ATTACHMENT C4

TRU MIXED WASTE CHARACTERIZATION USING ACCEPTABLE KNOWLEDGE

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C4-1 Introduction

The Resource Conservation and Recovery Act (**RCRA**) regulations codified in Title 40 of the Code of Federal Regulations (**CFR**) Parts 260 through 265, 268, and 270, and the New Mexico Hazardous Waste Management Regulations in 20.4.1 New Mexico Administrative Code (**NMAC**) Subparts 100 through 600, Subpart 800, and Subpart 900, authorize the use of acceptable knowledge (**AK**) in appropriate circumstances by waste generators, or treatment, storage, or disposal facilities to characterize hazardous waste. The AK is described in *Waste Analysis: EPA Guidance Manual for Facilities That Generate, Treat, Store and Dispose of Hazardous Waste* (EPA, 1994). The AK, as an alternative to sampling and analysis, can be used to meet all or part of the waste characterization requirements under the RCRA (EPA, 1994).

The Environmental Protection Agency's (**EPA's**) 1994 Guidance Manual broadly defines the term "acceptable knowledge" to include process knowledge, whereby detailed information on the wastes is obtained from existing published or documented waste analysis data or studies conducted on hazardous waste generated by processes similar to that which generated the waste; facility records of analysis performed before the effective date of RCRA; and waste analysis data obtained from generators of similar wastes that send their wastes off-site for treatment, storage, or disposal (EPA, 1994). If a generator/storage site determines that AK alone is insufficient to accurately characterize a waste, the site may use radiography and/or visual examination (**VE**) (specified in Permit Attachment C1) to complete the waste characterization process and satisfy the requirements of the Waste Analysis Plan (**WAP**) specified in Permit Attachment C. The AK is used in transuranic (**TRU**) mixed waste characterization activities in five ways:

- To delineate TRU mixed waste streams
- To assess whether TRU mixed wastes comply with the applicable requirements of the Treatment, Storage, and Disposal Facility Waste Acceptance Criteria (**TSDF-WAC**)
- To assess whether TRU mixed wastes exhibit a hazardous characteristic (20.4.1.200 NMAC, incorporating 40 CFR Part 261, Subpart C)
- To assess whether TRU mixed wastes are listed (20.4.1.200 NMAC, incorporating 40 CFR Part 261, Subpart D)
- To estimate waste material parameter weights

Radiography and/or VE may be performed to augment the characterization of wastes based on AK when an AK Sufficiency Determination has not been requested by the generator/storage site or, if requested, has not been granted by the U.S. Department of Energy (**DOE**) (see Section C4-3d). Transuranic mixed waste streams shall undergo applicable provisions of the AK process prior to management, storage, or disposal by the Permittees at the WIPP facility.

C4-2 Acceptable Knowledge Documentation

The Permittees shall obtain from each DOE TRU mixed waste generator/storage site (**site**) a logical sequence of AK information that progresses from general facility information (TRU Mixed Waste Management Program Information) to more detailed waste-specific information (TRU Mixed Waste Stream Information). Traceability of AK information for a selected container in the audited Waste Summary Category Group(s) will be examined during DOE's audit of a site (Section C4-3g). The consistent presentation of AK documentation among sites in auditable records[1] will allow DOE to verify the completeness and adequacy of AK for TRU mixed waste characterization during the audit process. The Permittees shall require sites to implement the AK process as specified in this Permit to characterize TRU mixed wastes and obtain sufficient waste characterization data to demonstrate compliance with the Permit. The New Mexico Environment Department (**NMED**) may independently validate the implementation of and compliance with applicable provisions of the WAP at each generator/storage site by participation in the Audit and Surveillance Program (Permit Attachment C6). The DOE shall provide the NMED with current audit schedules and notify NMED in writing no later than thirty (30) calendar days prior to each audit. The NMED may choose to accompany DOE on any audit of the WAP implementation.

The following sections include the information the Permittees will require for each site to characterize TRU mixed waste using AK. Because waste generating processes are site-specific, sites shall, as necessary, augment the required AK records with additional supporting information (see Section C4-2c, Additional Acceptable Knowledge Information). If the required information is not available for a particular waste stream, the waste stream will not be eligible for an AK Sufficiency Determination as specified in Section C4-3d.

