



Rocky Flats Environmental Technology Site

TYPE 1 RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR)

AREA 2 GROUP 3 CLOSURE PROJECTS (Buildings 706, 928, T706A and T779A)

REVISION 0

March 25, 2003

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



ADMIN RECORD

IA-A-001411

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March 25, 2003

Reviewed by:  Date: 3/26/03
Don Risoli, Quality Assurance

Reviewed by:  Date: 3/26/03
D. P. Snyder, RISS ESH&Q Manager

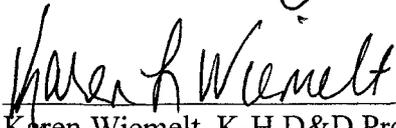
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Karen Wiemelt, K-H D&D Project Manager

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- A Facility Location Map
- B Historical Site Assessment Report
- C Radiological Data Summaries and Survey Maps
- 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 _{EMC}	Derived Concentration Guideline Level – elevated measurement comparison
DCGL _W	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 the Area 2, Group 3 facilities (i.e., Buildings 706, 928, T706A and T779A). Because these facilities are anticipated Type 1 facilities, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP). All facility surfaces were characterized in this RLC, including the interior and exterior surfaces [i.e., floors (slabs), walls, ceilings and roofs]. Environmental media beneath and surrounding the facilities 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 5400.5. Friable, thermal system insulation (TSI) and Category 1 and 2 non-friable asbestos containing materials were identified in Building 706. All beryllium sample results were less than $0.1 \mu\text{g}/100\text{cm}^2$. Fluorescent light ballasts may contain PCBs. Any PCB ballasts, asbestos containing materials, and hazardous-waste items will be removed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. All 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. All concrete associated with these facilities meet the criteria for recycling concrete per the RFCA RSOP for Recycling Concrete.

Based upon this RLCR, the Area 2 Group 3 facilities are considered Type 1 facilities. To ensure the facilities remain free of contamination and RLC data remain valid, Level 2 isolation controls have been established, and the facilities posted accordingly.

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1 INTRODUCTION

A Reconnaissance Level Characterization (RLC) was performed to enable compliant disposition and waste management of the Area 2, Group 3 facilities (i.e., Buildings 706, 928, T706A and T779A). Because these facilities are anticipated Type 1 facilities, a PDS characterization was performed. All facility surfaces were characterized in this RLC, including the interior and exterior surfaces of the facilities [i.e., floors (slabs), walls, ceilings and roofs]. Environmental media beneath and surrounding the facilities 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 are the Area 2, Group 3 facilities. The locations of these facilities are shown in Attachment A. These facilities no longer support the RFETS mission and require removal to reduce Site infrastructure, risks and/or operating costs.

Before the facilities can be removed, a Pre-Demolition Survey (PDS) must be conducted; this document presents the PDS results. The PDS 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.

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 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 of the Area 2, Group 3 facilities. Environmental media beneath and surrounding the facilities are 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

Facility-specific Historical Site Assessments (HSAs) were conducted to understand facility histories and related hazards. The assessments 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 packages. Results of the facility-specific HSAs were documented in a facility-specific *Historical Site Assessment Report (HSAR) for Area 2, Group 3 facilities*, dated March 21, 2002, Revision 0 (refer to Attachment B). In summary, the HSAR identified no potential for radiological and chemical hazards, except the potential for asbestos containing materials and PCBs in paint and light ballasts.

3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

The Area 2, Group 3 facilities were 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 describes the minimum survey requirements (refer to the RISS Characterization Project files).

Four radiological survey packages were developed for the interior and exterior surfaces of the Area 2, Group 3 facilities. The four survey packages were 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), 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*. 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.

118 TSA measurements (60 random, 50 biased and 8 QC), 110 RSA measurements (60 random and 50 biased), and a minimum of 5% of the interior and exterior surfaces of the four Area 2, Group 3 facilities were scanned at biased locations. The RLC data confirmed that these facilities do not contain radiological contamination above the surface contamination guidelines provided in the PDSP. 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 buildings to ensure no radioactive materials are inadvertently introduced.

4 CHEMICAL CHARACTERIZATION AND HAZARDS

The Area 2, Group 3 facilities were 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 the facilities. 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 and the justification for the sample locations and estimated sample numbers. Contaminants of concern included asbestos, beryllium, RCRA/CERCLA constituents, 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 the aforementioned buildings in accordance with the PDSP. 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. The following friable and non-friable asbestos containing building materials were identified:

Building	Material	Friable or Non-Friable	Approximate Quantities
706	Transite Wall Panel	Category 2 Non-friable	640 square feet
706	Black Roofing Tar and Silver Paint	Category 1 Non-Friable	4,000 square feet
706	9" x 9" vinyl floor tile and mastic adhesive	Category 1 Non-Friable	200 square feet
706	Sheet vinyl linoleum in the north and south entryways	Friable	90 square feet
706	Acoustical Drop Ceiling Tiles	Friable	3,800 square feet
706	Thermal Systems Insulation	Friable	835 lineal feet to include fittings, elbows, pipe hangers, and pipe runs

Asbestos laboratory analysis data and location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps*. Maps that did not contain any sample locations were not included in this report.

4.2 Beryllium (Be)

Based on the HSAR and personnel interviews, these buildings were anticipated Type 1 facilities. 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 beryllium smear sample results 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, interviews and facility walk-downs of the Area 2, Group 3 facilities, there was no record of operations using materials that could lead to RCRA/CERCLA concerns. None of the buildings had a history of spills or releases of RCRA/CERCLA regulated materials, and there were no observations to suggest contamination. Therefore, RCRA/CERCLA constituent sampling was not performed in these facilities as part of the PDS.

Sampling for lead in paint in the Area 2, Group 3 facilities were 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.

The buildings may contain some RCRA regulated items, such as mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury containing gauges, circuit boards, leaded glass and lead-acid batteries. These items will be removed prior to demolition and managed in accordance with the Colorado Hazardous Waste Act.

