Number** (575) 234-7300
4. Legal Owner Mailing Address and Telephone Number (See instructions on page 23)	**Street or P.O. Box:** P.O. Box 3090		
	City, Town, or Village: Carlsbad		
	State: NM		
	Country: USA	**Zip Code:** 88221	**Phone Number** (575) 234-7300
5. Facility Existence Date (See instructions on page 24)	**Facility Existence Date (mm/dd/yyyy):** 05/18/1981		

6. Other Environmental Permits (See instructions on page 24)

A. Permit Type *(Enter code)*	B. Permit Number	C. Description
		See Attachment O, Appendix 01-1

7. Nature of Business (Provide a brief description; see instructions on page 24)

The Waste Isolation Pilot Plant (WIPP) is a U.S. Department of Energy facility which entails receiving, unloading, and transferring radioactive-mixed waste from the surface of the site to the underground hazardous waste management units. Waste will be emplaced in an underground geologic repository horizon located in a deep-bedded salt formation approximately 2,150 feet beneath the surface.

8. Process Codes and Design Capacities (See instructions on page 24) - Enter information in the Sections on Form Page 3.

A. PROCESS CODE - *Enter the code from the list of process codes in the table below that best describes each process to be used at the facility. Fifteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), enter the process information in Item 9 (including a description).*

B. PROCESS DESIGN CAPACITY- *For each code entered in Section A, enter the capacity of the process.*

1. **AMOUNT** - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.*

2. **UNIT OF MEASURE** - *For each amount entered in Section B(1), enter the code in Section B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.*

C. PROCESS TOTAL NUMBER OF UNITS - *Enter the total number of units for each corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure in Code Table Below
	Storage:	
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure in Code Table Below
	Treatment:	
T01	Tank Treatment	Gallons Per Day; Liters Per Day
T02	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Hour; or Million Btu Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Treatment (continued):	
T81	Cement Kiln	For T81-T93:
T82	Lime Kiln	
T83	Aggregate Kiln	Gallons Per Day; Liters Per Day; Pounds
T84	Phosphate Kiln	Per Hour; Short Tons Per Hour; Kilograms
T85	Coke Oven	Per Hour; Metric Tons Per Day; Metric
T86	Blast Furnace	Tons Per Hour; Short Tons Per Day; Btu Per
T87	Smelting, Melting, or Refining Furnace	Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
T88	Titanium Dioxide Chloride Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed In 40 CFR §260.10	
T94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour
	Miscellaneous (Subpart X):	
X01	Open Burning/Open Detonation	Any Unit of Measure in Code Table Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V

UNIT OF MEASURE	UNIT OF MEASURE CODE
Short Tons Per Hour	D
Metric Tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R
Million Btu Per Hour	X

UNIT OF MEASURE	UNIT OF MEASURE CODE
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu Per Hour	I

8. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. (2) Unit of Measure (Enter code)	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
	1	X	0	4	175600.0	C	010	
	2	S	0	1	194.1	C	001	
	3	S	0	1	242.0	C	001	
	4				.			
	5				.			
	6				.			
	7				.			
	8				.			
	9				.			
1	0				.			
1	1				.			
1	2				.			
1	3				.			
1	4				.			
1	5				.			

NOTE: If you need to list more than 15 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.

9. Other Processes (*See instructions on page 25 and follow instructions from Item 8 for D99, S99, T04 and X99 process codes*)

Line Number (Enter #s in sequence with Item 8)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. (2) Unit of Measure (Enter code)	C. Process Total Number of Units	D. Description of Process
X	2	T	0	4	100.000	U	001	In-situ Vitrification
					.			
					.			
					.			
					.			
					.			

10. Description of Hazardous Wastes (See instructions on page 25) - Enter information in the Sections on Form Page 5.

A. EPA HAZARDOUS WASTE NUMBER - ***Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.***

B. ESTIMATED ANNUAL QUANTITY - ***For each listed waste entered in Section A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Section A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.***

C. UNIT OF MEASURE - ***For each quantity entered in Section B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:***

ENGLISH UNIT OF MEASURE	*CODE*	*METRIC UNIT OF MEASURE*	*CODE*
POUNDS	*P*	*KILOGRAMS*	*K*
TONS	*T*	*METRIC TONS*	*M*

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the listed hazardous wastes.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in Section A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. ***Enter the first two as described above.***
2. ***Enter "000" in the extreme right box of Item 10.D(1).***
3. ***Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.***

2. PROCESS DESCRIPTION: ***If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).***

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. ***Select one of the EPA Hazardous Waste Numbers and enter it in Section A. On the same line complete Sections B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.***
2. ***In Section A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Section D(2) on that line enter "included with above" and make no other entries on that line.***
3. ***Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.***

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		*A. EPA Hazardous Waste No. (Enter code)*				*B. Estimated Annual Quantity of Waste*	*C. Unit of Measure (Enter code)*	*D. PROCESSES*									
								(1) PROCESS CODES (Enter code)									*(2) PROCESS DESCRIPTION- (If a code is not entered in D(1))*
X	1	K	0	5	4	900	P	T	0	3	D	8	0				
X	2	D	0	0	2	400	P	T	0	3	D	8	0				
X	3	D	0	0	1	100	P	T	0	3	D	8	0				
X	4	D	0	0	2												Included With Above

10. Description of Hazardous Wastes (Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
	1	F	0	0	1	1891	M	X	0	4	S	0	1	S	0	1	
	2	F	0	0	2	1860	M	X	0	4	S	0	1	S	0	1	
	3	F	0	0	3	1593	M	X	0	4	S	0	1	S	0	1	
	4	F	0	0	4	26	M	X	0	4	S	0	1	S	0	1	
	5	F	0	0	5	1829	M	X	0	4	S	0	1	S	0	1	
	6	F	0	0	6	915	M	X	0	4	S	0	1	S	0	1	
	7	F	0	0	7	915	M	X	0	4	S	0	1	S	0	1	
	8	F	0	0	9	915	M	X	0	4	S	0	1	S	0	1	
	9	D	0	0	4	903	M	X	0	4	S	0	1	S	0	1	
1	0	D	0	0	5	484	M	X	0	4	S	0	1	S	0	1	
1	1	D	0	0	6	1819	M	X	0	4	S	0	1	S	0	1	
1	2	D	0	0	7	1248	M	X	0	4	S	0	1	S	0	1	
1	3	D	0	0	8	3246	M	X	0	4	S	0	1	S	0	1	
1	4	D	0	0	9	1727	M	X	0	4	S	0	1	S	0	1	
1	5	D	0	1	0	186	M	X	0	4	S	0	1	S	0	1	
1	6	D	0	1	1	1090	M	X	0	4	S	0	1	S	0	1	
1	7	D	0	1	8	749	M	X	0	4	S	0	1	S	0	1	
1	8	D	0	1	9	761	M	X	0	4	S	0	1	S	0	1	
1	9	D	0	2	1	26	M	X	0	4	S	0	1	S	0	1	
2	0	D	0	2	2	1098	M	X	0	4	S	0	1	S	0	1	
2	1	D	0	2	6	609	M	X	0	4	S	0	1	S	0	1	
2	2	D	0	2	7	26	M	X	0	4	S	0	1	S	0	1	
2	3	D	0	2	8	449	M	X	0	4	S	0	1	S	0	1	
2	4	D	0	2	9	478	M	X	0	4	S	0	1	S	0	1	
2	5	D	0	3	0	26	M	X	0	4	S	0	1	S	0	1	
2	6	D	0	3	2	26	M	X	0	4	S	0	1	S	0	1	
2	7	D	0	3	4	26	M	X	0	4	S	0	1	S	0	1	
2	8	D	0	3	5	139	M	X	0	4	S	0	1	S	0	1	
2	9	D	0	3	6	26	M	X	0	4	S	0	1	S	0	1	
3	0	D	0	3	7	26	M	X	0	4	S	0	1	S	0	1	
3	1	D	0	3	8	26	M	X	0	4	S	0	1	S	0	1	
3	2	D	0	3	9	26	M	X	0	4	S	0	1	S	0	1	
3	3	D	0	4	0	140	M	X	0	4	S	0	1	S	0	1	
3	4	D	0	4	3	26	M	X	0	4	S	0	1	S	0	1	
3	5	P	0	1	5	945	M	X	0	4	S	0	1	S	0	1	
3	6	U	0	0	2	344	M	X	0	4	S	0	1	S	0	1	
3	7	U	0	1	9	344	M	X	0	4	S	0	1	S	0	1	
3	8	U	0	3	7	344	M	X	0	4	S	0	1	S	0	1	
3	9	U	0	4	3	344	M	X	0	4	S	0	1	S	0	1	

10. Description of Hazardous Wastes (Continued. Use this Additional Sheet(s) as necessary; number as 5 a, etc.)

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	E. PROCESSES (1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in E(1))
4	0	U	0	4	4	344	M	X	0	4	S	0	1	S	0	1	
4	1	U	0	5	2	344	M	X	0	4	S	0	1	S	0	1	
4	2	U	0	7	0	344	M	X	0	4	S	0	1	S	0	1	
4	3	U	0	7	2	344	M	X	0	4	S	0	1	S	0	1	
4	4	U	0	7	8	344	M	X	0	4	S	0	1	S	0	1	
4	5	U	0	7	9	344	M	X	0	4	S	0	1	S	0	1	
4	6	U	1	0	5	344	M	X	0	4	S	0	1	S	0	1	
4	7	U	1	2	2	344	M	X	0	4	S	0	1	S	0	1	
4	8	U	1	3	3	344	M	X	0	4	S	0	1	S	0	1	
4	9	U	1	5	1	344	M	X	0	4	S	0	1	S	0	1	
5	0	U	1	5	4	344	M	X	0	4	S	0	1	S	0	1	
5	1	U	1	5	9	344	M	X	0	4	S	0	1	S	0	1	
5	2	U	1	9	6	344	M	X	0	4	S	0	1	S	0	1	
5	3	U	2	0	9	344	M	X	0	4	S	0	1	S	0	1	
5	4	U	2	1	0	344	M	X	0	4	S	0	1	S	0	1	
5	5	U	2	2	0	344	M	X	0	4	S	0	1	S	0	1	
5	6	U	2	2	6	344	M	X	0	4	S	0	1	S	0	1	
5	7	U	2	2	8	344	M	X	0	4	S	0	1	S	0	1	
5	8	U	2	3	9	344	M	X	0	4	S	0	1	S	0	1	
5	9	P	1	2	0	3.3	M	X	0	4	S	0	1	S	0	1	
6	0	U	1	3	4	344	M	X	0	4	S	0	1	S	0	1	
6	1	D	0	3	3	344	M	X	0	4	S	0	1	S	0	1	
6	2	P	0	3	0	344	M	X	0	4	S	0	1	S	0	1	
6	3	P	0	9	8	344	M	X	0	4	S	0	1	S	0	1	
6	4	P	0	9	9	344	M	X	0	4	S	0	1	S	0	1	
6	5	P	1	0	6	344	M	X	0	4	S	0	1	S	0	1	
6	6	U	0	0	3	344	M	X	0	4	S	0	1	S	0	1	
6	7	U	1	0	3	344	M	X	0	4	S	0	1	S	0	1	
6	8	U	1	0	8	344	M	X	0	4	S	0	1	S	0	1	

11. Map (See instructions on pages 25 and 26)

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

12. Facility Drawing (See instructions on page 26)

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

13. Photographs (See instructions on page 26)

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

14. Comments (See instructions on page 26)

See attached narrative from previous Part A Form (Section XII)

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NM4890139088

8. PROCESS—CODES AND DESIGN CAPACITIES (continued)

The Waste Isolation Pilot Plant (WIPP) geologic repository is defined as a "miscellaneous unit" under 40 CFR §260.10. "Miscellaneous unit" means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, waste pile, land treatment unit, landfill, incinerator, containment building, boiler, industrial furnace, or underground injection well with appropriate technical standards under 40 CFR Part 146, corrective action management unit, or unit eligible for research, development, and demonstration permit under 40 CFR §270.65. The WIPP is a geologic repository designed for the disposal of defense-generated transuranic (TRU) waste. Some of the TRU wastes disposed of at the WIPP contain hazardous wastes as co-contaminants. More than half the waste to be disposed of at the WIPP also meets the definition of debris waste. The debris categories include manufactured goods, biological materials, and naturally occurring geological materials. Approximately 120,000 cubic meters (m^3) of the 175,600 m^3 of WIPP wastes is categorized as debris waste. The geologic repository has been divided into ten discrete hazardous waste management units (HWMU) which are being permitted under 40 CFR Part 264, Subpart X.

During the Disposal Phase of the facility, which is expected to last 25 years, the total amount of waste received from off-site generators and any derived waste will be limited to 175,600 m^3 of TRU waste of which up to 7,080 m^3 may be remote-handled (RH) TRU mixed waste. For purposes of this application, all TRU waste is managed as though it were mixed.

~~On March 25, 1996, the DOE reached the conclusion that in order to comply with 40 CFR 191 §13 which regulates the long-term release of radionuclides from a geologic disposal facility, it is necessary to add magnesium oxide to each disposal room. This additive is to be placed as a backfill. The function of the backfill is to chemically alter the composition of brine that may accumulate in the disposal region. The result of the chemical alteration is to significantly reduce the solubility of the prevalent TRU radionuclides.~~

The process design capacity for the miscellaneous unit (composed of ten underground HWMUs in the geologic repository) shown in Section ~~XII~~8 B, is for the maximum amount of waste that may be received from off-site generators plus the maximum expected amount of derived wastes that may be generated at the WIPP facility. In addition, two HWMUs have been designated as container storage units (S01) in Section ~~XII~~8 B. One is inside the Waste Handling Building (WHB) and consists of the contact-handled (CH) bay, waste shaft conveyance loading room, waste shaft conveyance entry room, RH bay, cask unloading room, hot cell, transfer cell, and facility cask loading room. This HWMU will be used for waste receipt, handling, and storage (including storage of derived waste) prior to emplacement in the underground geologic repository. No treatment or disposal will occur in this S01 HWMU. The capacity of this S01 unit for storage is 194.1 m^3, based on 36 ten-drum overpacks on 18 facility pallets, four CH Packages at the TRUDOCKs, one standard waste box of derived waste, two loaded casks and one 55-gallon drum of derived waste in the RH Bay, one loaded cask in the Cask Unloading Room, 13 55-gallon drums in the Hot Cell, one canister in the Transfer Cell and one canister in the Facility Cask Unloading Room. The second S01 HWMU is the parking area outside the WHB where the Contact- and Remote-Handled Package trailers and the road cask trailers will be parked awaiting waste handling operations. The capacity of this unit is 50 Contact-Handled Packages and twelve Remote-Handled Packages with a combined volume of 242 m^3. The

HWMUs are shown in Figures B3-2, B3-3, and B3-4. ~~Appendix O3 as Figures O3-2, O3-3, and O3-4~~.

