



# Rocky Flats Environmental Technology Site

## TYPE 1 RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR)

### BUILDING 126 CLOSURE PROJECT

REVISION 0

September 16, 2003

CLASSIFICATION REVIEW NOT REQUIRED PER  
EXEMPTION NUMBER CEX-005-02

ADMIN RECORD

IA-A-001761

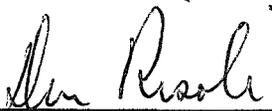
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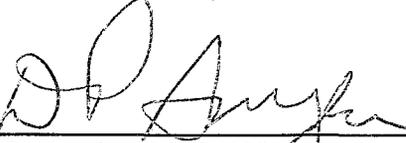
**TYPE 1  
RECONNAISSANCE LEVEL CHARACTERIZATION  
REPORT (RLCR)**

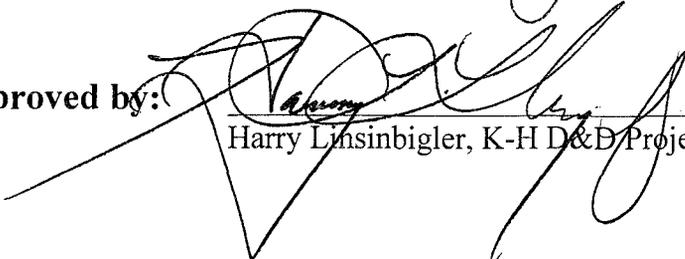
**BUILDING 126 CLOSURE PROJECT**

**REVISION 0**

**September 16, 2003**

**Reviewed by:**  Date: 9/12/03  
Don Risoli, Quality Assurance

**Reviewed by:**  Date: 9/17/03  
D.P. Snyder, RISS ESH&Q Manager

**Approved by:**  Date: 9/17/03  
Harry Linsinbigler, K-H D&D Project Manager

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- D Chemical Data Summaries and Sample Maps
- E Data Quality Assessment (DQA) Detail

## ABBREVIATIONS/ACRONYMS

|                     |   |
|---------------------|---|
| ACM                 | Asbestos containing material  |
| Be                  | Beryllium   |
| CDPHE               | Colorado Department of Public Health and the Environment                |
| CERCLA              | Comprehensive Emergency Response, Compensation and Liability Act        |
| DCGL <sub>EMC</sub> | Derived Concentration Guideline Level – elevated measurement comparison |
| DCGL <sub>W</sub>   | Derived Concentration Guideline Level – Wilcoxon Rank Sum Test          |
| D&D                 | Decontamination and Decommissioning                                     |
| DDCP                | Decontamination and Decommissioning Characterization Protocol           |
| DOE                 | U.S. Department of Energy   |
| DPP                 | Decommissioning Program Plan  |
| DQA                 | Data quality assessment   |
| DQOs                | Data quality objectives   |
| EPA                 | U.S. Environmental Protection Agency                                    |
| FDPM                | Facility Disposition Program Manual                                     |
| HVAC                | Heating, ventilation, air conditioning                                  |
| HSAR                | Historical Site Assessment Report                                       |
| IHSS                | Individual Hazardous Substance Site                                     |
| IWCP                | Integrated Work Control Package   |
| K-H                 | Kaiser-Hill   |
| LBP                 | Lead-based paint  |
| LLW                 | Low-level waste   |
| MARSSIM             | Multi-Agency Radiation Survey and Site Investigation Manual             |
| MDA                 | Minimum detectable activity   |
| MDC                 | Minimum detectable concentration  |
| NORM                | Naturally occurring radioactive material                                |
| NRA                 | Non-Rad-Added Verification  |
| OSHA                | Occupational Safety and Health Administration                           |
| PARCC               | Precision, accuracy, representativeness, comparability and completeness |
| PCBs                | Polychlorinated Biphenyls   |
| PDS                 | Pre-demolition survey   |
| QC                  | Quality Control   |
| RCRA                | Resource Conservation and Recovery Act                                  |
| RFCA                | Rocky Flats Cleanup Agreement   |
| RFETS               | Rocky Flats Environmental Technology Site                               |
| RFFO                | Rocky Flats Field Office  |
| RLC                 | Reconnaissance Level Characterization                                   |
| RLCR                | Reconnaissance Level Characterization Report                            |
| RSP                 | Radiological Safety Practices   |
| SVOCs               | Semi-volatile organic compounds   |
| TCLP                | Toxicity Characteristic Leaching Procedure                              |
| TSA                 | Total surface activity  |
| VOCs                | Volatile organic compounds  |

## EXECUTIVE SUMMARY

A Reconnaissance Level Characterization (RLC) was performed to enable facility "Typing" per the DPP (10/8/98) and compliant disposition and waste management of Building 126. Because this facility was an anticipated Type 1 facility, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP) requirements. All facility surfaces were characterized in this RLC, including the interior and exterior surfaces (i.e., floor, walls, ceiling and roof). Environmental media beneath and surrounding the facility were not within the scope of this RLCR and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

The RLC encompassed both radiological and chemical characterization to enable compliant disposition and waste management pursuant to the D&D Characterization Protocol (MAN-077-DDCP). The characterization built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report.

Results indicate that no radiological contamination exists in excess of the PDSP unrestricted release limits of DOE Order 5400. Non-friable asbestos was identified in the floor tile and mastic, and the roofing tar. The floor tile and mastic were abated as part of RLC activities. The remaining roofing tar will be managed and disposed of as asbestos containing sanitary waste during demolition activities. All beryllium sample results for Building 126 were less than  $0.1 \mu\text{g}/100\text{cm}^2$ . During the RLC process, lead dust was discovered in a source well at a concentration of 7,000 ppm. This well has been decontaminated, and a sample taken to verify the effectiveness of the decontamination. The result of the confirmatory sample was less than the PDS unrestricted release limits, therefore, the source wells will be managed and disposed of as sanitary waste during demolition. Fluorescent light ballasts may contain PCBs. PCB ballasts will be managed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. Demolition debris will be managed in compliance with regulations governing PCBs (40 CFR 761), and Environmental Compliance Guidance #27, *Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal*, as applicable. Concrete associated with Building 126 meets the criteria for concrete recycling criteria per the RFCA RSOP for Recycling Concrete.

There is one source well inside the east room of B126 that is over 20 feet deep. Standard site instrumentation could not reach deeper than 10 feet into the source well during the RLC, therefore areas of the source well deeper than 10 feet will be surveyed during demolition and removal. There are five (5) 30-gallon drum source wells embedded in the concrete floor in the east room of B126, their tops are flush with the floor level. During construction, a three inch diameter pipe was placed in the middle of each drum and paraffin wax was poured around the pipe, filling up the rest of the drum contents to the top of the drums. Standard site instrumentation could not fit into the three inch diameter pipe, therefore these drums will be further surveyed during demolition and removal, and managed accordingly.

Based upon this RLCR, Building 126 is considered a Type 1 facility and can be demolished. To ensure this facility remains free of contamination and RLC data remain valid, Level 2 Isolation Controls have been established and the facility posted accordingly.

## 1 INTRODUCTION

A Reconnaissance Level Characterization (RLC) was performed to enable compliant disposition and waste management of Building 126. Because this facility was an anticipated Type 1 facility, a PDS characterization was performed. All facility surfaces were characterized in this RLC, including the interior and exterior surfaces of the facilities (i.e., floor, walls, ceiling and roof). Environmental media beneath and surrounding the facility were not within the scope of this RLC Report (RLCR) and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed, among these is Building 126. The location of this facility is shown in Attachment A, *Facility Location Map*. This facility no longer supports the RFETS mission and will be removed to reduce Site infrastructure, risks and/or operating costs.

Before this facility can be removed, a Reconnaissance Level Characterization (RLC) must be conducted; this document presents the RLC results. The RLC was conducted pursuant to the Decontamination and Decommissioning Characterization Protocol (MAN-077-DDCP) and the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). The PDS built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report (HSAR).

### 1.1 Purpose

The purpose of this report is to communicate and document the results of the RLC effort. An RLC is performed before Type 1 building demolition to define the pre-demolition radiological and chemical conditions of a facility. Pre-demolition conditions are compared with the unrestricted release limits for radiological and non-radiological contaminants. RLC results will enable project personnel to make final disposition decisions, develop related worker health and safety controls, and estimate waste volumes by waste types.

### 1.2 Scope

This report presents the pre-demolition radiological and chemical conditions for Building 126. Environmental media beneath and surrounding this facility were not within the scope of this RLCR and will be addressed using the Soil Disturbance Permit process and in compliance with RFCA.

### 1.3 Data Quality Objectives

The Data Quality Objectives (DQOs) used in designing this RLC were the same DQOs identified in the Pre-Demolition survey Plan for D&D Facilities (MAN-127-PDSP.) Refer to section 2.0 of MAN-127-PDSP for these DQOs.

## 2 HISTORICAL SITE ASSESSMENT

A Facility-specific Historical Site Assessment (HSA) was conducted to understand the facility histories and related hazards. The assessment consisted of facility walk-downs, interviews, and document review, including review of the Historical Release Report (refer to the D&D Characterization Protocol, MAN-077-DDCP). Results were used to identify data gaps and needs, and to develop radiological and chemical characterization plans. Results of the facility-specific HSA were documented in a facility-specific *Historical Site Assessment Report (HSAR) for Building 126*, Dated February 2002, Revision 0 (refer to Attachment B, *Historical Site Assessment Report*). In summary, the HSAR identified the potential for radiological and asbestos hazards.

## 3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

Building 126 was characterized for radiological hazards per the PDSP. Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces. Measurements were performed to evaluate the contaminants of concern. Based upon a review of historical and process knowledge, building walk-downs, and MARSSIM guidance, a Radiological Characterization Plan was developed during the planning phase that describe the minimum survey requirements (refer to the RISS Characterization Project files).

Radiological survey package B126-A-001 was developed for the interior surfaces of Building 126. The survey package was developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure*. Total surface activity (TSA), removable surface activity (RSA), media samples, and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures*. Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis*. Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control*.

Thirty-seven (37) TSA measurements (15 random, 19 biased and 3 QC) and thirty-eight (38) RSA measurements (15 random, 23 biased) were performed on the interior surfaces of Building 126. Based on history of a possible radioactive spills inside B126, a 100% scan of the floor, a 25% scan on the lower walls (<2 meters) and a 5% scan on the upper walls and ceiling was performed. The RLC data confirmed that this facility does not contain radiological contamination above the surface contamination guidelines provided in the PDSP.