C4-2a Required TRU Mixed Waste Management Program Information

Transuranic mixed waste management program information shall clearly define waste categorization schemes and terminology, provide a breakdown of the types and quantities of TRU mixed waste that are generated and stored at the site, and describe how waste is tracked and managed at the site, including historical and current operations. Information related to TRU mixed waste certification procedures and the types of documentation (e.g., waste profile forms) used to summarize AK shall also be provided. The following information shall be included as part of the AK written record:

- Map of the site with the areas and facilities involved in TRU mixed waste generation, treatment, and storage identified
- Facility mission description as related to TRU mixed waste generation and management (e.g., nuclear weapons research may involve metallurgy, radiochemistry, and nuclear physics operations that result in specific waste streams)
- Description of the operations that generate TRU mixed waste at the site (e.g., plutonium recovery, weapons design, or weapons fabrication)

[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.

- Waste identification or categorization schemes used at the facility (e.g., item description codes, content codes)

- Types and quantities of TRU mixed waste generated, including historical generation through future projections

- Correlation of waste streams generated from the same building and process, as appropriate (e.g., sludge, combustibles, metals, and glass)

- Waste certification procedures for retrievably stored and newly generated wastes to be sent to the WIPP facility

C4-2b Required TRU Mixed Waste Stream Information

Sites may use AK to delineate site-specific waste streams. For each TRU mixed waste stream, the Permittees shall require sites to compile the process information and data that support the AK used to characterize that waste stream. The type and quantity of supporting documentation will vary by waste stream, depending on the process generating the waste and site-specific requirements imposed by the Permittees. At a minimum, the waste process information shall include the following written information:

- Area(s) and/or building(s) from which the waste stream was or is generated

- Waste stream volume and time period of generation (e.g., 100 standard waste boxes of retrievable stored waste generated from June 1977 through December 1977)

- Waste generating process described for each building (e.g., batch waste stream generated during decommissioning operations of glove boxes), including processes associated with U134 -(hydrofluoric acid) waste generation, if applicable.

- Documentation regarding how the site has historically managed the waste, including the historical regulatory status of the waste (i.e., TRU mixed versus TRU non-mixed waste)

- Process flow diagrams (e.g., a diagram illustrating glove boxes from a specific building to a size reduction facility to a container storage area); in the case of research/development, analytical laboratory waste, or other similar processes where process flow diagrams cannot be created, a description of the waste generating processes, rather than a formal process flow diagram, may be included if this modification is justified and the justification is placed in the auditable record

- Material inputs or other information that identifies the chemical content of the waste stream and the physical waste form (e.g., glove box materials and chemicals handled during glove box operations; events or processes that may have modified the chemical or physical properties of the waste stream after generation; data obtained through VE of newly generated waste that later undergoes radiography; information demonstrating neutralization of U134 and waste compatibility)

The AK written record shall include a summary that identifies the sources of waste characterization information used to delineate the waste stream. The basis and rationale for delineating each waste stream, based on the parameters of interest, shall be clearly summarized and traceable to referenced documents. Assumptions made in delineating each waste stream also shall be identified and justified. If discrepancies exist between required information, then sites may consider applying the EPA hazardous waste numbers indicated by the information to the subject waste stream, but must assess and evaluate the information to determine the appropriate EPA hazardous waste numbers consistent with RCRA requirements. The Permittees shall obtain from each site, at a minimum, procedures that comply with the following AK requirements:

- Procedures for identifying and assigning the physical waste form of the waste
- Procedures for delineating waste streams and assigning Waste Matrix Codes
- Procedures for resolving inconsistencies in AK documentation
- Procedures for VE and/or radiography, if applicable
- For newly generated waste, procedures describing process controls used to ensure prohibited items (specified in the WAP, Permit Attachment C) are documented and managed
- Procedures to ensure radiography and VE include a list of prohibited items that the operator shall verify are not present in each container (e.g., liquid exceeding TSDF-WAC limits, corrosives, ignitables, reactives, and incompatible wastes)
- Procedures to document how changes to Waste Matrix Codes, waste stream assignment, and associated EPA hazardous waste numbers based on material composition are documented for any waste
- Procedures that ensure the assignment of EPA hazardous waste numbers is appropriate, consistent with RCRA requirements, and considers site historical waste management
- Procedures for estimating waste material parameter weights

C4-2c Additional Acceptable Knowledge Information

The generator/storage sites shall obtain additional AK information. Sites shall collect information as appropriate to augment required information and provide any other information obtained to further delineate waste streams. Adequacy of this information shall be assessed by DOE during audits (Section C4-3g). Sites will use this information to compile the AK written record.

