General Instructions

The Profile Sheet is the primary means by which the National Nuclear Security Administration Nevada Field Office (NNSA/NFO) obtains data about each waste stream. The term “waste” as used in these instructions means both waste and matter. The profile must provide the waste stream's radiological and physical/chemical characteristics, its regulatory classification, and packaging. These data are required to ensure that the waste stream can be compliantly managed at the Nevada National Security Site (NNSS). Any relevant background information, documents, and analytical data should be referenced or attached. Information provided with the profile should be concise and complete.

The profile data required is to ensure that a waste stream can be managed in compliance with the Facility's permit conditions, safety basis and operational requirements.

The term “waste acceptance criteria” as used in these instructions means the current version of the Nevada National Security Site Waste Acceptance Criteria (NNSSWAC) (DOE/NV-325). Please contact the Navarro Radioactive Waste Acceptance Program (RWAP) Manager if you have any questions concerning this form and how to complete it.

Detailed Instructions

The Profile Sheet is provided as a Microsoft Word template, which is the preferred format for use. A Profile may be submitted electronically by electronic mail in either PDF or scanned format. Generators needing a different format should contact the Contractor RWAP Manager (Frank.DiSanza@nv.doe.gov or 702-295-5855). Indicate on the form if additional information is attached to the Profile Sheet.

Send completed Profile Sheets electronically to: RWAP@nv.doe.gov

The following are itemized descriptions of the information required on the Profile Sheet:

A. Generator or Originator Information

A.1 Company Name: Enter the name of the company responsible for certifying the waste.

A.2 Address: Enter the company address.

A.3 Generator/Originator Facility: Enter the specific facility generating the waste.

A.4 Primary Technical Contact: Enter the name, email address, and phone number of the primary technical contact for this profile.

A.5 DOE Point of Contact: Enter the name, email address, and phone number of the responsible DOE contact if applicable.

A.6 Certification Official: Enter the name, email address, and phone number of the generator’s waste certification official.

A.7 Generator’s EPA Identification Number: For waste streams that involve hazardous waste, enter the waste generator’s EPA Identification Number.
A.8 **Additional Processing/Treatment Facility:** When the waste is being processed/treated/shipped from a satellite facility under the generator’s approved Waste Certification Program, enter the company name and address, and the name, email address, and phone number of the primary technical contact for that facility.

A.8.a If a generator is preparing a waste stream that will be generated, certified, and shipped from a site that is not included under the generator site’s current Waste Certification Program, list the documents that will be used/developed to certify the waste under the existing approved program (e.g., QA Project Plan, Project Specific NNSSWAC Implementation Crosswalk [NIC], or Waste Certification Plan). Identify how these documents will implement the approved waste certification program at the off-site facility.

A.9 **Reference Controlling Documents:** List the current QA Project Plan, Project Specific NNSSWAC Implementation Crosswalk (NIC), or Waste Certification Plan as applicable to the individual site.

B. **General Profile Information**

B.1 **Profile Name:** Enter a name to describe this waste stream. Check the appropriate box for new or revised waste profiles.

B.2.a **NNSS Profile Identification Number:** Enter the unique two-part, 13-character alphanumeric code. The first four characters are alphanumeric code for the facility found in NNSSWAC Appendix C, page C-4. The second part is a generator determined nine-character alphanumeric code for the waste stream (e.g., USAA000000001, where USAA is the facility code for Aberdeen Proving Ground and 000000001 is the Aberdeen Proving Ground assigned waste stream code). Include the Profile revision number and date. For new profiles, the revision number is 0.

B.2.b **Profile Revisions:** Describe and list all changes made to the profile since last submitted. List any changes to generating, volume, packaging, characterization, or certification processes. Provide a detailed profile revision history. The revision history should include the profile revision number and revision date. Revision based on additional package(s) may be handled through an RWAP Limited Review of the profile revision. Identify that a limited review is requested because the only change in the profile revision is for packaging.

B.2.c **Project/Program History:** Identify the project or program that the waste is traced to, and describe the benefits from them. (e.g., Off-site source recovery project; Remove excess, unwanted, abandoned, or orphan radioactive sealed sources that pose a potential risk to public or safety and national security; Disposal at the NNSS ensures radioactive waste is secure.) This information will be shared with our stakeholders and on fact sheets to show the benefits of DOE programs and waste disposal. Note: Commercial entities should N/A Section B.2.c

B.3 **Generating/Originating Process Description:** Describe the waste-generating process in sufficient detail to provide context for data evaluation. Failure to adequately describe the generating process can lead to delays in profile approval. If there is a separate document that describes the generating process, please provide a very brief process description, and reference and attach the document. Flow charts and other materials may be attached for clarity.