The exterior radiological survey for Building 126 was performed as part of the RISS West Side Exterior PDS strategy effort (authorized by Department of Energy letter, 02-DOE-01598, dated December 13<sup>th</sup>, 2002 and approved by CDPHE letter, RE: *Proposed Deviations From The Pre-Demolition Survey Plan (PDSP)*, dated January 27, 2003; refer to the RISS Characterization Project Files for letter copies). The RISS West Side exterior building radiological surveys and locations can be found in survey unit package EXT-B-001, *RISS West Side Building Exteriors*. Two (2) biased TSA measurements, two (2) biased RSA measurements, and a one (1) square meter scan at each of the two (2) TSA/RSA locations were performed at biased locations on the exterior surfaces of Building 126. Ten percent scan surveys were performed at biased locations on the exterior entrance and associated concrete surfaces of Building 126. The RLC data collected in exterior survey unit package EXT-B-001 confirmed that the exterior surfaces of these facilities do not contain radiological contamination above the surface contamination guidelines provided in the PDSP. Radiological survey data, statistical analysis results, and survey map locations for the West-Side Exterior survey unit package EXT-B-001 are maintained in the RISS Characterization Project files.

There is one source well inside the east room of B126 that is over 20 feet deep. Standard site instrumentation could not reach deeper than 10 feet into the source well during the RLC, therefore areas of the source well deeper than 10 feet will be surveyed during demolition and removal. There are five (5) 30-gallon drum source wells embedded in the concrete floor in the east room of B126, their tops are flush with the floor level. A three inch diameter pipe was placed in the middle of each drum and paraffin wax was poured around the pipe, filling up the rest of the drum contents to the top of the drums. Standard site instrumentation could not fit into the three inch diameter pipe, therefore these drums will be further surveyed during demolition and removal, and managed accordingly. Accessible portions of these source wells were surveyed for fixed and loose contamination and no contamination above the PDSP guidelines were identified. There is no reason to suspect that the inaccessible (not surveyed) areas of these source wells are more suspect than the areas that were surveyed clean.

Radiological survey data, statistical analysis results, and survey locations are presented in Attachment C, *Radiological Data Summary and Survey Maps*. The radiological survey unit packages are maintained in the RISS Characterization Project files. Level 2 Isolation Control postings are displayed on the building to ensure no radioactive materials are inadvertently introduced.

## 4 CHEMICAL CHARACTERIZATION AND HAZARDS

Building 126 was characterized for chemical hazards per the PDSP. Chemical characterization was performed to determine the nature and extent of chemical contamination that may be present on, or in this facility. Based upon a review of historical and process knowledge, visual inspections, and PDSP DQOs, additional sampling needs were determined. A Chemical Characterization Plan (refer to RISS Characterization Project files) was developed during the planning phase that describes sampling requirements, the justification for the sample locations and estimated number of samples. Contaminants of concern included asbestos, beryllium, RCRA/CERCLA constituents, lead and PCBs. Refer to Attachment D, *Chemical Data Summaries and Sample Maps*, for details on sample results and sample locations.

### 4.1 Asbestos

A survey of building materials suspected of containing asbestos was conducted in Building 126 in accordance with the RLCP. A CDPHE-certified asbestos inspector conducted the inspection and sampling in accordance with the *Asbestos Characterization Protocol, PRO-563-ACPR, Revision 1*. Building materials suspected of containing asbestos were identified for sampling at the discretion of the inspector.

A comprehensive, invasive asbestos inspection was conducted to determine the presence of friable and non-friable asbestos containing building materials. Asbestos was identified in the floor tile and mastic, and the roofing tar. The floor tile, mastic and roofing tar are category one non-friable ACM. The ACM floor tile and mastic were abated as part of RLC activities. The roofing tar will be managed and disposed of as asbestos containing sanitary waste during demolition activities. Asbestos laboratory analysis data and sample location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps*.

### 4.2 Beryllium (Be)

Based on the HSAR and personnel interviews, Building 126 was an anticipated Type 1 facility. There was not, however, adequate historical and process knowledge to conclude that beryllium was not used or stored in these buildings. Therefore, biased beryllium sampling was performed in accordance with the PDSP and the *Beryllium Characterization Procedure, PRO-536-BCPR, Revision 0, September 9, 1999*. Biased sample locations corresponded with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition.

All five (5) biased beryllium surface smear sample results for Building 126 were less than  $0.1 \mu\text{g}/100\text{cm}^2$ . Beryllium laboratory sample data and location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps*.

#### **4.3 RCRA/CERCLA Constituents [including metals and volatile organic compounds (VOCs)]**

Based on the HSAR, facility walk-downs and a review of RFETS waste management databases, Building 126 functioned as a Source Calibration facility, and never contained processes that involved RCRA regulated materials other than lead used for shielding. The lead glass window on the entry wall and the lead collar on the walled-in pit (NW corner of East room) will be removed prior to demolition and managed in accordance with Colorado hazardous waste regulations. During performance of RLC surveys, a piece of lead was discovered at the bottom of the source well in the east room. Further investigation by sampling for lead in the wells determined that one source well (the 3rd stainless-steel lined source well from the north) was contaminated with lead dust at a concentration of 7,000 ppm. Since this level of lead contamination would exceed the RCRA lead limit of 5.0 ppm (TCLP), the well was decontaminated and a confirmation lead sample was taken to verify the effectiveness of the decontamination. Results of the confirmation sample were less than the unrestricted release limits, therefore, the source wells will be disposed of as sanitary waste. All lead-lined containers used for source handling and storage have been removed. Based on the above historical and process knowledge, additional RCRA/CERCLA sampling was not performed as part of this RLC.

Sampling for lead in paint in these facilities was not performed. Environmental Waste Compliance Guidance #27, *Lead-based Paint (LBP) and Lead-based paint Debris Disposal*, states that LBP debris generated outside of currently identified high contamination areas shall be managed as non-hazardous (solid) wastes, and additional analysis for characteristics of hazardous waste derived from LBP is not a requirement for disposal.

This facility may contain RCRA regulated materials such as mercury switches, batteries, and fluorescent lamps. A thorough inspection of the facility will be made, and all regulated materials will be removed prior to demolition.

#### **4.4 Polychlorinated Biphenyls (PCBs)**

Based on a review of the HSAR and facility walk-downs, there is no history of PCB use (other than light ballasts), or evidence of PCB contamination in this facility. Building 126 was never used to store PCB waste. Based on the age of the building (constructed before 1980), paints used are expected to contain PCBs and painted surfaces will be managed as PCB Bulk Product Waste.

This facility may contain fluorescent light ballasts containing PCBs. Fluorescent light fixtures will be inspected to identify PCB ballasts during removal operations. PCB ballasts will be identified based on factors such as labeling (e.g., PCB-containing and non PCB-containing), manufacturer, and date of manufacturing. All ballasts that do not indicate non PCB-containing are assumed to be PCB-containing. Leaking PCB ballasts, and those that weigh more than 9 pounds, will be removed prior to demolition and managed in accordance with Colorado hazardous waste regulations. If non-leaking PCB ballasts are discovered and left in the facility, the debris will be managed as PCB Bulk Product Waste.

### Physical hazards

Physical hazards associated with Building 126 are those common to standard industrial environments and include hazards associated with energized systems, utilities, and trips and falls. There is an east room and west room inside B126. There are 13 source wells embedded into the east room concrete floor. There are seven wells along the east wall that are about 2 feet deep and 6 inches in diameter. There are five 30-gallon drum sources wells, two along the east wall and three along the south wall, that are about three feet deep and two feet in diameter. There is one source well in the northwest corner of the east room that is about 30 feet deep and 18 inches in diameter. This building has been relatively well maintained and is in good physical condition, therefore, does not present hazards associated with building deterioration. Physical hazards are controlled by the Site Occupational Safety and Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practice.

## 5 DATA QUALITY ASSESSMENT

Data used in making management decisions for decommissioning of Building 126 and consequent waste management are of adequate quality to support the decisions documented in this report. The data presented in this report (Attachments C and D) were verified and validated relative to DOE quality requirements, applicable EPA guidance, and original DQOs of the project.

In summary, the Verification and Validation (V&V) process corroborates that the following elements of the characterization process are adequate:

- ◆ the *number* of samples and surveys;
- ◆ the *types* of samples and surveys;
- ◆ the sampling/survey process as implemented “in the field”; and,
- ◆ the laboratory analytical process, relative to accuracy and precision considerations.

Details of the DQA are provided in Attachment E.

## 6 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The demolition and disposal of Building 126 will generate a variety of wastes. Estimated waste types and waste volumes are presented below. All loose RCRA/TSCA regulated materials will be removed prior to demolition. The source wells and other demolition waste can be disposed of as sanitary waste, except painted surfaces, which are managed as PCB Bulk Product Waste. The remaining roofing tar will be managed and disposed of as asbestos containing sanitary waste during demolition activities. There is no radioactive waste. PCB ballasts will be managed pursuant to the Site PCB waste management procedures. Concrete associated with Building 126 meets the criteria for concrete recycling criteria per the RFCA RSOP for Recycling Concrete.

| Waste Volume Estimates and Material Types |                     |                 |                  |                                      |                          |                             |                            |
|---|---------------------|-----------------|------------------|--------------------------------------|--------------------------|-----------------------------|----------------------------|
| Facility                                  | Concrete<br>(cu ft) | Wood<br>(cu ft) | Metal<br>(cu ft) | Corrugated<br>Sheet Metal<br>(cu ft) | Wall<br>Board<br>(cu ft) | ACM*<br>(cu ft)             | Other<br>Waste             |
| Building 126                              | 1,600               | 0               | 75               | 0                                    | 0                        | 150 Non-Friable Roofing/Tar | 150 Cu ft built-up roofing |

\*The ACM floor tile and mastic were abated during RLC activities.

## 7 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, Building 126 is classified as a RFCA Type 1 facility pursuant to the RFETS Decommissioning Program Plan (DPP; K-H, 1999) and can be demolished. The Type 1 classification is based on a review of historical and process knowledge, and newly acquired RLC data.

The RLC of Building 126 was performed in accordance with the DDCP and PDSP. All PDSP DQOs were met, and all data satisfied the PDSP DQA criteria. This facility will not contain radiological wastes. The source wells will be disposed of as sanitary waste. Asbestos and PCB ballasts will be managed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. Demolition debris will be managed in compliance with regulations governing PCBs (40 CFR 761), and Environmental Compliance Guidance #27, *Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal*, as applicable. Environmental media beneath and surrounding the facilities will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA. Concrete associated with Building 126 meets the criteria for concrete recycling criteria per the RFCA RSOP for Recycling Concrete.

There is one source well inside the east room of B126 that is over 20 feet deep. Standard site instrumentation could not reach deeper than 10 feet into the source well during the RLC, therefore areas of the source well deeper than 10 feet will be surveyed during demolition and removal. There are five (5) 30-gallon drum source wells embedded in the concrete floor in the east room of B126, their tops are flush with the floor level. Three inch diameter pipe was placed in the middle of each drum and paraffin wax was poured around the pipe, filling up the rest of the drum contents to the top of the drums. Standard site instrumentation could not fit into the three inch diameter pipe, therefore these drums will be further surveyed during demolition and removal, and managed accordingly.

To ensure this Type 1 facility remains free of contamination and RLC data remain valid, Level 2 Isolation Controls have been established and the facility posted accordingly.