During the ten year period of the permit, up to 148,500 ~~129,750~~ m^3 of CH TRU mixed waste could be emplaced in Panels 1 to ~~7~~8 and up to 2,635 ~~1,985~~ m^3 of RH TRU mixed waste could be emplaced in Panels 4 to 8 ~~7~~. Panels ~~8,~~ 9 and 10 will be constructed under the initial term of this permit. These latter areas will not receive waste for disposal under this permit.

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RCRA PART A APPLICATION CERTIFICATION

The U.S. Department of Energy (DOE), through its Carlsbad Field Office, has signed as "owner and operator," and Washington TRU Solutions LLC, the Management and Operating Contractor (MOC), has signed this application for the permitted facility as "co-operator."

The DOE has determined that dual signatures best reflect the actual apportionment of Resource Conservation and Recovery Act (RCRA) responsibilities as follows:

The DOE's RCRA responsibilities are for policy, programmatic directives, funding and scheduling decisions, Waste Isolation Pilot Plant (WIPP) requirements of DOE generator sites, auditing, and oversight of all other parties engaged in work at the WIPP, as well as general oversight.

The MOC's RCRA responsibilities are for certain day-to-day operations (in accordance with general directions given by the DOE and in the Management and Operating Contract as part of its general oversight responsibility), including, but not limited to, the following: certain waste handling, monitoring, record keeping, certain data collection, reporting, technical advice, and contingency planning.

For purposes of the certification required by Title 20 of the New Mexico Administrative Code, Chapter 4, Part 1 (20.4.1 NMAC), Subpart IX, §270.11(d), the DOE's and the MOC's representatives certify, under penalty of law that this document and all attachments were prepared under their direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on their inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of their knowledge and belief, true, accurate, and complete for their respective areas of responsibility. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner and Operator Signature:	*Original signed by Edward Ziemianski*
Title:	Manager, Carlsbad Field Office
for:	U.S. Department of Energy
Date:	12/30/10
Co-Operator Signature:	*Original signed by Farok Sharif*
Title:	General Manager
for:	Washington TRU Solutions LLC
Date:	12/30/10

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APPENDIX B1
OTHER ENVIRONMENTAL PERMITS

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1

Active Environmental Permits and Approvals for the Waste Isolation Pilot Plant as of December 30, 2010

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
1.	Department of the Interior, Bureau of Land Management	Right-of-Way for Water Pipeline	NM53809	08/17/83	In Perpetuity	Inactive (city of Carlsbad Double Eagle is the owner of the pipeline)~~Active~~
2.	Department of the Interior, Bureau of Land Management	Right-of-Way for the North Access Road	NM55676	08/24/83	None	Active
3.	Department of the Interior, Bureau of Land Management	Right-of-Way for Railroad	NM55699	09/27/83	None	Active
4.	Department of the Interior, Bureau of Land Management	Right-of-Way for Dosimetry and Aerosol Sampling Sites	NM63136	07/31/86	07/31/11	Active
5.	Department of the Interior, Bureau of Land Management	Right-of-Way for Seven Subsidence Monuments	NM65801	11/07/86	None	Active
6.	Department of the Interior, Bureau of Land Management	Right-of-Way for Aerosol Sampling Site	NM77921	08/18/89	08/18/19	Active
7.	Department of the Interior, Bureau of Land Management	Right-of-Way for 2 Survey Monuments	NM82245	12/13/89	12/13/19	Active
8.	Department of the Interior, Bureau of Land Management	Right-of-Way for telephone cable	NM46092	07/03/90	09/04/11	Active
9.	Department of the Interior, Bureau of Land Management	Right-of-Way for SPS Powerline	NM43203	02/20/96	10/19/11	Active
10.	Department of the Interior, Bureau of Land Management	Right-of-Way for South Access Road	NM123703	1/27/10	12/31/39	Active
11.	Department of the Interior, Bureau of Land Management	Right-of-Way for Duval telephone line	NM60174	11/06/96	03/08/15	Active
12.	Department of the Interior, Bureau of Land Management	Right-of-Way for Wells AEC-7 & AEC-8	NM108365	8/30/02	08/30/32	Active
13.	Department of the Interior, Bureau of Land Management	Right-of-Way for ERDA-6	NM108365	8/30/02	08/30/32	Active
14.	Department of the Interior, Bureau of Land Management	Right-of-Way for Well C-2756 (P-18)	NM108365	8/30/02	08/30/32	Active
15.	Department of the Interior, Bureau of Land Management	Right-of-Way for Monitoring Well C-2664 (Cabin Baby)	NM107944	04/23/02	04/23/32	Active

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
16.	Department of the Interior, Bureau of Land Management	Right-of-Way for Seismic Monitoring Station	NM85426	09/23/91	None	Active
17.	Department of the Interior, Bureau of Land Management	Right-of-Way for Wells C-2725 (H-4A), C-2775 (H-4B), & C-2776 (H-4C)	NM-6-5 Cooperative Agreement	04/27/78	None	Active
18.	Department of the Interior, Bureau of Land Management	Right-of-Way for Monitoring Wells C-2723 (WIPP-25), C-2724 (WIPP-26), C-2722 (WIPP-27), C-2636 (WIPP-28), C-2743 (WIPP-29), & C-2727 (WIPP-30)	NM-6-5 Cooperative Agreement	06/14/78	None	Active
19.	Department of the Interior, Bureau of Land Management	Right-of-Way for Aerosol Sampling Sites	NM77921	10/03/89	08/18/19	Active
20.	New Mexico State Land Office	Right-of-Way easement for accessing state trust lands in Eddy & Lea Counties	R25430	9/28/04	9/28/14	Active
21.	Department of Interior, Bureau of Land Management	Right of Way for Valor Telecom	NM113339	8/9/05	12/31/34	Active
22.	Department of Interior, Bureau of Land Management	Right of Way for South Access Road Fence	NM094304	3/15/95	In Perpetuity	Active
23.	New Mexico Commissioner of Public Lands	Right-of-Way for High Volume Air Sampler	RW-22789	10/03/85	10/03/20	Active
24.	New Mexico Environment Department Groundwater Bureau	Discharge Permit	DP-831	9/9/08	9/9/13	Active
25.	New Mexico Environment Department Air Quality Bureau	Operating Permit for two backup diesel generators	310-M-2	12/07/93	None	Active
26.	New Mexico Environment Department-UST Bureau	Underground Storage Tanks	NMED11811 (Number changes annually)	07/01/02	06/30/03 (2003 registration submitted 6/18/02)	Active
27.	New Mexico State Engineer Office	Monitoring Well Exhaust Shaft Exploratory Borehole	C-2801	02/23/01	None	Active
28.	New Mexico State Engineer Office	Monitoring Well Exhaust Shaft Exploratory Borehole	C-2802	02/23/01	None	Active
29.	New Mexico State Engineer Office	Monitoring Well Exhaust Shaft Exploratory Borehole	C-2803	02/23/01	None	Active

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
30.	New Mexico State Engineer Office	Monitoring Well	C-2811	03/02/02	None	Active
31.	New Mexico State Engineer Office	Appropriation: WQSP-1 Well	C-2413	10/21/96	None	Active
32.	New Mexico State Engineer Office	Appropriation: WQSP-2 Well	C-2414	10/21/96	None	Active
33.	New Mexico State Engineer Office	Appropriation: WQSP-3 Well	C-2415	10/21/96	None	Active
34.	New Mexico State Engineer Office	Appropriation: WQSP-4 Well	C-2416	10/21/96	None	Active
35.	New Mexico State Engineer Office	Appropriation: WQSP-5 Well	C-2417	10/21/96	None	Active
36.	New Mexico State Engineer Office	Appropriation: WQSP-6 Well	C-2418	10/21/96	None	Active
37.	New Mexico State Engineer Office	Appropriation: WQSP-6a Well	C-2419	10/21/96	None	Active
38.	New Mexico State Engineer Office	Monitoring Well AEC-7	C-2742	11/06/00	None	Active
39.	New Mexico State Engineer Office	Monitoring Well AEC-8	C-2744	11/06/00	None	P&A~~Active~~
40.	New Mexico State Engineer Office	Monitoring Well Cabin Baby	C-2664	07/30/99	None	Active
~~41.~~	~~New Mexico State Engineer Office~~	~~Monitoring Well D-268 Plugged to 220'. Livestock watering~~	~~C-2638~~	~~01/12/99~~	~~None~~	~~Active~~
42.	New Mexico State Engineer Office	Monitoring Well DOE-1	C-2757	11/06/00	None	P&A~~Active~~
43.	New Mexico State Engineer Office	Monitoring Well DOE-2	C-2682	04/17/00	None	Active
44.	New Mexico State Engineer Office	Monitoring Well ERDA-9	C-2752	11/06/00	None	Active
45.	New Mexico State Engineer Office	Monitoring Well H-1	C-2765	11/06/00	None	P&A~~Active~~
46.	New Mexico State Engineer Office	Monitoring Well H-2A	C-2762	11/06/00	None	P&A~~Active~~

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
47.	New Mexico State Engineer Office	Monitoring Well H-2B1	C-2758	11/06/00	None	Active
48.	New Mexico State Engineer Office	Monitoring Well H-2B2	C-2763	11/06/00	None	Active
49.	New Mexico State Engineer Office	Monitoring Well H-2C	C-2759	11/06/00	None	P&A~~Active~~
50.	New Mexico State Engineer Office	Monitoring Well H-3B1	C-2764	11/06/00	None	Active
51.	New Mexico State Engineer Office	Monitoring Well H-3B2	C-2760	11/06/00	None	Active
52.	New Mexico State Engineer Office	Monitoring Well H-3B3	C-2761	11/06/00	None	P&A~~Active~~
53.	New Mexico State Engineer Office	Monitoring Well H-3D	C-3207	11/06/00	None	Active
54.	New Mexico State Engineer Office	Monitoring Well H-4A	C-2725	11/06/00	None	P&A~~Active~~
55.	New Mexico State Engineer Office	Monitoring Well H-4B	C-2775	11/06/00	None	P&A~~Active~~
56.	New Mexico State Engineer Office	Monitoring Well H-4C	C-2776	11/06/00	None	Active
57.	New Mexico State Engineer Office	Monitoring Well H-5A	C-2746	11/06/00	None	P&A~~Active~~
58.	New Mexico State Engineer Office	Monitoring Well H-5B	C-2745	11/06/00	None	Active
59.	New Mexico State Engineer Office	Monitoring Well H-5C	C-2747	11/06/00	None	Active
60.	New Mexico State Engineer Office	Monitoring Well H-6A	C-2751	11/06/00	None	P&A~~Active~~
61.	New Mexico State Engineer Office	Monitoring Well H-6B	C-2749	11/06/00	None	P&A~~Active~~
62.	New Mexico State Engineer Office	Monitoring Well H-6C	C-2750	11/06/00	None	Active
63.	New Mexico State Engineer Office	Monitoring Well H-7A	C-2694	04/17/00	None	P&A~~Active~~

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
64.	New Mexico State Engineer Office	Monitoring Well H-7B1	C-2770	11/06/00	None	Active
65.	New Mexico State Engineer Office	Monitoring Well H-7B2	C-2771	11/06/00	None	P&A~~Active~~
~~66.~~	~~New Mexico State Engineer Office~~	~~Monitoring Well H-7C~~	~~C-2772~~	~~11/06/00~~	~~None~~	~~Active~~
67.	New Mexico State Engineer Office	Monitoring Well H-8A	C-2780	11/06/00	None	Active
~~68.~~	~~New Mexico State Engineer Office~~	~~Monitoring Well H-8B~~	~~C-2781~~	~~11/06/00~~	~~None~~	~~Active~~
~~69.~~	~~New Mexico State Engineer Office~~	~~Monitoring Well H-8C~~	~~C-2782~~	~~11/06/00~~	~~None~~	~~Active~~
70.	New Mexico State Engineer Office	Monitoring Well H-9A	C-2785	11/06/00	None	P&A~~Active~~
71.	New Mexico State Engineer Office	Monitoring Well H-9B	C-2783	11/06/00	None	P&A~~Active~~
72.	New Mexico State Engineer Office	Monitoring Well H-9C	C-2784	11/06/00	None	Active
73.	New Mexico State Engineer Office	Monitoring Well H-10A	C-2779	11/06/00	None	Active
74.	New Mexico State Engineer Office	Monitoring Well H-10B	C-2778	11/06/00	None	P&A~~Active~~
75.	New Mexico State Engineer Office	Monitoring Well H-10C	C-2695	04/17/00	None	Active
76.	New Mexico State Engineer Office	Monitoring Well H-11B1	C-2767	11/06/00	None	Active
77.	New Mexico State Engineer Office	Monitoring Well H-11B2	C-2687	04/17/00	None	Active
78.	New Mexico State Engineer Office	Monitoring Well H-11B3	C-2768	11/06/00	None	P&A~~Active~~
79.	New Mexico State Engineer Office	Monitoring Well H-11B4	C-2769	11/06/00	None	Active
80.	New Mexico State Engineer Office	Monitoring Well H-12	C-2777	11/06/00	None	Active

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
81.	New Mexico State Engineer Office	Monitoring Well H-14	C-2766	11/06/00	None	Active
82.	New Mexico State Engineer Office	Monitoring Well H-15	C-2685	04/17/00	None	Active
83.	New Mexico State Engineer Office	Monitoring Well H-16	C-2753	11/06/00	None	Active
84.	New Mexico State Engineer Office	Monitoring Well H-17	C-2773	11/06/00	None	Active
85.	New Mexico State Engineer Office	Monitoring Well H-18	C-2683	04/17/00	None	Active
86.	New Mexico State Engineer Office	Monitoring Well H-19B0	C-2420	01/25/95	None	Active
87.	New Mexico State Engineer Office	Monitoring Well H-19B1	C-2420	01/25/95	None	Active
88.	New Mexico State Engineer Office	Monitoring Well H-19B2	C-2421	01/25/95	None	Active
89.	New Mexico State Engineer Office	Monitoring Well H-19B3	C-2422	01/25/95	None	Active
90.	New Mexico State Engineer Office	Monitoring Well H-19B4	C-2423	01/25/95	None	Active
91.	New Mexico State Engineer Office	Monitoring Well H-19B5	C-2424	01/25/95	None	Active
92.	New Mexico State Engineer Office	Monitoring Well H-19B6	C-2425	01/25/95	None	Active
93.	New Mexico State Engineer Office	Monitoring Well H-19B7	C-2426	01/25/95	None	Active
94.	New Mexico State Engineer Office	Monitoring Well P-14	C-2637	01/02/99	None	P&A
95.	New Mexico State Engineer Office	Monitoring Well P-15	C-2686	04/17/00	None	P&A
96.	New Mexico State Engineer Office	Monitoring Well P-17	C-2774	11/06/00	None	P&A~~Active~~
97.	New Mexico State Engineer Office	Monitoring Well P-18	C-2756	11/06/00	None	P&A