4.4 Polychlorinated Biphenyls (PCBs)

Based on the HSAR, interviews and facility walkdowns of the Area 2, Group 3 facilities, no PCB-containing equipment were ever present in any of the facilities, making the potential for PCB contamination resulting from spills highly unlikely. Therefore, PCB sampling was not performed in these facilities as part of the PDS.

Based on the age of the Area 2, Group 3 facilities (constructed prior to 1980), with the exception of T779A, paints used may contain PCBs, and painted surfaces will need to be disposed of PCB Bulk Product Waste. Painted concrete surfaces can be used as backfill on site in accordance with approval received from EPA in November 2001 (letter from K. Clough, US EPA Region 8, to J. Legare, DOE RFFO, 8EPR-F, Approval of the Risk-Based Approach for Polychlorinated Biphenyls (PCB)-Based Painted Concrete), provided the concrete meets the unrestricted-release criteria outlined in the Concrete Recycling RSOP. Based on the age of T779A (constructed after 1980), paints used on the facility are not expected to contain PCBs, and painted surfaces can be disposed of as sanitary waste.

Because some of the facilities 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 and, if not leaking, will be disposed of as PCB Bulk Product Waste.

5 PHYSICAL HAZARDS

Physical hazards associated with the Area 2, Group 3 facilities consist of those common to standard industrial environments and include hazards associated with energized systems, utilities, and trips and falls. Refer to the Site Safety Analysis Report (PADC-1998-00662). There are no unique hazards associated with the facilities. The facilities have been relatively well maintained and are in good physical condition, and therefore, do 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 practices.

6 DATA QUALITY ASSESSMENT

Data used in making management decisions for decommissioning of the Area 2, Group 3 facilities, 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.

7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The demolition and disposal of the Area 2, Group 3 facilities will generate a variety of wastes. Estimated waste types and waste volumes are presented below by facility. All waste can be disposed of as sanitary waste, except asbestos containing material, PCB Bulk Product Waste, and any hazardous-waste items (e.g., mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury containing gauges, circuit boards, leaded glass and lead-acid batteries). There is no radioactive or beryllium waste. Asbestos, PCB ballasts, and hazardous waste items will be removed prior to demolition and disposed of pursuant to Site asbestos abatement and waste management procedures.

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Waste Volume Estimates and Material Types, Area 2, Group 3							
Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste (cu ft)
706	5,900	500	600	None	1,800	1,151	Glass – 90 Carpet – 1,500
T706A	390	460	722	2,100	300	0	Glass – 30 Carpet – 120
T779A	480	460	722	2,100	300	0	Glass – 30 Carpet – 120
928	4,200	None	2,000	None	None	0	None

8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, the Area 2, Group 3 facilities (i.e., Buildings 706, 928, T706A and T779A) are classified as RFCA Type 1 facilities pursuant to the RFETS Decommissioning Program Plan (DPP; K-H, 1999). The Type 1 classification is based on a review of historical and process knowledge, and newly acquired RLC data.

The RLC of the Area 2, Group 3 facilities was performed in accordance with the DDCP and PDSP. All PDSP DQOs were met, and all data satisfied the PDSP DQA criteria. These facilities do not contain radiological or beryllium wastes. Any PCB ballasts, asbestos containing materials, and hazardous-waste items will be managed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. All 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. All concrete associated with these facilities meet the criteria for recycling concrete per the RFCA RSOP for Recycling Concrete. 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.

To ensure that the Type 1 facilities remain free of contamination and that RLC data remain valid, Level 2 isolation controls have been established, and the facilities posted accordingly.

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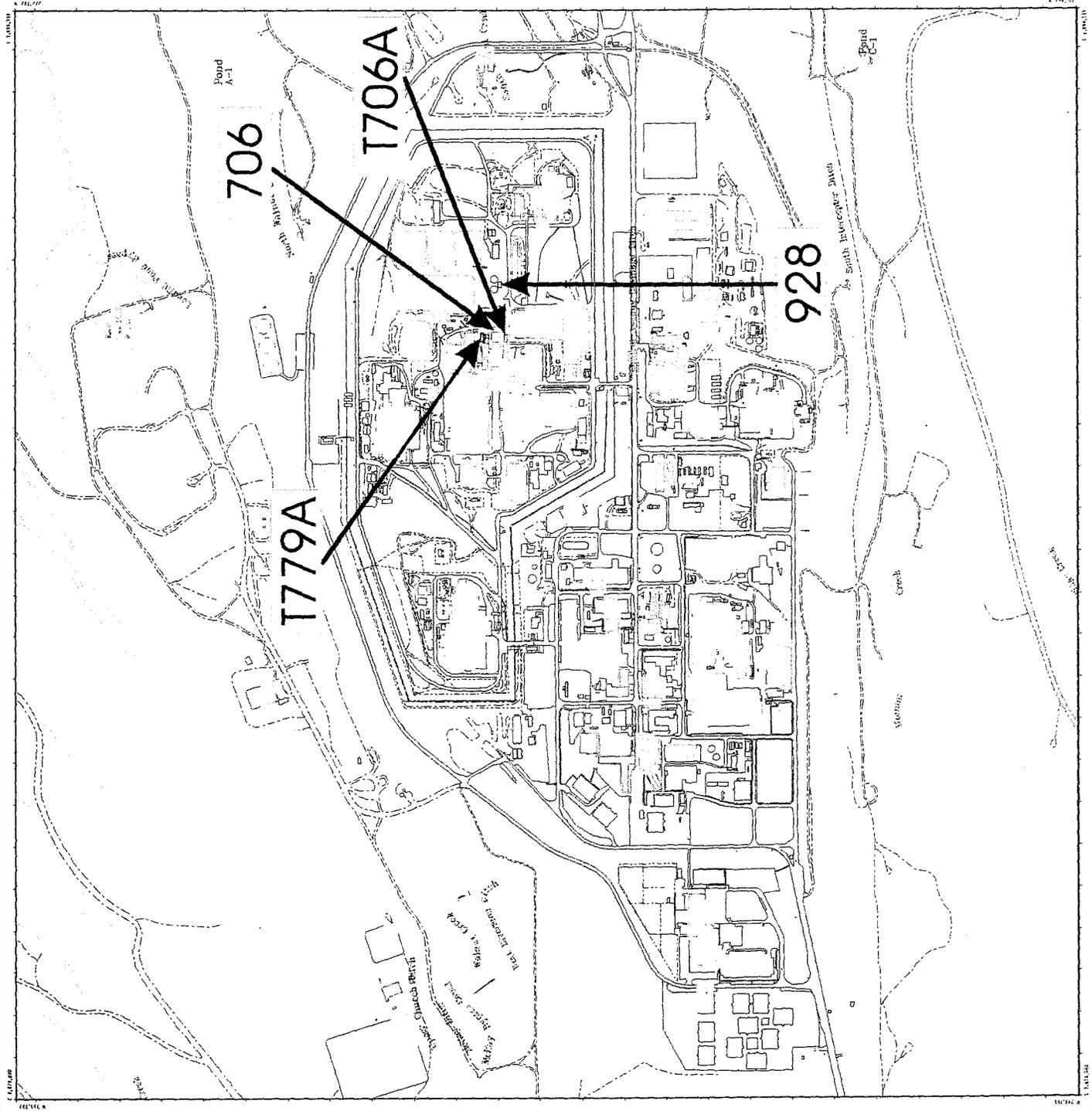
9 REFERENCES