Additional specific, relevant AK documentation assembled and used in the AK process, whether it supports or contradicts any required AK documentation, shall be identified and an explanation provided for its use (e.g., identification of a toxicity characteristic). Additional documentation may be used to further document the rationale for the hazardous characterization results. The collection and use of additional information shall be assessed by DOE during site audits to

ensure that hazardous waste characterization is supported, as necessary, by such information. Similar to required information, if discrepancies exist between additional information and the required information, then sites may consider applying the EPA hazardous waste numbers indicated by the additional information to the subject waste stream, but must assess and evaluate the information to determine the appropriate EPA hazardous waste numbers consistent with RCRA requirements. The information considered must be documented and placed in the auditable record, including applicable discrepancy resolution documentation.

Additional AK documentation includes, but is not limited to, the following information:

- Process design documents (e.g., Title II Design)
- Standard operating procedures that may include a list of raw materials or reagents, a description of the process or experiment generating the waste, and a description of wastes generated and how the wastes are managed at the point of generation
- Preliminary and final safety analysis reports and technical safety requirements
- Waste packaging records
- Test plans or research project reports that describe reagents and other raw materials used in experiments
- Site databases (e.g., chemical inventory database for Superfund Amendments and Reauthorization Act Title III requirements)
- Information from site personnel (e.g., documented interviews)
- Standard industry documents (e.g., vendor information)
- Analytical data relevant to the waste stream, including results from fingerprint analyses, spot checks, routine verification sampling, or other processes that collect information pertinent to the waste stream; this may also include new information which augments required information (e.g., VE not performed in compliance with the WAP, radiography screening for prohibited items)
- Material Safety Data Sheets/Safety Data Sheets, product labels, or other product package information
- Sampling and analysis data from comparable or surrogate waste streams (e.g., equivalent nonradioactive materials)
- Laboratory notebooks that detail the research processes and raw materials used in an experiment

C4-3 Acceptable Knowledge Training, Procedures and Other Requirements

The Permittees shall require consistency among sites in using AK information to characterize TRU mixed waste by the use of the following: 1) compiling the required and additional AK

documentation in an auditable record, 2) auditing AK records, and 3) Waste Stream Profile Form (**WSPF**) approval and waste confirmation. This section specifies qualification and training requirements, describes each phase of the process, specifies the procedures that the Permittees shall require sites to develop to implement the requirements for using AK, and specifies data quality requirements for AK.

C4-3a Qualifications and Training Requirements

Site personnel responsible for compiling AK, assessing AK, and resolving discrepancies associated with AK shall be qualified and trained in the following areas at a minimum:

- WIPP WAP in Permit Attachment C, *Waste Analysis Plan*, and the TSDF-WAC specified in this permit
- State and Federal RCRA regulations associated with solid and hazardous waste characterization
- Discrepancy resolution and reporting processes
- Site-specific procedures associated with waste characterization using AK

C4-3b Acceptable Knowledge Assembly and Compilation

The Permittees shall obtain from sites AK procedures which require consistent application of the AK process and requirements. Site-specific AK procedures shall address the following:

- Sites shall prepare and implement a written procedure outlining the specific methodology used to assemble AK records, including the origin of the documentation, how it will be used, and any limitations associated with the information (e.g., identify the purpose and scope of a study that included limited sampling and analysis data).
- Sites shall develop and implement a written procedure to compile the required AK record.
- Sites shall develop and implement a written procedure that ensures unacceptable wastes (e.g., reactive, ignitable, corrosive) are identified and segregated from TRU mixed waste populations sent to the WIPP facility.
- Sites shall prepare and implement a written procedure to evaluate AK and resolve discrepancies. For example, if different sources of information indicate different hazardous wastes are present, then sites shall include the sources of information in its records and may choose to either conservatively assign EPA hazardous waste numbers or assign only those numbers deemed appropriate and consistent with RCRA requirements. Information used to justify assignment of EPA hazardous waste numbers must be placed in the auditable record. Further, the assignment of EPA hazardous waste numbers shall be tracked in the auditable record to the required documentation.

