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Revision 0

PFP Slab Removal and Disposal Data Quality Objective Summary

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
under Contract DE-AC06-08RL14788

P.O. Box 1600
Richland, Washington 99352

Approved for Public Release;
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Terms

AA	alternative action
CERCLA	*Comprehensive Environmental Response, Compensation, and Liability Act of 1980*
COC	contaminant of concern
CWC	Central Waste Complex
D4	deactivation, decontamination, decommissioning, and demolition
DOE	U.S. Department of Energy
DOE-RL	DOE Richland Operations Office
DQO	data quality objective
DR	decision rule
DS	decision statement
ERDF	Environmental Restoration Disposal Facility
HHE	human health and the environment
NDA	nondestructive assay
PFP	Plutonium Finishing Plant
PSQ	principal study question
RAWP	removal action work plan
RCRA	*Resource Conservation and Recovery Act of 1976*
SAP	sampling and analysis plan
TRU	transuranic
WIDS	Waste Information Data System
WIPP	Waste Isolation Pilot Plant

1 Introduction

The purpose of this data quality objective (DQO) is to support the characterization efforts needed for removal and disposal of the Hanford Site Plutonium Finishing Plant (PFP) 236Z and 242Z Building concrete slabs and any associated soil. The slabs are the floors of the buildings that will remain after demolition of the above-grade structures. Removal of the slabs is expected to reduce hazards during the surveillance and maintenance phase and will support the final remedial action.[1] Additional parts of the foundation for these buildings may be left in place.

A sampling and analysis plan (SAP) will be prepared using the results of this DQO. The objective for the slab removal SAP is to provide the characterization information necessary for safe removal of the slabs, associated soils, and debris; compliant disposal of the removed materials; and preparation for follow-up remedial actions. In particular, implementation of the SAP will help obtain additional characterization information that will be used for the following purposes:

- Identify the controls necessary to protect workers during slab removal.
- Make waste management decisions.
- Develop waste profiles for waste disposed to the Hanford Site Environmental Restoration Disposal Facility (ERDF), or other approved and appropriate treatment/disposal facility, if needed.
- Provide additional waste site information for entry of the remaining soil footprint into the Waste Information Data System (WIDS).

2 Background

The U.S. Department of Energy, Richland Operations Office (DOE-RL) determined that a *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) removal action was warranted to mitigate potential risk to human health and the environment (HHE) presented by the inactive PFP structures. DOE-RL was delegated with the authority to conduct removal actions under Section 104, “Response Authorities,” of CERCLA by Executive Order 12580, *Superfund Implementation*.

The structures included in this removal action scope were evaluated in DOE/RL-2004-05, *Engineering Evaluation/Cost Analysis for the Plutonium Finishing Plant Above-Grade Structures*. These removal activities (which include deactivation, decontamination, decommissioning, and demolition [D4]) are authorized in DOE/RL-2005-13, *Action Memorandum for the Plutonium Finishing Plant Above-Grade Structures Non-Time Critical Removal Action*.

A removal action work plan (RAWP), DOE/RL-2011-03, *Removal Action Work Plan for the Deactivation, Decontamination, Decommissioning, and Demolition of the Plutonium Finishing Plant Complex*) was prepared to complete the D4 activities that support the non-time critical removal action for PFP above-grade structures. DOE-RL and the lead regulatory agency (Washington State Department of Ecology) amended the RAWP (DOE/RL-2011-03) to incorporate removal of the 236Z and 242Z Building slabs in order to achieve the removal action objective to reduce the potential for contaminant migration to the environment. For the 236Z/242Z slabs, controls for safe removal and disposal will be established during D4 activities. Characterization of floors from the 236Z/242Z Buildings will also occur during D4

[1] For the purposes of this DQO, removal of the slabs includes removing the building floor; it may also include approximately 3 ft of underlying soils, if necessary.

activities. Sampling will be performed, as needed, to ensure proper slab disposal and ensure that the remaining footprint will be left in a protective state, which would not preclude future remediation.

3 Data Quality Objectives

The DQO process is a strategic planning approach used to define the data collection design criteria to ensure that the type, quantity, and quality of data are appropriate for the intended application. The DQO process was used to support the sample design presented in the SAP.