- DOE/RFFO, CDPHE, EPA, 1996. *Rocky Flats Cleanup 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 for the Area 2, Group 3 facilities, dated March 21, 2002, Revision 0.

ATTACHMENT A

Facility Location Map

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**Area 2 Group 3
706, T706A, T779A, 928**

Standard Map Features

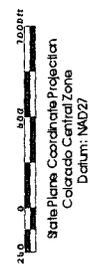
-  Buildings and other structures
-  Demolished buildings and other structures
-  Lakes and ponds
-  Streams, ditches, or other drainage features
-  Fences and other barriers
-  Paved roads
-  Dirt roads

DATA SOURCE BASE FEATURES:

Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&S RSL, Las Vegas. Digitized from the orthophotographs: 1/95



Scale = 1 : 12,450
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**

Prepared by:
CH2M HILL
Colorado



MAP ID: FY 2002

March 21, 2003

ATTACHMENT B

Historical Site Assessment Report

**D&D RISS Facility Characterization
Historical Site Assessment Report
March 21, 2002, Rev. 0**

Facility ID: Area 2 – Group 3 Facilities, Building 706, T-706A Office Trailer, T-779A Office Trailer, Building K750, Building 928 Firewater Pump House, Building 990 Pre-Aeration, Building 990A Waste Water Treatment

Anticipated Facility Type (1, 2, or 3): Building 706 = Type 1, T-706A = Type 1, T-779A = Type 1, Building K750 = Type 1, Building 928 = Type 1, Building 990 = Type 1, Building 990A = Type 1,

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 706 was constructed in 1966. Building 706 is located northeast of Building 750 about 75 yards and directly east of Building 705. Building 706 has masonry exterior walls and the pour steel-reinforced concrete roof is supported by steel I-beams. The Building 706 exterior walls are constructed from concrete block. The size of Building 706 is approximately 50 feet wide by 80 feet long and approximately 16 feet above ground at the top of the roof eave. The roof is a flat steel deck is a built-up-type roof that slopes to the south for water drainage. Building 706 has approximately 4,000 square feet of floor space. The Building 706 floor is a steel-reinforced poured concrete floor. Building 706 has approximately hard-wall offices, a Conference Room, a Men's Restroom, and a Women's Restroom. In addition, Building 706 has approximately 22 separate offices cubicles. Building 706 has a North Entrance/Exit and a South Entrance/Exit Doors that have weather airlock room entry ways that are heated. Building 706 has a acoustical tile drop-ceiling. Building 706 is natural gas hot-water/steam heated facility and it is connected to the Plant Fire Alarm and LSDW Systems.

T-706A Office Trailer was constructed in 1979. Office Trailer T-706A is located approximately 30 feet directly south of Building 706, the old Plant Library. T-706A Office Facility is a modular construction type. T-706A is 60'3" long X 24'3" wide X 13'4" high including the 40" metal skirt around the foundation. T-706A contains approximately 1440 square feet of floor space. Covered entry doors are located on the east and west ends of the facility. There are 5' by 8' covered wooden decks and steps leading to the doors. The covering for entryways, the sides of the building, and the roof is galvanized corrugated sheet metal. The skirting around T-706A is enamel baked on corrugated aluminum. Structurally the building is sound, there are no leaks in the ceiling and the outside has no damage. The interior perimeter is wood paneling over insulation, the ceiling is a drop ceiling with 2' by 4' acoustical tile and the floor is carpet covering wood flooring. The foundation could not be observed as the skirting covered it. Both entry doors have cipher locks on them. It has been an office building through out its use.

The utilities for this building are an electric heat pump for heating and cooling, and it is connected to the Plant Fire Alarm and LSDW Systems. The drawings for this unit consist only of a Facility Planning layout sketch of the cubicles. Radiological surveys may have been done, but the old data is not available. This unit will have to be resurveyed to meet present standards for unrestricted release.

**D&D RISS Facility Characterization
Historical Site Assessment Report
March 21, 2002, Rev. 0**

Physical Description (con't):

T-779A Office Trailer was constructed in 1984. Office Trailer T-779A is located approximately 30 feet directly north of Building 706, the old Plant Library. Office Trailer T-779A is 60'3" long X 24'3" wide X 13'4" high including the 40" metal skirt around the foundation. Covered entry doors are located on the east and west ends of the facility. T-779A contains approximately 1440 square feet of floor space. There are 5' by 8' covered wooden decks and steps leading to the doors. The covering for entryway and the sides of the building is galvanized corrugated sheet metal. The skirting around T-779A is enamel baked on corrugated aluminum. Structurally the building is sound, there are no leaks in the ceiling and the outside has no damage. The interior perimeter is dry wall over insulation, the ceiling is a drop ceiling with 2' by 4' acoustical tile and the floor is carpet covering wood flooring. The foundation could not be observed as the skirting covered it. Both entry doors have cipher locks on them. It has been an office building through out its use.

