Rocky Flats Environmental Technology Site

RADIOLOGICAL CHARACTERIZATION PACKAGE

800 AREA CLUSTER CLOSURE PROJECT

REVISION ~~0~~ 1

AAP 10/22/01

March 1, 2001

Prepared by: Jay Britten / 2/27/01.
Radiological Engineer

Reviewed by: Duane Parsons / 2/27/01.
RISS Facility Characterization Coordinator

Reviewed by: Steve Luker / 3/1/01.
Quality Assurance

Approved by: Kent Dorr / 3/1/01.
Closure Project Facility Manager

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ADMIN RECORD

B800-A-000016

Radiological Characterization Package
800 Area Cluster (B864, B830, B885, B863, T883D, and Tank 020, 021 and 026 Slabs)

Building:	800 Area		Last Updated:	Date:	2/28/01	Time:	800	Initials:	JMB

* This characterization package was prepared in accordance with MAN-077-DDCP, D&D Characterization Protocols (07/26/00), and MAN-127-PDSP, Pre-Demolition Survey Plan for D&D Facilities (02/14/01).
* PDSP Data Quality Objectives were used to develop this characterization package.

Instructions:

1. Verify characterization activities are on the Plan-of-the-Day (POD).
2. Perform a Pre-Evolution Brief and/or Job Task Brief in accordance with the Site Conduct of Operations Manual.
3. Verify personnel have appropriate training for the applicable tasks they will be performing.
4. Comply with RWP requirements, if applicable.
5. Comply with JHA and facility PPE requirements, as applicable.
6. Inform the Facility Manager, or designee prior to starting characterization activities.
7. Follow applicable characterization and sampling procedures.
8. Notify Wackenhut Security (x2444) and the Shift Supervisor (x2914), and verify appropriate safety precautions/requirements are followed prior to accessing facility roofs.
9. Coordination with the Environmental Restoration Program organization will be required to further characterize underneath facility foundations and slabs prior to removal.
10. Collect and maintain all characterization paperwork in the Project File(s).
11. All radiological surveys shall be conducted in accordance with the sampling and instruction forms included in 800 Cluster Package Identification numbers 01-0004, 01-0005, and 01-0011. Sample locations are denoted on scaled maps attached to each survey package.

Class 1 Areas

Survey Area	Survey Unit	Class	Description	Total m^2	Floor m^2	Scan m^2	TSA	Smears	Media	Class Justification
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No Class 1 Areas identified in this characterization unit. Historical Site Assessment and process knowledge indicate no need for this classification.
			Class 1 Totals	0	0	0	0	0	0	

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Class 2 Areas

Survey Area	Survey Unit	Class	Description	Total m^2	Floor m^2	Scan m^2	TSA	Smears	Media	Class Justification
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No Class 2 Areas identified in this characterization unit. Historical Site Assessment and process knowledge indicate no need for this classification.
			Class 2 Totals	0	0	0	0	0	0	

Radiological Characterization Package
800 Area Cluster (B864, B830, B885, B863, T883D, and Tank 020, 021 and 026 Slabs)