3.1 Data Quality Objectives Summary

Consistent with DOE/RL-2004-05, the PFP structures that are no longer required to support Hanford Site operations are undergoing D4 activities. Sufficient information must be obtained, so the slabs can be safely removed and disposed and the WIDS discovery process can be implemented. Previous data collected during the D4 activities will be utilized, whenever possible, to ensure that duplicate sampling efforts are not conducted.

3.1.1 Step 1 – Statement of the Problem

The 236Z/242Z slabs have been contaminated to some degree from PFP chemical and radiological processes. Residual radiological and chemical constituents associated with these activities have potentially contaminated the slabs and may pose a threat to HHE. Contaminant concentration information obtained during PFP above-grade structures D4 activities will help support identification of required controls for removal and disposal. After slab removal, the underlying soil may contain residual chemical and/or radiological contaminants that should be identified to support future remedial activities.

3.1.2 Step 2 – Identify the Decision

Principal study questions (PSQs) that the sampling effort attempts to address, as well as the alternative actions (AAs) or outcomes that may result, are based upon the answers to key questions.

The PSQs are basic DQO questions that require resolution in order to address the problem identified in DQO Step 1. Decision statements (DSs) will be used to guide development of the sampling and analytical program, which is discussed in this SAP.

Table 1 presents the PSQs and AAs, which are combined to form DSs.

It is anticipated that some of the waste will be transuranic (TRU), and it will be shipped to the Hanford Site Central Waste Complex (CWC) for staging, pending final disposal at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. The remainder of the waste will be disposed at ERDF. If the project determines that it is desirable to ship waste to CWC prior to disposition at a location other than ERDF, the waste will be characterized in accordance with waste acceptance criteria for the receiving facility before shipment.

Table 1. PSQs, AAs, and DSs

PSQ Number	PSQ	AA Number	AA
1	Do standard controls allow open-air removal of the 236Z/242Z slabs without release of radionuclide or other contamination at levels that present a concern for the environment and worker health and/or safety?	1a	Yes; standard controls used during open-air building demolition may be used (e.g., fix or shield contamination, apply amended water, use remote handling and other methods to isolate workers from hazards, and wear appropriate personal protective equipment).
		1b	No; controls beyond those used for open-air demolition will be required (e.g., containment enclosure). DOE-RL, in consultation with the lead regulatory agency, may choose to leave the slab(s) in place for future remediation.
DS 1: Determine whether radionuclide or other contaminant concentrations to be encountered during slab removal using open-air methods will allow removal to be performed in a safe and environmentally protective manner using standard controls for such activities.			
2	Does the slab waste contain TRU residuals at levels that cannot be disposed at ERDF (cannot meet ERDF waste acceptance criteria [WCH-191] and the requirements of 40 CFR 191)?	2a	Yes; evaluate for compliance with CWC waste acceptance criteria and package waste for staging at CWC pending disposal at WIPP.
		2b	No; evaluate for compliance with the balance of ERDF waste acceptance criteria and ship to ERDF.
DS 2: Determine whether waste is TRU and must be staged at CWC pending disposal at WIPP or is not TRU and is compliant with the balance of the ERDF waste acceptance criteria.			
3	Does the 236Z/242-W slab removal waste designate for RCRA characteristic or listed waste or contain other constituents (e.g., asbestos and beryllium) requiring additional hazard communication and controls?	3a	Yes; assign appropriate waste designation codes, determine if treatment is necessary to meet land disposal restriction treatment standards, identify additional worker protection and waste management controls, and package for disposal at ERDF or other appropriate facility.
		3b	No; ship to ERDF as low-level waste.
DS 3: Determine whether the waste requires treatment, special worker protection, or environmental controls because the waste contains regulated levels of constituents such as RCRA or *Washington Administrative Code* characteristic or listed waste, asbestos, or beryllium, therefore resulting in the addition of applicable waste codes and treatment.			
4	Does sufficient information exist to enter the remaining site after 236Z and 242Z slab removal as a waste management unit into the WIDS database following the TPA-MP-14 procedure as a discovery site?	4a	Yes; gather existing information and start the discovery site process following the TPA-MP-14 procedure.
		4b	No; complete additional surveys to quantify residuals for the WIDS database after slab removal activities are complete to queue the TPA-MP-14 process**.**

Table 1. PSQs, AAs, and DSs

PSQ Number	PSQ	AA Number	AA
DS 4: Determine if sufficient information has been collected to establish waste sites in the WIDS database.			