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
98.	New Mexico State Engineer Office	Monitoring Well WIPP-12	C-2639	01/12/99	None	P&A~~Active~~
99.	New Mexico State Engineer Office	Monitoring Well WIPP-13	C-2748	11/06/00	None	Active
100.	New Mexico State Engineer Office	Monitoring Well WIPP-18	C-2684	04/17/00	None	Active
101.	New Mexico State Engineer Office	Monitoring Well WIPP-19	C-2755	11/06/00	None	Active
102.	New Mexico State Engineer Office	Monitoring Well WIPP-21	C-2754	11/06/00	None	P&A~~Active~~
103.	New Mexico State Engineer Office	Monitoring Well WIPP-25	C-2723	07/26/00	None	P&A~~Active~~
104.	New Mexico State Engineer Office	Monitoring Well WIPP-26	C-2724	11/06/00	None	P&A~~Active~~
105.	New Mexico State Engineer Office	Monitoring Well WIPP-27	C-2722	11/06/00	None	P&A~~Active~~
167.	New Mexico State Engineer Office	Monitoring Well WIPP28	C-2636	01/12/99	None	P&A
107.	New Mexico State Engineer Office	Monitoring Well WIPP-29	C-2743	11/06/00	None	P&A~~Active~~
108.	New Mexico State Engineer Office	Monitoring Well WIPP-30	C-2727	08/04/00	None	P&A~~Active~~
109.	New Mexico State Engineer Office	Monitoring Well H-6BR	C-3362	12/27/07	None	Active
110.	New Mexico State Engineer Office	Monitoring Well H-15R	C-3361	12/27/07	None	Active
111.	New Mexico State Engineer Office	Monitoring Well SNL-2	C-2948	2/14/03	None	Active
112.	New Mexico State Engineer Office	Monitoring Well SNL-9	C-2950	2/14/03	None	Active
113.	New Mexico State Engineer Office	Monitoring Well SNL-12	C-2954	2/25/03	None	Active
114.	New Mexico State Engineer Office	Monitoring Well SNL-1	C-2953	2/25/03	None	Active

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
115.	New Mexico State Engineer Office	Monitoring Well SNL-3	C-2949	2/14/03	None	Active
116.	New Mexico State Engineer Office	Monitoring Well SNL-5	C-3002	10/1/03	None	Active
117.	New Mexico State Engineer Office	Monitoring Well IMC-461	C-3015	11/25/03	None	Active
118.	New Mexico State Engineer Office	Monitoring Well SNL-10	C-3221	7/26/05	None	Active
119.	New Mexico State Engineer Office	Monitoring Well SNL-16	C-3220	7/26/05	None	Active
120.	New Mexico State Engineer Office	Monitoring Well SNL-17	C-3222	7/26/05	None	Active
121.	US Environmental Protection Agency Region 6	Conditions of Approval for Disposal of PCB/TRU and PCB/TRU Mixed Waste at the US Department of Energy (DOE) Waste Isolation Pilot Plant (WIPP) Carlsbad, New Mexico	N/A	4/30/08	4/30/13	Active
122.	US Fish and Wildlife Service	Migratory Bird Special Purpose – Relocate	NMED 31539 ~~MB155189 0~~	07/01/10 ~~6/1/09~~	6/30/11 ~~5/31/10~~	Active
123.	New Mexico State Engineer Office	Monitoring Well H-4bR	C-3404	1/13/09	None	Active
124.	New Mexico State Engineer Office	Monitoring Well H-9bR	C-2783-POD2	7/14/10	None	Active
125.	New Mexico State Engineer Office	Monitoring Well C-2737	C-2737	9/27/00	None	Active
126.	New Mexico State Engineer Office	Monitoring Well WIPP-11	C-3112	12/27/07	None	Active
127.	New Mexico State Engineer Office	Monitoring Well SNL-6	C-3151	2/10/05	None	Active
128.	New Mexico State Engineer Office	Monitoring Well SNL-8	C-3150	2/10/05	None	Active
129.	New Mexico State Engineer Office	Monitoring Well SNL-13	C-3139	12/17/04	None	Active

	Granting Agency	Type of Permit	Permit Number	Granted/ Submitted	Expiration	Current Permit Status
130.	New Mexico State Engineer Office	Monitoring Well SNL-14	C-3140	12/17/04	None	Active
131.	New Mexico State Engineer Office	Monitoring Well SNL-15	C-3152	2/10/05	None	Active
132.	New Mexico State Engineer Office	Monitoring Well SNL-18	C-3233	10/6/05	None	Active
133.	New Mexico State Engineer Office	Monitoring Well SNL-19	C-3234	10/6/05	None	Active
134.	Department of the interior, Bureau of Land Management	Right-of- Way reservation amendment for SNL-6, SNL-8, and SNL-15	NM108365	3/15/05	8/30/32	Active
135.	Department of the interior, Bureau of Land Management	Right-of- Way reservation amendment for SNL-13 and SNL-14	NM108365	1/25/05	8/30/32	Active
136.	Department of the interior, Bureau of Land Management	Right-of- Way grant for SNL-18 and SNL-19	NM115315	3/21/2006	12/31/35	Active

1 P&A - Plugged and Abandoned

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APPENDIX B2
MAPS

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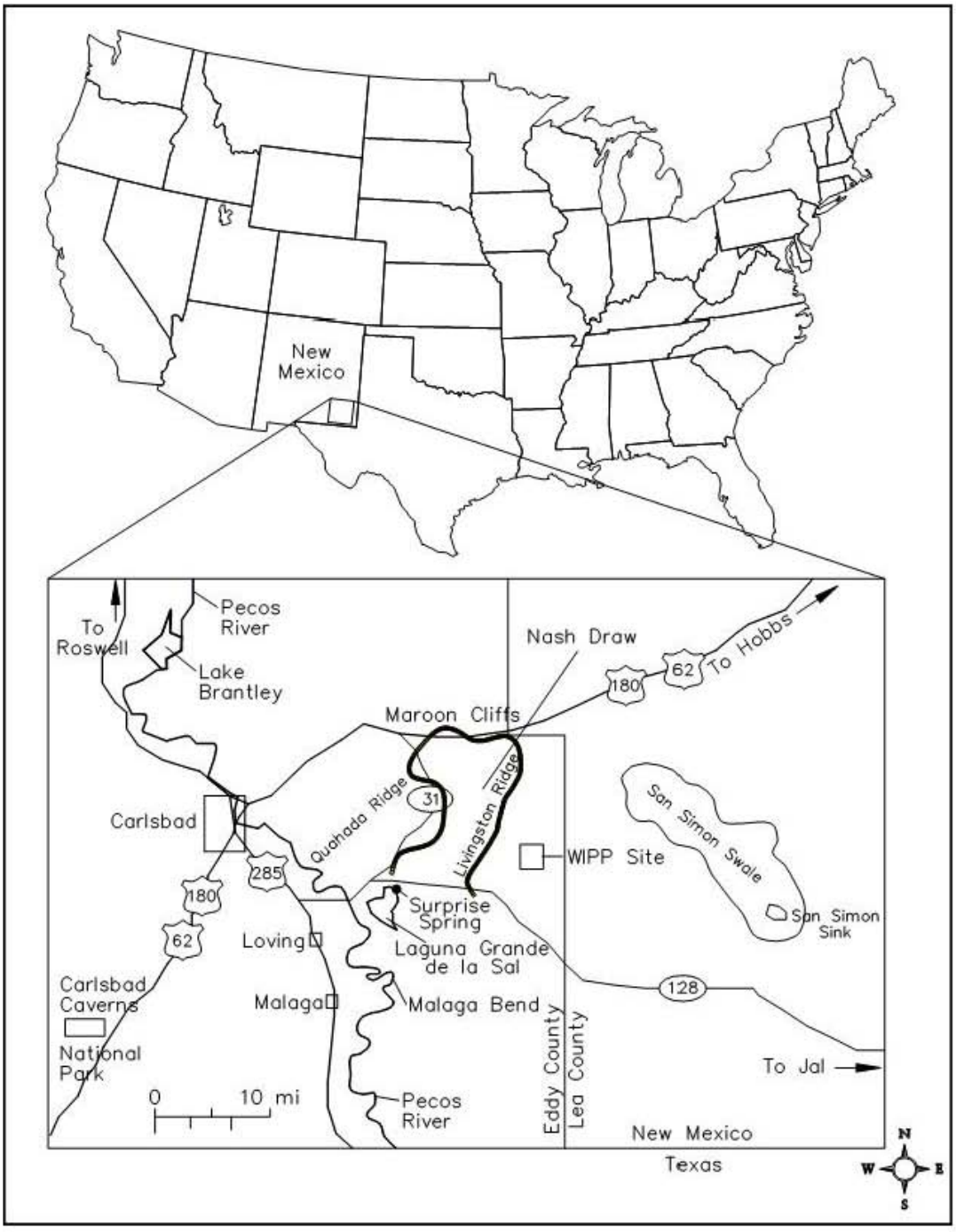

Figure B2-1
General Location of the WIPP Facility

1

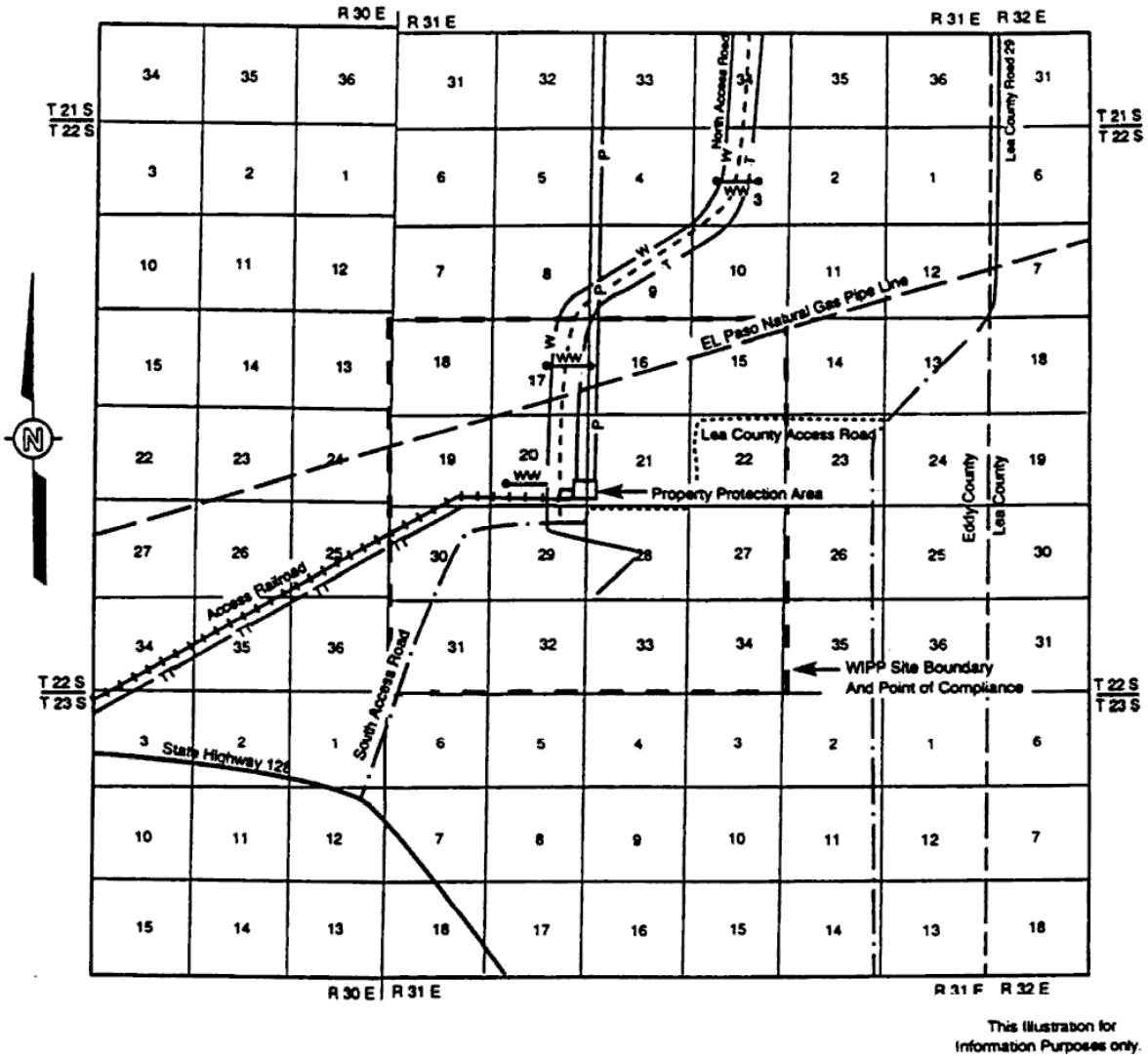

Figure B2-2
Planimetric Map-WIPP Facility Boundaries

1

LEGEND

- WIPP Site Boundary 10,240 Acres.
- W — U.S. DOE Right of Way Number NM-53809. For Waterline, 50 Feet Wide. The DOE had Agreed with the City of Carlsbad to Allow the Individuals to Tap this Line Located within the North Access Road Right of Way.
- Stock Water Tanks and Tap Lines Connected to the Main WIPP Waterline.
- Southwestern Public Service Company Right of Way Number NM-43203 for Power 60 Feet Wide.
- General Telephone of the Southwest Right of Way for Telephone Line, 30 Feet Wide, Located within the North access Road Right of Way.
- General Telephone of the Southwest Right of Way Number NM-60174 for Telephone Line, 30 Feet Wide, Located within the Railroad Right of Way.
- U.S. DOE Right of Way Number NM-55675 for North Access Road, 170 Feet Wide.
- El Paso Natural Gas company Right of Way for Gas Pipeline, 30 Feet Wide in Section 16, 50 Feet Wide Elsewhere.
- U.S. DOE Right of Way Number NM-55699 for Access Railroad, 150 Feet Wide.
- U.S. DOE Right of Way for Access Roads Includes Right of Way Number NM-123703 for the South Access Road which is 140 Feet Wide.

NOTES

1. The Property Protection Area is a fenced area of approximately 35 acres. It contains all surface facilities with the exception of salt storage piles, parking lot, landfill and waste water stabilization lagoons.