Generators are encouraged to use and list key words in B.3 when describing the waste stream history or generating/originating process. Key words are identified on the Key Word sheet.
B.4 **Category:** Check all of the applicable boxes. Because low-level and mixed low-level waste must be segregated, only one of these two boxes may be checked. Accountable nuclear material is required to be identified.

B.5 **Classified:** Check applicable boxes for the waste stream. Radioactive Classified Waste or Radioactive Classified Matter is waste or Matter containing material that is classified for security reasons. Radioactive Hazardous Classified Waste, Radioactive Hazardous Classified Matter, Non-radioactive Classified Waste, or Non-radioactive Classified Matter is accepted for disposal or placement in the classified cells for security reasons. Non-radioactive Hazardous Classified Waste or Matter must be managed in accordance with the Military Munitions Rule (40 Code of Federal Regulations [CFR] 266, Subpart M). More than one category may be checked.

B.5.a **Security Authorization:** If any of the classified boxes in Section B.5 are checked, a copy of the signed DOE or NNSA Security Authorization for permanent burial without sanitization must be attached. This must be submitted with every revision.

B.6 **Estimated Volume:** For Revision 0 profiles, provide an initial estimated volume in cubic meters. This initial volume must *not* change.

Provide an estimate of the projected volume in cubic meters remaining for the waste stream. This remaining estimate may increase or decrease through profile revisions including exceeding the original estimated volume on revision 0 of the profile. The reason for any increase should be explained or justified at the bottom of B.6.

Provide the estimated cubic meters (m³) anticipated to be shipped annually.

B.7 **Estimated Frequency of Shipments:** Describe the anticipated shipment frequency (e.g., monthly, quarterly). If the waste will only be generated and shipped once, enter "one-time."

B.8 **Total Number of Packages with RCRA Regulated or Hazardous Constituents:** For mixed waste profiles or classified matter profiles containing a hazardous constituent only, provide the total number of packages. This is a finite number and cannot be changed without subsequent revisions and deviations. The number of packages is used to calculate verification percentages.

C. **Physical/Chemical Characterization**

C.1 **Physical/Chemical Process Knowledge:** Check the applicable boxes, and provide the additional detail requested. If process knowledge is a major source of the chemical characterization and/or used to make Underlying Hazardous Constituent (UHC) determinations for the Land Disposal Restrictions (LDRs) of 40 CFR 268.48, it is important to thoroughly describe that knowledge and reference any applicable documents. Documentation and process knowledge can include procedures, historical data, Safety Data Sheets (SDSs), or other applicable documents.

C.2 **Physical/Chemical Analysis:** Check the appropriate boxes describing the type of sampling and analysis performed to characterize the waste. If field screening or laboratory analysis data are used, describe in detail the sampling and analytical methods used, and attach a copy of the analytical results from a representative sample or sample set. If the laboratory analysis box is checked, a completed Table B-1 and data validation summary must be attached.

C.3 **Regulatory Status:** Check all of the boxes that apply, as defined by the referenced regulations. When asked for waste codes, type all waste codes that could apply to the waste stream. Check the last box if there is a regulatory investigation against the generator or site or both and provide an explanation.
C.4 Federal Land Disposal Restrictions: Mark the box or boxes that describe how the federal LDRs of 40 CFR Part 268 are met. If the waste has been treated to meet any federal LDR requirements, describe the methods used to meet the LDR requirements. For wastes containing UHCs, please list them in this section.

C.5 Physical State: Indicate the physical state by marking the applicable box or boxes.

C.6 Absorbed or Stabilized Liquid Waste: If the final waste or matter contains absorbed or stabilized liquids, check the appropriate box.

C.6.a Liquid Evaluation: Describe the evaluations performed on a high moisture content, absorbed, and/or stabilized liquid waste to ensure that the requirements of the NNSSWAC Section 3.1.5 are met.

C.7 Other Contents: Check all applicable boxes. For all checked boxes, list the controls that ensure the waste form meets NNSSWAC criteria, or provide a description of how the waste acceptance criteria are met.

C.8 Profile Composition: Check the appropriate box (weight or volume). List the profile components and the weight or volume percent for each component generated greater than 1% (e.g., Metal 0 – 10%, wood 80 – 90%, misc. debris 0 – 10%). Do not include waste packaging materials, such as liners, shielding, sorbents added for packaging, void fillers, blocking and bracing materials, or rigging. Note: These are estimates of weight or volume percentages.