## 8 REFERENCES

- DOE/RFFO, CDPHE, EPA, 1996. Rocky Flats Clean-up Agreement (RFCA), July 19, 1996.
- DOE Order 5400.5, "Radiation Protection of the Public and the Environment."
- EPA, 1994. "The Data Quality Objective Process," EPA QA/G-4.
- K-H, 1999. Decommissioning Program Plan, June 21, 1999.
- MAN-131-QAPM, *Kaiser-Hill Team Quality Assurance Program*, Rev. 1, November 1, 2001.
- MAN-076-FDPM, *Facility Disposition Program Manual*, Rev. 3, January 1, 2002.
- MAN-077-DDCP, *Decontamination and Decommissioning Characterization Protocol*, Rev. 3, July 15, 2002.
- MAN-127-PDSP, *Pre-Demolition Survey Plan for D&D Facilities*, Rev. 1, July 15, 2002.
- MARSSIM - Multi-Agency Radiation Survey and Site Investigation Manual, December 1997 (NUREG-1575, EPA 402-R-97-016).
- PRO-475-RSP-16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation, and Closure*, Rev. 1, May 22, 2001.
- PRO-476-RSP-16.02, *Pre-Demolition (Final Status) Radiological Surveys of Surfaces and Structures*, Rev. 1, May 22, 2001.
- PRO-477-RSP-16.03, *Radiological Samples of Building Media*, Rev. 1, May 22, 2001.
- PRO-478-RSP-16.04, *Radiological Survey/Sample Data Analysis for Final Status Survey*, Rev. 1, May 22, 2001.
- PRO-479-RSP-16.05, *Radiological Survey/Sample Quality Control for Final Status Survey*, Rev. 1, May 22, 2001.
- PRO-563-ACPR, Asbestos Characterization Procedure, Revision 0, August 24, 1999.
- PRO-536-BCPR, Beryllium Characterization Procedure, Revision 0, August 24, 1999.
- RFETS, Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition.
- RFETS, Environmental Waste Compliance Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal.
- RFCA Standard Operation Protocol for Recycling Concrete, September 28, 1999.
- Historical Site Assessment Report (HSAR) for Building 126*, Dated February 2002, Revision 0.

# ATTACHMENT A

## Facility Location Map

# Area 5 Building 126

## Standard Map Features

-  Buildings and other structures
-  Demolished buildings and other structures
-  Lakes and ponds
-  Streams, ditches, or other drainage features
-  Fences and other barriers
-  Paved roads
-  Dirt roads

**DATA SOURCE BASE FEATURES:**  
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G ISEL, Las Vegas. Digitized from the orthophotographs, 1/95



Scale = 1:12,650  
1 inch represents approximately 1,038 feet



State Plane Coordinate Projection  
Colorado Central Zone  
Datum: NAD27

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

OR ISIP: 303-360-7100

Prepared for:



Aug. 13, 2003

Prepared by:

8242147/03.1

MAP ID: FY 2002



# ATTACHMENT B

## Historical Site Assessment Report

**D&D RISS Facility Characterization  
Historical Site Assessment Report  
February, 2002 Rev. 0**

**Facility ID:** Buildings 126.

Anticipated Facility Type (1, 2, or 3): Buildings 126 is an anticipated Type 1 facility.

This facility-specific Historical Site Assessment (HSA) has been performed in accordance with:

*D&D Characterization Protocol*, RFETS MAN-077-DDCP, latest version, and

*Facility Disposition Program Manual*, RFETS MAN-076-FDPM, latest version

**Physical Description**

**Building 126**

Building 126 is the Source Calibration Facility. This building is a single-story structure built in 1969 and has a total of 450 sq. ft. of floor space. Building 126 has had no structural modifications. The building was constructed with 12-inch thick concrete wall. The roof is 24 gauge metal with built-up roofing and a roof mounted heating and air conditioning unit. The floor is a concrete slab poured on grade. The floor has several storage wells used to store radiological sources.

Building 126 is serviced by the following utilities; electric, gas has been disconnected, and fire protection is provided by wall-mounted fire extinguishers.

**Historical Operations**

**Building 126**

The facility was originally used to expose and calibrate radiation detection devices worn by employees. The facility calibrated both film dosimeters and thermoluminescent dosimeters. Film dosimeters were calibrated by exposing the film within the dosimeter to gamma and neutron radiation, which darken the film. Employee exposure was calculated by comparing the amount of darkening between the calibrated dosimeter and the employee dosimeter. Thermoluminescent dosimeters were calibrated by exposing the crystal within the dosimeter to gamma and neutron radiation. The exposed crystal was then heated to release stored energy in the crystal in the form of light. The amount of light emitted was then measured. Employee exposure was calculated by comparing the amount of light emitted by the calibrated dosimeter and the employee's dosimeter. Dosimeter calibration activities ended in the late 1980s.

The facility is currently used to package sealed sources for off-site disposal. Source storage and packaging activities began in 1994 and are currently going on.

See the Building 126 WISRC for additional Building 126 waste stream descriptions.

**Current Operational Status**

Building 126 dosimetry calibration operations are currently inactive, but the building is being used to package sealed source for off-site disposal.

**D&D RISS Facility Characterization  
Historical Site Assessment Report  
February, 2002 Rev. 0**

**Contaminants of Concern**

**Asbestos**

*Describe any potential, likely, or known sources of Asbestos:*

Building 126 is posted as potentially containing asbestos. Building 126 has no comprehensive asbestos surveys.

**Beryllium (Be)**

*Describe any potential, likely, or known Be production or storage locations:*

Building 126 is not on the list of known beryllium areas.

*Summarize any recent Be sampling results:*

No recent Be samples have been collected on this building.

**Lead**

*Describe any potential, likely, or known sources of Lead (e.g., paint, shielding, etc.):*

Lead in paint and lead in electrical equipment may be a concern in Building 126. Lead shielding was used in the building in the form of lead "Pigs", which are small lead containers used to transport certain sources. The building has a 1-foot by 1-foot piece of lead glass in the wall as you enter the building.

**RCRA/CERCLA Constituents**

*Describe any potential, likely, or known sources of RCRA/CERCLA constituents (e.g., chemical storage, waste storage, and processes):*

Building 126 did not house any chemical processes, which used RCRA/ CERCLA constituents. Building 126 was never a Permitted RCRA Unit.

*Describe any potential, likely, or known spill locations (and sources, if any):*

Building 126 had no known spills of RCRA/ CERCLA constituents.

*Describe methods in which spills were mitigated, if any:*

Building 126 had no known spills of RCRA/ CERCLA constituents.

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**PCBs**

*Describe any potential, likely, or known sources of PCBs (e.g., light ballasts, paints, equipment, etc.):*

Due to the age of Building 126, there may be a concern with PCBs in paint, light ballasts, and electrical equipment. PCBs were not known to have been regularly handled in this building.

*Describe any potential, likely, or known spill locations (and sources, if any):*

No known PCB spills.

*Describe methods in which spills were mitigated, if any:*

No known PCB spills.

**Radiological Contaminants**

*Describe any potential, likely, or known radiological production or storage locations:*

Building 126 is posted as containing radiological material. Building 126 used a variety of sources to calibrate dosimetry at RFETS. In addition, in the 1990s the building was used to store source until they could be packaged for off-site disposal. Monthly radiological surveys show no indication of contamination in the facilities. There is no knowledge of any sources having leaked and contaminated the building. During the building's operation as a calibration facility, any leaking source would have been cleaned up immediately due to the negative effect of any facility contamination on the calibration process.

*Describe any potential, likely, or known spill locations (e.g., known leaking sealed radioactive sources, leaking waste drums, potentially contaminated drains, etc.):*

Building 126 had no documented spills.

*Describe methods in which spills were mitigated, if any:*

No known spills.

*Describe any potential, likely, or known isotopes of concern (e.g., weapons grade plutonium, uranium isotopes, pure beta emitters, mixed fission products, etc.):*

The sources used and stored in Building 126 include, but are not limited to Am, U, Pu, Co, Ce, Eu, Pu, Sr, Tc, and U. Other than sealed sources, there were no known mixed fission products or pure beta emitters used in Building 126.

*Describe any potential, likely, or known external facility contamination (e.g., stack release points, unfiltered ventilation, facility's physical location to known site releases, etc.):*

See section below for information on IHSSs PACs, and UBCs.

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**Environmental Restoration Concerns**

*Describe any ER concerns that could affect facility characterization (e.g., IHSSs, PACs, UBCs):*

There are no IHSSs, PACs, and UBCs related to Building 126.

**Additional Information**

*Describe any additional information that may be useful during facility characterization (e.g., contaminant migration routes, waste handling operations, physical hazards, Historical Release Reports, WSRIC data, etc.):*

None

**References**

*Provide all sources of information utilized to gather data for facility history (e.g., documents, files, interviews):*

Sources reviewed to complete this HSA were the RFETS Facility List, the Historical Release Report, Site Master List of RCRA Units, and the Site IHSS, PAC, and UBC databases. The Building 126 WSRIC. In addition, a facility walkdown and interviews were performed.

**Waste Volume Estimates and Material Types**

| Facility     | Concrete<br>(cu ft) | Wood<br>(cu ft) | Metal<br>(cu ft) | Corrugated<br>Sheet Metal<br>(cu ft) | Wall Board<br>(cu ft) | ACM<br>(cu ft) | Other Waste<br>(cu ft) |
|--------------|---------------------|-----------------|------------------|--------------------------------------|-----------------------|----------------|------------------------|
| Building 126 | 1600                | 0               | 75               | 0                                    | 0                     | TBD            | Built-up roofing - 150 |

**Further Actions**

*Recommend any further actions, if any (e.g., characterization, decontamination, special handling, etc.):*

Begin the RLC/PDS process.

**Note:**

This HSA was performed prior to SME walkdowns, and chemical and radiological characterization package preparations. SMEs should evaluate and/or verify all information during the RLC/PDS process. SMEs may need to review additional documentation and perform additional interviews. Information contained in this HSA only represents a "snapshot" in time. Subsequent data may be obtained during SME walkdowns and chemical and radiological characterization package preparations, which may conflict with this report. However, this report will not be amended, and the newer data will take precedence over the data in this report. Newer Data will appear in the RLCR/PDSR.