2. Zone II overlies the maximum extent of the Area available for underground development.

3. WIPP site boundary (WSB) provides a one mile buffer area around the area available for underground development.

Figure B2-2a
Legend to Figure B2-2

1

Replace this page with the Topographic Map from the earlier version of the draft Permit

Figure B2-3
Topographic Map

1

APPENDIX B3
FACILITIES

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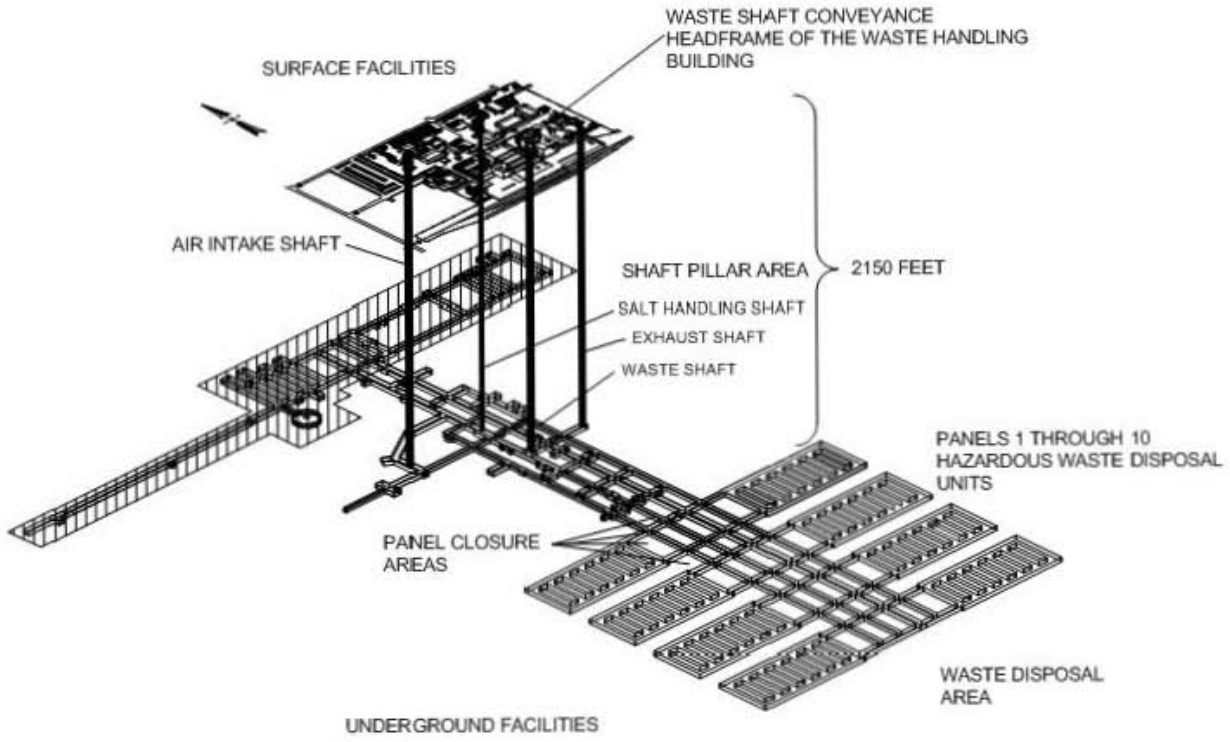
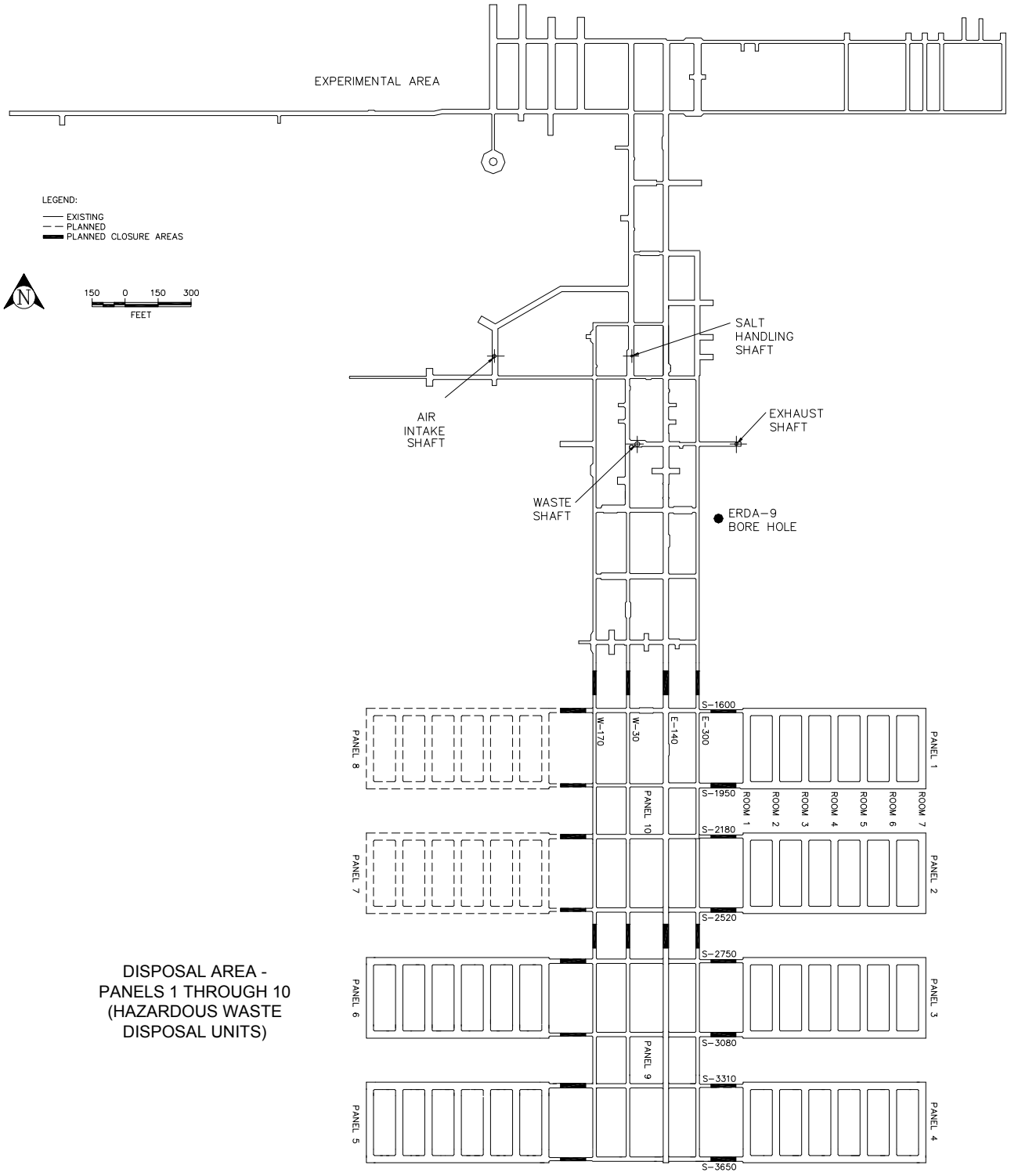


Figure B3-1
Spatial View of the WIPP Facility

1



DISPOSAL AREA - PANELS 1 THROUGH 10 (HAZARDOUS WASTE DISPOSAL UNITS)

Figure B3-2
Repository Horizon

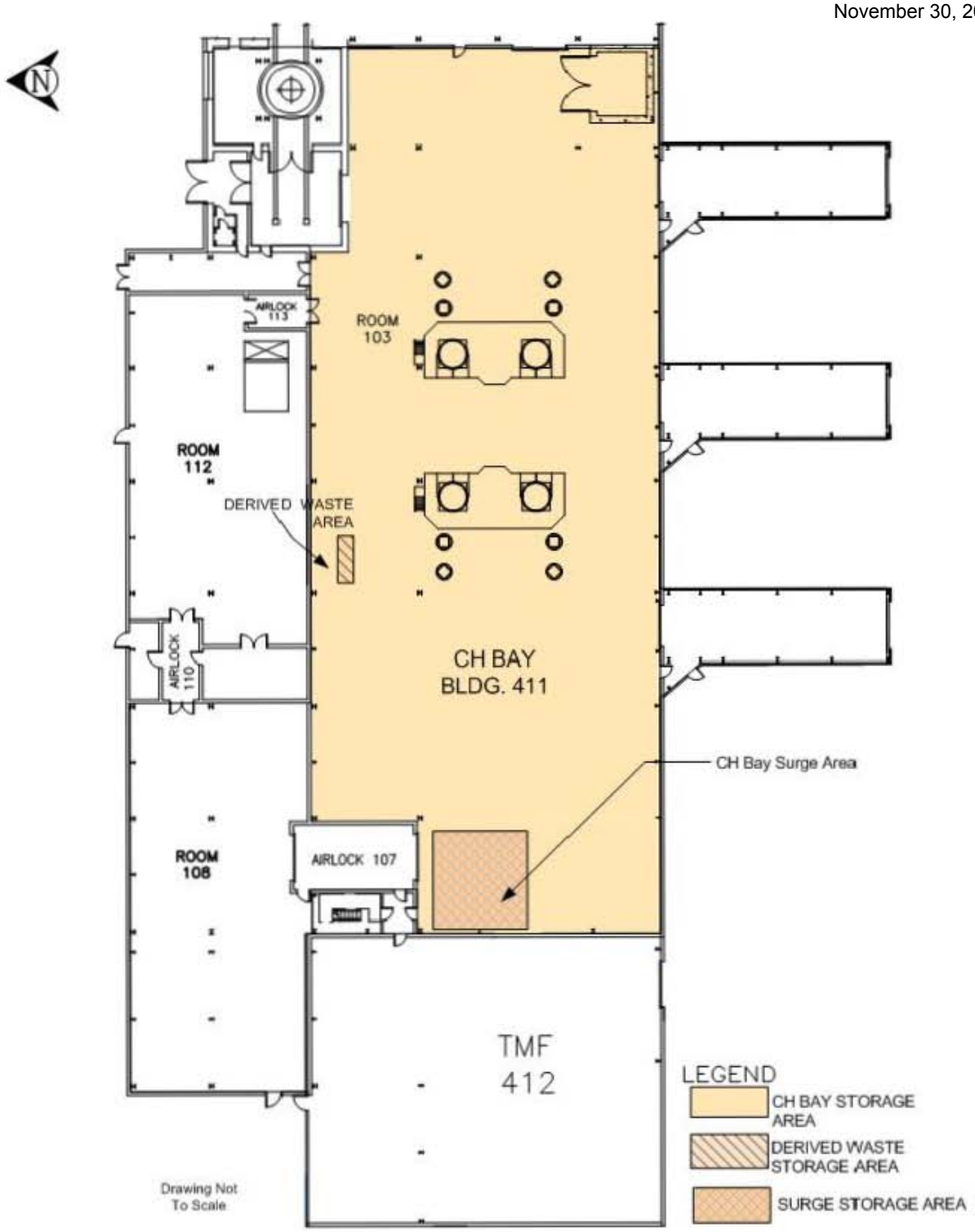


Figure B3-3
Waste Handling Building - CH TRU Mixed Waste Container Storage and Surge Areas

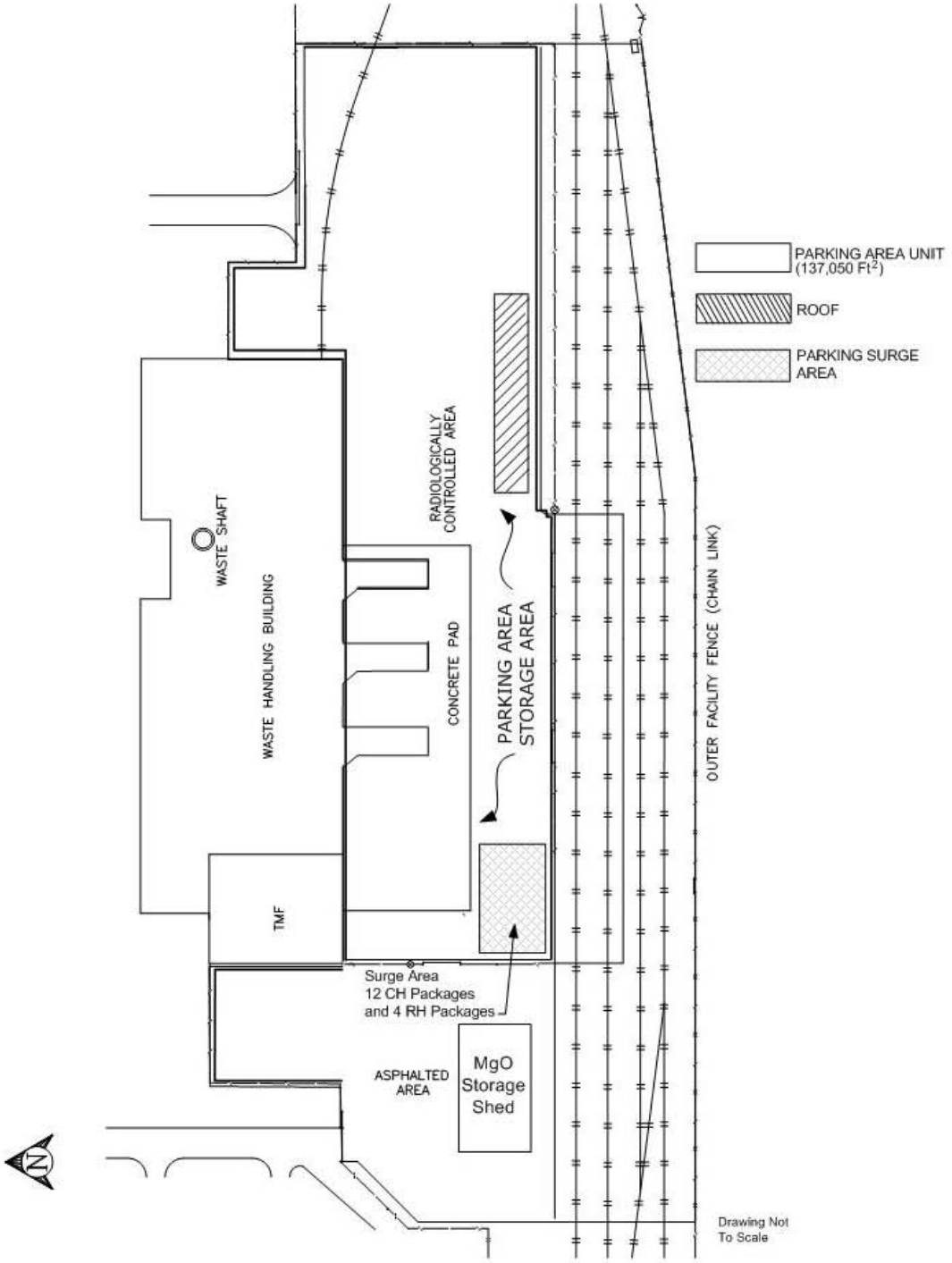


Figure B3-4
Parking Area-Container Storage and Surge Areas

APPENDIX B4
PHOTOGRAPHS

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Figure B4-1
Aerial Photograph of the Waste Isolation Pilot Plant