- Sites shall prepare and implement a written procedure to identify hazardous wastes and assign the appropriate EPA hazardous waste numbers to each waste stream. The following are minimum baseline requirements/standards that site-specific procedures shall include to ensure comparable and consistent characterization of hazardous waste:

  - Compile the required information in an auditable record.

  - Review the compiled information and delineate waste streams. Delineation of waste streams must comply with the 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.

  - Review the compiled information to determine if the waste stream is compliant with the TSDF-WAC.

  - Review the required information to determine if the waste is listed under 20.4.1.200 NMAC (incorporating 40 CFR Part 261), Subpart D. Assign the listed EPA hazardous waste numbers unless the sites choose to justify an alternative assignment and document the justification in the auditable record.

  - 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 Part 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 EPA hazardous waste number consistent with RCRA requirements. Data examined to reach the EPA hazardous waste number determination must be placed in the auditable record and must present a clear justification for the EPA hazardous waste number analyses.

  - Review the compiled information to provide an estimate of material parameter weights for each container to be stored or disposed of at the WIPP facility.

  For newly generated wastes, procedures shall be developed and implemented to characterize hazardous waste using AK prior to packaging the waste.

- Sites shall ensure that results of audits of the site's TRU mixed waste characterization programs are available in the records.

- Sites shall identify the process controls (implemented to ensure that the waste contains no prohibited items and to control hazardous waste content and/or physical form) that may have been applied to retrievably stored waste and/or may presently be applied to newly generated waste. Process controls are applied at the time of waste generation/packaging to control waste content, whereas any activities performed after waste generation/packaging to identify prohibited items, hazardous waste content, or physical form are waste characterization activities, not process controls. The AK record must contain specific process controls and supporting documentation identifying when these process controls are used to control waste content. See Permit Attachment C, Section C-2 for programmatic requirements related to process controls.

- Chemical compatibility will be evaluated pursuant to Permit Part 2, Section 2.3.3.4 (as applicable), on a waste stream basis based on guidance provided in the 1980 EPA method, EPA 600/2-80-076. The evaluation will be documented (e.g., in a chemical compatibility evaluation memorandum).

C4-3c Criteria for Assembling an Acceptable Knowledge Record and Delineating the Waste Stream

Figure C4-1 provides an overview of the process for assembling AK documentation into an auditable record. The first step is to assemble the required AK information and any additional information regarding the materials and processes that generate a specific waste stream. The Permittees shall require the sites to implement procedures which comply with the following criteria to establish AK records:

- Acceptable knowledge information shall be compiled in an auditable record, including a road map for the applicable information.

- The overview of the facility and TRU mixed waste management operations in the context of the facility's mission shall be correlated to specific waste stream information.

- Correlations between waste streams, with regard to time of generation, waste generating processes, and site-specific facilities shall be clearly described. For newly generated wastes, the rate and quantity of waste to be generated shall be defined.

- A reference list shall be provided that identifies documents, databases, Quality Assurance protocols, and other sources of information that support the AK information.

Container inventories for TRU mixed waste currently in retrievable storage shall be delineated into waste streams by correlating the container identification to the required AK information and any additional AK information.

C4-3d AK Sufficiency Determination Request Contents

Generator/storage sites may submit an AK Sufficiency Determination Request (**Determination Request**) to meet all or part of the waste characterization requirements. The Determination Request shall include, at a minimum:

- A complete AK Summary that addresses the following technical requirements:
  - Executive Summary;
  - Waste Stream Identification Summary, including a demonstration that the waste stream has been properly delineated and meets the Permit definition of waste stream (Permit Attachment C, *Introduction*);
  - Mandatory Program Information (including, but not limited to, facility location and description, mission, defense waste assessment, spent nuclear fuel and high-level waste assessment, description of waste generating processes, research/development [as necessary], facility support operations [as applicable], types and quantities of TRU waste generated, correlation of waste streams to

buildings/processes, waste identification and categorization, physical form identifiers);

- Mandatory Waste Stream Information (including, but not limited to, Area and Building of Generation, waste stream volume/period of generation (including, for newly generated waste, the rate and quantity of waste to be generated), waste generating activities, types of waste generated, material input related to physical form and identification of percentage of each waste material parameter in the waste stream, chemical content information including hazardous constituents and hazardous waste identification, prohibited item content (including documented evidence that the waste meets the TSDF-WAC in Permit Part 2, Sections 2.3.3.1 through 2.3.3.10), waste packaging, presence of filter vents, number of layers of confinement);

- Types of additional information gathered;

- Container specific data (if available and relevant); and

- A complete reference list including mandatory and additional information.