References: 40 CFR 191, "Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes."

WCH-191, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*.

AA	=	alternative action	PSQ	=	principal study question
CWC	=	Central Waste Complex	RCRA	=	*Resource Conservation and Recovery Act of 1976*
DOE-RL	=	U.S. Department of Energy, Richland Operations Office	TRU	=	transuranic
DS	=	decision statement	WIDS	=	Waste Information Data System
ERDF	=	Environmental Restoration Disposal Facility	WIPP	=	Waste Isolation Pilot Plant

3.1.3 Step 3 – Identify Inputs to the Decision

Decision rules (DRs) define the logic for how the data will be used to draw conclusions from the sampling effort and are typically generated from the DSs, as needed. Decision inputs such as calculations, analytical methods and parameters, and action levels provide the information needed to make decisions. Risk calculations to humans and the environment are not needed for these disposal decisions. Table 2 lists the data required to be reported to the disposal facilities and data needed.

Table 2. Data Needs

DS Number	Data Needs
1	A grid nondestructive assay survey of the Plutonium Reclamation Facility canyon slab is needed for further quantification of the 236Z transuranic materials. Surface radiological surveys of the slabs following demolition are also needed.
2, 3	Sampling and analysis of 236Z/243-Z floor slabs and underlying soil for radiological and chemical constituents are needed to supplement process knowledge for waste management and disposal. Media samples may be analyzed locally for radiological content through use of nondestructive assay; chemical content will require laboratory analysis.
4	Radiological surveys and visual inspection of the remaining excavated area will be needed to determine conditions after slab removal for input into the Waste Information Data System. Soil samples will be collected for analysis if there are areas of high radiation/contamination levels or evidence of staining appears.

An air dispersion model supporting 236Z demolition (PNNL-20173, *Air Dispersion Modeling of Radioactive Releases During Proposed PFP Complex Demolition Activities*) demonstrates that up to 1.4 Ci/d (alpha) could be disturbed by open-air demolition techniques over a wide range of seasonal atmospheric variation without challenging radiological derived air concentration or contamination deposition limits at a 61 m (200 ft) perimeter. Additional dispersion modeling calculations may be needed to derive a survey limit for DS 1 that is applicable to the planned slab removal method and duration. D4 removal action characterization data for the prevailing radiological material at risk will be biased.

While such data exists, it will likely be insufficient for slab removal decision-making purposes. Other calculations (i.e., sum of fractions calculations) that demonstrate compliance with ERDF waste acceptance criteria (WCH-191, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*) are straightforward when constituent concentrations are determined through execution of this SAP. Limits for DSs 2 and 3 can be expressed in terms of meeting or not meeting ERDF waste acceptance criteria. In regard to DS 4, there is no anticipated limit; data collection pursuant to DS 4 targets quantifying residual long-term exposure potential when slab removal is complete. Table 3 provides examples of types of information that are typically required.

After data have been collected to meet the various input requirements, survey and analytical results must be compared to action levels to evaluate removal controls, disposal/disposition alternatives, and worker protection considerations. The criteria for disposal of debris at ERDF and the Low-Level Burial Grounds, and storage at CWC, will be used as the basis for analytical criteria in the quality assurance/quality control portion of the SAP.