1

Figure B4-2
Underground - Panel One - Waste Disposal Room

Figure B4-3
Aerial Photograph of the Waste Handling Building

Figure B4-4
TRUDOCKs in CH Bay of the Waste Handling Building

Figure B4-5
NE Corner of CH Bay of the Waste Handling Building

1

Figure B4-6
Westward View of CH Bay of the Waste Handling Building

1

Figure B4-7
Waste Shaft Conveyance - Loading Facility Pallet with CH Waste, Waste Handling Building

1

Figure B4-8
RH Bay (Photo Taken July 2000)

1

Figure B4-9
Cask Unloading Room and Bridge Crane

Figure B4-10
Hot Cell

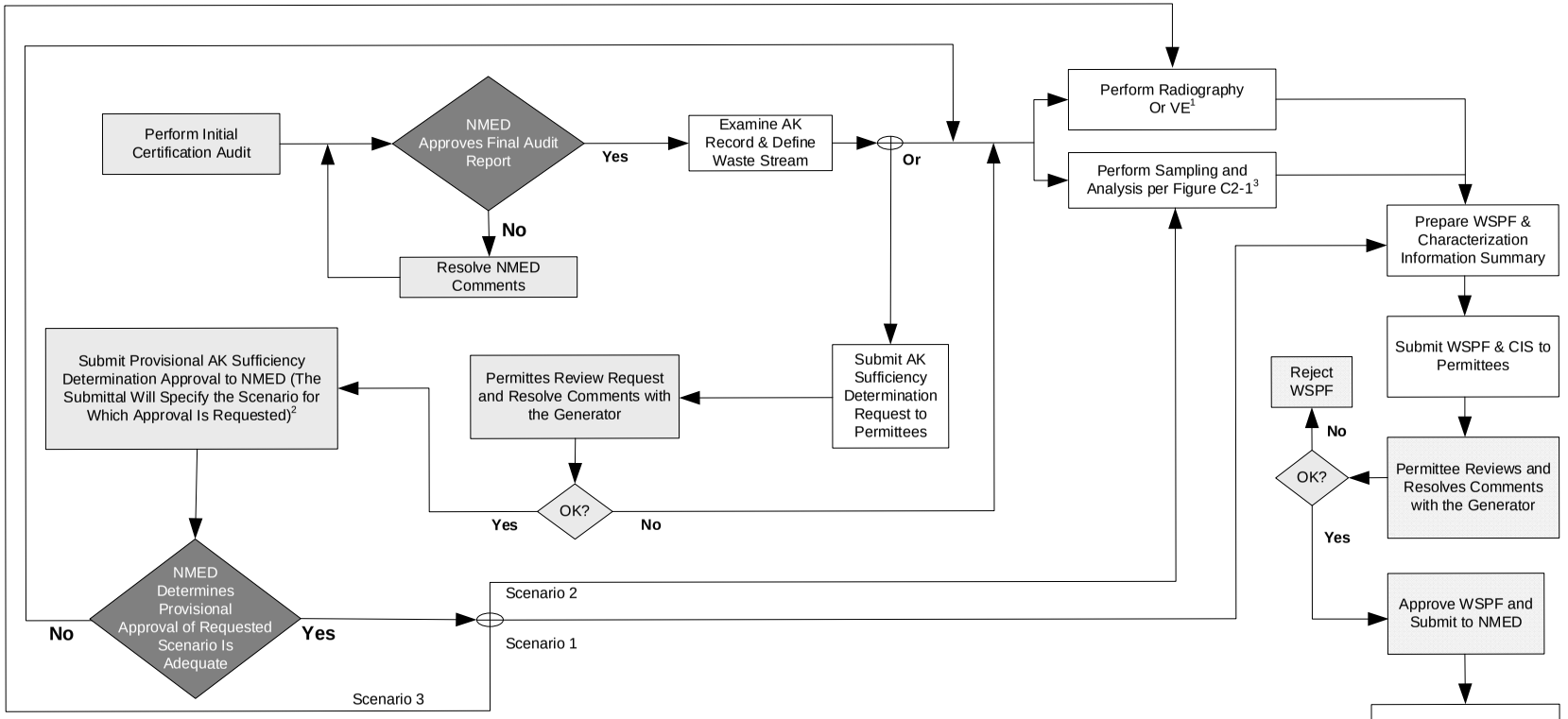
Figure B4-11
Transfer Cell

Figure B4-12
Facility Cask Loading Room and Facility Cask Rotating Device

1

Attachment B2
Figures – Item 4

Figure C-2
Waste Characterization Process



[1] Not all containers in the waste stream need to be radiographed or VE'd at the time of WSPF submittal and subsequent approval (C3-12(b)2)

[2] Scenario 1 - No further radiography/VE, or sampling is required (C-0b)
Scenario 2 - No further radiography/VE is required, but sampling is required (C-0b)
Scenario 3 - No further sampling is required, but radiography/VE is required (C-0b)

[3] Preliminary estimate samples from the accessible portion of the waste stream must be sampled and analyzed prior to WSPF submittal. (C3-12(b)2)

[4] This applies to containers that are radiographed/VE'd after WSPF approval (C-3c)

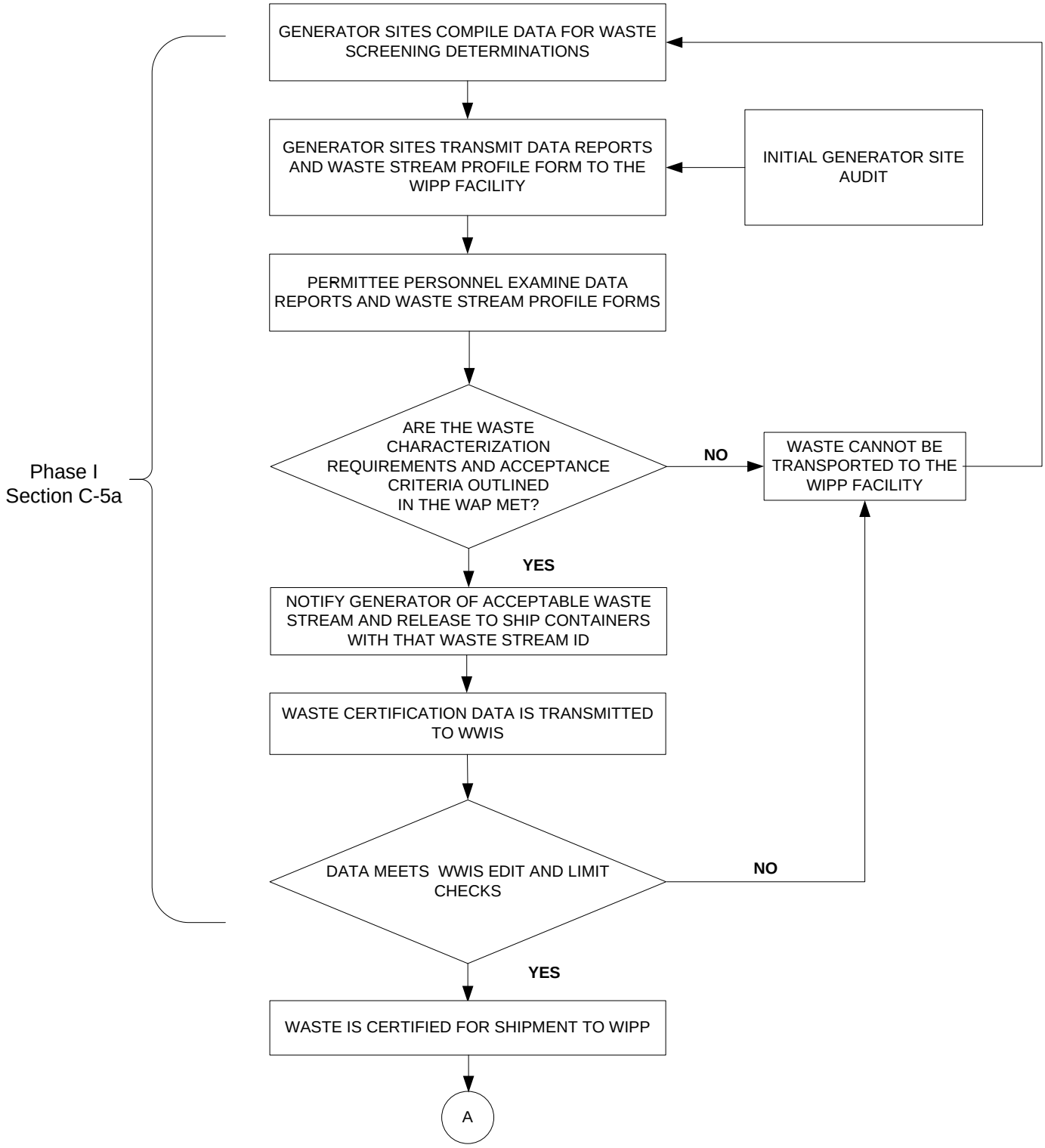


Figure C-3
TRU Mixed Waste Screening and Verification

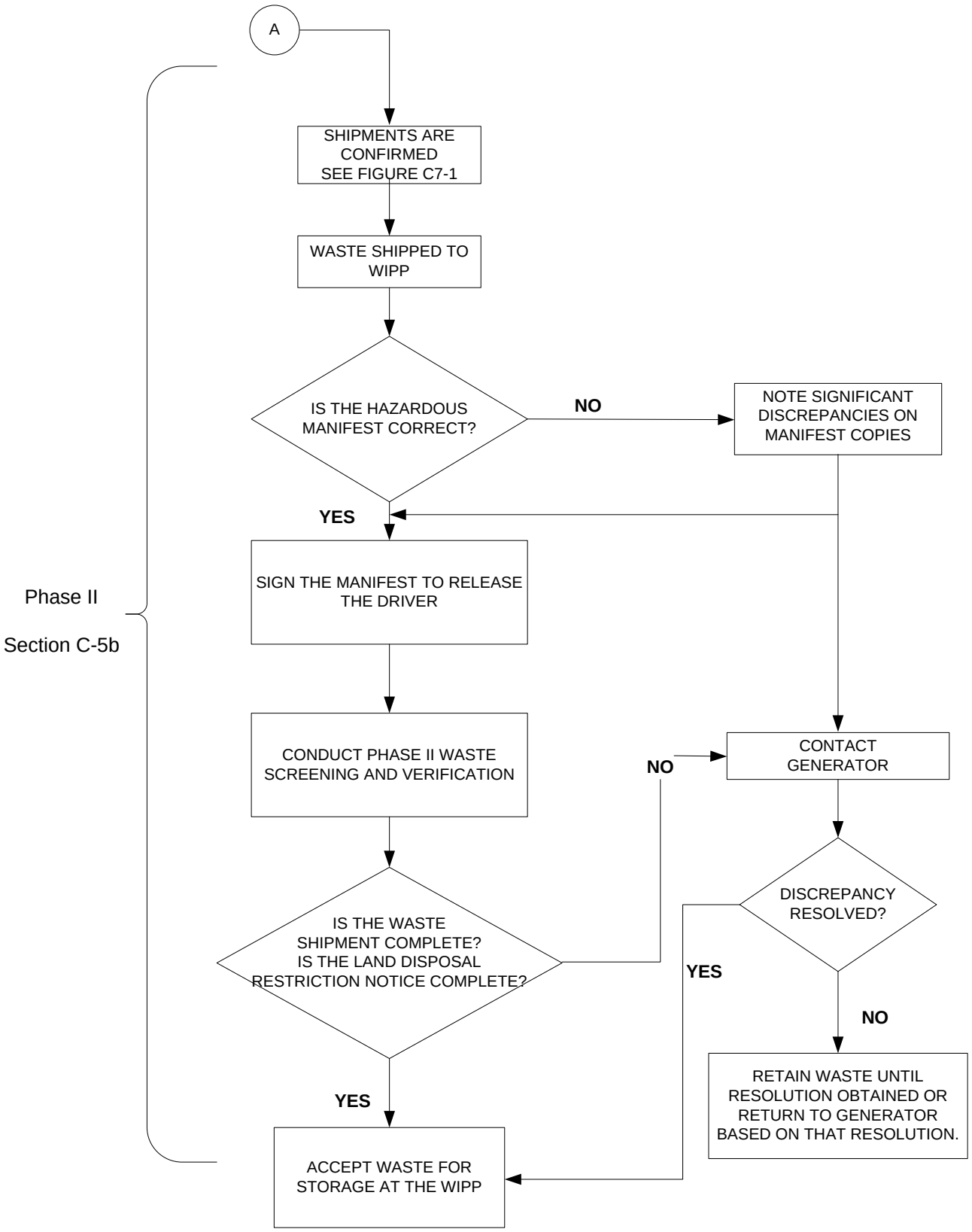


Figure C-3
TRU Mixed Waste Screening and Verification (Continued)