- An AK roadmap (defined as a cross reference between mandatory programmatic and mandatory waste stream information, with references supporting these requirements).

- A complete reference list including mandatory and additional documentation.

- Additional relevant information for the required programmatic and waste stream data addressed in the AK Summary, examples of which are presented in Permit Attachment C4, Section C4-2c.

- Identification of any mandatory requirements supported only by upper tier documents (i.e., there is insufficient supporting data).

- Description or other means of demonstrating that the AK process described in the Permit was followed (for example, AK personnel were appropriately trained; discrepancies were documented).

- Information showing that the generator/storage site has developed a written procedure for compiling the AK information and assigning EPA hazardous waste numbers as required in Section C4-3b.

- Information showing that the generator/storage site has assessed the AK process (e.g. internal audits, Section C4-3b).

The Permittees shall evaluate the Determination Request for completeness and technical adequacy as specified in Permit Attachment C.

C4-3e Requirements for Re-evaluating Acceptable Knowledge Information

Acceptable knowledge includes information regarding the physical form of the waste, the base materials composing the waste, and the process that generates the waste. Waste testing (i.e., radiography or VE) may be used to augment AK information.

The WSPF and Characterization Information Summary (including the AK summary) will be reviewed by the Permittees for each waste stream prior to DOE approval of the WSPF. The Permittees' review will ensure that the submitted AK information was collected under procedures that ensure implementation of the WAP, provides data sufficient to meet the DQOs in Permit Attachment C, Section C-4a(1), and allow the Permittees to demonstrate compliance with the waste analysis requirements of the Permit. A detailed discussion of the Permittees' waste stream review and the DOE's WSPF approval process is provided in Permit Attachment C, Section C-1d.

The Permittees shall require sites to establish procedures for reevaluating AK if the results of waste confirmation indicate that the waste to be shipped does not match the approved waste stream, or if data obtained from radiography or VE for waste streams without an AK Sufficiency Determination exhibit this discrepancy. Site procedures shall describe how the waste is reassigned, AK reevaluated, and appropriate EPA hazardous waste numbers assigned. If the reevaluation requires that the Waste Matrix Code be changed for the waste stream or the waste does not match the approved waste stream, the following minimum steps shall be taken to reevaluate AK:

- Review existing information based on the container identification number and document the differences in EPA hazardous waste number assignments
- If differences exist in the EPA hazardous waste numbers that were assigned, reassess and document the required AK information (Section C4-3b) associated with the new designation
- Reassess and document testing data associated with the waste
- Verify and document that the reassigned Waste Matrix Code was generated within the specified time period, area and buildings, waste generating process, and that the process material inputs are consistent with the waste material parameters identified during radiography or VE
- Record changes to AK records
- If discrepancies exist in the AK information for the revised Waste Matrix Code, document the segregation of the affected portion of the waste stream, and define the actions necessary to fully characterize the waste

C4-3f Acceptable Knowledge Data Quality Requirements

The data quality objectives for testing techniques are provided in Permit Attachment C3. Testing results will be used to augment the characterization of wastes based on AK. To ensure that the AK process is consistently applied, the Permittees shall require sites to comply with the data quality requirements for AK documentation in Permit Attachment C3.

Each site shall address quality control by tracking its performance with regard to the use of AK by: 1) assessing the frequency of inconsistencies among information, and 2) documenting the results of waste discrepancies identified by the generator/storage site during waste characterization or the Permittees during waste confirmation using radiography, review of radiography audio/video recordings, VE, or review of VE records. In addition, the AK process and waste stream documentation shall be evaluated through internal assessments by generator/storage site quality assurance organizations.