Table 3. Required Information for PSQs

PSQ Number	Required Information	Existence of Data?	Source Reference	Sufficient Quality?
1	Material at risk and planned slab removal duration (Ci/d)	Yes	Limit: Pacific Northwest National Laboratory air dispersion model (PNNL-20173) Data: 236Z and 242Z radiological data summary reports (pending)	Yes
2	Volumetric isotopic specific activity (pCi/g)	No	Limit: ERDF waste acceptance criteria (WCH-191); CWC waste acceptance criteria Data: Sample results	No
3	Volumetric chemical concentration (mg/kg)	Yes	Limit: ERDF waste acceptance criteria; CWC waste acceptance criteria Data: 236Z and 242Z chemical data summary reports (pending) and sample results	Yes
4	Dose rates, airborne, removable, and fixed radiological contamination levels (if cross-over exhaust or 291-Z Trenches exposed)	Yes	Radiological surveys that have been performed and can be used for evaluation of health and safety requirements (additional data will be required at the time that work is initiated and completed)	No
1, 2, and 4	Radiological contaminant of concern composition of waste	Yes	Radiological isotopes that are known and readily discernable by nondestructive assay and process knowledge	Yes

Table 3. Required Information for PSQs

PSQ Number	Required Information	Existence of Data?	Source Reference	Sufficient Quality?
3 and 4	Volumetric asbestos-containing material/ beryllium concentrations	Yes	Limit: None; presence invokes added waste management Data: 236Z and 242Z asbestos inspection reports (pending), 236Z industrial hygiene (beryllium) facility assessment (pending), demolished facility posting (pending), and sample results	Yes (asbestos-containing material) No (beryllium)

References: PNNL-20173, *Air Dispersion Modeling of Radioactive Releases During Proposed PFP Complex Demolition Activities*.

WCH-191, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*.

CWC = Central Waste Complex
ERDF = Environmental Restoration Disposal Facility
PSQ = principal study question

3.1.4 Step 4 – Identify Boundaries

The geographic boundaries for the characterization study are the 236Z/242Z slabs and approximately 0.9 m (3 ft) of soil beneath the slab. Table 4 identifies the physical boundaries of interest. Figure 1 provides a plan view of 236Z subsurface exhaust and drain lines. Figure 2 contains a three-dimensional version of both 236Z and 242Z Buildings.

Table 4. Physical Boundaries of Investigation

DS Number	Principle Areas of Investigation
1, 2, and 3	Slab and approximately 0.9 m (3 ft) of underlying soil
4	Remaining soil footprint