Prepared By:

Doug Bryant  
Name



Signature

February 2002  
Date

# ATTACHMENT C

## Radiological Data Summaries and Survey Maps

**SURVEY UNIT B126-A-001  
RADIOLOGICAL DATA SUMMARY - PDS**

Survey Unit Description: B126 (Interior)

B126-A-001  
PDS Data Summary

| <u>Total Surface Activity Measurements</u> |                 |                         | <u>Removable Activity Measurements</u> |                 |                         |
|--|-----------------|-------------------------|--|-----------------|-------------------------|
| (Alpha)                                    |                 |                         | (Alpha)                                |                 |                         |
|  | 25              | 34                      |  | 25              | 38                      |
|  | Number Required | Number Obtained         |  | Number Required | Number Obtained         |
| MIN  | -5.3            | dpm/100 cm <sup>2</sup> | MIN                                    | -1.2            | dpm/100 cm <sup>2</sup> |
| MAX  | 38.5            | dpm/100 cm <sup>2</sup> | MAX                                    | 2.4             | dpm/100 cm <sup>2</sup> |
| MEAN                                       | 8.6             | dpm/100 cm <sup>2</sup> | MEAN                                   | -0.1            | dpm/100 cm <sup>2</sup> |
| STD DEV                                    | 10.4            | dpm/100 cm <sup>2</sup> | STD DEV                                | 1.1             | dpm/100 cm <sup>2</sup> |
| TRANSURANIC DCGL <sub>w</sub>              | 100             | dpm/100 cm <sup>2</sup> | TRANSURANIC DCGL <sub>w</sub>          | 20              | dpm/100 cm <sup>2</sup> |

| <u>Total Surface Activity Measurements</u> |                 |                         | <u>Removable Activity Measurements</u> |                 |                         |
|--|-----------------|-------------------------|--|-----------------|-------------------------|
| (Beta)                                     |                 |                         | (Beta)                                 |                 |                         |
|  | 25              | 34                      |  | 25              | 38                      |
|  | Number Required | Number Obtained         |  | Number Required | Number Obtained         |
| MIN  | -1108.7         | dpm/100 cm <sup>2</sup> | MIN                                    | -30.9           | dpm/100 cm <sup>2</sup> |
| MAX  | 1105.0          | dpm/100 cm <sup>2</sup> | MAX                                    | 51.2            | dpm/100 cm <sup>2</sup> |
| MEAN                                       | -28.0           | dpm/100 cm <sup>2</sup> | MEAN                                   | 5.8             | dpm/100 cm <sup>2</sup> |
| STD DEV                                    | 669.7           | dpm/100 cm <sup>2</sup> | STD DEV                                | 20.7            | dpm/100 cm <sup>2</sup> |
| URANIUM DCGL <sub>w</sub>                  | 5,000           | dpm/100 cm <sup>2</sup> | URANIUM DCGL <sub>w</sub>              | 1,000           | dpm/100 cm <sup>2</sup> |

**SURVEY UNIT B126-A-001  
ALPHA TSA - DATA SUMMARY**

|                               |         |          |         |          |
|-------------------------------|---------|----------|---------|----------|
| Manufacturer:                 | NE Tech | NE Tech  | NE Tech | NE Tech  |
| Model:                        | DP-6    | DP-6     | DP-6    | DP-6     |
| Instrument ID#:               | 1       | 2        | 9       | 10       |
| Serial #:                     | 2352    | 1249     | 2352    | 1582     |
| Cal Due Date:                 | 2/8/04  | 10/18/03 | 2/8/04  | 11/13/03 |
| Analysis Date:                | 9/11/03 | 9/11/03  | 9/15/03 | 9/15/03  |
| Alpha Eff. (c/d):             | 0.228   | 0.202    | 0.228   | 0.223    |
| Alpha Bkgd (cpm)              | 1.0     | 3.3      | 0.0     | 1.0      |
| Sample Time (min)             | 1.5     | 1.5      | 1.5     | 1.5      |
| LAB Time (min)                | 1.5     | 1.5      | 1.5     | 1.5      |
| MDC (dpm/100cm <sup>2</sup> ) | 48.0    | 48.0     | 48.0    | 48.0     |

| Sample Location Number | Instrument ID#: | Sample Gross Counts (cpm) | Sample Gross Activity (dpm/100cm <sup>2</sup> ) | LAB Gross Counts (cpm) | LAB Gross Activity (dpm/100cm <sup>2</sup> ) | Sample Net Activity (dpm/100cm <sup>2</sup> ) <sup>1,2</sup> |
|------------------------|-----------------|---------------------------|---|------------------------|--|--|
| 1                      | 1               | 4.0                       | 17.5  | 2.0                    | 8.8  | 9.2  |
| 2                      | 2               | 5.3                       | 26.2  | 2.0                    | 9.9  | 17.8   |
| 3                      | 1               | 3.3                       | 14.5  | 0.0                    | 0.0  | 6.1  |
| 4                      | 1               | 10.7                      | 46.9  | 2.0                    | 8.8  | 38.5   |
| 5                      | 1               | 2.0                       | 8.8   | 0.7                    | 3.1  | 0.4  |
| 6                      | 1               | 2.0                       | 8.8   | 0.7                    | 3.1  | 0.4  |
| 7                      | 2               | 4.0                       | 19.8  | 2.7                    | 13.4   | 11.4   |
| 8                      | 1               | 1.3                       | 5.7   | 0.7                    | 3.1  | -2.7   |
| 9                      | 2               | 5.3                       | 26.2  | 3.3                    | 16.3   | 17.8   |
| 10                     | 1               | 5.3                       | 23.2  | 1.3                    | 5.7  | 14.9   |
| 11                     | 1               | 2.0                       | 8.8   | 0.7                    | 3.1  | 0.4  |
| 12                     | 1               | 4.0                       | 17.5  | 5.3                    | 23.2   | 9.2  |
| 13                     | 2               | 2.7                       | 13.4  | 3.3                    | 16.3   | 5.0  |
| 14                     | 2               | 6.0                       | 29.7  | 0.7                    | 3.5  | 21.3   |
| 15                     | 1               | 8.0                       | 35.1  | 0.7                    | 3.1  | 26.7   |
| 16                     | 1               | 3.3                       | 14.5  | 2.0                    | 8.8  | 6.1  |
| 17                     | 2               | 2.0                       | 9.9   | 4.0                    | 19.8   | 1.5  |
| 18                     | 2               | 7.3                       | 36.1  | 0.7                    | 3.5  | 27.7   |
| 19                     | 2               | 3.3                       | 16.3  | 3.3                    | 16.3   | 7.9  |
| 20                     | 1               | 4.0                       | 17.5  | 2.0                    | 8.8  | 9.2  |
| 21                     | 2               | 2.0                       | 9.9   | 2.0                    | 9.9  | 1.5  |
| 22                     | 2               | 1.3                       | 6.4   | 2.0                    | 9.9  | -2.0   |
| 23                     | 2               | 4.0                       | 19.8  | 2.0                    | 9.9  | 11.4   |
| 24                     | 2               | 2.7                       | 13.4  | 0.7                    | 3.5  | 5.0  |
| 25                     | 1               | 7.3                       | 32.0  | 2.7                    | 11.8   | 23.6   |
| 26                     | 9               | 2.7                       | 11.8  | 2.7                    | 11.8   | 3.5  |
| 27                     | 9               | 2                         | 8.8   | 2.7                    | 11.8   | 0.4  |
| 28                     | 9               | 3.3                       | 14.5  | 1.3                    | 5.7  | 6.1  |
| 29                     | 9               | 1.3                       | 5.7   | 0                      | 0.0  | -2.7   |
| 30                     | 9               | 1.3                       | 5.7   | 1.3                    | 5.7  | -2.7   |
| 31                     | 9               | 2.7                       | 11.8  | 0                      | 0.0  | 3.5  |
| 32                     | 9               | 2                         | 8.8   | 2.7                    | 11.8   | 0.4  |
| 33                     | 9               | 6.7                       | 29.4  | 2.7                    | 11.8   | 21.0   |
| 34                     | 9               | 0.7                       | 3.1   | 0.7                    | 3.1  | -5.3   |

1 - Average LAB used to subtract from Gross Sample Activity

|                               |                    |
|-------------------------------|--------------------|
| 8.4                           | Sample LAB Average |
| MIN                           | -5.3               |
| MAX                           | 38.5               |
| MEAN                          | 8.6                |
| SD                            | 10.4               |
| Transuranic DCGL <sub>w</sub> | 100                |

**QC Measurements**

| QC    | Instrument ID#: | Sample Gross Counts (cpm) | Sample Gross Activity (dpm/100cm <sup>2</sup> ) | LAB Gross Counts (cpm) | LAB Gross Activity (dpm/100cm <sup>2</sup> ) | Sample Net Activity (dpm/100cm <sup>2</sup> ) <sup>1,2</sup> |
|-------|-----------------|---------------------------|---|------------------------|--|--|
| 2 QC  | 1               | 4.0                       | 17.5  | 1.3                    | 5.7  | 3.2  |
| 10 QC | 2               | 6.0                       | 29.7  | 3.3                    | 16.3   | 15.3   |
| 33 QC | 10              | 10.0                      | 44.8  | 4.7                    | 21.1   | 30.5   |

1 - Average QC LAB used to subtract from Gross Sample Activity

|                               |                |
|-------------------------------|----------------|
| 14.4                          | QC LAB Average |
| MIN                           | 3.2            |
| MAX                           | 30.5           |
| MEAN                          | 16.3           |
| Transuranic DCGL <sub>w</sub> | 100            |

**SURVEY UNIT B126-A-001  
BETA TSA - DATA SUMMARY**

| Manufacturer:                 | NE Tech | NE Tech  | NE Tech | NE Tech  |
|-------------------------------|---------|----------|---------|----------|
| Model:                        | DP-6    | DP-6     | DP-6    | DP-6     |
| Instrument ID#:               | 1       | 2        | 9       | 10       |
| Serial #:                     | 2352    | 1249     | 2352    | 1582     |
| Cal Due Date:                 | 2/8/04  | 10/18/03 | 2/8/04  | 11/13/03 |
| Analysis Date:                | 9/11/03 | 9/11/03  | 9/15/03 | 9/15/03  |
| Beta Eff. (c/d):              | 0.320   | 0.312    | 0.320   | 0.336    |
| Beta Bkgd (cpm)               | 326.0   | 447.0    | 335.0   | 421.0    |
| Sample Time (min)             | 1       | 1        | 1       | 1.5      |
| LAB Time (min)                | 1       | 1        | 1       | 1.5      |
| MDC (dpm/100cm <sup>2</sup> ) | 599.0   | 599.0    | 599.0   | 48.0     |