D. Radiological Characterization

D.1 Radiological Process Knowledge: Describe the radioactive material or sources of radiological contamination (e.g., waste is contaminated soil and equipment generated from the D&D of a uranium enrichment facility). Describe the process knowledge used to determine the major radionuclides present. Reference or attach the process knowledge documentation.

D.2 Radiological Characterization Methods: Check all applicable boxes. For each box checked, provide a brief but specific method description. If laboratory analysis was used, a data validation summary report must be attached.

D.2.a Multiple Radiological Characterization Methods: If multiple characterization methods are checked (e.g., nondestructive assay and scaling factors), briefly describe how these methods are used together to establish the radiological inventory.

D.3 Estimated Radiation Dose: Provide estimated external radiation dose readings at the package surface, at 30 cm from the package, and at 1 m from the package.

D.4 Fissile Material: If waste contains enriched uranium (235U wt% > 0.90), 233U, 239Pu, 241Pu, 242mAm, 243Cm, 248Cm, 249Cm, 249Cf, or 251Cf, check the appropriate box (es) (D.4.1–4.8) identifying the limits used for compliance with the criticality safety criteria of the NNSSWAC. Specify the controlling documents. Natural and depleted uranium should not be reported here, regardless of quantity. If no, skip to Section D.5.

D.5 Reportable Radionuclides: Report the major radionuclides anticipated in the waste stream. Reportable radionuclides are those isotopes determined to be major radionuclides as described in the Appendix E.1, Radionuclide Reporting, of the NNSSWAC. Report both the highest activity concentration expected and the activity representative of the final waste form concentration for each reportable radionuclide in the packaged waste. Activities should be reported in
becquerels per cubic meter (Bq/m³). For revised waste profiles, highlight all changes in the table. The basis for the reported nuclide concentrations must be defensible, documented, and available upon request.

D.6 Alpha-Emitting Transuranic Radionuclides: If the waste stream contains any reportable alpha-emitting transuranic nuclides with half-lives greater than 20 years and exceed 10 picocuries per gram (pCi/g) as required by Appendix E.A.2 of the NNSSWAC, check the appropriate box and report both the highest activity expected and the activity representative of the final waste form for each reportable transuranic radionuclide in the packaged waste. Activities should be reported in nanocuries per gram (nCi/g). For revised waste profiles, highlight all changes in the table. The basis for the reported nuclide concentrations must be defensible, documented, and available upon request.

D.6.a Specify controlling document(s) that ensure transuranic waste is not shipped for disposal. If the sum of the high activity values listed exceeds 100 nCi/g, please provide an explanation.

D.7 Plutonium Equivalent Gram (PE-g) Limits: Provide supporting PE-g calculations in the tables provided.

D.7.a If any packages exceed the PE-g limits specified in NNSSWAC, Section 3.2.2, check the appropriate box. Describe the controls that ensure the package activity limit is not exceeded for each package (e.g. procedures, spreadsheets, checklists).

E. Packaging

E.1 Packaging Used: Check “yes” if package is identified in the NNSSWAC, Appendix D “Container Codes.” Check “No” if package is not listed and provide a package type name, description, dimension, and rated weight. Check “Yes” if listed as container codes 100, 110, 120, 130, 230, and/or 240. Identify the container and provide information as requested. Specify maximum container size and gross weight.

E.2 Metal or Wood boxes: Metal or wood boxes not meeting the 3,375-pounds per square foot (lb/ft²) strength test require a deviation request per Section 3.4 of NNSSWAC documented in Section F.2 of waste profile.

E.3 High Integrity Container (HIC); describe size range, and type.

HIC definition: Generators may determine based on Department of Transportation (DOT) or NNSSWAC requirements to use HICs for shipment. More active wastes are often transported and disposed in high integrity containers (HIC’s). Materials used to construct HIC’s may include 316 stainless steel, Ferallium (a duplex stainless steel), and high-density polyethylene (HDPE). In some cases, HICs may also be selected for use to reduce external dose rates. HICs are not considered in the Area 5 Performance Assessment.

E.4 Roll-off Container; describe size range, type, and weight range of each and complete sections “a, and b.”

E.5 Type B Package; check box if Certificate of Compliance (CoC) for each type of package is attached.

E.6 Shielded Package; describe the type of shielding and package, including the reason for shielding.
E.7 Unpackaged Low Specific Activity or Surface Contaminated Objects LSA/SCO (e.g., equipment, large machinery). Provide shipment dimensions and weight ranges. Provide a detailed justification as to why IP-1 packaging is not being used and how the shipment will comply with all applicable regulations.