Class 3 Areas

Survey Area	Survey Unit	Class	Description	Total m^2	Floor m^2	Scan m^2	TSA	Smears	Media	Class Justification*
A	800-A-001	3	Interior of B864, B830, B885, B863, and T883D	1163	221	117	**15-random, 60-biased,** Fifteen total sample points per building interior	**15-random, 60-biased,** Fifteen total sample points per building interior	0	Areas are not expected to contain, or have ever contained, any residual radioactivity greater than the $DCGL_W$. Historical Site Assessment and process knowledge of this unit provide a high degree of confidence that no individual measurement will exceed the $DCGL_W$. A 10% scan will be biased towards areas of greater potential for contamination (e.g., floors and lower walls). Additional biased measurements have been prescibed and will be collected to ensure all building surfaces are adequately characterized. These additional biased measurements are above and beyond requirements set forth in the RFETS PDSP.
B	800-B-002	3	Exterior and Roof of B864, B830, B885, B863, and T883D	797	0	80	**15-random, 60-biased,** Fifteen total sample points per building exterior	**15-random, 60-biased,** Fifteen total sample points per building exterior	0	Areas are not expected to contain, or have ever contained, any residual radioactivity greater than the $DCGL_W$. Historical Site Assessment and process history of this unit provide a high degree of confidence that no individual measurement will exceed the $DCGL_W$. A 10% scan will be biased towards areas of greater potential for contamination (e.g., lower walls & roof areas). Additional biased measurements have been prescibed and will be collected to ensure all building surfaces are adequately characterized. These additional biased measurements are above and beyond requirements set forth in the RFETS PDSP.
B	800-B-003	3	Tank 020, 021, 026 Slabs, AND 863 Pad	81	0	9	**15-random, 6-biased,** Two biased sample points per tank	**15-random, 6-biased,** Two biased sample points per tank	0	Areas are not expected to contain, or have ever contained, any residual radioactivity greater than the $DCGL_W$. Historical Site Assessment and process knowledge of this unit provide a high degree of confidence that no individual measurement will exceed the $DCGL_W$. A 10% scan will be biased towards areas of greater potential for contamination. Additional biased measurements have been prescibed and will be collected to ensure all building surfaces are adequately characterized. These additional biased measurements are above and beyond requirements set forth in the RFETS PDSP.
			Class 3 Totals	**2041**	**221**	**206**	**181**	**181**	**0**	
All Class Areas			**All Class Totals**	**2041**	**221**	**206**	**181**	**181**	**0**	

Radiological Characterization Package
800 Area Cluster (B864, B830, B885, B863, T883D, and Tank 020, 021 and 026 Slabs)

Non-Impacted Areas

Survey Area	Survey Unit	Class	Description	Total m^2	Floor m^2	Scan m^2	TSA	Smears	Media	Class Justification
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No Non-Imapacted areas identified during the Historical Site Assessment.
			Non-Impacted Totals	0	0	0	0	0	0	

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Revised to Rev 1. Diane Parsons 2/21/01

Rocky Flats Environmental Technology Site

CHEMICAL CHARACTERIZATION PACKAGE

800 AREA TYPE 1 CLUSTER CLOSURE PROJECT

REVISION 0

February 1, 2001

Prepared by: _____
Industrial Hygiene

Prepared by: _____ 2/1/01
Environmental Compliance

Reviewed by: _____ 2/1/01
Quality Assurance

Reviewed by: _____ 2/1/01
RISS Facility Characterization Coordinator

Approved by: _____ 2/1/01
Closure Project Facility Manager

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CHEMICAL CHARACTERIZATION PACKAGE

BUILDING(s): 800 AREA, TYPE 1 BUILDINGS (864, 830, 885, T883D and B863)

Note: This characterization package was prepared in accordance with MAN-077-DDCP, D&D Characterization Protocols, and MAN-127-PDSP, Pre-Demolition Survey Plan for D&D Facilities.

ASBESTOS		
Sample Location	**Estimated Number of Samples**	**Sample location and justification/rational**
T883D	8	Ceiling tile, drywall and floor tiles may contain asbestos.
863	0	No suspect materials.
830	0	No suspect materials.
885	3	Piping insulation may contain asbestos.
864	20	Floor tile, TSI, base cove, plaster, transite panels, drywall, roof, exterior texture finish, caulk may contain asbestos.
Total Samples:	31	The exact sample numbers and locations cannot be determined until a comprehensive, invasive inspection is performed in accordance with 40 CFR Part 763, Subpart E. Sample locations will be specified on sample maps during characterization efforts. Samples will be obtained in accordance with PRO-653-ACPR, Asbestos Characterization Procedure and 40 CFR 763.

BERYLLIUM		
Sample Location	**Number of Samples (smears)**	**Sample location and justification/rational**
T883D, 863, 830, 885, 864	10-biased	There is no documented supporting data or process history that proves beryllium was not used or stored in these buildings. Therefore, two biased samples from each of the five building will be obtained. Buildings have similar history and can be treated as one area.
Total Samples:	10	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-536-BCPR, Beryllium Characterization Procedure. Biased sample locations will correspond with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition.