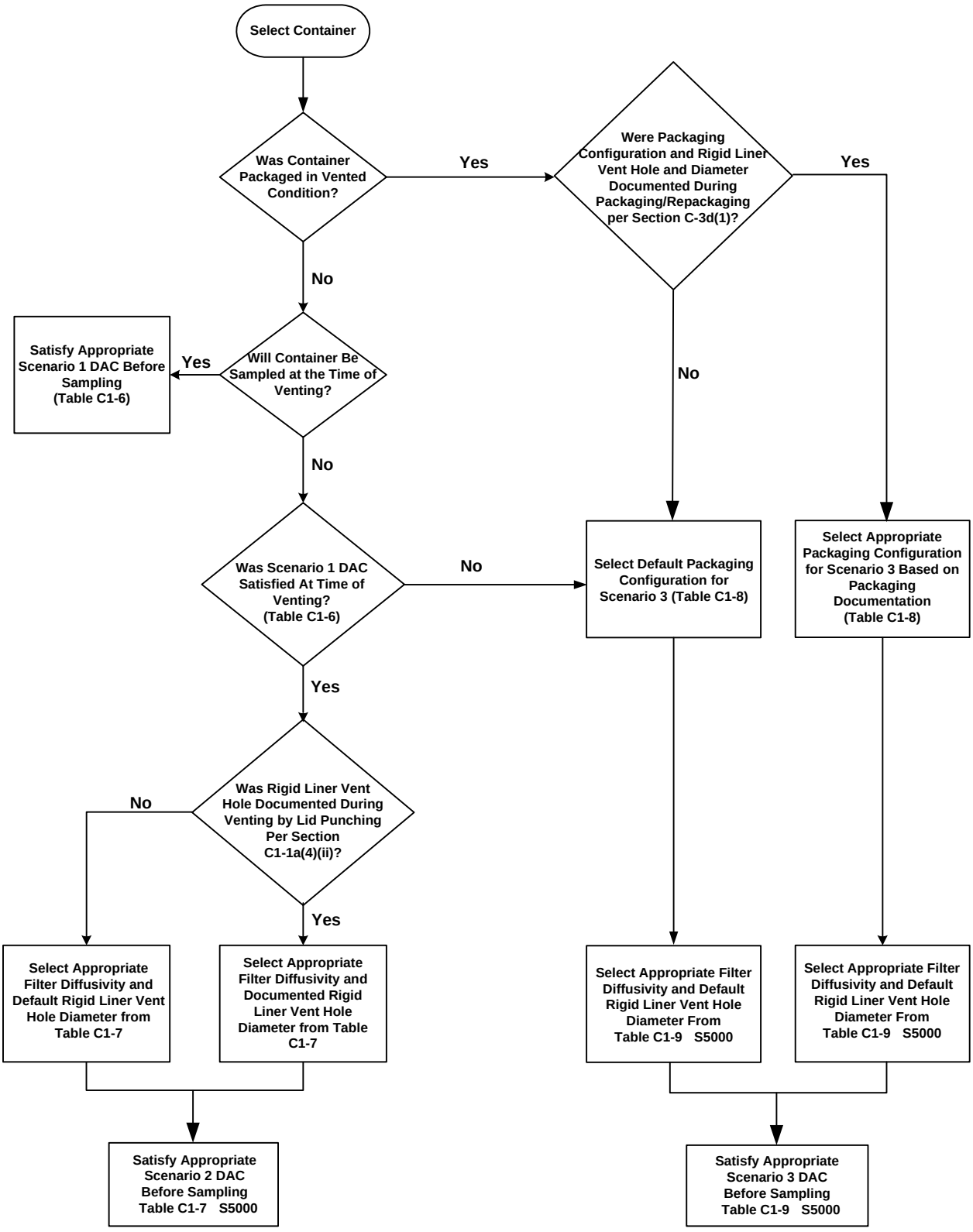


Figure C1-1
Headspace Gas Drum Age Criteria Sampling Scenario Selection Process

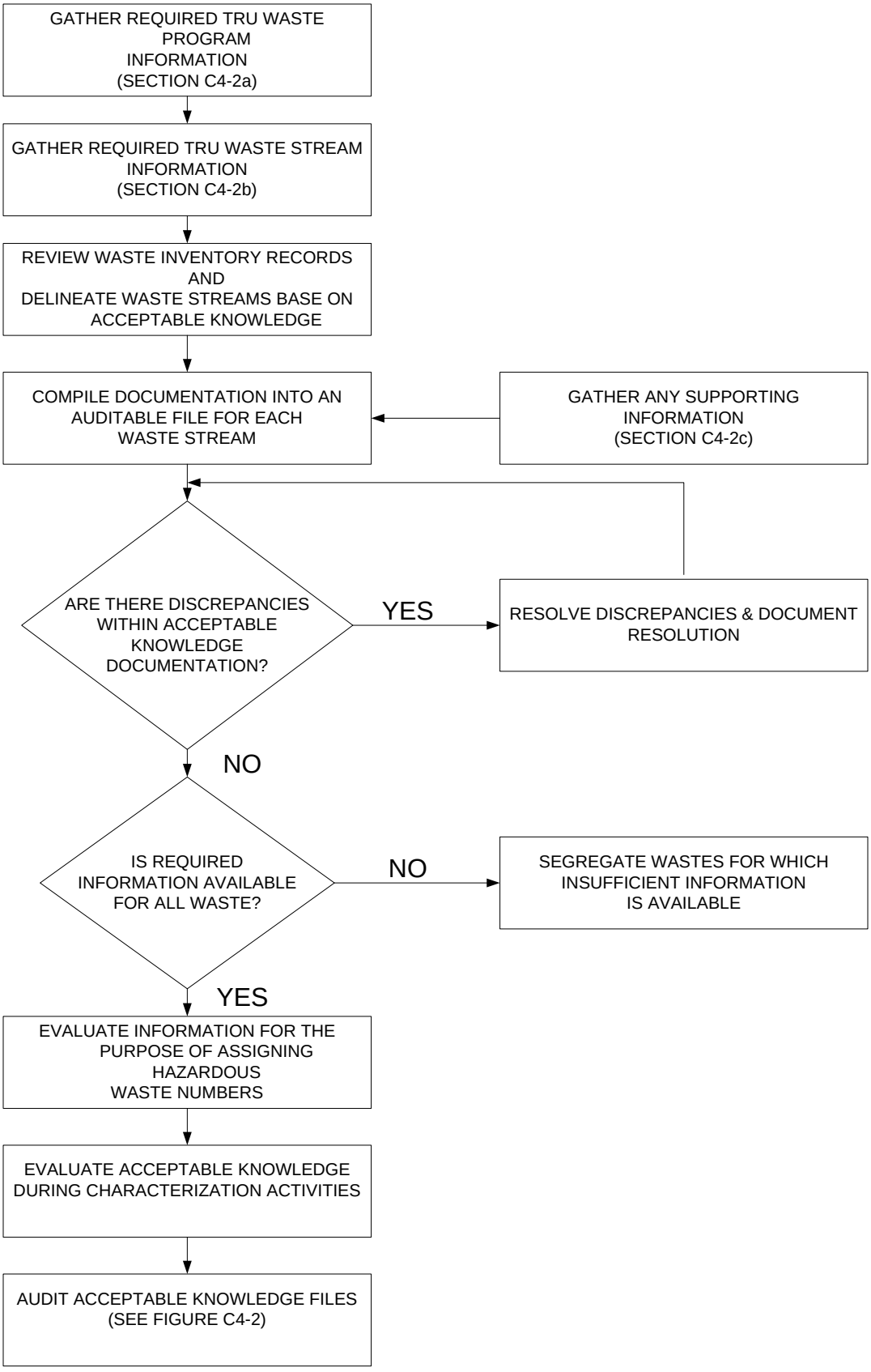


Figure C4-1
Compilation of Acceptable Knowledge Documentation

Attachment B3
Figures – Item 7

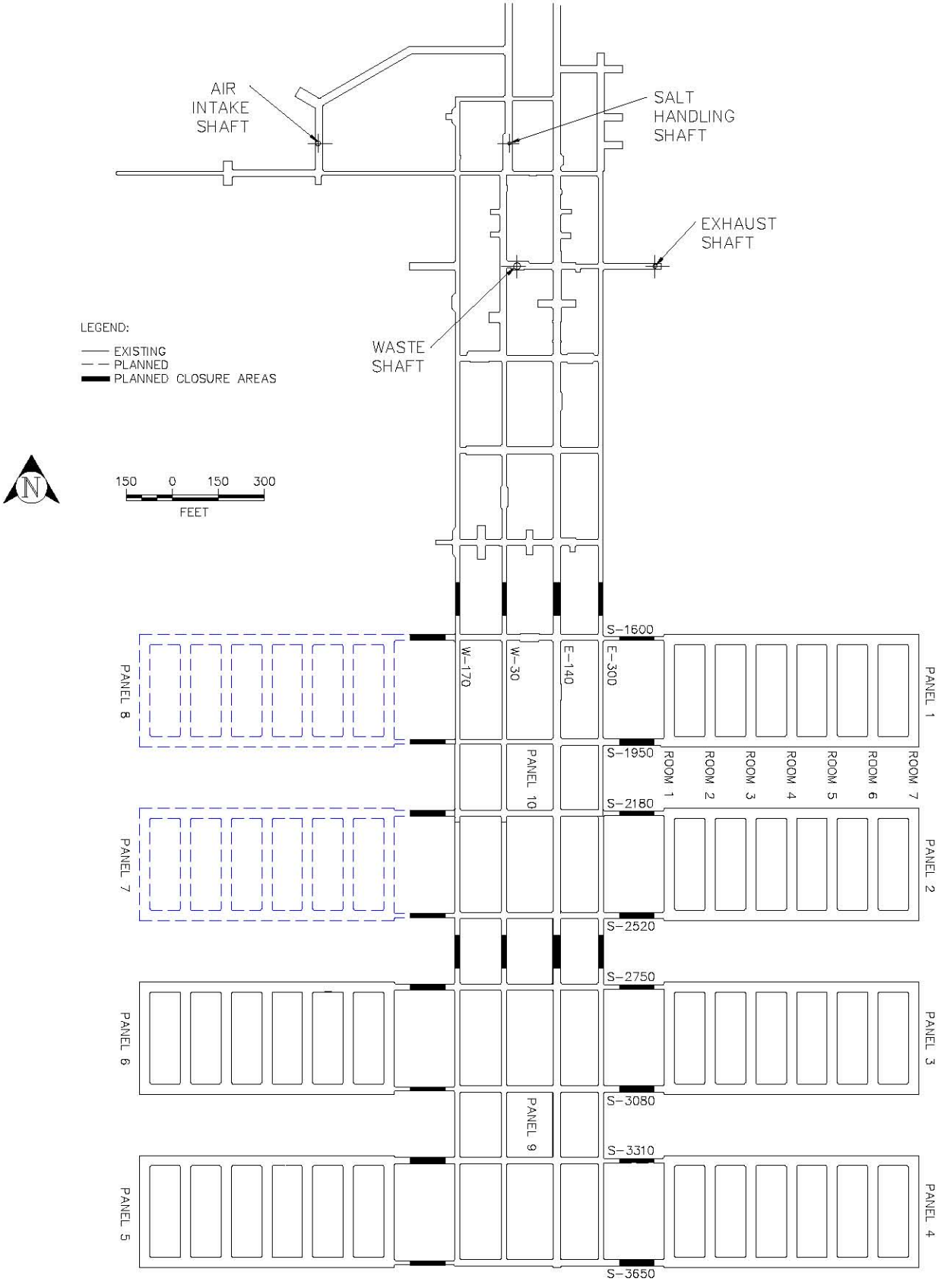
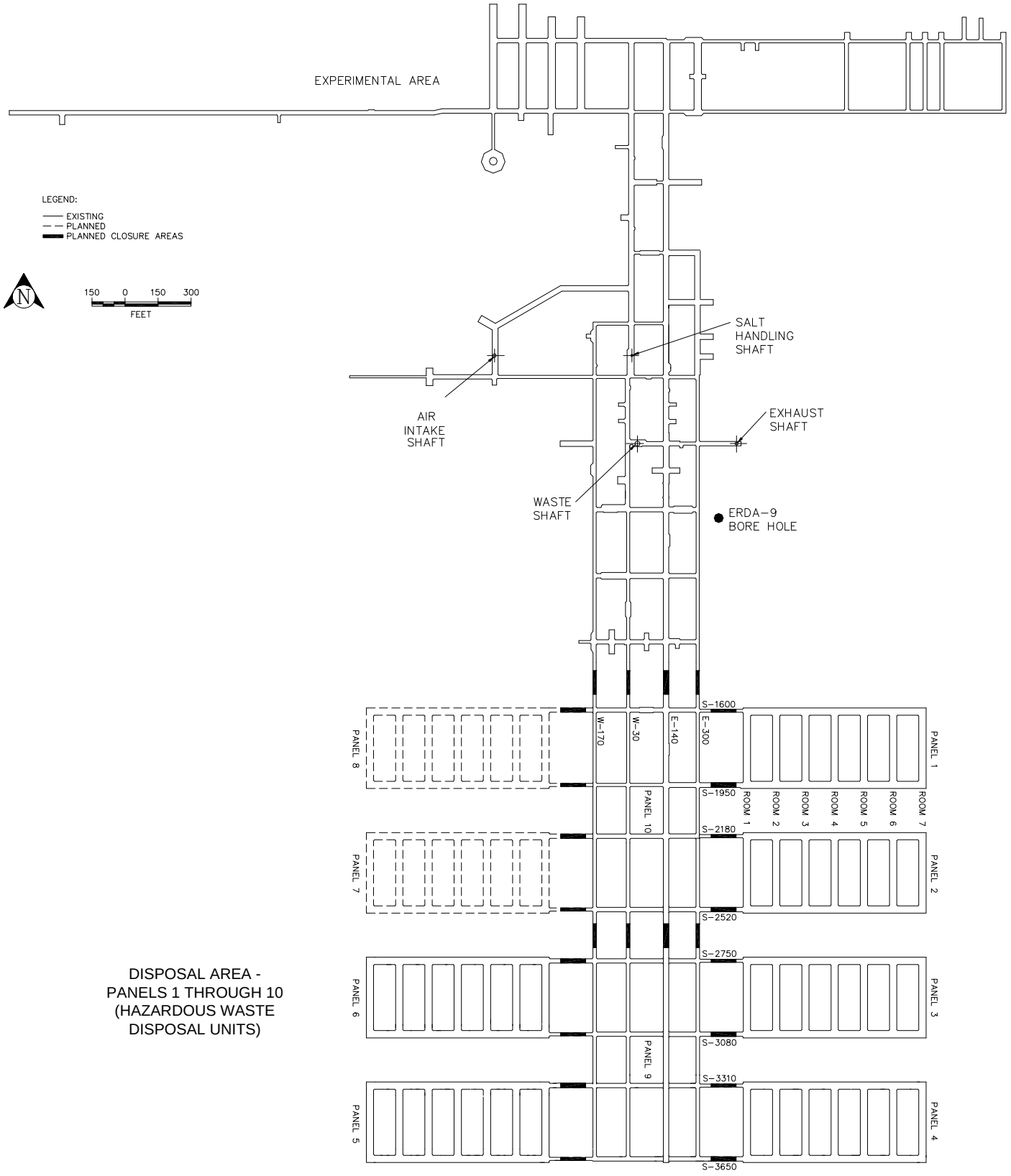


Figure A2-1
Repository Horizon



DISPOSAL AREA - PANELS 1 THROUGH 10 (HAZARDOUS WASTE DISPOSAL UNITS)