E.8 Miscellaneous (Other): Describe packaging as Code 100 “Miscellaneous” per NNSSWAC, Appendix D. A deviation request may be required per Section 3.4 of the NNSSWAC.

E.9 Returned Containers: Specify any containers previously identified that will be returned to the generator’s facility.

E.10 ALARA and Special Handling Instructions: List any special handling requirement such as remote handled, odd packaging configurations, or other requirement; and list any special handling procedures or ALARA documentation necessary for shipping or receiving the waste.

E.11 Internal Contamination: Is internal contamination (e.g., internal contamination of a Type B cask for waste removal and cask return) anticipated? Check the appropriate box and if contamination is present, provide details on the expected contamination levels.

E.12 Radon Generation: If radon is expected to be generated during storage, handling, and transportation of the waste stream, please check the appropriate box.

E.13 Comments: Provide any additional comments or information needed to clarify the information provided in Section E.

E.14 Additional Packaging: If additional packaging is identified after profile approval, check the appropriate box. Identify in Section B.2.b the only change in the profile revision is for packaging.

F. Additional Information

F.1 Comments: This section may be used to provide any additional information about the waste.

F.2 Exception or Deviation Request to NNSSWAC: Complete this section if the waste stream requires an exception to any of the NNSSWAC. Instructions for completing an exception or deviation to the acceptance criteria are provided in Section 3.4 of the NNSSWAC.

F.3 Attachments: Number and list the attachments provided with this Profile Sheet. All attachments must be submitted with the waste profile, including packaging Certificate of Conformance, Security Authorizations, etc. Generally, waste characterization documents should be listed as references (not attachments) and if not necessary to support the specific profile data or requested, may not need to be included. Attachments should include PE-g calculations, Table B-1 (if required), data validation summary reports (if required), and Table E-3 (if required).

G. Waste Generator or Classified Matter Originator Signatures: The generator/originator technical contact for the waste profile, and the authorized certification representative must sign and date the profile and any information regarding the waste stream provided on attachments.

Profiles are distributed to State of Nevada personnel, which may be considered a public release. Generators must check with their Derivative Classification (DC) Reviewer to determine the classification (e.g., unclassified, approved for public release). The DC Reviewer must sign and date the profile and add the classification determination.
Nevada National Security Site Profile Sheet

A. Generator or Originator Information

1. Company Name:

2. Address:

3. Generator/Originator Facility:

4. Primary Technical Contact: Email:
   Phone:

5. DOE Point of Contact: Email:
   Phone:

6. Certification Official: Email:
   Phone:

7. Generator’s EPA Identification Number (if profile involves hazardous waste):

8. Additional Processing/Treatment Facility. If the waste or classified matter is being processed/treated/shipped from a location other than the Generator/Originator Facility, provide the following:
   Company Name:
   Address:
   Primary Technical Contact: Email:
   Phone:
   Processing/Treatment Facility’s EPA Identification Number (if profile involves hazardous waste):
   a. If a generator is preparing a waste stream that will be generated, certified, and shipped from a site that is not included under the generator site’s current Waste Certification Program, list the documents that will be developed or revised to certify the waste at the off-site facility (e.g., QA Project Plan, Project Specific NNSSWAC Implementation Crosswalk [NIC], or Waste Certification Plan).

9. Reference Controlling Documents (e.g., QA Project Plan, Project Specific NNSSWAC Implementation Crosswalk [NIC]) for the approved generator facility:

B. General Profile Information

1. Profile Name:
   - New Profile
   - Revised Profile

2. a NNSS Profile Identification Number:
   Profile Revision Number: Profile Revision Date:
Nevada National Security Site Profile Sheet

2.b Profile Revisions. Describe and list all changes made to the profile (e.g., revision history from previous revision). If any part of the generating, packaging, characterization, or certification process has changed, list all process changes. If only packaging has changed, a limited review may be acceptable and requested prior to profile submittal:

2.c Project/Program History. Identify DOE nexus/authorization for waste eligibility for disposal and the project or program that the waste is traced to, and describe the benefits (e.g., Provide national security; Safe disposal of waste to prevent danger or health risk to the population; Disposal of Cold War clean-up and community restoration):

3. Generating/Originating Process Description. Describe the process that generated the waste stream or originated the classified matter identified by this profile sheet. Attach process flow charts and other available information if helpful in explaining the process:

Keywords (see Profile Sheet Instructions, B.3):