The utilities for this building are an electric heat pump for heating and cooling, and it is connected to the Plant Fire Alarm and LSDW Systems. The drawings for this unit consist only of a Facility Planning layout sketch of the cubicles. Radiological surveys may have been done, but the old data is not available. This unit will have to be resurveyed to meet present standards for unrestricted release.

Building K750 was constructed in approximately 1997. K750 was originally located directly south of Building 750, K750 is now located south of Central Avenue and west of Eighth Street in the WIPP Transport Truck/Trailer Parking Lot. K750 is a temporary portable building constructed on wood runners. The sized of K750 is approximately 10' wide X 16' long X 12'

Building 928 Firewater Pump House was constructed in 1975. Building 928 is located approximately 60 feet north of Pad 980 and approximately 100 feet directly west of Building 910, the Solar Pond Evaporator Facility. Building 928 has approximately 1255 square feet of floor space. Building 928 is constructed from concrete block with as steel I-beam supported flat steel built-up roof. The Projects Facility List shows a 1986 construction date, but interviewees thought it was originally constructed in 1975 and then relocated to the existing location in approximately 1981. Aerial photographs seem to support the 1975 and 1981 construction and relocation dates.

Building 990 Pre-Aeration was constructed in approximately 1977. Building 990 is located on a hill north of Building 991 and approximately 200 yards directly west of Building 995. Building 990 has approximately 222 square feet of floor space. Building 928 is constructed from concrete block with as steel I-beam supported flat steel built-up roof. The Projects Facility List shows a 1996 construction date for Building 990, but interviewees thought it was originally constructed in the 1970-80 time and aerial photographs indicate it was constructed prior to 1977.

Building 990A Waste Water Treatment was constructed in approximately 1980. Building 990A is located on a hill north of Building 991 and approximately 200 yards directly west of Building 995. Building 990A has approximately 220 square feet of floor space. Building 928 is constructed from concrete block with as steel I-beam supported flat steel built-up roof. Building 990A has an eight foot wide steel roll-up truck door. The Projects Facility List shows a 1996 construction date for Building 990A, but interviewees thought it was originally constructed in the 1970-80 time and aerial photographs indicate it was constructed prior to 1977.

**D&D RISS Facility Characterization
Historical Site Assessment Report
March 21, 2002, Rev. 0**

Historical Operations

Building 706 was designed and constructed as a Plant Library Facility and opened as such in 1966. Building 706 operated from 1966 until approximately 1996 as a Plant Library Facility. In approximately 1996 Building 706 was converted from a Plant Library to a Building 779 Closure Project Office Support Facility. In approximately 2001 Building 706 became a Building 707/776/777/778/779 Closure Project Office Support Facility.

T-706A Office Trailer has always been an office trailer facility.

T-779A Office Trailer has always been an office trailer facility.

Building K750 was originally a hot lunch service facility located in the "old Building 750 Parking Lot" directly south of Building 750. For approximately one year and currently K750 serves as an office for Traffic Safety Officers (TSO). The TSO personnel use K750 as an operations office for the WIPP Transport Truck/Trailers.

Building 928 Firewater Pump House has always been used as a Plant Firewater Pump House.

Building 990 Pre-Aeration has always been used as a Plant Sewer incoming sewage pre-aeration facility. Building 990 operated from approximately 1977 until 1994 when it was by-passed with Plant sewage flows going directly to Building 995.

Building 990A Waste Water Treatment has always been used as a Plant Sewer incoming sewage pre-screening and grinding facility. Building 990A operated from approximately 1977 until 1994 when it was by-passed with Plant sewage flows going directly to Building 995.

Current Operational Status

Building 706 is currently being used as a Building 707/776/777/778/779 Closure Project Office Support Facility, providing offices for approximately 16 closure project personnel.

T-706A Office Trailer is currently being used as an office trailer facility and CBT Training Facility by the Plant Training Department.

T-779A Office Trailer is currently being used as an office trailer facility for ten KH and Sub-Contractor personnel.

Building K750 is currently being used by TSO personnel use K750 as an operations office for the WIPP Transport Truck/Trailers.

Building 928 Firewater Pump House has always been and currently used as a Firewater Pump House for the Plant Firewater Sprinkler System.

Building 990 Pre-Aeration is currently bypassed and Out of Service and has been for eight years. The facility could be put Back in Service if a Plant Sewer problem or emergency should occur.

Building 990A Waste Water is currently bypassed and Out of Service and has been for eight years. The facility could be put Back in Service if a Plant Sewer problem or emergency should occur.

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**D&D RISS Facility Characterization
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Asbestos

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

Building 706 is believed to have some asbestos containing materials (ACM) of construction in the form of wall, pipe, and roof insulation. Both Building 706 Entrances/Exits are posted with the standard asbestos warning signs.

Beryllium (Be)

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

The Area 2 Group 3 Buildings 706, T-706A, T-779A, K750, 928, 990, and Building have no information on the RFETS Beryllium (Be) Areas Historical and Present list. Interviewees felt that no Be materials were ever in any of the Area 2 Group 3 Facilities.

Summarize any recent Be sampling results:

No known Be sampling has done in any of the Area 2 Group 3 Facilities.

Lead

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

The Area 2 Group 3 Facilities were constructed from approximately 1975 to approximately 1990, therefore some of them may contain lead-based paints. No lead operations were known to have occurred in the Area 2 Group 3 Facilities. Electrical components of all of the Area 2 Group 3 Facilities might contain some lead.