C4-3g Audits of Acceptable Knowledge

The DOE will conduct an initial audit of each site prior to certifying the site for shipment of TRU mixed waste to the WIPP facility. This initial audit will establish an approved baseline that will be reassessed annually by the DOE. These audits will verify compliance with the requirements specified in the WAP (Permit Attachment C). The audits will be used to verify compliance with the compilation, application, and interpretation requirements of AK information specified in this Permit at the sites, and to evaluate the completeness and defensibility of site-specific AK documentation related to hazardous waste characterization. Permit Attachment C6 gives a description of the overall audit program and a required checklist. Figure C4-2 includes the primary steps associated with the audit process of AK.

Site-specific audit plans will be prepared by the DOE and provided to the NMED, and will identify the scope of the audit, requirements to be assessed, participating personnel, activities to be audited, organizations to be notified, applicable documents, and schedule. Audits will be performed in accordance with written procedures and site-specific checklists that will be developed by the DOE prior to the audit and provided to the NMED. The site-specific audit checklists will include items associated with the compilation and evaluation of the required AK information as specified in the checklist required by Permit Attachment C6.

Audit checklists shall include Permit Attachment C6, Table C6-2, and will include but not be limited to the following elements for review during the audit:

- Documentation of the process used to compile, evaluate, and record AK is available and implemented;
- Personnel qualifications and training are documented;
- The required AK documentation specified in Section C4-2 has been compiled in an auditable record;
- The required procedures specified in Section C4-3 have been developed and implemented, including but not limited to:
  - A procedure exists for assigning EPA hazardous waste numbers to waste streams in accordance with Section C4-3;
  - A procedure exists for resolving discrepancies in AK documentation in accordance with Section C4-3; and
- Results of other audits of the TRU mixed waste characterization programs at the site are available in site records.

Members of the audit team will be knowledgeable regarding the required AK information, RCRA regulations and EPA guidance regarding the use of AK for waste characterization, RCRA hazardous waste characterization, and the WAP requirements (Permit Attachment C). Audit team members will be independent of all TRU mixed waste management operations at the site being audited.

Auditors will evaluate AK documentation for at least one waste stream from the Summary Category Group(s) being audited, and will audit AK traceability for at least one container from the audited Summary Category Group(s). For these waste streams, auditors will review the procedures and associated processes developed by the site for documenting the process of compiling AK documentation; correlating information to specific waste inventories; assigning EPA hazardous waste numbers; and identifying, resolving, and documenting discrepancies in AK records. The adequacy of AK procedures and processes will be assessed and any deficiencies in procedures documented in the audit report.

Auditors will review the AK documentation for selected waste streams for logic, completeness, and defensibility. The criteria that will be used by auditors to evaluate the logic and defensibility of the AK documentation include completeness and traceability of the information, consistency of application of information, clarity of presentation, degree of compliance with this Permit Attachment with regard to AK data, nonconformance procedures, and oversight procedures. Auditors will evaluate compliance with written site procedures for developing the AK record. A completeness review will evaluate the availability of required TRU mixed waste management program information and TRU mixed waste stream information (Section C4-2). Records will be reviewed for correlation to specific waste streams and the basis for characterizing hazardous waste. Auditors will verify that sites include required information and assigned appropriate EPA hazardous waste numbers as indicated by the AK records and consistent with RCRA requirements. Deficiencies in the AK documentation will be included in the audit report.

Auditors will verify and document that sites use administrative controls and follow written procedures to characterize hazardous waste for newly-generated and retrievably stored wastes. Procedures to document changes in AK documentation and changes to EPA hazardous waste number assignments to specific waste streams also will be evaluated for compliance with the WAP (Permit Attachment C).

After the audit is complete, the DOE will provide the site with preliminary results at a close-out meeting. The DOE will prepare a final audit report that includes the observations and findings identified during the audit. Sites shall respond to the audit findings and identify corrective actions. Audit results will be included in the final audit report (Permit Attachment C6). If AK procedures do not exist, the required information is not available, or corrective actions (i.e., Corrective Action Reports (**CAR**s)) are associated with deficiencies in the AK compilation process (i.e., the minimum required information in Section C4-2 has not been collected and organized to present the required information on the subject waste stream(s)), and/or EPA hazardous waste number assignment is not accurate, the Permittees will not manage, store, or dispose TRU mixed waste for the subject waste stream(s). Permit Attachment C3, Section C3-7, *Nonconformances,* requires the responsible organization(s) to review CARs and evaluate the extent of condition. If, during the corrective action process, the extent of condition is determined to be applicable to other waste streams, the Permittees will not manage, store, or dispose of TRU mixed waste from those affected waste streams. Management, storage, or disposal of the subject waste summary category at the WIPP facility will not resume until the DOE finds that the

corrective actions have been implemented and the site complies with the applicable requirements of the WAP.