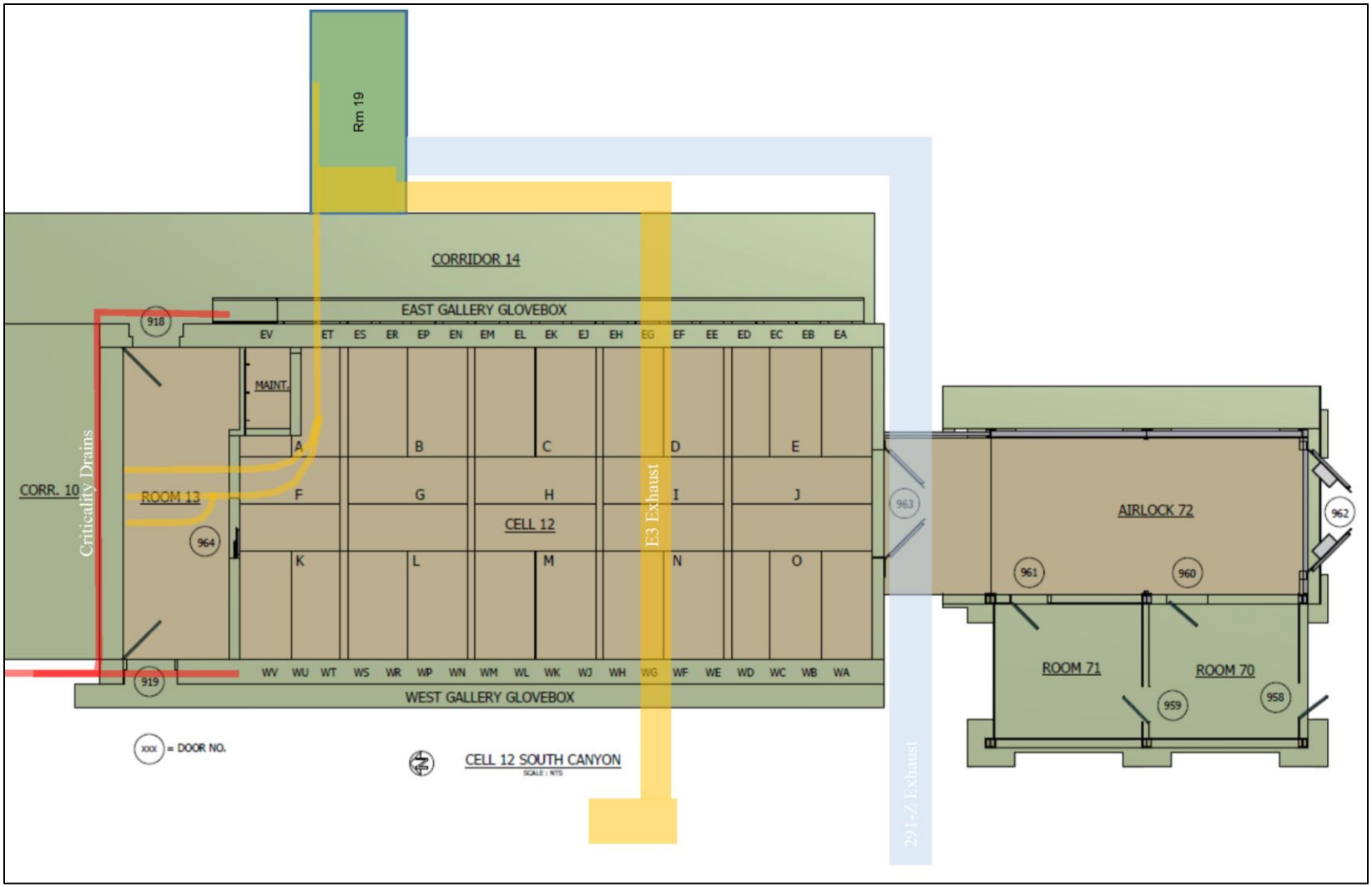

Figure 1. Conceptual Layout of 236Z Subsurface Trenches

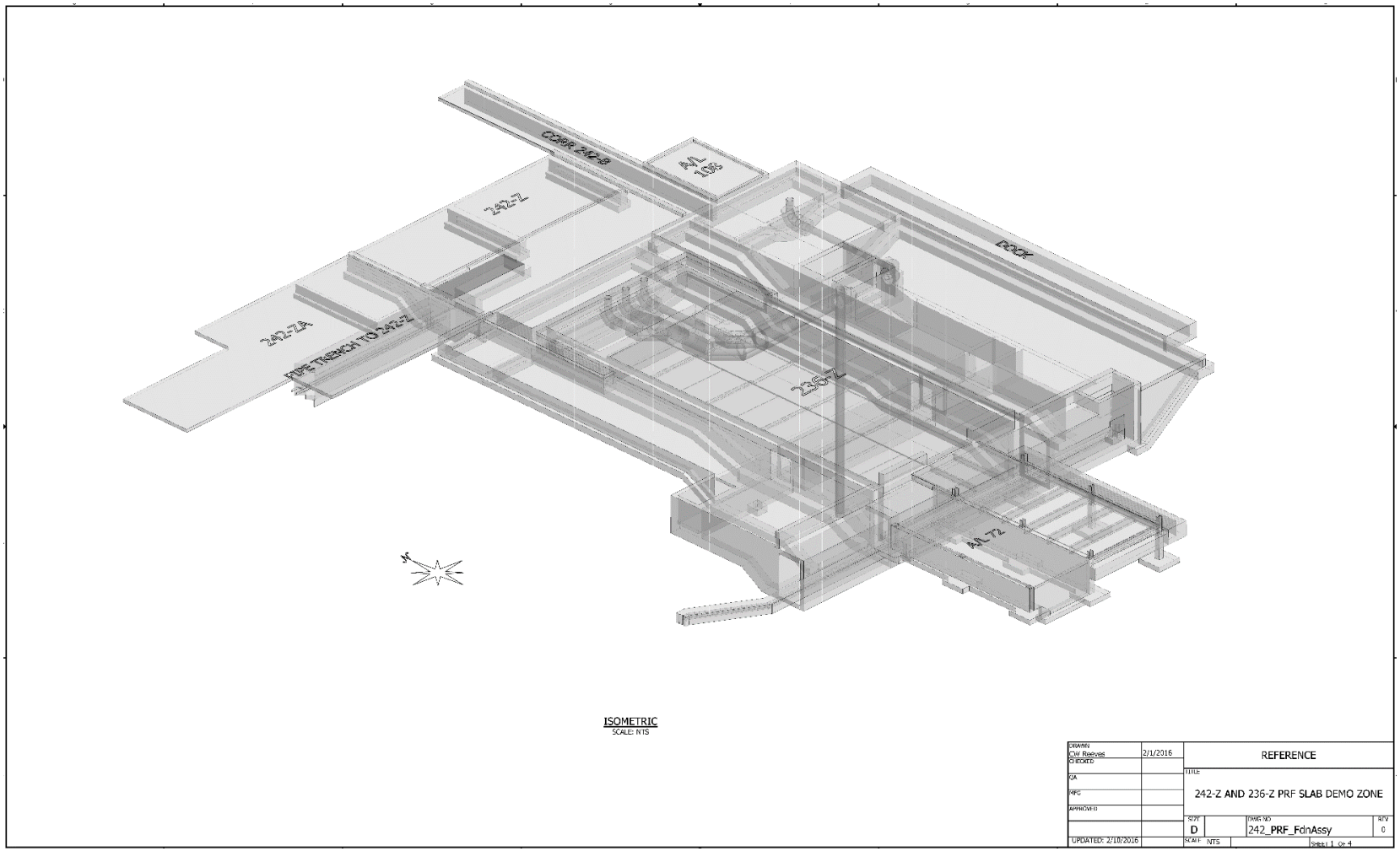

Figure 2. Three-Dimensional Version of Both 236Z and 242Z Buildings

Table 5 identifies the waste streams, strata, population, and characteristics of the nonradionuclide contaminants of concern (COCs). Each material is considered as separate boundary/strata for disposal characterization evaluations. The debris will be disposed at ERDF, unless data indicate that an alternate disposal/treatment is required or appropriate.

The scale of the decisions for each facility may encompass the entire facility or it may be subdivided by slabs or portions of slabs. Analysis of these groupings is based on the material within the facility/area/room.

Table 5. Waste Streams, Strata, Population, and Characteristics for Nonradionuclides

Waste Stream	Strata	Population of Interest	Homogeneity or Heterogeneity
Stainless steel/concrete	Plutonium Reclamation Facility canyon floor debris	Slab	Could vary from pan to pan
Criticality drain pipe trenches	Plutonium Reclamation Facility floor (corridor 10) debris	Slab	Relatively homogenous
Asbestos-containing material exhaust	Transite exhaust piping	Slab	Relatively homogenous
Concrete/asbestos-containing floor tiles	Debris	Slab	Relatively homogenous
Soil	Soil	Soil	Could vary due to potential leaks from floor pans

3.1.4.1 Spatial Scale of Decision Making

In order to create a sampling design, the homogeneity or heterogeneity of the waste must be considered. The spatial scale of the design includes the construction materials and equipment for the slab debris/soil and potential presence of surface or volumetric contamination. The conceptual model assumes that no standing water exists, and pressure is sufficient to drive radionuclides into the depths of the substrate. The areal footprint of the facility slabs to a depth of approximately 0.9 m (3 ft) will be the boundary of the decision.

3.1.4.2 When to Collect Data

There are no temporal conditions that would impact slab debris/soil measurements supporting the removal schedule, and short radiological decay times will not affect disposal decisions. D4 projects typically collect, analyze, and review data prior to decision making and/or physical work. Because decisions will be made immediately after survey results have been processed, and because the isotopes of interest have long half-lives, the decay is not a factor in decision making.

3.1.4.3 Practical Constraints on Data Collection

Some slab characterization will be completed prior to and during above-grade structure removal for 236Z and 242Z Buildings. Conditions under the slab will be characterized in conjunction with slab and soil removal.