RCRA/CERCLA Constituents

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

None of the Area 2 Group 3 Facilities were ever used as a chemical storage facilities. The Area 2 Group 3 Facilities all might have had cleaning chemicals used and stored in them. Building 990 has a WSRIC, but none of the other Area 2 Group 3 Facilities have one. The WSRIC for Building 990 describes the cleanup of used oils from the air compressors and states that the oils and cleanup chemicals are taken to Building 778 for disposal.

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

No known chemical spills ever occurred in any of the Area 2 Group 3 Facilities, except a Chromic Acid spill occurred in the Plant Sewer System several years ago (possibly described in HRR Pages NE-16, NE-17, and Pages 000-49/000-50 that describe PAC 000-500).

Describe methods in which spills were mitigated, if any:

Unknown

PCBs

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

Due to the age of some of the facilities addressed in this HSA, some of the facilities may contain PCBs in paints. Some of the Area 2 Group 3 Facilities lighting ballasts might contain PCBs. No known equipment items containing PCBs, were ever located in of the Area 2 Group 3 Facilities.

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

No known PCB spills ever occurred in any of the Area 2 Group 3 Facilities.

Describe methods in which spills were mitigated, if any:

N/A

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PCBs

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

All of the Area 2 Group 3 Facilities contain PCB/lead-based paints. Some of the Area 2 Group 3 Facilities lighting ballasts might contain PCBs. No known equipment items containing PCBs, were ever located in of the Area 2 Group 3 Facilities.

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

No known PCB spills ever occurred in any of the Area 2 Group 3 Facilities.

Describe methods in which spills were mitigated, if any:

N/A

Radiological Contaminants

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

No known radiological materials or sealed radioactive sources were in any of the Area 2 Group 3 Facilities.

Office Trailer T-779A have Radiation Dosimeters on the north wall because of radiation coming from the materials being stored on the on Pad 779.

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

There have been no known spills in any of the Area 2 Group 3 Facilities.

Describe methods in which spills were mitigated, if any:

N/A

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

None

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.):

None

Environmental Restoration Concerns

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

Only the Chromic Acid spill into the Plant Sewage System previously described.

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.):

The Chromic Acid spill is listed in the RFETS Historical Release Reports. A WSRIC exists for only for Building 990 and it describes the air compressor oils and cleanup chemicals. None of the Area 2 Group 3 Facilities have any equipment listed in the Appendix 1A of Idle Equipment With Non-Hazardous Materials Inventory or in Appendix 1 of Idle Equipment With Hazardous Materials Inventory.

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References

Provide all sources of information utilized to gather data for facility history (e.g., documents, files, interviews). Attach all applicable supporting documentation.

References used were: HRR, Site SAR, IHSS/PAC/UBC Site Maps, Listing of Beryllium Areas, Historical and Present, the T-130B Industrial Hygiene Asbestos Inventory Library, Building 452 Engineering Drawings, Appendix 1 of Idle Equipment With Hazardous Materials Inventory, Master Listing of RCRA Units, and Appendix 1A of Idle Equipment With Non-Hazardous Materials Inventory, Appendix 1 of Idle Equipment With Hazardous Materials Inventory, The Building 990 WSRIC Books, and Historic American Engineering Record for the RFETS.

Waste Volume Estimates and Material Types, Area 2 – Group 3

Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM	Other Waste (cu ft)
B706	5,900	500	600	None	1,800	(ACM TBB) Floor tile 150 cu ft Insul. 5, 500 cu ft Accoust. Ceil. Tile 1,500 cu ft	Glass 90 cu ft Carpet 1500 cu ft
T-706A	390	460	722	2,100	300	Insul. 1,852 cu ft (ACM TBD)	Glass 30 cu ft Carpet 120 cu ft
T-779A	480	460	722	2,100	300	82 cu ft (ACM TBD)	Glass 30 cu ft Carpet 120 cu ft
K750	200	400	14	220	None	None	Glass 10 cu ft
B928	4200	None	2000	None	None	Insul. 800 cu ft (ACM TBD)	None
B990	1500	None	180	None	None	Insul. 400 cu ft (ACM TBD)	Glass 10 cu ft Mercury Lights 6 cu ft
B990A	1200	None	120	None	None	Insul. 40 cu ft (ACM TBD)	Mercury Lights 6 cu ft

Further Actions.

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

Begin the RLC/PDS process.

**D&D RISS Facility Characterization
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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 the report. Newer Data will appear in the RLCR/PDSR.

Prepared By:

Bob Sheets

Print Name



Signature

March 21, 2002

Date

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ATTACHMENT C

Radiological Data Summaries and Survey Maps

SURVEY UNIT 706-A-001
RADIOLOGICAL DATA SUMMARY - PDS

Survey Unit Description: 706 (Interior and Exterior)

706-A-001
PDS Data Summary

<u>Total Surface Activity Measurements</u>			<u>Removable Activity Measurements</u>		
	30	30		30	30
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-8.1	dpm/100 cm ²	MIN	-1.5	dpm/100 cm ²
MAX	58.3	dpm/100 cm ²	MAX	1.5	dpm/100 cm ²
MEAN	15.4	dpm/100 cm ²	MEAN	-0.8	dpm/100 cm ²
STD DEV	19.2	dpm/100 cm ²	STD DEV	0.9	dpm/100 cm ²
TRANSURANIC DCGL _w	100	dpm/100 cm ²	TRANSURANIC DCGL _w	20	dpm/100 cm ²

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**SURVEY UNIT 706-A-001
TSA - DATA SUMMARY**