Figure B3-2
Repository Horizon

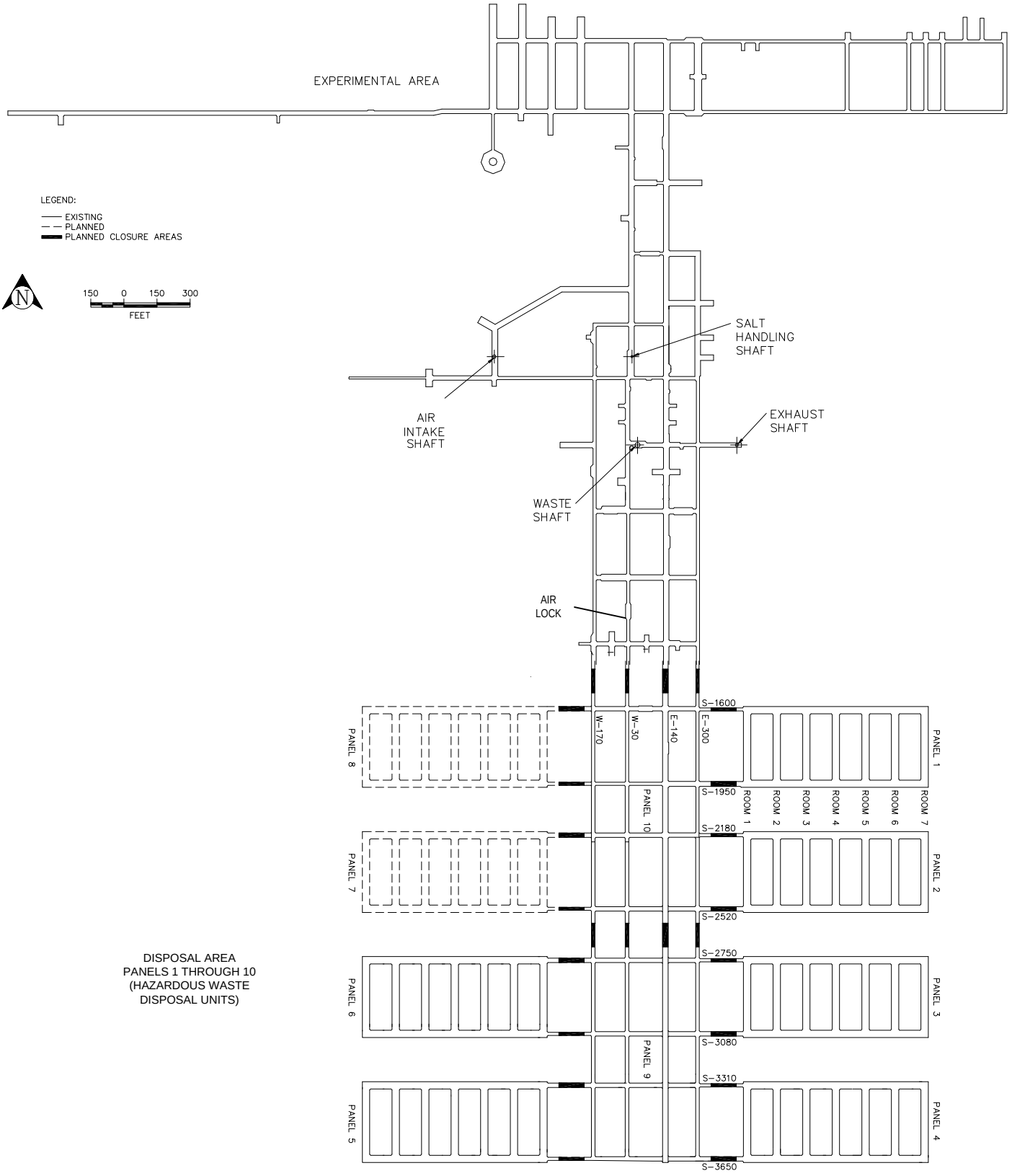


Figure D-3
WIPP Underground Facilities

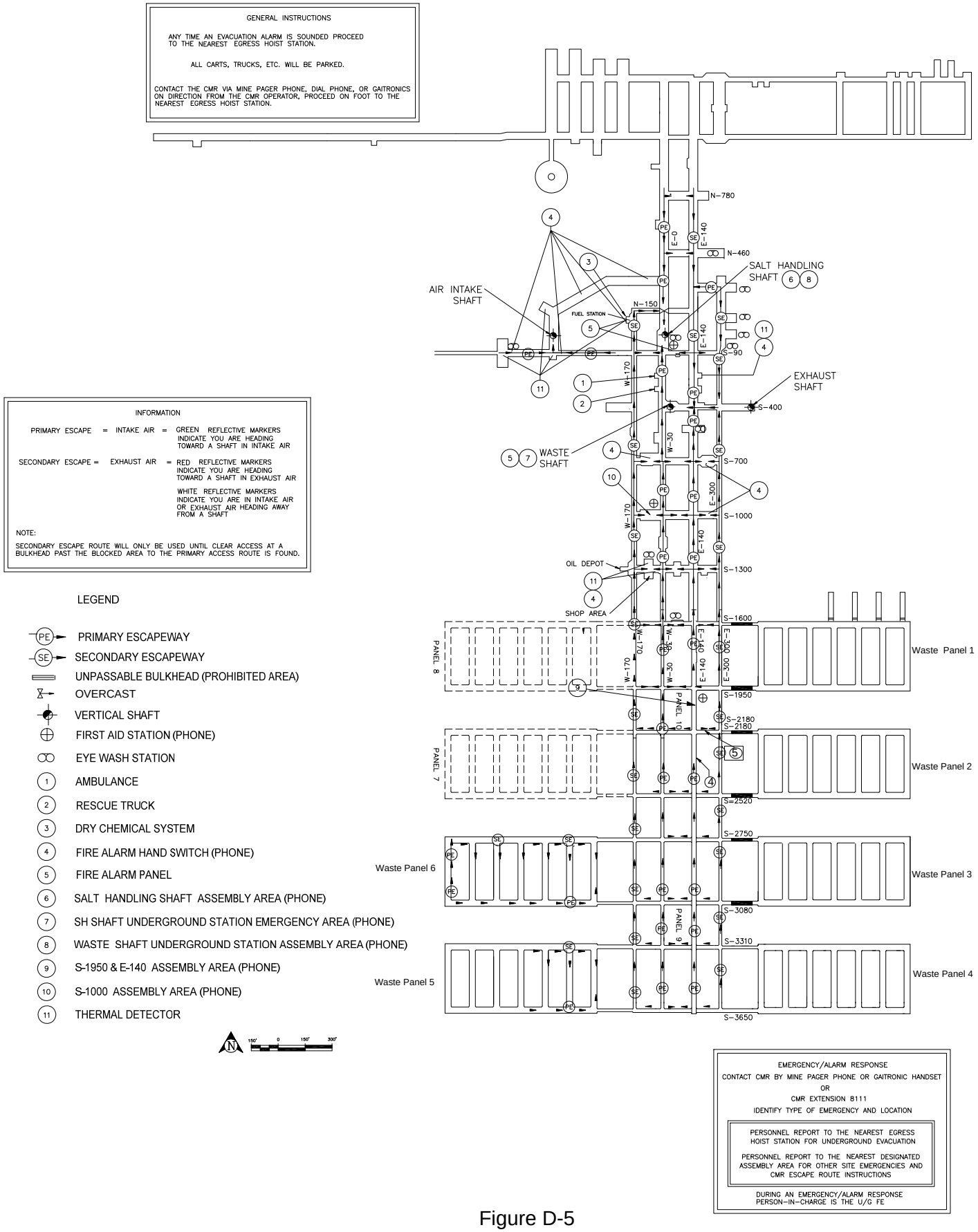
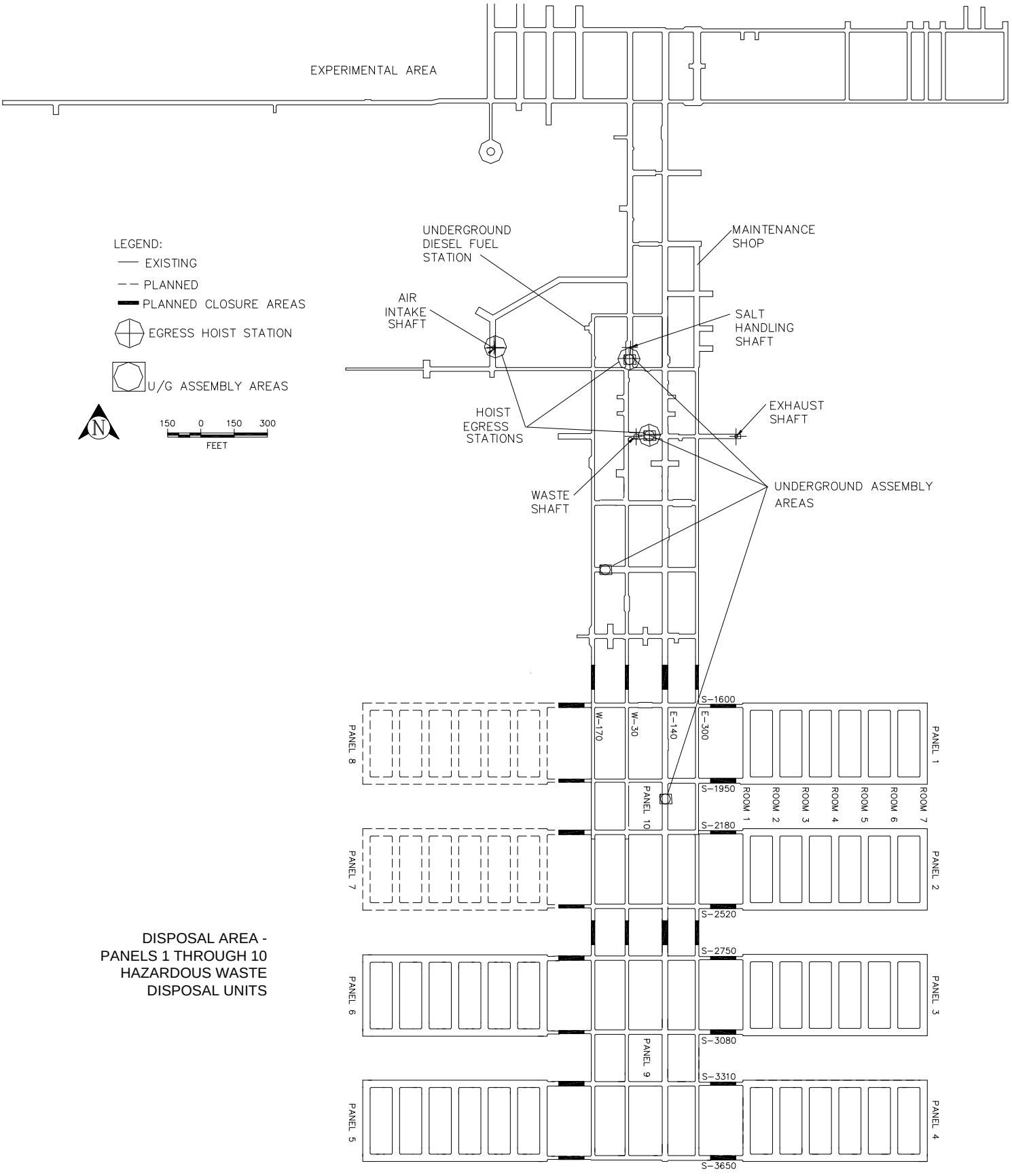


Figure D-5
Underground Emergency Equipment Locations and Underground Evacuation Routes