3.1.5 Step 5 – Develop Decision Rules

This step develops the DRs (often called "IF…THEN" statements) that provide the criteria for taking actions. The DRs state what action is to be taken when prescribed conditions are met based on the results of data collection and resolution of the PSQs. DRs are mechanisms for implementing DSs. Table 6 provides the DRs, and Table 7 provides the DRs with the parameters of interest for each statement.

Table 6. Decision Rules

Decision Rule Number	Decision Rule
1	**If** the radiological survey of slab and underlying soil will require personnel protection as identified in the radiological control program, or if sample analysis indicates that other nonradiological contaminants present a potential health concern, **then** workers shall be required to implement the appropriate health and safety precautions when conducting deactivation, decontamination, decommissioning, and demolition activities in the area.
2, 3	**If** the waste contains items that are prohibited from disposal at ERDF (WCH-191), **then** ship the waste to CWC or other appropriate facility that can accept the waste.
2	**If** the in situ radiological measurements (i.e., nondestructive assay or direct survey measurements) or sample analyses of slab debris or soil indicate that radiological activity exceeds the 10 CFR 61.55 (Nuclear Regulatory Commission) Class C limit (approximately 97 nCi/g transuranic concentration for radiological contaminants of concern), **then** the waste cannot be disposed at ERDF and must be packaged for transfer to CWC pending final disposal at the Waste Isolation Pilot Plant.
2	**If** the in-situ radiological measurements or sample analyses of slab and underlying soil indicate that radiological activity of the debris will exceed the ERDF waste acceptance criteria, **then** the project will discuss the results with ERDF to determine whether ERDF can accept the waste and what type of packaging may be required. **If** ERDF cannot accept the waste, **then** it will be packaged and sent to CWC.
3	**If** the analyses of slab and underlying soil indicate that the concentrations of RCRA metals exceed toxicity characteristic criteria, **then** the waste must be designated for the toxicity characteristic. If the waste is a Washington State characteristic corrosive, then designate appropriately. The debris must then be evaluated to determine whether treatment is required to meet ERDF waste acceptance criteria, as indicated in Table 4-3 of the ERDF waste acceptance criteria (WCH-191).
1	**If** rad surveys of soil remaining in excavation indicate areas of higher than background dose or contamination or if visual inspection indicates evidence of staining, **then** soil samples will be taken to provide input to WIDS data.

References: 10 CFR 61.55, "Licensing Requirements for Land Disposal of Radioactive Waste," "Waste Classification."
WCH-191, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*.

CWC = Central Waste Complex
ERDF = Environmental Restoration Disposal Facility
RCRA = *Resource Conservation and Recovery Act of 1976*

Table 7. Decision Rules with Detailed Parameters of Interest

Decision Statement Number	Population Parameter	Sample Statistics	Environmental Variable		Unit or Scale of Decision Making	Relationship	Action Level	Alternative Action Number 1	Relationship	Alternative Action Number 2
			Attribute	Unit						
1	If the total slab debris/ soil material at risk removal rate prior to demolition	As determined by nondestructive assay and planned removal duration	Of alpha-emitting radioactivity over time	Ci/day	Within the slab and subsurface	Is greater than	1.4	Consider added containment controls, alternative methods, longer durations, and site specific dispersion modeling	If not	Workers shall be required to implement appropriate health and safety procedures for open-air demolition
2 and 3	If the slab debris/soil	As determined by the sample results, process knowledge, or visual inspection	Contains an item or attribute	Not Applicable	Within the waste container	That is	Listed in WCH-191, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*, as a prohibited item	Then the prohibited condition will be remedied on site or the waste will be shipped to the Central Waste Complex or other appropriate facility	If not	Continue the remaining evaluations
3	If the concentration in the waste container	As determined by analytical measurements and analysis	Of chemical constituents (RCRA metals)	mg/K and mg/L toxicity characteristic leachate procedure	In an ERDF waste container	Is greater than	RCRA (40 CFR 261.24, "Identification and Listing of Hazardous Waste," "Toxicity Characteristic") limits	And if low-level waste, plan for appropriate RCRA (40 CFR 268, "Land Disposal Restrictions") treatment prior to disposal	If not	Ship the waste to ERDF

Note: There is no limit for polychlorinated biphenyl matrix in solids for ERDF disposal.