| Sample Location Number | Instrument ID#: | Sample Gross Counts (cpm) | Sample Gross Activity (dpm/100cm <sup>2</sup> ) | LAB Gross Counts (cpm) | LAB Gross Activity (dpm/100cm <sup>2</sup> ) | Sample Net Activity (dpm/100cm <sup>2</sup> ) <sup>1,2</sup> |
|------------------------|-----------------|---------------------------|---|------------------------|--|--|
| 1                      | 1               | 940.0                     | 2,937.5   | 868.0                  | 2,712.5                                      | 119.4  |
| 2                      | 2               | 1,129.0                   | 3,618.6   | 1,023.0                | 3,278.8                                      | 800.5  |
| 3                      | 1               | 932.0                     | 2,912.5   | 930.0                  | 2,906.3                                      | 94.4   |
| 4                      | 1               | 801.0                     | 2,503.1   | 634.0                  | 1,981.3                                      | (315.0)  |
| 5                      | 1               | 885.0                     | 2,765.6   | 974.0                  | 3,043.8                                      | (52.5)   |
| 6                      | 1               | 577.0                     | 1,803.1   | 654.0                  | 2,043.8                                      | (1,015.0)  |
| 7                      | 2               | 1,059.0                   | 3,394.2   | 981.0                  | 3,144.2                                      | 576.1  |
| 8                      | 1               | 1,059.0                   | 3,309.4   | 906.0                  | 2,831.3                                      | 491.3  |
| 9                      | 2               | 933.0                     | 2,990.4   | 975.0                  | 3,125.0                                      | 172.3  |
| 10                     | 1               | 938.0                     | 2,931.3   | 873.0                  | 2,728.1                                      | 113.2  |
| 11                     | 1               | 617.0                     | 1,928.1   | 668.0                  | 2,087.5                                      | (890.0)  |
| 12                     | 1               | 860.0                     | 2,687.5   | 809.0                  | 2,528.1                                      | (130.6)  |
| 13                     | 2               | 1,144.0                   | 3,666.7   | 1,025.0                | 3,285.3                                      | 848.6  |
| 14                     | 2               | 1,190.0                   | 3,814.1   | 1,029.0                | 3,298.1                                      | 996.0  |
| 15                     | 1               | 867.0                     | 2,709.4   | 830.0                  | 2,593.8                                      | (108.7)  |
| 16                     | 1               | 547.0                     | 1,709.4   | 644.0                  | 2,012.5                                      | (1,108.7)  |
| 17                     | 2               | 1,224.0                   | 3,923.1   | 1,094.0                | 3,506.4                                      | 1,105.0  |
| 18                     | 2               | 1,066.0                   | 3,416.7   | 1,051.0                | 3,368.6                                      | 598.6  |
| 19                     | 2               | 796.0                     | 2,551.3   | 983.0                  | 3,150.6                                      | (266.8)  |
| 20                     | 1               | 1,095.0                   | 3,421.9   | 851.0                  | 2,659.4                                      | 603.8  |
| 21                     | 2               | 1,164.0                   | 3,730.8   | 1,009.0                | 3,234.0                                      | 912.7  |
| 22                     | 2               | 1,135.0                   | 3,637.8   | 1,004.0                | 3,217.9                                      | 819.7  |
| 23                     | 2               | 1,017.0                   | 3,259.6   | 989.0                  | 3,169.9                                      | 441.5  |
| 24                     | 2               | 965.0                     | 3,092.9   | 1,002.0                | 3,211.5                                      | 274.8  |
| 25                     | 1               | 892.0                     | 2,787.5   | 946.0                  | 2,956.3                                      | (30.6)   |
| 26                     | 9               | 665.0                     | 2,078.1   | 760.0                  | 2,375.0                                      | (740.0)  |
| 27                     | 9               | 686.0                     | 2,143.8   | 815.0                  | 2,546.9                                      | (674.3)  |
| 28                     | 9               | 654.0                     | 2,043.8   | 923.0                  | 2,884.4                                      | (774.3)  |
| 29                     | 9               | 680.0                     | 2,125.0   | 943.0                  | 2,946.9                                      | (693.1)  |
| 30                     | 9               | 613.0                     | 1,915.6   | 877.0                  | 2,740.6                                      | (902.5)  |
| 31                     | 9               | 960.0                     | 3,000.0   | 910.0                  | 2,843.8                                      | 181.9  |
| 32                     | 9               | 623.0                     | 1,946.9   | 878.0                  | 2,743.8                                      | (871.2)  |
| 33                     | 9               | 676.0                     | 2,112.5   | 748.0                  | 2,337.5                                      | (705.6)  |
| 34                     | 9               | 639.0                     | 1,996.9   | 743.0                  | 2,321.9                                      | (821.2)  |

1 - Average LAB used to subtract from Gross Sample Activity

|               |                    |
|---------------|--------------------|
| 2,818.1       | Sample LAB Average |
| MIN           | (1,108.7)          |
| MAX           | 1,105.0            |
| MEAN          | (28.0)             |
| SD            | 669.7              |
| Uranium DCGLW | 5,000.0            |

**QC Measurements**

|       |    |         |         |         |         |         |
|-------|----|---------|---------|---------|---------|---------|
| 2 QC  | 1  | 929.0   | 2,903.1 | 774.0   | 2,418.8 | 242.6   |
| 10 QC | 2  | 1,007.0 | 3,227.6 | 1,002.0 | 3,211.5 | 567.1   |
| 33 QC | 10 | 692.0   | 2,059.5 | 790.0   | 2,351.2 | (601.0) |

1 - Average QC LAB used to subtract from Gross Sample Activity

|               |                |
|---------------|----------------|
| 2660.5        | QC LAB Average |
| MIN           | -601.0         |
| MAX           | 567.1          |
| MEAN          | 69.6           |
| Uranium DCGLW | 5,000          |

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**SURVEY UNIT B126-A-001  
ALPHA RSC - DATA SUMMARY**

|                                    |          |          |          |          |
|------------------------------------|----------|----------|----------|----------|
| <b>Manufacturer:</b>               | Eberline | Eberline | Eberline | Eberline |
| <b>Model:</b>                      | SAC-4    | SAC-4    | SAC-4    | SAC-4    |
| <b>Instrument ID#:</b>             | 6        | 7        | 8        | 11       |
| <b>Serial #:</b>                   | 1164     | 924      | 959      | 1158     |
| <b>Cal Due Date:</b>               | 11/30/03 | 10/23/03 | 1/14/04  | 1/1/04   |
| <b>Analysis Date:</b>              | 9/11/03  | 9/11/03  | 9/11/03  | 9/15/03  |
| <b>Alpha Eff. (c/d):</b>           | 0.33     | 0.33     | 0.33     | 0.33     |
| <b>Alpha Bkgd (cpm)</b>            | 0.2      | 0.1      | 0.4      | 0.3      |
| <b>Sample Time (min)</b>           | 2        | 2        | 2        | 2        |
| <b>Bkgd Time (min)</b>             | 10       | 10       | 10       | 10       |
| <b>MDC (dpm/100cm<sup>2</sup>)</b> | 9.0      | 9.0      | 9.0      | 9.0      |

| Sample Location Number | Instrument ID# | Gross Counts (cpm)                   | Net Activity (dpm/100 cm <sup>2</sup> ) |
|------------------------|----------------|--------------------------------------|---|
| 1                      | 6              | 0                                    | -0.6                                    |
| 2                      | 7              | 0                                    | -0.3                                    |
| 3                      | 8              | 1                                    | 0.3                                     |
| 4                      | 6              | 0                                    | -0.6                                    |
| 5                      | 7              | 0                                    | -0.3                                    |
| 6                      | 8              | 0                                    | -1.2                                    |
| 7                      | 6              | 0                                    | -0.6                                    |
| 8                      | 7              | 1                                    | 1.2                                     |
| 9                      | 8              | 0                                    | -1.2                                    |
| 10                     | 6              | 0                                    | -0.6                                    |
| 11                     | 7              | 0                                    | -0.3                                    |
| 12                     | 8              | 0                                    | -1.2                                    |
| 13                     | 6              | 0                                    | -0.6                                    |
| 14                     | 7              | 1                                    | 1.2                                     |
| 15                     | 8              | 0                                    | -1.2                                    |
| 16                     | 6              | 1                                    | 0.9                                     |
| 17                     | 7              | 0                                    | -0.3                                    |
| 18                     | 8              | 2                                    | 1.8                                     |
| 19                     | 6              | 1                                    | 0.9                                     |
| 20                     | 7              | 0                                    | -0.3                                    |
| 21                     | 8              | 0                                    | -1.2                                    |
| 22                     | 6              | 2                                    | 2.4                                     |
| 23                     | 7              | 0                                    | -0.3                                    |
| 24                     | 8              | 0                                    | -1.2                                    |
| 25                     | 6              | 0                                    | -0.6                                    |
| 26                     | 11             | 1                                    | 0.6                                     |
| 27                     | 11             | 0                                    | -0.9                                    |
| 28                     | 11             | 2                                    | 2.1                                     |
| 29                     | 11             | 0                                    | -0.9                                    |
| 30                     | 11             | 1                                    | 0.6                                     |
| 31                     | 11             | 0                                    | -0.9                                    |
| 32                     | 11             | 0                                    | -0.9                                    |
| 33                     | 11             | 0                                    | -0.9                                    |
| 34                     | 11             | 2                                    | 2.1                                     |
| 35                     | 11             | 1                                    | 0.6                                     |
| 36                     | 11             | 0                                    | -0.9                                    |
| 37                     | 11             | 0                                    | -0.9                                    |
| 38                     | 11             | 0                                    | -0.9                                    |
|                        |                | <b>MIN</b>                           | -1.2                                    |
|                        |                | <b>MAX</b>                           | 2.4                                     |
|                        |                | <b>MEAN</b>                          | -0.1                                    |
|                        |                | <b>SD</b>                            | 1.1                                     |
|                        |                | <b>Transuranic DCGL<sub>LW</sub></b> | <b>20</b>                               |

Locations 35 through 38 were taken inside source wells. There is not a corresponding TSA measurement due to the small diameter of the tube.