Manufacturer:	NE Tech					
Model:	DP-6	DP-6	DP-6	DP-6	DP-6	DP-6
Instrument ID#:	1	2	3	4	6	7
Serial #:	3115	3125	3250	1261	3115	1513
Cal Due Date:	6/4/03	4/21/03	7/13/03	6/19/03	6/4/03	4/30/03
Analysis Date:	2/7/03	2/7/03	2/7/03	2/7/03	2/12/03	2/12/03
Alpha Eff. (c/d):	0.228	0.211	0.219	0.207	0.228	0.219
Alpha Bkgd (cpm)	3.3	0.7	2.7	2.0	2.7	4.7
Sample Time (min)	1.5	1.5	1.5	1.5	1.5	1.5
LAB Time (min)	1.5	1.5	1.5	1.5	1.5	1.5
MDC (dpm/100cm²)	48.0	48.0	48.0	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm ²)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm ²)	Sample Net Activity (dpm/100cm ²) ^{1,2}
1	2	15.3	72.5	1.3	6.2	58.3
2	1	4.0	17.5	6.0	26.3	3.3
3	1	5.3	23.2	4.0	17.5	9.0
4	6	15.3	67.1	6.0	26.3	52.9
5	3	10.7	48.9	5.3	24.2	34.6
6	7	10.0	45.7	6.7	30.6	31.4
7	1	14.7	64.5	7.3	32.0	50.3
8	1	4.0	17.5	3.3	14.5	3.3
9	6	8.0	35.1	2.7	11.8	20.9
10	6	14.0	61.4	4.0	17.5	47.2
11	4	8.0	38.6	1.3	6.3	24.4
12	2	2.7	12.8	2.0	9.5	-1.4
13	1	9.3	40.8	4.7	20.6	26.6
14	6	8.0	35.1	4.7	20.6	20.9
15	1	4.0	17.5	2.0	8.8	3.3
16	4	2.7	13.0	3.3	15.9	-1.2
17	2	2.7	12.8	0.7	3.3	-1.4
18	1	3.3	14.5	3.3	14.5	0.3
19	4	10.0	48.3	2.0	9.7	34.1
20	2	2.7	12.8	1.3	6.2	-1.4
21	4	2.7	13.0	3.3	15.9	-1.2
22	1	8.7	38.2	2.0	8.8	23.9
23	2	3.3	15.6	0.7	3.3	1.4
24	2	2.7	12.8	2.0	9.5	-1.4
25	2	1.3	6.2	0.7	3.3	-8.1
26	2	4.7	22.3	1.3	6.2	8.1
27	2	2.0	9.5	1.3	6.2	-4.7
28	2	2.7	12.8	0.7	3.3	-1.4
29	7	7.3	33.3	4.0	18.3	19.1
30	6	6.0	26.3	6.7	29.4	12.1

¹ - Average LAB used to subtract from Gross Sample Activity

14.2	Sample LAB Average
MIN	-8.1
MAX	58.3
MEAN	15.4
SD	19.2
Transuranic DCGL _W	100

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**SURVEY UNIT 706-A-001
TSA - DATA SUMMARY**

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm2)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm2)	Sample Net Activity (dpm/100cm2) ^{1,2}
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QC Measurements

1 QC*	1	7.3	32.0	4.7	20.6	12.2
7 QC	2	8.0	37.9	4.0	19.0	18.1

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

2 - The initial Sample Net Activity for QC location 1 was 142 dpm/100cm². This location was sealed and re-surveyed after a decay period. Re-survey results are reported.

19.8	QC LAB Average
MIN	12.2
MAX	18.1
MEAN	15.2
Transuranic DCGL _w	100

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**SURVEY UNIT 706-A-001
RSC - DATA SUMMARY**

Manufacturer:	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4
Instrument ID#:	5	8	9
Serial #:	767	767	1164
Cal Due Date:	5/13/03	5/13/03	6/17/03
Analysis Date:	2/7/03	2/12/03	2/12/03
Alpha Eff. (c/d):	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.5	0.2	0.4
Sample Time (min)	2	2	2
Bkgd Time (min)	10	10	10
MDC (dpm/100cm²)	9.0	9.0	9.0

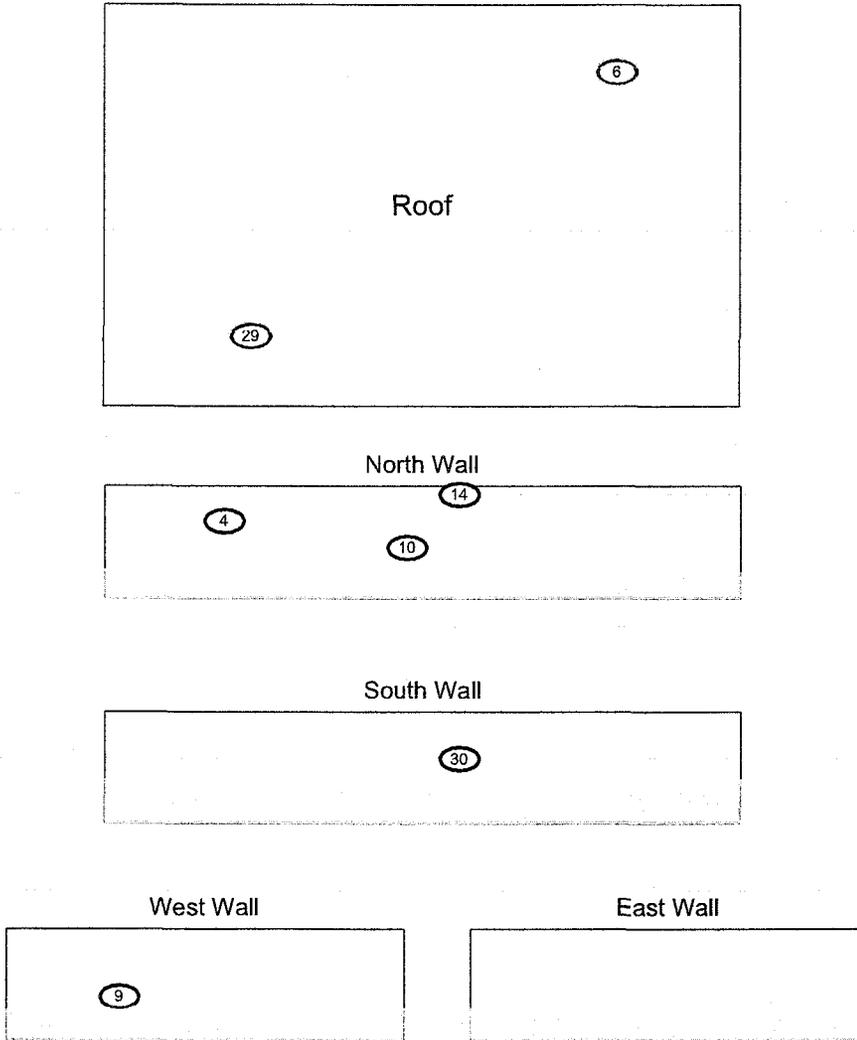
Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
1	5	1	0.0
2	5	0	-1.5
3	5	0	-1.5
4	9	0	-1.2
5	5	2	1.5
6	9	0	-1.2
7	5	1	0.0
8	5	0	-1.5
9	8	0	-0.6
10	8	0	-0.6
11	5	1	0.0
12	5	1	0.0
13	5	0	-1.5
14	8	0	-0.6
15	5	0	-1.5
16	5	1	0.0
17	5	0	-1.5
18	5	1	0.0
19	5	0	-1.5
20	5	0	-1.5
21	5	0	-1.5
22	5	0	-1.5
23	5	0	-1.5
24	5	2	1.5
25	5	0	-1.5
26	5	0	-1.5
27	5	0	-1.5
28	5	0	-1.5
29	8	0	-0.6
30	9	1	0.3
		MIN	-1.5
		MAX	1.5
		MEAN	-0.8
		SD	0.9
		Transuranic DCGL _W	20