4. Category (check all that apply):
   - Low-Level Waste (LLW)
   - Regulated Asbestiform Low-Level Waste (RALLW)
   - Mixed Low-Level Waste (MLLW)
   - Contains accountable nuclear material
   - Classified (also complete Section B.5)
   - PCB waste requiring disposal in permitted hazardous waste landfill
   - Hydrocarbon-burdened LLW (NNSA/NFO generated waste only)

5. Classified (check all that apply):
   - Radioactive Classified Waste
   - Radioactive Classified Matter*
   - Radioactive Hazardous Classified Waste
   - Radioactive Hazardous Classified Matter*
   - Non-radioactive Classified Waste
   - Non-radioactive Classified Matter*
   - Non-radioactive Classified Hazardous Waste
   - Non-radioactive Classified Hazardous Matter*
   - Non-radioactive Classified Non-Hazardous Waste
   - Non-radioactive Classified Non-Hazardous Matter*
   - Classified waste/matter requiring protection from visual observation
   - *Managed in accordance with the Military Munitions Rule (40 CFR 266, Subpart M).

5.a. Security Authorization. If any of the classified boxes in Section B.5, above are checked, attach a copy of the signed DOE or NNSA Security Authorization for permanent burial.

   Total initial estimated waste stream volume (Rev. 0) (remains the same through profile revisions): (m³)
   Estimated total remaining waste stream volume (if different from earlier revisions, explain/justify the change below): (m³)
   Estimated annual rate of waste stream being shipped: (m³/yr)

   Explanation/justification for change:

7. Estimated Frequency of Shipments (stipulate per month, quarter, or fiscal year):

8. Total Number of Packages with RCRA Regulated or Hazardous Constituents (required only for mixed waste profiles or classified matter profiles containing a hazardous constituent, provide the total number of packages):
C. Physical/Chemical Characterization

1. Physical/Chemical Process Knowledge. Describe the point of generation (NNSSWAC Section 5.5) and process knowledge information used for physical/chemical characterization of this profile:

- Safety Data Sheets (SDS) or other applicable documents. If checked, please attach SDS or other document(s).
- Mass Balance from Process Inputs. Describe how process inputs are controlled and recorded:
- Historical Process and Analytical Data. Describe:
- Other. Describe:

2. Physical/Chemical Analysis. Describe the sampling and analysis performed to characterize this profile:

- No Analysis Performed.
- Field Screening Performed. Describe the frequency and type of field screening performed:
- Laboratory Analysis Performed. Describe the sample source and sampling frequency and methods: Attach completed Table B-1 and data validation summary:

3. Regulatory Status. Check all boxes below that describe the regulatory status of the profile:

- Federally Regulated (RCRA) Hazardous Waste (40 CFR 261). List all RCRA U, P, F, K, or D waste codes that apply to the profile:
- Waste is hazardous per state-of-generation regulations. List state and hazardous waste codes:
- Classified matter that if a future waste determination is made, would be federally regulated (RCRA) hazardous waste (40 CFR 261). List all RCRA U, P, F, K, or D waste codes that would apply to the classified matter:
- TSCA regulated PCB (40 CFR 761). Describe category of PCB (e.g., PCB waste, PCB bulk product waste, PCB remediation waste, PCB analytical waste). Describe PCB source and concentration:
- Waste generated from cleanup activities conducted under CERCLA. If checked, list applicable regulatory documents and agreements (e.g., Records of Decisions, Remedial Actions/Feasibility Studies, and Removal Action Plans):
- Profile is not regulated under any of the above regulations.
- The generator site is under investigation or penalties by a State or Federal regulatory agency. If checked, explain:


- Profile is not subject to federal Land Disposal Restrictions (LDRs).
- Classified matter that if a future waste determination is made would not be subject to federal LDRs.
- Waste contains Underlying Hazardous Constituents (UHCs). Please list all applicable UHCs here:
- Waste was treated after August 24, 1998.
Nevada National Security Site Profile Sheet

Profile meets all applicable land disposal restrictions of 40 CFR 268. Check this box if the waste or material constituting the profile has been treated to meet all federal LDRs, or if it meets the LDRs as generated/originated. If checked, describe the treatment performed and analytical data to support LDR determination:

5. Physical State:
   - Sludge
   - Powder/Dust
   - Debris
   - Solid
   - Sealed Source
   - Encapsulated
   - Solidified
   - Other; describe:

6. Absorbed or Stabilized Liquid Waste
   - Does the final waste or matter contain absorbed or stabilized liquid? ☐ Yes ☐ No

6.a. Liquid Evaluation. If "yes," provide the evaluation (e.g., high moisture content waste) determining that the waste will not release liquid, and reference or attach controlling procedure:

7. Other Contents. Check if any of the following are components of the profile, and provide a description of how NNSSWAC requirements for each are met (list procedure, or provide detailed description):
   - Animal carcasses
   - Infectious waste
   - Free liquids
   - Pyrophorics
   - Chelating agents
   - Asbestos (Friable)
   - Particulates
   - Beryllium Dust
   - Gases
   - PCBs
   - Explosives
   - Other

8. Profile Composition. Describe the gross composition/component of the profile, and estimated weight or volume percent for each component greater than 1%. Ranges for gross composition/components are acceptable (e.g., Metal 0 – 10%, wood 80 – 90%, 0 – 10% misc. debris):

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<th>Composition/Component</th>
<th>Estimated weight percent</th>
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D. Radiological Characterization

1. Radiological Process Knowledge. Describe the source(s) of the radioactive material in this profile (e.g., the radiological processes that introduced the radioactive material into the profile). Reference or attach the process knowledge documentation:

2. Radiological Characterization Methods. Describe the analysis and characterization methods used to determine the radionuclide inventory of the profile. Check all that apply:

- □ Radionuclide material accountability. Describe the accounting methods used to help establish the radionuclide inventory:

- □ Radiochemical analysis. Describe type and frequency of sampling and analysis:
  Attach data validation summary:

- □ Nondestructive assay. Describe type and frequency of assay performed:

- □ Field measurement instruments. Describe the type of instruments and how they are used to help establish the radionuclide inventory:

- □ Scaling factors. Explain how the scaling factors were derived and how they are used:

- □ Computer models. Describe the computer model used and how it is used to help establish the radionuclide inventory:

- □ Other. Describe method:

2.a. Multiple Radiological Characterization Methods. If multiple methods are checked above, describe how the methods are used together to establish the radiological inventory of the profile:

3. Estimated Radiation Dose rate from disposal package (mSv/hr):

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<th>Surface</th>
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4. □ Yes   □ No  Fissile Material. Does the profile contain enriched uranium ($^{235}$U wt% > 0.90), $^{233}$U, $^{237}$Pu, $^{241}$Pu, $^{242}$Am, $^{243}$Cm, $^{245}$Cm, $^{247}$Cm, $^{248}$Cf, $^{251}$Cf? If yes, check all boxes that may be applicable. If no, skip to Section D.5.

4.1 □ Attach completed NNSSWAC, Appendix E, Table E.3, $^{235}$U FGE and $^{235}$U Effective Enrichment, for each enrichment level or range.

4.2 □ Meets criteria specified in 49 CFR 173.453, Fissile materials – exceptions. Specify controlling document:

4.3 □ Fissile material does not exceed 350 g of $^{235}$U FGE per package nor does it exceed 2 g of $^{235}$U FGE per kilogram of waste/classified matter (mass of the package is not included in the mass of the waste/classified matter) (graphite and beryllium must not exceed 1% of the mass of the waste/classified matter). Note: These criteria apply to 55-gallon metal drums or larger containers (e.g., 55-gallon drums, metal boxes) and are not applicable to drums < 55-gallon or soft sided, wood, or plastic containers. Specify controlling document:

4.4 □ Profile complies with the limits and conditions as specified in NNSSWAC, Appendix E, Table E.4. Specify controlling document:

4.5 □ Graphite and beryllium exceeds 1% of the mass of the waste/classified matter.
4.6   Profile complies with the limits and conditions as specified in NNSSWAC, Appendix E, Tables E.5 and E.6. Specify controlling document:

4.7   A profile specific nuclear criticality safety evaluation (NCSE) was performed to show compliance with the NNSSWAC, Section 3.2.1. Attach NCSE for review and specify controlling document:

4.8   If a fissile material package (49 CFR 173.403) will be used, provide model and type:

5. Reportable Radionuclides. List the reportable radionuclides by listing the expected high activity and the activity representative of the final waste/classified matter form in becquerels per cubic meter (Bq/m³):

   For revised profiles, highlight all changes in the table below.

   Note: Concentrations must be entered in Bq/m³.

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<th>Concentration (Bq/m³) ; High Activity</th>
<th>Concentration (Bq/m³) ; Representative of Final Profile</th>
<th>Isotope</th>
<th>Concentration (Bq/m³) ; High Activity</th>
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6. Alpha-Emitting Transuranic Radionuclides. Does the profile contain any alpha-emitting transuranic radionuclides with a half-life greater than 20 years?

   Yes    No (If yes, list below. For revised profiles, highlight all changes in the table below.)