**SURVEY UNIT B126-A-001  
BETA RSC - Data Summary**

|                                    |          |          |          |          |
|------------------------------------|----------|----------|----------|----------|
| <b>Manufacturer:</b>               | Eberline | Eberline | Eberline | Eberline |
| <b>Model:</b>                      | BC-4     | BC-4     | BC-4     | BC-4     |
| <b>Instrument ID#:</b>             | 3        | 4        | 5        | 12       |
| <b>Serial #:</b>                   | BC700    | BC702    | BC911    | BC700    |
| <b>Cal Due Date:</b>               | 12/19/03 | 4/30/04  | 10/30/03 | 12/19/03 |
| <b>Analysis Date:</b>              | 9/11/03  | 9/11/03  | 9/11/03  | 9/15/03  |
| <b>Beta Eff. (c/d):</b>            | 0.25     | 0.25     | 0.25     | 0.25     |
| <b>Beta Bkgd (cpm)</b>             | 32.1     | 31.1     | 33.1     | 31.2     |
| <b>Sample Time (min)</b>           | 1        | 1        | 1        | 1        |
| <b>Bkgd Time (min)</b>             | 10       | 10       | 10       | 10       |
| <b>MDC (dpm/100cm<sup>3</sup>)</b> | 9.0      | 9.0      | 9.0      | 9.0      |

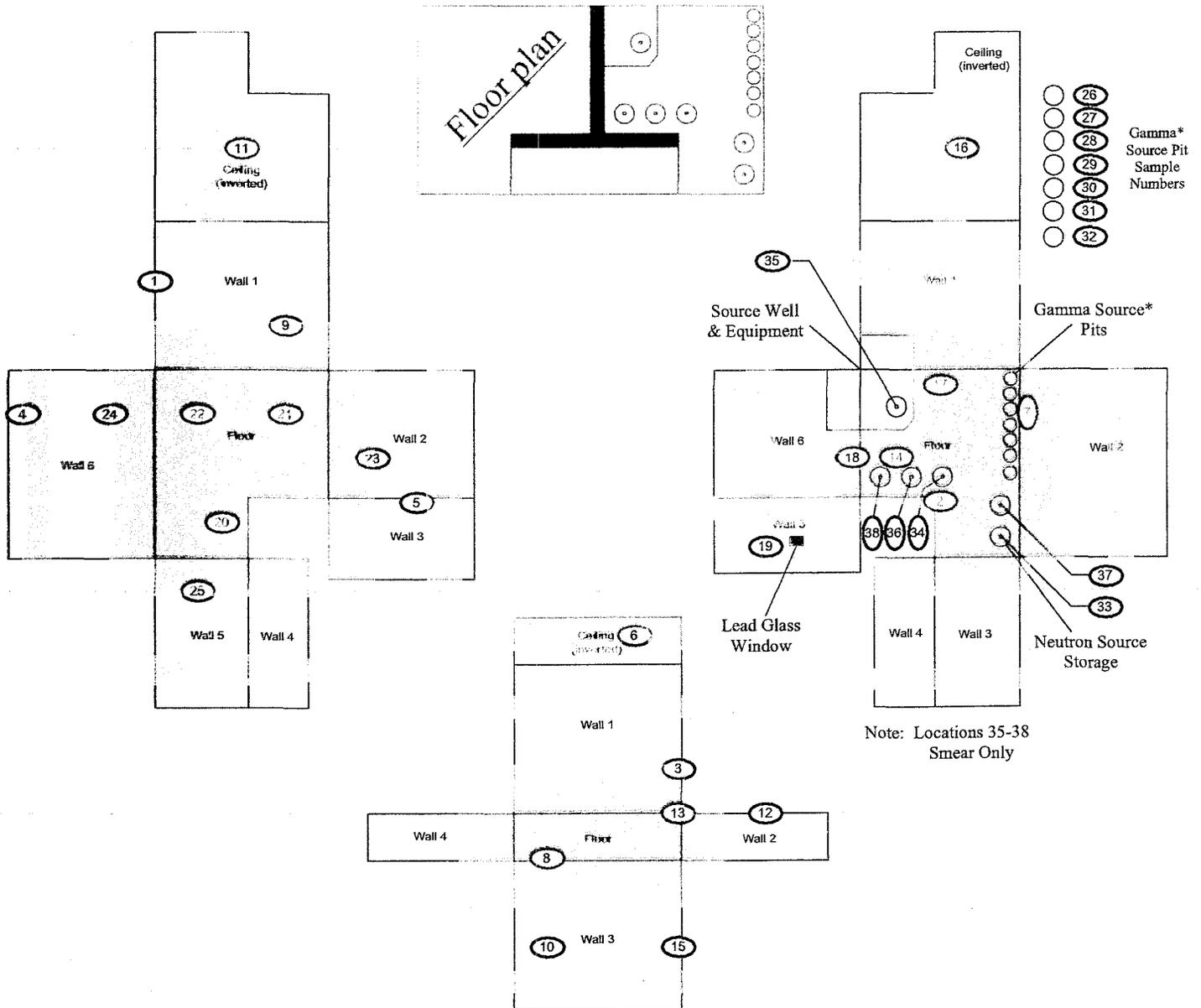
| Sample Location Number | Instrument ID# | Gross Counts (cpm)              | Net Activity (dpm/100 cm <sup>3</sup> ) |
|------------------------|----------------|---------------------------------|---|
| 1                      | 3              | 49                              | 51.2                                    |
| 2                      | 4              | 36                              | 14.8                                    |
| 3                      | 5              | 39                              | 17.9                                    |
| 4                      | 3              | 46                              | 42.1                                    |
| 5                      | 4              | 26                              | -15.5                                   |
| 6                      | 5              | 31                              | -6.4                                    |
| 7                      | 3              | 32                              | -0.3                                    |
| 8                      | 4              | 38                              | 20.9                                    |
| 9                      | 5              | 42                              | 27.0                                    |
| 10                     | 3              | 31                              | -3.3                                    |
| 11                     | 4              | 23                              | -24.5                                   |
| 12                     | 5              | 23                              | -30.6                                   |
| 13                     | 3              | 27                              | -15.5                                   |
| 14                     | 4              | 30                              | -3.3                                    |
| 15                     | 5              | 40                              | 20.9                                    |
| 16                     | 3              | 31                              | -3.3                                    |
| 17                     | 4              | 35                              | 11.8                                    |
| 18                     | 5              | 34                              | 2.7                                     |
| 19                     | 3              | 28                              | -12.4                                   |
| 20                     | 4              | 39                              | 23.9                                    |
| 21                     | 5              | 27                              | -18.5                                   |
| 22                     | 3              | 35                              | 8.8                                     |
| 23                     | 4              | 25                              | -18.5                                   |
| 24                     | 5              | 33                              | -0.3                                    |
| 25                     | 3              | 29                              | -9.4                                    |
| 26                     | 12             | 38                              | 20.6                                    |
| 27                     | 12             | 28                              | -9.7                                    |
| 28                     | 12             | 41                              | 29.7                                    |
| 29                     | 12             | 30                              | -3.6                                    |
| 30                     | 12             | 39                              | 23.6                                    |
| 31                     | 12             | 38                              | 20.6                                    |
| 32                     | 12             | 30                              | -3.6                                    |
| 33                     | 12             | 28                              | -9.7                                    |
| 34                     | 12             | 21                              | -30.9                                   |
| 35                     | 12             | 45                              | 41.8                                    |
| 36                     | 12             | 40                              | 26.7                                    |
| 37                     | 12             | 40                              | 26.7                                    |
| 38                     | 12             | 34                              | 8.5                                     |
|                        |                | <b>MIN</b>                      | -30.9                                   |
|                        |                | <b>MAX</b>                      | 51.2                                    |
|                        |                | <b>MEAN</b>                     | 5.8                                     |
|                        |                | <b>SD</b>                       | 20.7                                    |
|                        |                | <b>Uranium DCGL<sub>w</sub></b> | <b>1,000</b>                            |

Locations 35 through 38 were taken inside source wells. There is not a corresponding TSA measurement due to the small diameter of the tube.

**PRE-DEMOLITION SURVEY FOR B126**

Survey Area: 5      Survey Unit: B126-A-001      Classification: 3  
 Building: 126  
 Survey Unit Description: Interior of Building  
 Total Area: 177 sq. m.      Total Floor Area: 31 sq. m.

**B126 Interior**

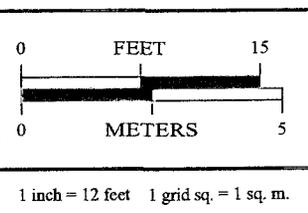


**SURVEY MAP LEGEND**

- ⊙ Smear & TSA Location
- ⊠ Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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**Scan Survey Information**  
 Survey Instrument ID #(s) & RCT ID #(s):  
 1, 2, 9, 10



Scan Area

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707      Prepared for:

CH2M HILL  
 Communications Group

Kaiser Hill

MAP ID: 02-0772/B126-IN      Sept 3, 2003

# ATTACHMENT D

## Chemical Data Summaries and Sample Maps

**Asbestos Data Summary**

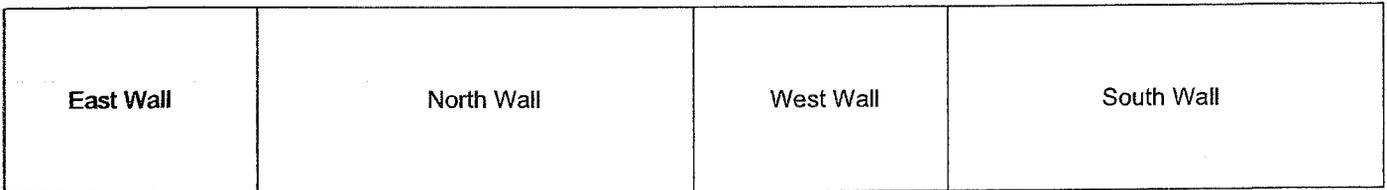
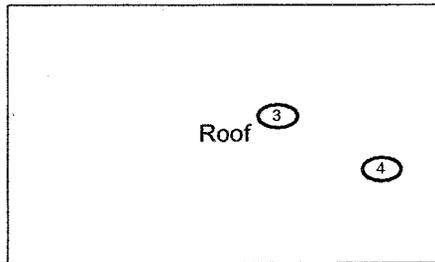
| Sample Number                     | Map Survey Location | Room | Material Sampled and Location      | Analytical Results |
|-----------------------------------|---------------------|------|------------------------------------|--------------------|
| <b>Building 126 - RIN 03Z2066</b> |                     |      |                                    |                    |
| 126-07302003-314-001              | 001                 | West | Green floor tile with black mastic | Tile 5% Mastic 7%  |
| 126-07302003-314-002              | 002                 | East | Green floor tile with black mastic | Tile 8% Mastic 7%  |
| 126-07302003-314-003              | 003                 | Roof | Black roofing tar                  | Tar 10%            |
| 126-07302003-314-004              | 004                 | Roof | Black roofing tar flashing         | Tar 10%            |