ERDF = Environmental Restoration Disposal Facility

RCRA = *Resource Conservation and Recovery Act of 1976*

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3.1.6 Step 6 – Specify Limits on Decision Error

The terms statistical and nonstatistical can be independently applied to two factors of the sampling design: the number of samples can be determined statistically or not, and the locations can be determined randomly or not. If the location is not determined randomly, the determination is characterized as biased (judgmental). If the locations are random, statistical calculations can be performed on the results. If the locations are biased to either areas of high or low concentrations, then applying statistical calculations may not be appropriate to evaluate the results.

3.1.7 Step 7 – Optimize the Design for Obtaining Data

The sampling and analysis design is based on information from all of the previous DQO steps. Nondestructive assay (NDA) surveys have been completed for each floor pan (a total of 15 locations) in the 236Z canyon. Focused samples will be taken from soil locations below areas where high levels of radioactivity and/or staining of the soil occurs.

Optimization of the sampling design will focus on gathering the radiological information necessary to meet the overall objective of reducing the radiological source term associated with the 236Z/242Z slabs and underlying soils. Existing NDA survey information will be supplemented, if needed, to support characterization. Such NDA surveys will be performed using portable, high-resolution gamma spectroscopy assets (ORTEC® or CANBERRA™ units). The NDA assets used will be certified by Safeguards and Security if controls need to be reintroduced to support the slab removal effort.

Characterization of the soils immediately below the 236Z and 242Z slabs will be guided by radiological surveys and process knowledge to identify areas where leaks from the slab would be most likely. Sampling devices and methodology would allow collection of samples in a manner that is protective of HHE.

After the slabs have been removed, a final site survey will be performed using portable radiological instrumentation to document current radiological conditions. The excavation will then be backfilled. Table 8 summarizes the sample design.

Table 8. Type of Data Collection Design

Principal Study Question Number*	Type of Design	Optimum Number of Samples/Measurements
1	236Z canyon floor grid nondestructive assay	Assay each of the 15 pans on the canyon floor
2, 3, and 4	236Z/242Z slabs, soil; judgmental in locations of highest likelihood contamination (sumps, drains, and floor penetrations)	Judgmental; number of samples based on observations

Note: Data collected from soil characterizations will be used as input into the Waste Information Data System for the resulting waste site after slab-on-grade or slab removal has been completed.

* The corresponding decision statements were provided in Table 1.

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3.2 Contaminants of Concern

The final COCs to be considered for waste generated during D4 of the PFP above-grade structures are listed in Table 9.

Table 9. Chemical and Radionuclide COCs

Chemical COCs
Metals
Nitrites/Nitrates
Beryllium (236Z Only)
Radionuclides COCs
Americium-241
Plutonium-238
Plutonium-239
Plutonium-240
Plutonium-241
Plutonium-242
Uranium-233 and Uranium-234
Uranium-235
Uranium-238

4 References

10 CFR 61.55, "Licensing Requirements for Land Disposal of Radioactive Waste," "Waste Classification," *Code of Federal Regulations*. Available at: http://www.gpo.gov/fdsys/pkg/CFR-2010-title10-vol2/xml/CFR-2010-title10-vol2-sec61-55.xml.

40 CFR 191, "Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes," *Code of Federal Regulations*. Available at: http://www.access.gpo.gov/nara/cfr/waisidx_10/40cfr191_10.html.

40 CFR 261.24, "Identification and Listing of Hazardous Waste," "Toxicity Characteristic," *Code of Federal Regulations*. Available at: http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol25/xml/CFR-2010-title40-vol25-sec261-24.xml.

40 CFR 268, "Land Disposal Restrictions," *Code of Federal Regulations*. Available at: http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol26/xml/CFR-2010-title40-vol26-part268.xml.

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Resource Conservation and Recovery Act of 1976, 42 USC 6901, et seq. Available at: http://www.epa.gov/rcraonline/.

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WCH-191, 2015, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*, Rev. 4, Washington Closure Hanford, Richland, Washington. Available at: http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0080195H.

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