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PRE-DEMOLITION SURVEY FOR AREA 2/GROUP 3

Survey Area: 2 Survey Unit: 706-A-001 Classification: 3
 Building: B706
 Survey Unit Description: Interior & Exterior
 Total Area: 2108 sq. m. Total Floor Area: 142 sq. m.

B706 Exterior



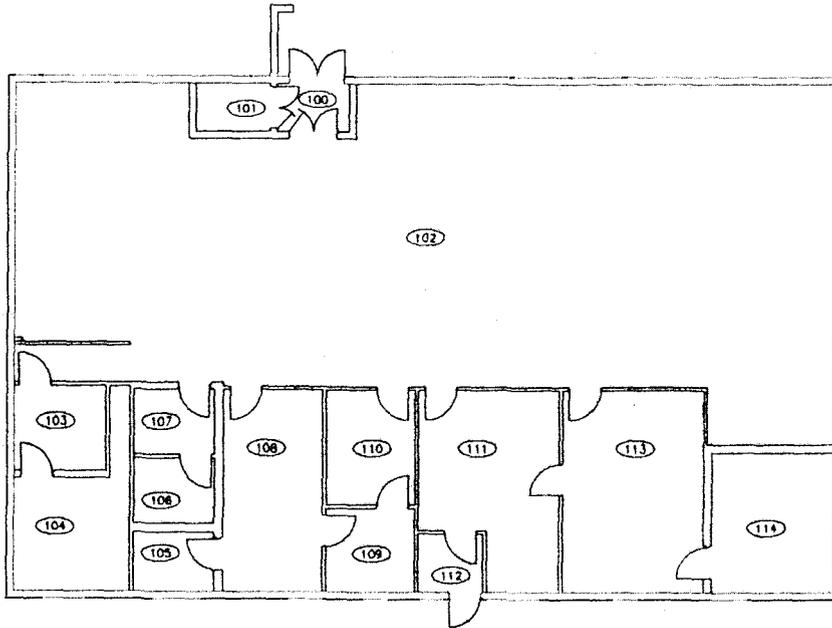
Scan Area

<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Smear & TSA Location Smear, TSA & Sample Location Open/Inaccessible Area Area in Another Survey Unit 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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 align="center">N</p>	<p align="center">0 FEET 30</p> <p align="center">0 METERS 10</p>	<p>U.S. Department of Energy Rocky Flats Environmental Technology Site</p>	
				<p>Scan Survey Information Survey Instrument ID #(s) & RCT ID #(s): 3 & 4</p>	<p>Prepared by: GIS Dept. 303-966-7707 Prepared for:</p>
			<p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>		
				<p>MAP ID: 02-0223706-EX1-SC March 3, 2003</p>	

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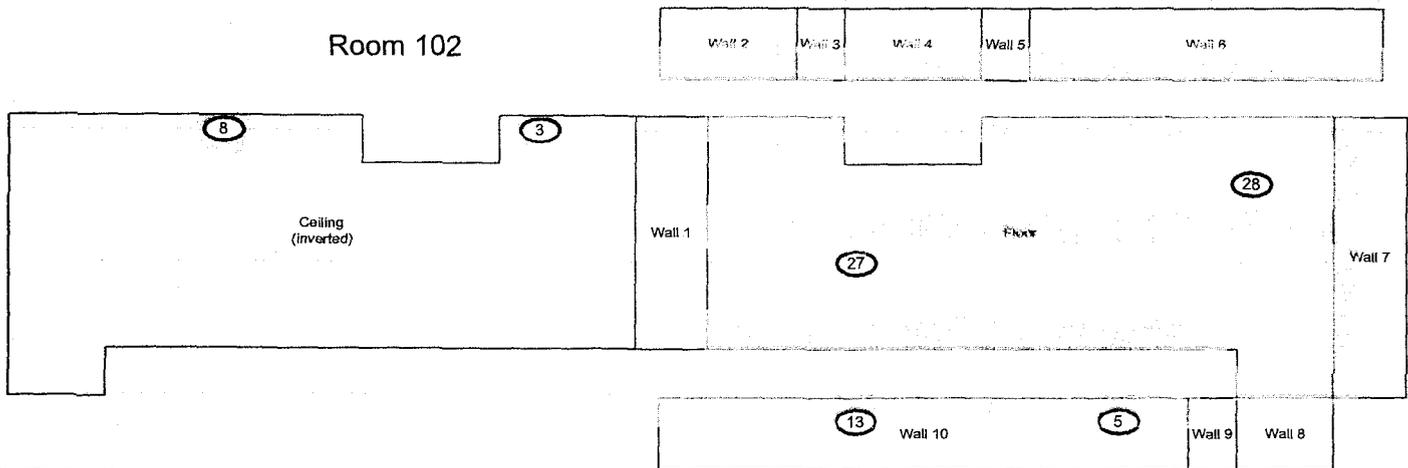
PRE-DEMOLITION SURVEY FOR AREA 2/GROUP 3