<table>
<thead>
<tr>
<th>Transuranic Nuclide</th>
<th>Concentration (nCi/g); Expected High Activity</th>
<th>Concentration (nCi/g); Representative of Final Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Np-237</td>
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<tr>
<td>Pu-238</td>
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<td>Pu-239</td>
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<td>Pu-242</td>
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<td>Am-241</td>
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<td>Am-242m</td>
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<td>Am-243</td>
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<td>Cm-243</td>
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<td>Cm-246</td>
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<tr>
<td>Cm-250</td>
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<td>Bk-247</td>
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<tr>
<td>Cf-249</td>
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</tbody>
</table>
6.a. Specify controlling document(s) that ensure transuranic waste is not shipped for disposal.

If the total of the high activity concentration for the reported nuclides exceed 100 nCi/g, explain why the waste is not transuranic:

7. Plutonium Equivalent Gram (PE-g) Limits: Provide PE-g supporting calculations for each container type.

<table>
<thead>
<tr>
<th>Isotope</th>
<th>High Activity from Table D.5 (Bq/m³)</th>
<th>PE-g Conversion Factors (gPE/Bq)</th>
<th>PE-g/m³</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Total PE-g/m³

<table>
<thead>
<tr>
<th>Container Type</th>
<th>Volume (m³)</th>
<th>PE-g/container*</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

*Value for container is derived from multiplying total PE-g/m³ by volume of container (m³)

7.a. Are there any packages that exceed the PE-g totals as described in NNSSWAC, Section 3.2.2?

☐ Yes  ☐ No

Specify controls for meeting NNSSWAC requirements for each container that exceeds NNSSWAC limits:

E. Packaging

1. Packaging Used. Check the applicable boxes.

Are the packages to be used for the waste stream identified in NNSSWAC Appendix D “Container Codes”?  ☐ Yes  ☐ No

If No, provide package type name, description, dimension, and rated weight:

If using container codes listed below, provide a package type name, description, dimension, rated weight, whether placed on pallets, and method of off-loading (e.g., crane, forklift):

a) 100, Miscellaneous
b) 110 Miscellaneous Drum
c) 120 Miscellaneous Box
d) 130 Miscellaneous Softsided
e) 230 Supersack
f) 240, Burrito Wraps and Liner

Specify maximum container size:

Specify maximum container gross weight:
2. Metal or Wood boxes do not meet the 3,375-lb/ft² strength test; If checked, provide deviation request per Section 3.4 of NNSSWAC in Section F.2 of waste profile.

3. High Integrity Container; describe size range and type:

4. Roll-off Container; describe size range, type, and weight range:
   a) Have returnable roll-off containers been packaged in accordance with NNSSWAC Appendix F? Yes No
   b) For containers that will be emptied (i.e. roll-off boxes) provide anticipated contamination levels on the waste.

5. Type B Package. Certificate of Compliance (CoC) for the package attached.

6. Shielded Package; describe type of shielding, reason for shielding, and type of packaging:

7. Unpackaged LSA/SCO (e.g., equipment, large machinery). Provide shipment dimensions and weight ranges. Provide a detailed justification as to why IP-1 packaging is not being used and how the shipment will comply with regulations:

8. Miscellaneous (Other): A deviation request per Section 3.4 of NNSSWAC or Section F.2 of waste profile may be required.

9. Returned Containers. Are any of the containers checked above required to be returned to the generator/originator facility? If yes, specify.

10. ALARA and Special Handling Instructions. Do any packages listed above require special handling (e.g., remote handled, Type B Package, odd package configurations)? Yes No
    Reference any special handling procedures and ALARA documentation required to off-load, if applicable.

11. Internal Contamination. Is internal contamination anticipated? (e.g., internal contamination of a Type B cask for waste/classified matter removal and cask return) Yes No
    Please provide anticipated contamination levels.

12. Radon Generation. Is radon expected to be generated during storage, handling, and shipping both from the exterior surface of the packaging and the waste content? Yes No

13. Comments:

14. Additional Packaging. Is additional packaging identified after profile approval? Yes No Identify in Section B.2.b that the only change in the profile revision is for packaging.

F. Additional Information

1. Comments:

2. Exception or Deviation Request to NNSSWAC: Complete if needed.
   a) Identify specific requirement for which an exception or deviation is desired:
   b) Provide reason an exception or deviation is needed:
   c) Describe any proposed alternative methods to meet the general intent of the requirement:

3. Attachments. List any attachments provided with this profile:
G. Waste Generator or Classified Matter Originator Signatures

To the best of my knowledge, the information provided on this form and the attached documentation is a full, true, and accurate description of the profile. Willful and deliberate omissions have not been made. All known and suspected hazardous materials have been disclosed.