LEAD		
Sample Location	**Number of Samples**	**Sample location and justification/rational**
800 Area Cluster, all locations	0	Lead sampling is not required in the 800 Area Cluster. All paint will remain a part of the infrastructure during demolition and therefore does not require sampling per Environmental Waste Compliance Guidance No. 27, Lead Based Paint (LBP) and LBP Debris Disposal. Sampling for lead for IH requirements will be at the discretion of the demolition contractor.
Total Samples:	0	

RCRA/CERCLA CONSTITIUENTS		
Sample Location	**Number of Samples**	**Sample location and justification/rational**
B863	0	This is a metal building with electrical breakers. The site historical information indicates that this building never contained hazardous waste or materials and visual observation revealed no evidence of spills or

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		stains; therefore, there is no need to sample this building for RCRA/CERCLA constituents.
T883D	0	This is a small metal bathroom trailer. This building has never contained hazardous waste or materials and visual observation revealed no evidence of spills or stains; therefore, there is no need to sample this building for RCRA/CERCLA constituents.
B830	16 total 6 discrete locations	This building has historically stored waste materials; however, no information exists to say whether hazardous wastes and or chemicals were stored. A walkdown of the building shows evidence of spills of an oily type substance. Therefore, sampling requirements are as follows: sixteen samples with one that is the duplicate as required by QA/QC procedures, for each set of three samples. Sample for TCLP metals (6 real and 2 duplicate samples) and VOAs (6 real and 2 duplicate samples) (Number of samples based on 10% sampling of building floor, with a biased sample at the spill locations).
B885	24 total 9 discrete locations	This building is IHSS 800-177. It was used as a 90-day and satellite accumulation area for hazardous waste. The building was also used for the storage of paints and solvents. The Historical Release Report also states that inadvertent dumping of radioactive oil sludge into an open top dumpster occurred at 885. Therefore, sampling requirements are as follows: Twenty-four samples, with one that is the duplicate as required by QA/QC procedures, for each set of three samples. Sample for TCLP metals (9 real and 3 duplicate samples) and VOAs (9 real and 3 duplicate samples) (Number of samples based on 10% random sampling of building floor).
B864	0	This is a concrete reinforced building, that historical information shows never stored hazardous waste or materials. According to conversations with guards, hazardous materials were passed through this building for transportation to B881, but there is no history of a spill within the building. Therefore, there is no need to sample this building for RCRA/CERCLA constituents. **The walls and foundation/footers extend below grade and are part of IHSS 162. Therefore, to totally remove this building additional characterization will be required and will involve environmental remediation.**
Total Samples:	40	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-488-BLCR, Bulk Solids and Liquids Characterization Procedure. The 10% sampling is consistent with SW 826 sampling protocol.

PCBs		
Sample Location	**Number of Samples**	**Sample location and justification/rational**
B863	0	Metal building constructed in 1982. Use of PCBs was banned in 1978, therefore no sampling required.
T883D	0	Metal building constructed in 1984. Use of PCBs was banned in 1978, therefore no sampling required.
B830	4 3 discrete locations	Visual observation of the building shows evidence of oil like substance being spilled (2 areas). Therefore, sampling requirements are as follows: 4 samples, 2 biased at the spill locations, 1 duplicate, and 1 sample located next to one of the spill locations.
B885	0	The concrete floor is painted. However, the rubble will be considered PCB Bulk Product waste and disposed off-site in accordance with 40 CFR 761.

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B864	0	The rubble will be considered PCB Bulk Product waste and disposed off-site in accordance with 40 CFR 761.
Total Samples:	6	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-487-MPCR, Metals and PCB Characterization Procedure.

* PCB ballasts, fluorescent light bulbs, potential mercury switches in thermostats, and mercury vapor light bulbs shall be removed prior to demolition.

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