The DOE disseminates information regarding TRU mixed waste characterization requirements and program status through the WIPP Home Page. The Permittees will use this web page to disseminate information regarding TRU mixed waste streams, RCRA compliance, and operational and programmatic issues, methods development, and waste characterization information, including the application of AK. The DOE is provided the required waste characterization information prior to management, storage, or disposal of that waste at WIPP and also will conduct audits at least annually. The Permittees will maintain an Operating Record for review during regulatory agency audits. The NMED may also review any information relevant to the scope of the audit during site audits. The DOE will notify the NMED regarding any site's failure to implement corrective actions associated with hazardous waste characterization as specified in Permit Parts 1 and 2 and Permit Attachment C3.

FIGURES

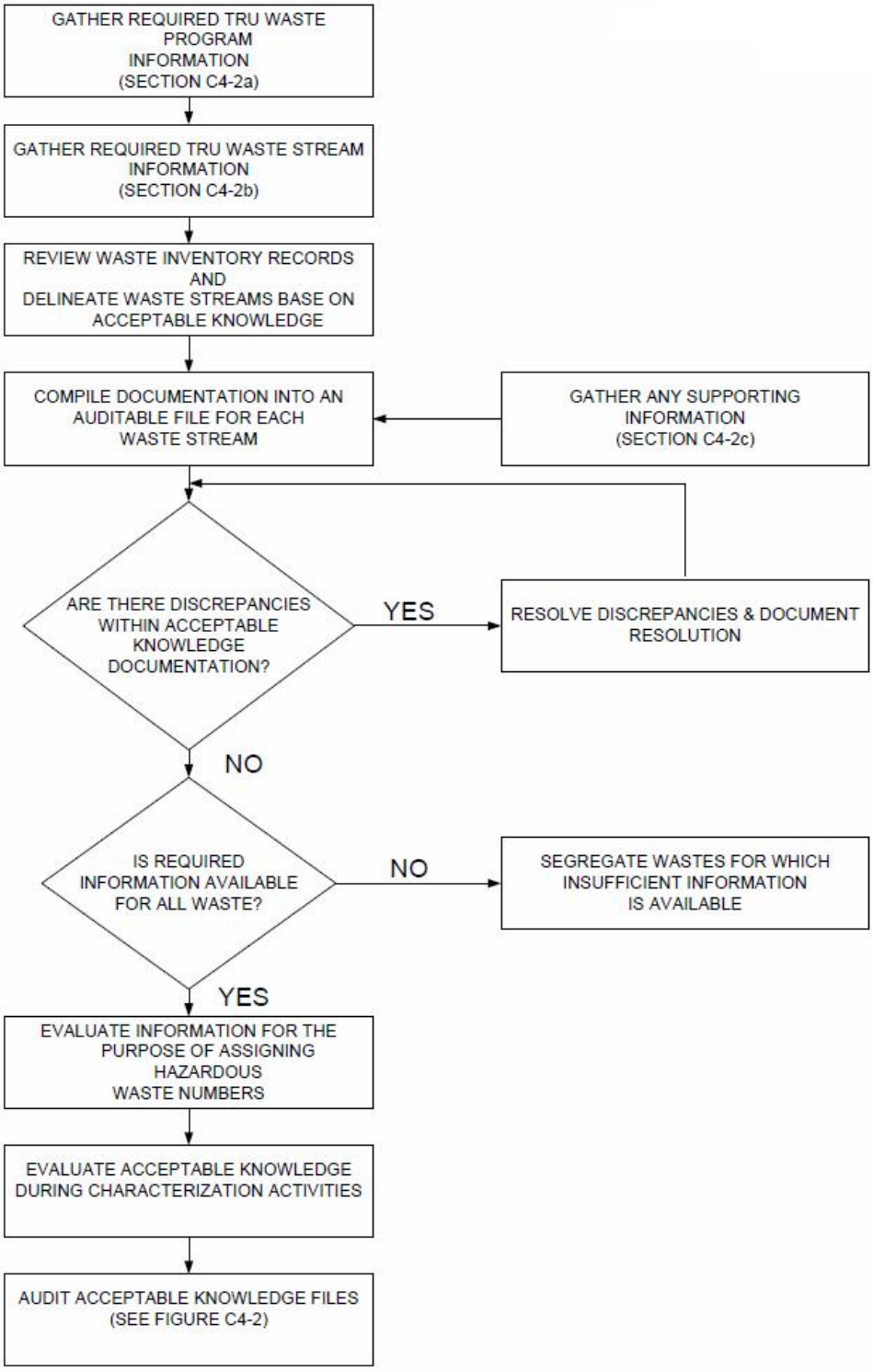

Figure C4-1
Compilation of Acceptable Knowledge Documentation

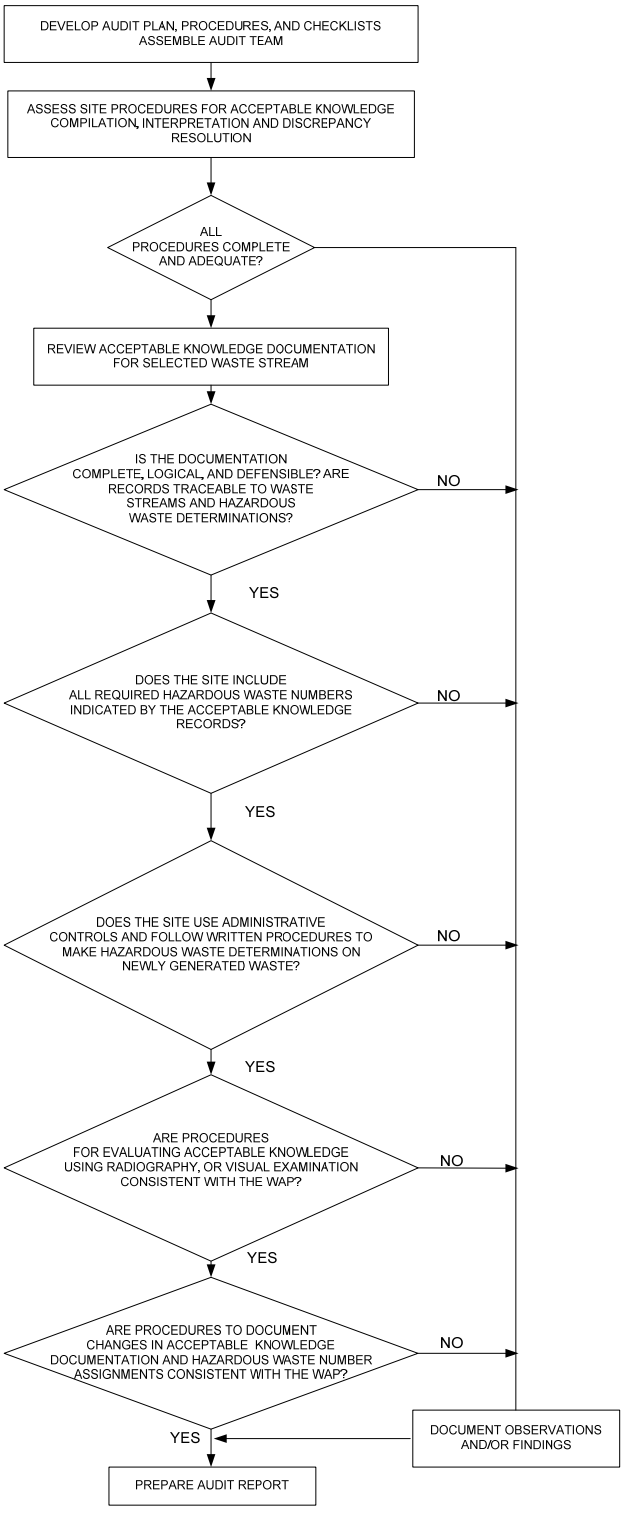

Figure C4-2
Acceptable Knowledge Auditing

1