Technical Contact Name: 
Signature: ____________________________ Date: 

Certification Official Name: 
Signature: ____________________________ Date: 

Derivative Classification Reviewer Name: 
Signature: ____________________________ Derivative Classification Determination: 

NEVADA NUCLEAR SECURITY SITE

WASTE ACCEPTANCE CRITERIA (NNSSWAC)

Key Words

All waste profiled **MUST** meet the NNSSWAC and be reviewed and recommended for approval by the Waste Acceptance Review Panel (WARP). Generators are encouraged to use and list in the Profile Section B.3, “Key Words” when describing the waste stream history or generating/originating process. Should the generator desire to use a key word not identified on the Key Word list below, the Navarro, Radioactive Waste Program Manager shall be notified of the key word and definition via e-mail as part of the profile submittal.

<table>
<thead>
<tr>
<th>KEY WORDS</th>
<th>KEY WORDS</th>
<th>KEY WORDS</th>
<th>KEY WORDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11(e)(2) Material</td>
<td>Foreign</td>
<td>Nitrate</td>
<td>Special Nuclear Material (SNM)</td>
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<tr>
<td>Activated</td>
<td>Fuel</td>
<td>NRC</td>
<td>Spent</td>
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<tr>
<td>Agreement</td>
<td>Gaseous Diffusion</td>
<td>Nuclear Criticality Safety Evaluation (NCSE)</td>
<td>Stand-off</td>
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<tr>
<td>Air Force Base Creech and Nellis</td>
<td>Grade</td>
<td>Off-Site Source Recovery Program (OSRP)</td>
<td>Tamper indicating Device (TID)</td>
</tr>
<tr>
<td>KEY WORDS</td>
<td>KEY WORDS</td>
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<tr>
<td>Alpha</td>
<td>Graphite</td>
<td>Operations</td>
<td>Target</td>
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<td>Array</td>
<td>Handling</td>
<td>Other container</td>
<td>Thermoelectric</td>
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<tr>
<td>As Low As Reasonably Achievable (ALARA)</td>
<td>Heat Generation</td>
<td>Pahrump</td>
<td>Thorium</td>
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<tr>
<td>Category (I, II, III, etc.) Nuclear Facilities</td>
<td>HEU</td>
<td>Pile</td>
<td>Transuranic (TRU)</td>
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<tr>
<td>Caustic</td>
<td>High</td>
<td>Plutonium</td>
<td>Treatment</td>
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<tr>
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<td>Highly Enriched Uranium (HEU)</td>
<td>Polychlorinated Biphenyl (PCB)</td>
<td>U-233</td>
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<tr>
<td>Commercial</td>
<td>Highway Route Control</td>
<td>Pool</td>
<td>UF6 Cylinders</td>
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<td>Components</td>
<td>Hoisting</td>
<td>Previously TRU</td>
<td>Unique</td>
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<tr>
<td>Consolidation</td>
<td>Hot Cell</td>
<td>Purex</td>
<td>Unirradiated</td>
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<tr>
<td>Converter</td>
<td>International</td>
<td>Pyrophorics</td>
<td>Unirradiated light Water Breeder Reactor (ULWBR)</td>
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<tr>
<td>Crane</td>
<td>Irradiated</td>
<td>Radioisotope Thermoelectric Generator (RTG)</td>
<td>Uranium</td>
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<tr>
<td>Criticality</td>
<td>Isolation Pilot Plant</td>
<td>Reactor</td>
<td>Usable</td>
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<td>KEY WORDS</td>
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<td>Depleted (DU)</td>
<td>Land Disposal Restrictions (LDR)</td>
<td>Reactor Core</td>
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<td>Deviation</td>
<td>Level</td>
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<td>Light Water</td>
<td>Reprocessed</td>
<td>Waste Incidental to Reprocessing (WIR)</td>
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<tr>
<td>Elevated Dose</td>
<td>Light Water Breeder</td>
<td>Reprocessing</td>
<td>Weapon</td>
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<td>Long-Lived Radioactivity</td>
<td>Rigging</td>
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<td>Exceed PE-g totals</td>
<td>Macroencapsulated</td>
<td>Sealed</td>
<td>WIPP</td>
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<td>Explosives</td>
<td>Milk Run</td>
<td>Sewage</td>
<td>Yucca Mountain</td>
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<td>Fissile</td>
<td>Mixed Oxide Fuel (MOX)</td>
<td>Size (Other Container)</td>
<td>ZPPR</td>
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<td>Fixed Contamination</td>
<td>Neutron Generator</td>
<td>Source(s)</td>
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