DISPOSAL AREA -
PANELS 1 THROUGH 10
HAZARDOUS WASTE
DISPOSAL UNITS

Figure D-9
Designated Underground Assembly Areas

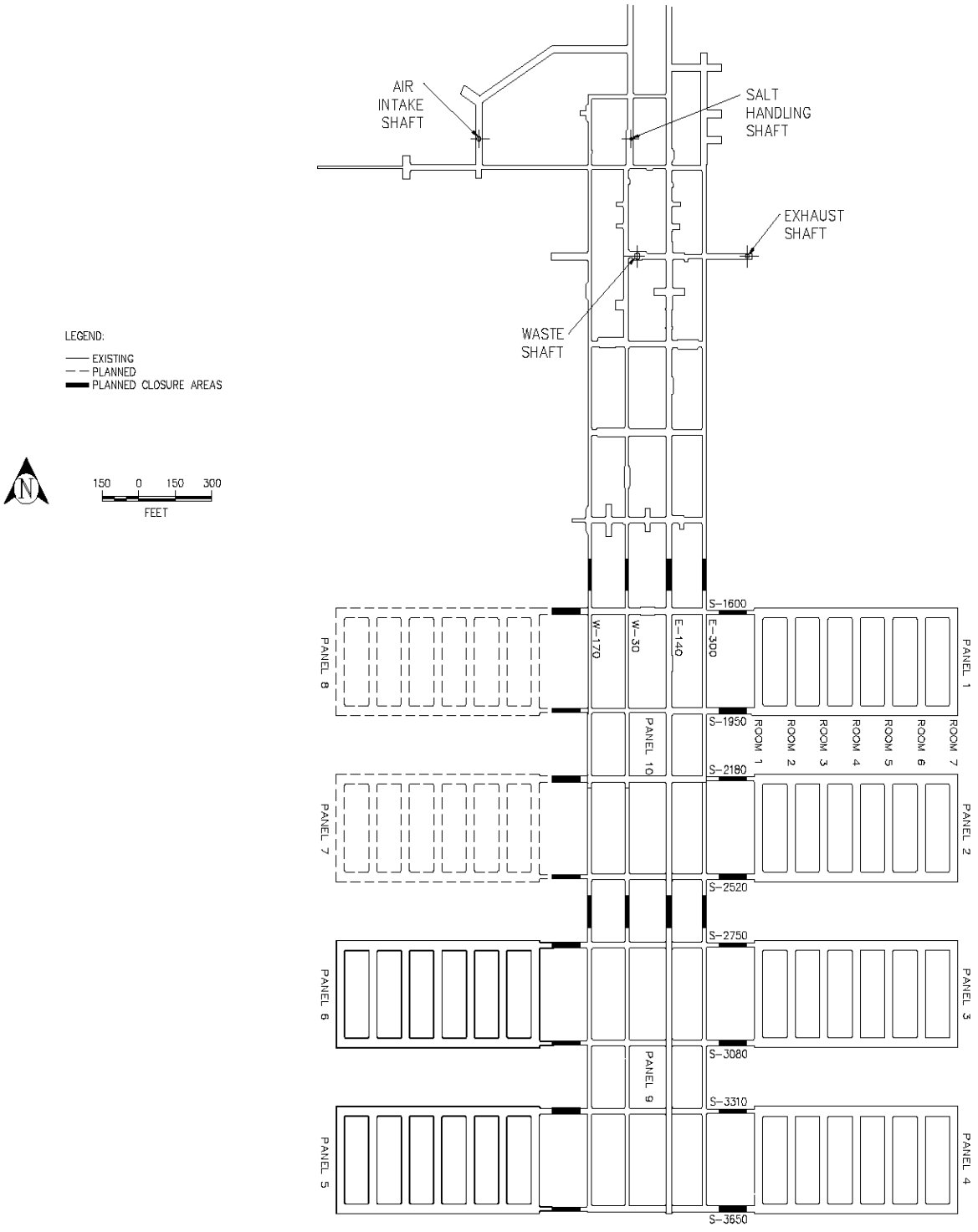


Figure G-1
Location of Underground HWDUs and Anticipated Closure Locations

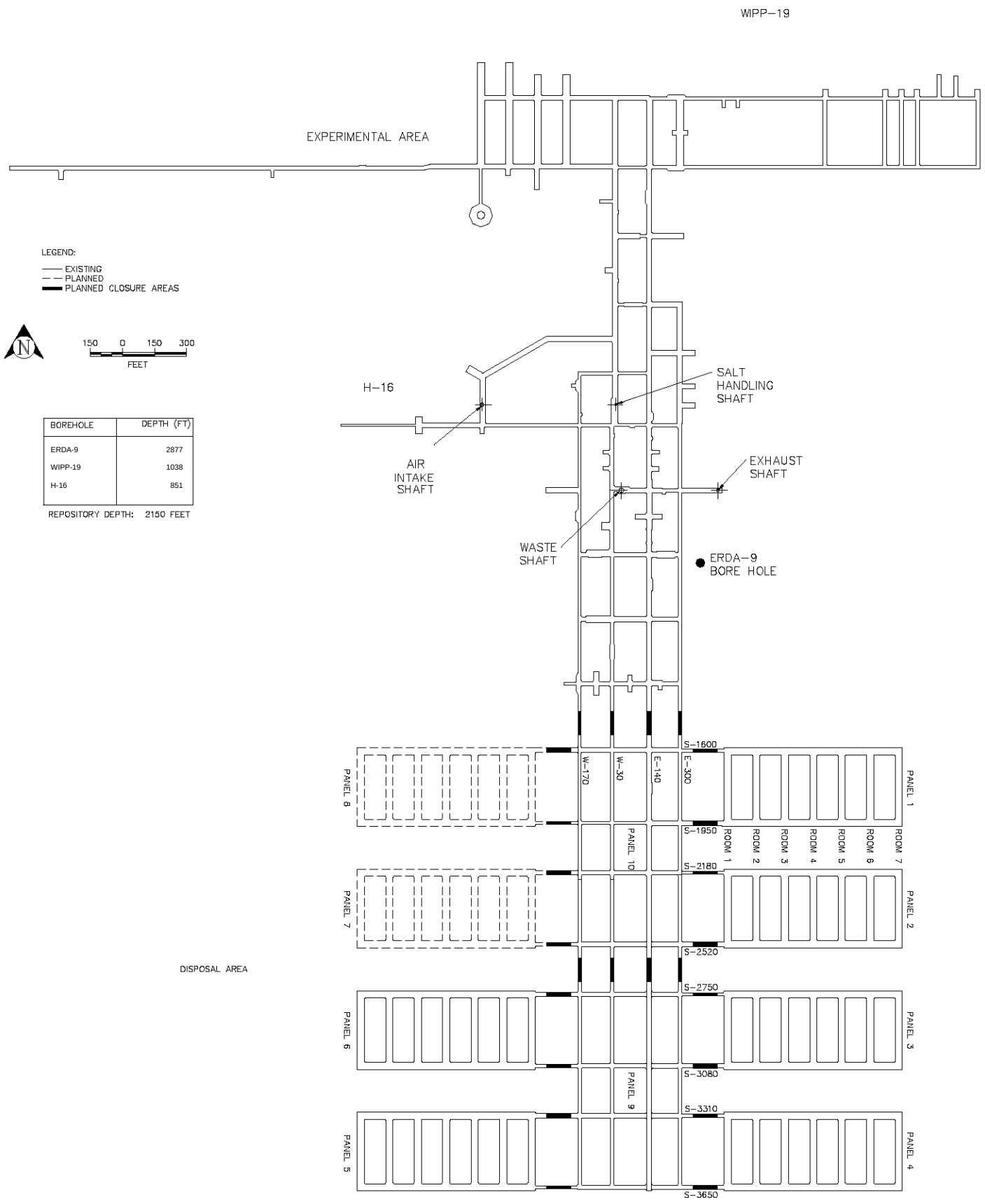


Figure G-6
Approximate Location of Boreholes in Relation to the WIPP Underground

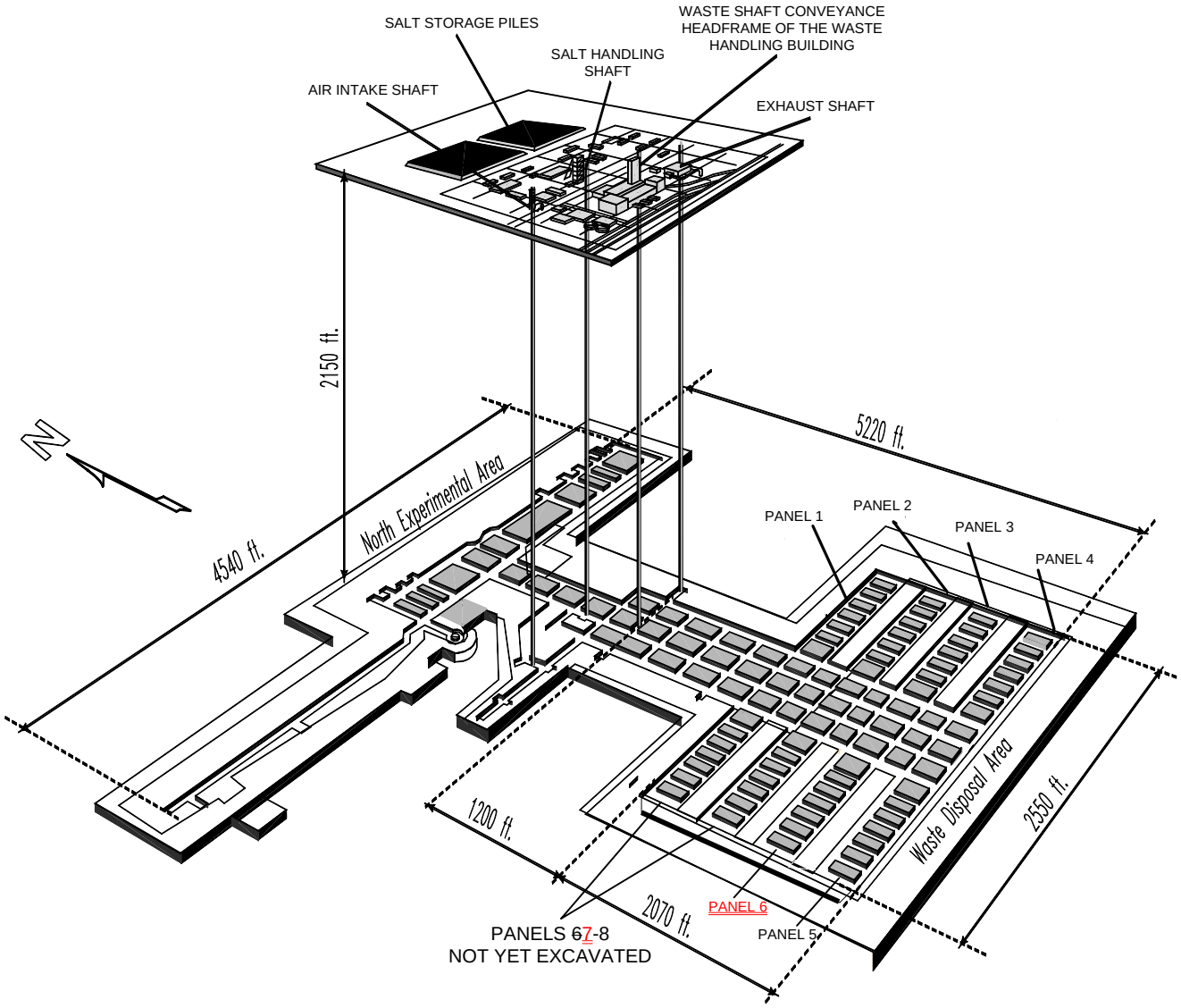


Figure G2-1
View of the WIPP Underground Facility

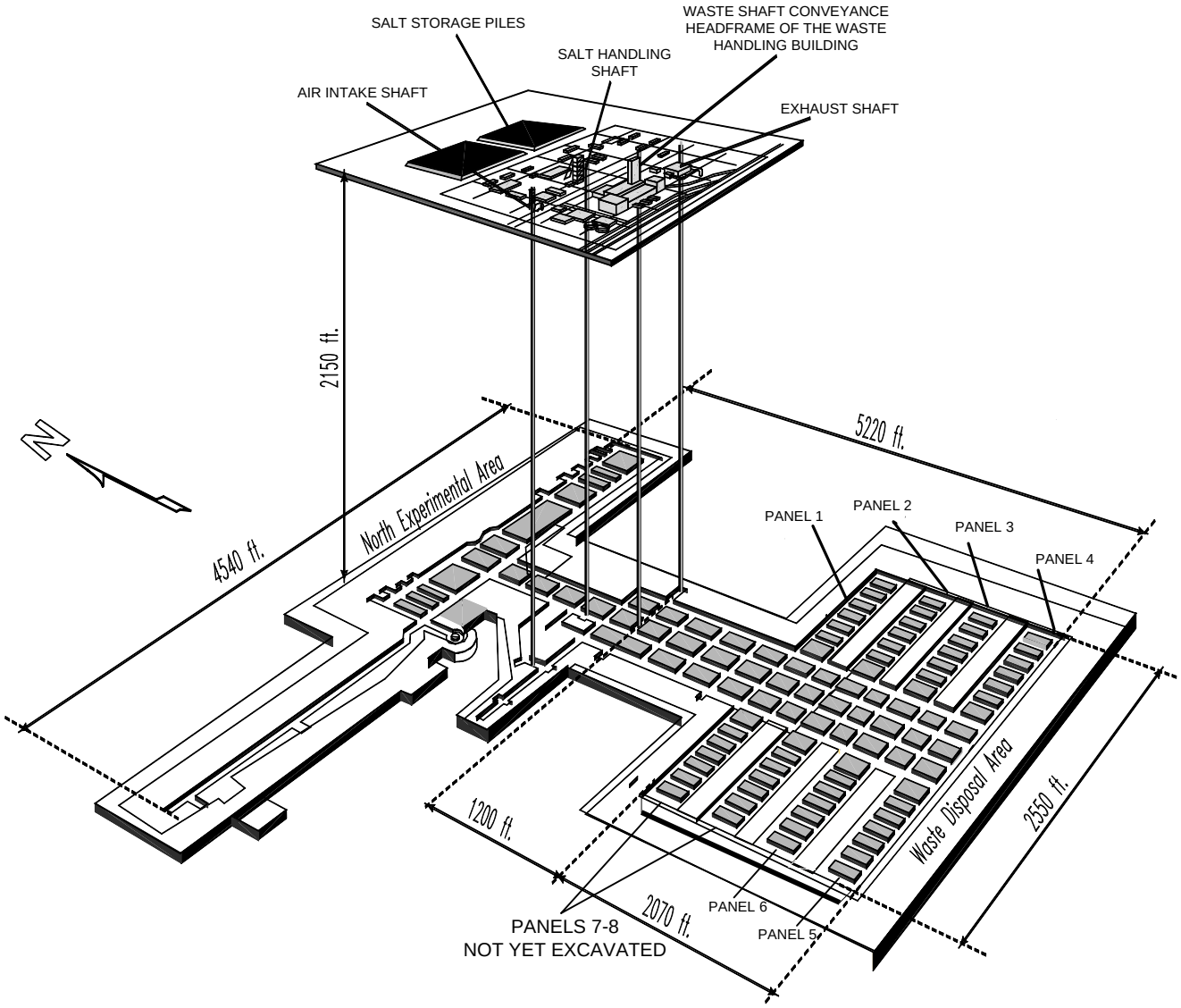


Figure G2-1
View of the WIPP Underground Facility

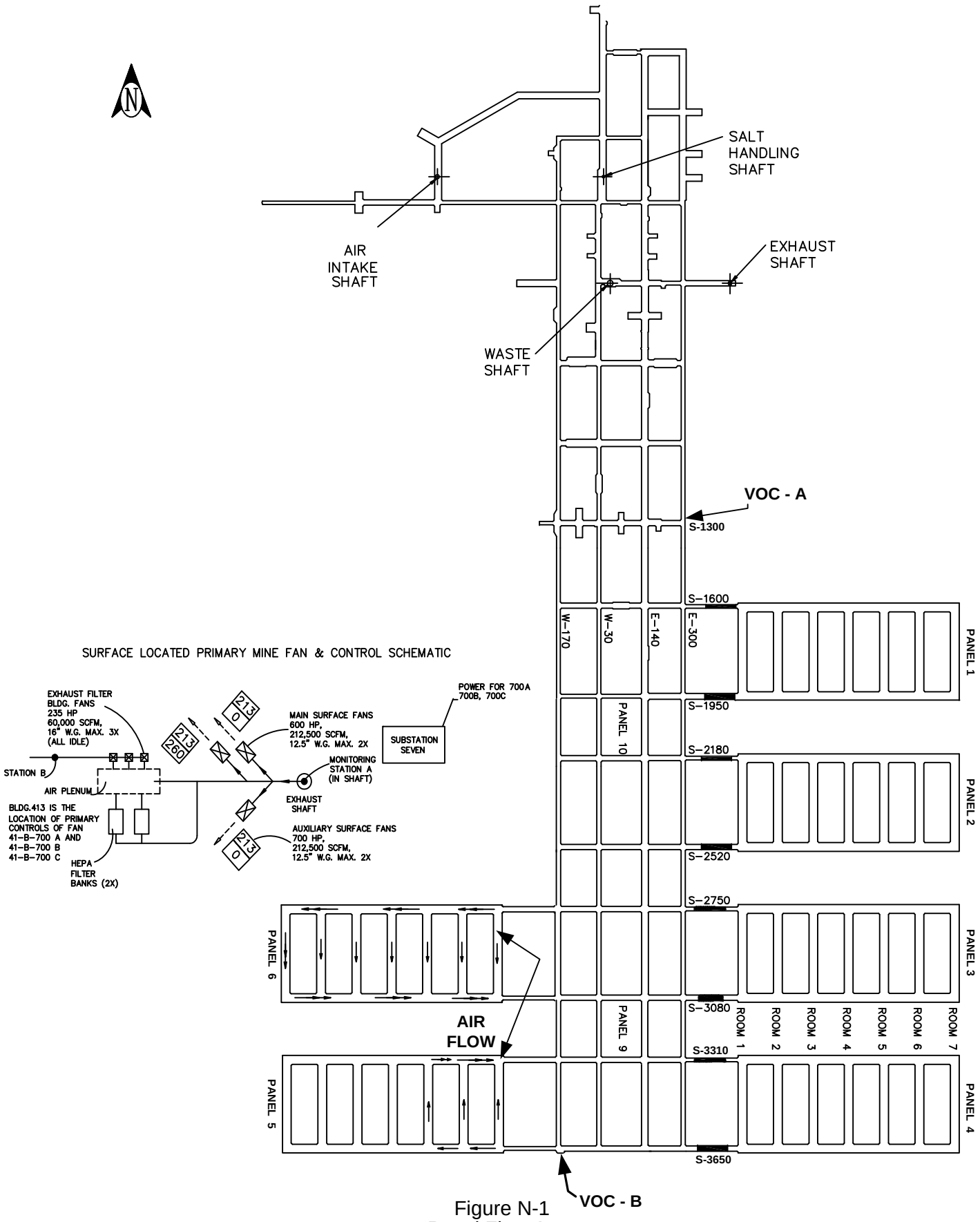


Figure N-1
Panel Flow Area