# CHEMICAL SAMPLE MAP

**Building: 126  
Asbestos**

PAGE 1 OF 2

## B126 Exterior

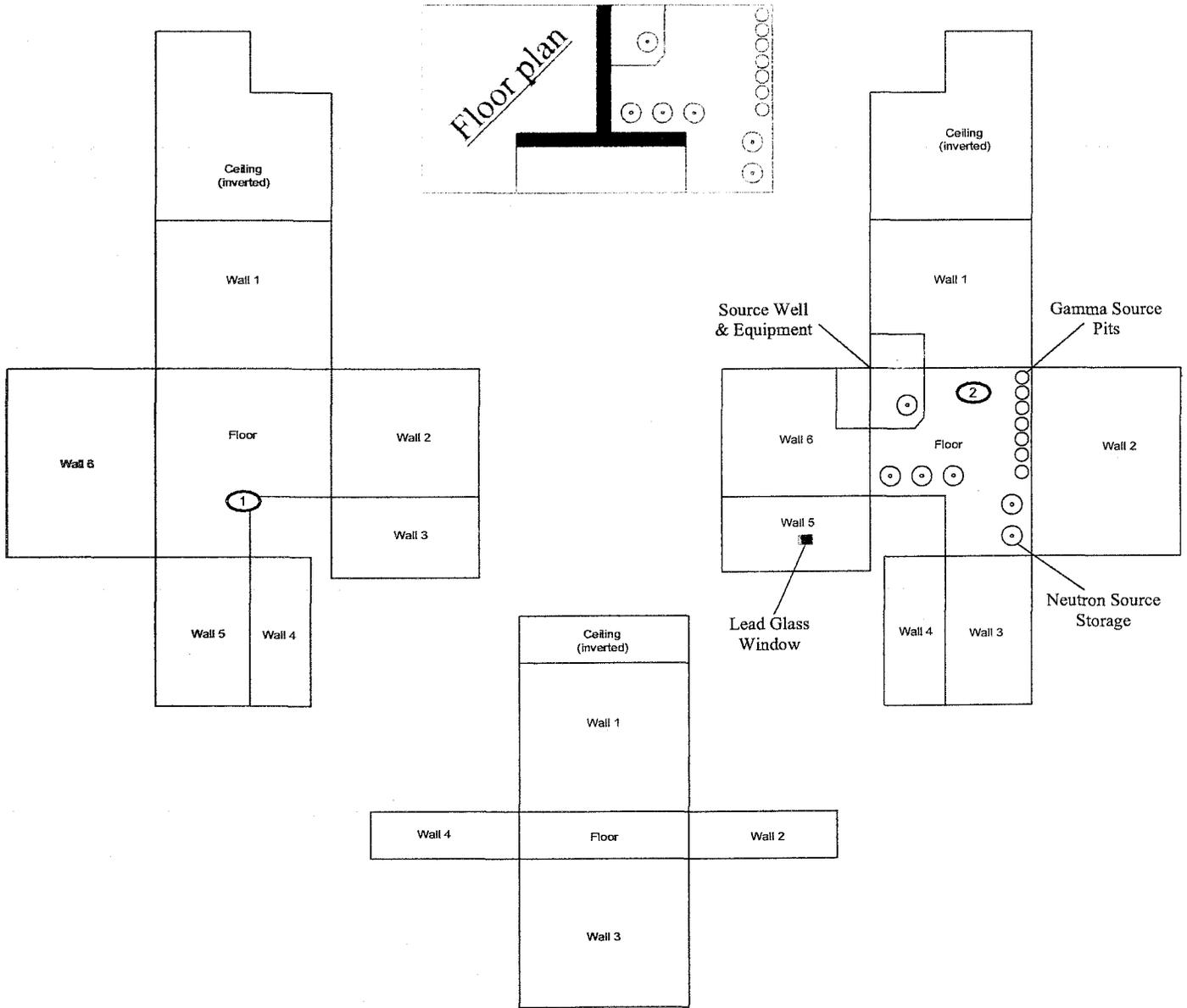


|  |   |                 |   |   |
|--|---|-----------------|---|---|
| <p><b>SURVEY MAP LEGEND</b></p> <ul style="list-style-type: none"> <li> Asbestos Sample Location</li> <li> Beryllium Sample Location</li> <li> Lead Sample Location</li> <li> RCRA/CERCLA Sample Location</li> <li> PCB Sample Location</li> </ul> | <p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&amp;ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.</p> | <p><b>N</b></p> | <p style="text-align: center;">0      FEET      15</p> <p style="text-align: center;">0      METERS      5</p> <p style="text-align: center;">1 inch = 12 feet    1 grid sq. = 1 sq. m.</p> | <p>U.S. Department of Energy<br/>Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707    Prepared for:</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <br/> <small>Communications Group</small> </div> <div style="text-align: center;"> </div> </div> <p>MAP ID: 02-0772/B126-EX-ASB    Sept 15, 2003</p> |
|--|---|-----------------|---|---|

# CHEMICAL SAMPLE MAP

## Building B126 Interior Asbestos

### B126 Interior



|  |   |  |  |  |
|--|---|--|--|--|
| <p><b>SURVEY MAP LEGEND</b></p> <ul style="list-style-type: none"> <li> Asbestos Sample Location</li> <li> Beryllium Sample Location</li> <li> Lead Sample Location</li> <li> RCRA/CERCLA Sample Location</li> <li> PCB Sample Location</li> </ul> | <p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&amp;ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.</p> | <p><b>N</b></p>                                  | <p style="text-align: center;">0      FEET      15</p> <p style="text-align: center;">0      METERS      5</p> | <p>U.S. Department of Energy<br/>Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707      Prepared for:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> </div> <p>MAP ID: 02-0772/B126-IN-ASB      Sept 15, 2003</p> |
| <ul style="list-style-type: none"> <li> Open/Inaccessible Area</li> <li> Area in Another Survey Unit</li> </ul>  |   | <p>1 inch = 12 feet    1 grid sq. = 1 sq. m.</p> |  |  |

### Beryllium Data Summary

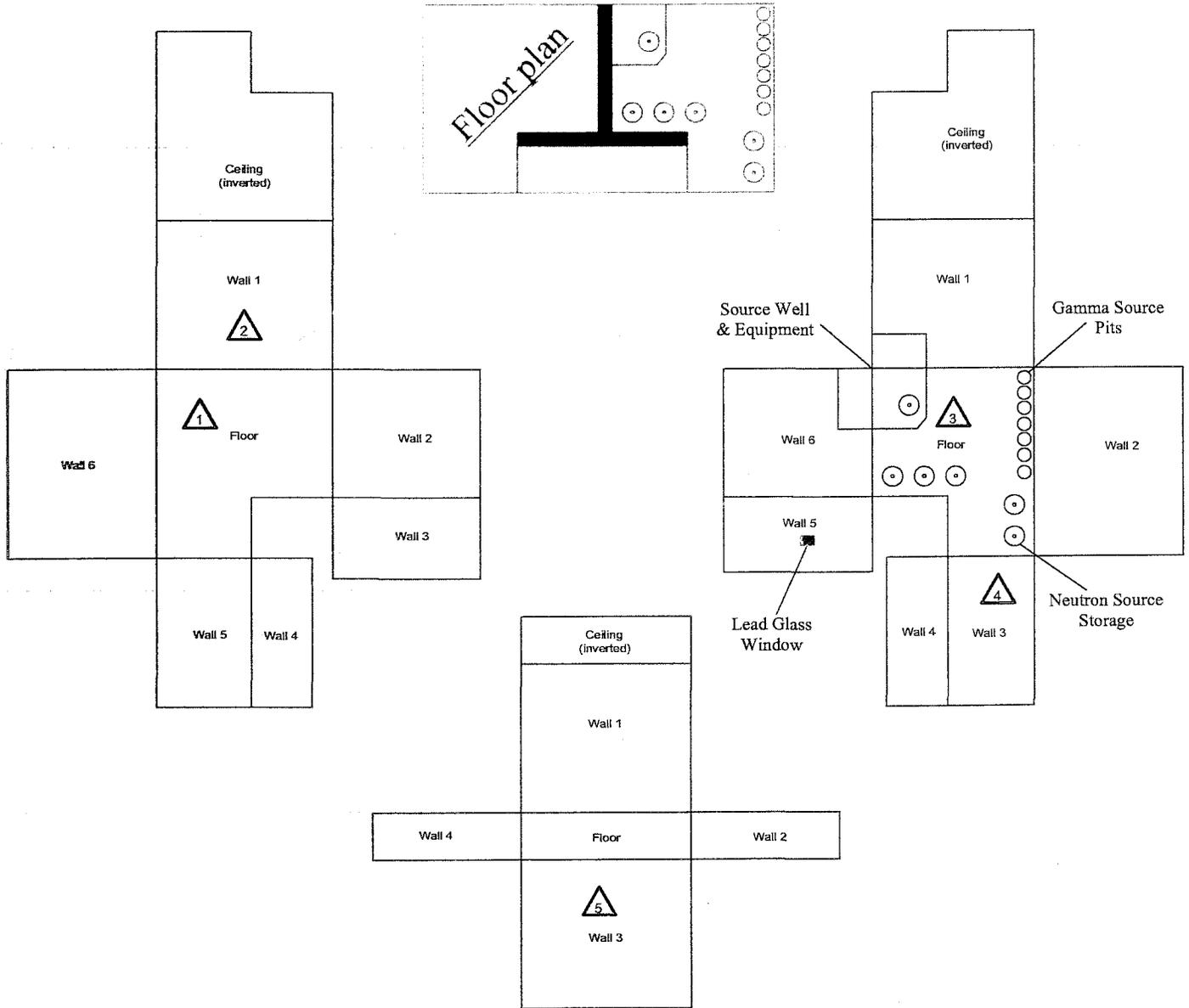
| Sample Number                   | Map Survey Point Location | Room    | Sample Location                              | Result (ug/100 cm <sup>2</sup> ) |
|---------------------------------|---------------------------|---------|--|----------------------------------|
| <b>Building 126-RIN 03Z2256</b> |                           |         |  |                                  |
| 126-09082003-314-001            | 001                       | West    | Center of floor on top of green tile, biased | < 0.1                            |
| 126-09082003-314-002            | 002                       | West    | Concrete north wall, biased                  | < 0.1                            |
| 126-09082003-314-003            | 003                       | East    | Center of floor on top of green tile, biased | < 0.1                            |
| 126-09082003-314-004            | 004                       | East    | Concrete south wall, biased                  | < 0.1                            |
| 126-09082003-314-005            | 005                       | Hallway | On window ledge at building entrance, biased | < 0.1                            |

# CHEMICAL SAMPLE MAP

Building B126 Interior  
Beryllium

PAGE 1 OF 1

## B126 Interior



|  |   |  |                                    |   |
|--|---|--|------------------------------------|---|
| <p><b>SURVEY MAP LEGEND</b></p> <ul style="list-style-type: none"> <li> Asbestos Sample Location</li> <li> Beryllium Sample Location</li> <li> Lead Sample Location</li> <li> RCRA/CERCLA Sample Location</li> <li> PCB Sample Location</li> </ul> | <p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&amp;ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.</p> | <p><b>N</b></p>                                  | <p>0 FEET 15</p> <p>0 METERS 5</p> | <p>U.S. Department of Energy<br/>Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707</p> <p>Prepared for:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> </div> <p>MAP ID: 02-0772/B126-IN-BE      Sept 15, 2003</p> |
| <p> Open/Inaccessible Area</p> <p> Area in Another Survey Unit</p>   |   | <p>1 inch = 12 feet    1 grid sq. = 1 sq. m.</p> |                                    |   |

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# ATTACHMENT E

## Data Quality Assessment (DQA) Detail

## DATA QUALITY ASSESSMENT (DQA)

### VERIFICATION & VALIDATION OF RESULTS

V&V of the data confirm that appropriate quality controls are implemented throughout the sampling and analysis process, and that any substandard controls result in qualification or rejection of the data in question. The required quality controls and their implementation are summarized in a tabular, checklist format for each category of data – radiological surveys and chemical analyses (specifically asbestos and beryllium).

DQA criteria and results are provided in a tabular format for each suite of surveys or chemical analyses performed; the radiological survey assessment is provided in Table E-1, asbestos in table E-2 and beryllium in E-3. A data completeness summary for all results is given in Table E-4.

All relevant Quality records supporting this report are maintained in the RISS Characterization Project Files. This report will be submitted to the CERCLA Administrative Record for permanent storage within 30 days of approval by the Regulators. All radiological data are organized into Survey Packages, which correlate to unique (MARSSIM) Survey Units. Chemical data are organized by RIN (Report Identification Number) and are traceable to the sample number and corresponding sample location.

Beta/gamma survey designs were not implemented for Building 126 based on the conservatism of the transuranic limits used as DCGLs in the unrestricted release decision process. Survey designs were implemented based on the transuranic limits used as DCGLs in the unrestricted release decision process. All survey results were evaluated against, and were less than the Transuranic DCGL<sub>w</sub> (100 dpm/100cm<sup>2</sup>) and the Uranium DCGL<sub>w</sub> (5,000 dpm/100cm<sup>2</sup>) unrestricted release limits.

Consistent with EPA's G-4 DQO process, the radiological survey design (for those survey units performed per PDS requirements) was optimized by checking actual measurement results (acquired during pre-demolition surveys) against model output with original estimates. Use of actual sample/survey (result) variances in the MARSSIM DQO model confirms that an adequate number of surveys were acquired.

### SUMMARY

In summary, the data presented in this report have been verified and validated relative to the quality requirements and project decisions as stated in the original DQOs. All data are useable based on qualifications stated herein and are considered satisfactory without qualification. All media surveyed and sampled yielded results less than their associated action levels and with acceptable certainties.

Based upon an independent review of the radiological data, it is determined that the original project DQOs satisfied MARSSIM guidance. All facility contamination levels were below applicable unrestricted release levels. Minimum survey requirements were met, sampling/survey protocol was performed in accordance with applicable procedures, survey units were properly designed and bounded, and instrument performance and calibration were within acceptable limits thereby ensuring data accuracy. All radiological results meet the PDS unrestricted release criteria, asbestos results were "none detected" and all beryllium results were less than associated action levels ( $0.1 \mu\text{g}/100\text{cm}^2$ ) thus confirming a Type 1 facility classification.

Chain of Custody was intact; documentation was complete, hold times were acceptable (where applicable,) and packaging integrity/custody seals were maintained throughout the sampling/analysis process. Level 2 Isolation Controls have been posted to prevent the inadvertent introduction of contamination into the facility. On this basis, Building 126 meets the unrestricted release criteria with the confidences stated herein.

**Table E-1 V&V of Radiological Surveys – Building 126**

| V&V CRITERIA, RADIOLOGICAL SURVEYS |   | K-H RSP 16.00 Series<br>MARSSIM (NUREG-1575)                        |                | COMMENTS  |
|------------------------------------|---|---|----------------|---|
| QUALITY REQUIREMENTS               |   |   |                |   |
|                                    | Parameters  | Measure   | frequency      |   |
| <b>ACCURACY</b>                    | initial calibrations  | 90% < x < 110%  | ≥ 1            | Multi-point calibration through the measurement range encountered in the field; programmatic records.   |
|                                    | daily source checks   | 80% < x < 120%  | ≥ 1/day        | Performed daily/within range.   |
|                                    | local area background: Field  | typically < 10 dpm  | ≥ 1/day        | All local area backgrounds were within expected ranges (i.e., no elevated anomalies.)   |
| <b>PRECISION</b>                   | field duplicate measurements for TSA  | ≥ 5% of real survey points  | ≥ 10% of reals | N/A   |
| <b>REPRESENTATIVENESS</b>          | MARSSIM methodology: Survey Unit B126-A-001 (interior) and EXT-B-001 (exterior).<br>Survey Maps | statistical and biased  | NA             | Random w/ statistical confidence.   |
| <b>COMPARABILITY</b>               | Controlling Documents (Characterization Pkg; RSPs)  | qualitative   | NA             | Random and biased measurement locations controlled/mapped to ± 1m.  |
|                                    | units of measure  | dpm/100cm <sup>2</sup>  | NA             | Refer to the Characterization Package (planning document) for field/sampling procedures (located in Project files); thorough documentation of the planning, sampling/analysis process, and data reduction into formats. |
| <b>COMPLETENESS</b>                | Plan vs. Actual surveys usable results vs. unusable detection limits                            | >95%<br>>95%  | NA             | Use of standardized engineering units in the reporting of measurement results.  |
| <b>SENSITIVITY</b>                 |   | TSA: ≤ 50 dpm/100cm <sup>2</sup><br>RA: ≤ 10 dpm/100cm <sup>2</sup> | all measures   | See Table E-4 for details.<br>MDAs ≤ 50% DCGL <sub>w</sub> per MARSSIM guidelines.  |

**Table E-2 V&V of Asbestos Results – Building 126**

| V&V CRITERIA, CHEMICAL ANALYSES<br>ASBESTOS | METHOD: EPA 600/R-<br>93/116                                | DATA PACKAGE  |                  | COMMENTS  |
|---|---|---|------------------|---|
|   |   | LAB ----><br>Reservoirs<br>Environmental, Inc<br>RIN ----><br>RIN 03Z2066 | Frequency        |   |
| <b>QUALITY REQUIREMENT</b>                  |   |   |                  |   |
| <b>ACCURACY</b>                             | Calibrations:<br>Initial/continuing                         | Measure<br>below<br>detectable<br>amounts                                 | Frequency<br>≥ 1 | Semi-quantitative, per (microscopic) visual estimation.   |
| <b>PRECISION</b>                            | Actual Number Sampled<br>LCSD<br>Lab duplicates             | all below<br>detectable<br>amounts  | ≥ 4 samples      | Semi-quantitative, per (microscopic) visual estimation.   |
| <b>REPRESENTATIVENESS</b>                   | COC   | Qualitative   | NA               | Chain-of-Custody intact: completed paperwork, containers w/<br>custody seals.   |
|   | Hold times/preservation                                     | Qualitative   | NA               | N/A   |
|   | Controlling Documents<br>(Plans, Procedures, maps,<br>etc.) | Qualitative   | NA               | See original Chemical Characterization Package (planning<br>document); for field/sampling procedures (located in project<br>file;) thorough documentation of the planning,<br>sampling/analysis process, and data reduction into formats. |
| <b>COMPARABILITY</b>                        | Measurement Units   | % by bulk<br>volume   | NA               | Use of standardized engineering units in the reporting of<br>measurement results.   |
| <b>COMPLETENESS</b>                         | Plan vs. Actual samples<br>Usable results vs. unusable      | Qualitative   | NA               | See Table E-4; final number of samples at Certified<br>Inspector's discretion.  |
| <b>SENSITIVITY</b>                          | Detection limits  | <1% by<br>volume  | All measures     | N/A   |

**Table E-3 V&V of Beryllium Results – Building 126**

| V&V CRITERIA, CHEMICAL ANALYSES |   | DATA PACKAGE  |   |
|---------------------------------|---|---|---|
| BERYLLIUM                       | Prep: NMAM 7300<br>METHOD: OSHA ID-125G               | LAB ---->   | DataChem Laboratories<br>Salt Lake City, Utah |
| QUALITY REQUIREMENTS            |   | RIN ---->   | RIN 03Z2566                                   |
| ACCURACY                        | QUALITY REQUIREMENTS                                  | Measure   | Frequency                                     |
| ACCURACY                        | Calibrations Initial                                  | Linear calibration  | ≥1  |
|                                 | Continuing  | 80%<-%R<120 %   | ≥1  |
|                                 | LCS/MS  | 80%<-%R<120 %   | ≥1  |
| PRECISION                       | Blanks - lab & field                                  | <MDL  | ≥1  |
|                                 | interference check std (ICP)                          | NA  | NA  |
|                                 | LCSD  | 80%<-%R<120 %<br>(RPD<20%)  | ≥1  |
| REPRESENTATIVE<br>SS            | field duplicate                                       | all results < RL  | ≥1  |
|                                 | COC   | Qualitative   | NA  |
|                                 | hold times/preservation                               | Qualitative   | NA  |
| COMPARABILITY                   | Controlling Documents (Plans, Procedures, maps, etc.) | Qualitative   | NA  |
|                                 | measurement units                                     | ug/100cm <sup>2</sup>   | NA  |
| COMPLETENESS                    | Plan vs. Actual samples                               | >95%  | NA  |
|                                 | usable results vs. unusable                           | >95%  | NA  |
| SENSITIVITY                     | detection limits                                      | MDL of  |   |
|                                 |   | 0.012 ug/100cm <sup>2</sup>   | all measures                                  |
|                                 |   | <b>COMMENTS</b>   |   |
|                                 |   | No qualifications significant enough to change project decisions i.e., classification of a Type 1 facility is confirmed. All results were below associated action levels. |   |

**Table E-3 Data Completeness Summary – Building 126**

| ANALYTE      | Building/Area/<br>Unit  | Sample Number<br>Planned<br>(Real & QC)   | Sample Number<br>Taken<br>(Real & QC)   | Project Decisions<br>(Conclusions) &<br>Uncertainty  | Comments<br><br>(RIN, Analytical Method, Qualifications, etc.)   |
|--------------|---|---|---|--|--|
| Asbestos     | Building 126<br>(interior)  | 6 biased  | 4 biased  | ACM present, results<br>> 1% by volume<br>(4 locations)  | 40 CFR 763.86; 5 CCR 1001-10; EPA 600/R-93/116<br><br>RIN 03Z2066<br><br>ACM identified at 4 locations in the tile and mastic (5% to 8% chrysotile) and roofing tar (10% chrysotile). Refer to Attachment C for sample locations and results. The tile and mastic were abated as part of RLC activities. |
| Beryllium    | Building 126<br>(interior)  | 5 biased  | 5 biased  | No beryllium<br>contamination found,<br>all results less than<br>associated action<br>levels                     | OSHA ID-125G<br><br>RIN 03Z2566<br><br>No results above action level (0.2ug/100cm <sup>2</sup> ) or<br>investigative level (0.1 ug/100cm <sup>2</sup> ).   |
| Radiological | Survey Area 5<br>Survey Unit:<br>B126-A-001<br>Building 126<br>(interior) | 25 α & β TSA<br>(15 random/10<br>biased)<br><br>15 α & β Smears<br>(15 random/10<br>biased)<br><br>2 QC TSA<br><br>100% scan of<br>interior floor, 25%<br>scan of lower walls<br>(<2 m.) and 5%<br>scan of upper walls<br>and ceiling<br>surfaces | 34 α & β TSA<br>(15 random/19<br>biased)<br><br>38 α & β Smears<br>(15 random/23<br>biased)<br><br>3 QC TSA<br><br>100% scan of<br>interior floor, 25%<br>scan of lower walls<br>(<2 m.) and 5%<br>scan of upper walls<br>and ceiling<br>surfaces | No elevated<br>contamination found<br>at any location; all<br>values below PDS<br>unrestricted release<br>levels | Transuranic and/or Uranium DCGLs as applicable.  |

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