Survey Area: 2 Survey Unit: 706-A-001 Classification: 3
 Building: B706
 Survey Unit Description: Interior & Exterior
 Total Area: 2108 sq. m. Total Floor Area: 142 sq. m.



B706 Interior

Room 102



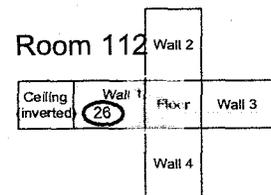
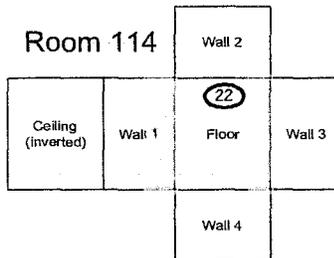
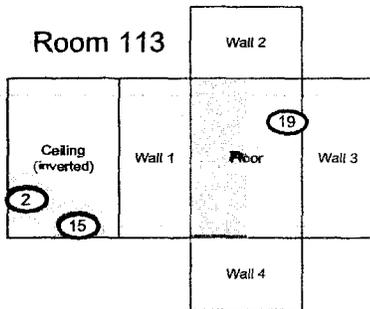
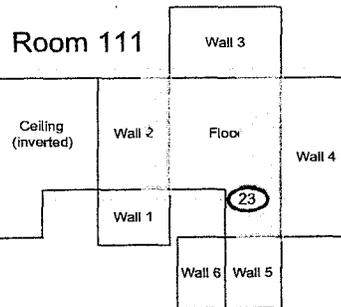
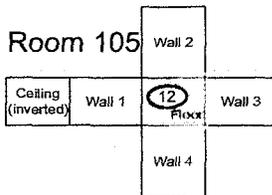
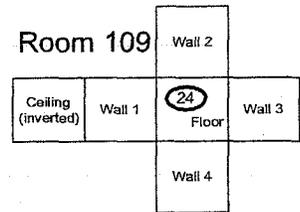
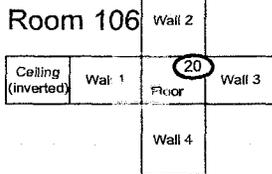
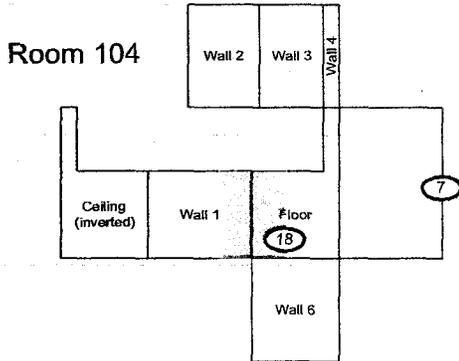
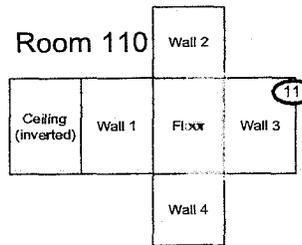
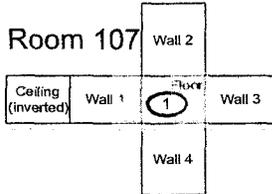
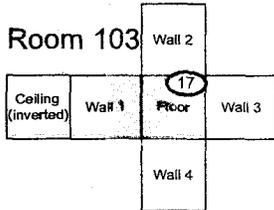
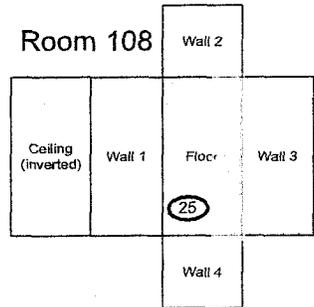
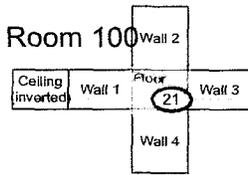
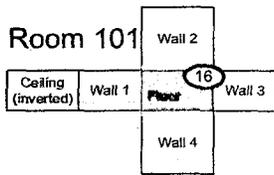
<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none">  Smear & TSA Location  Smear, TSA & Sample Location  Open/Inaccessible Area  Area in Another Survey Unit 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes 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 style="text-align: center;">N ↑</p>	<p style="text-align: center;">0 FEET 30</p>  <p style="text-align: center;">0 METERS 10</p> <p style="text-align: center;">1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p style="text-align: center;">U.S. Department of Energy Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707 Prepared for:</p> <div style="display: flex; justify-content: space-between;"> <div data-bbox="1123 1893 1371 1947"> <p>CH2MHILL Communications Group</p> </div> <div data-bbox="1395 1862 1511 1947">  </div> </div> <p style="text-align: center;">MAP ID: 02-0223/706-IN2-SC March 3, 2003</p>
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PRE-DEMOLITION SURVEY FOR AREA 2/GROUP 3

Survey Area: 2 Survey Unit: 706-A-001 Classification: 3
 Building: B706
 Survey Unit Description: Interior & Exterior
 Total Area: 2108 sq. m. Total Floor Area: 142 sq. m.

B706 Interior



Scan Area

<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Smear & TSA Location Smear, TSA & Sample Location Open/Inaccessible Area Area in Another Survey Unit 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>Scan Survey Information Survey Instrument ID #(s) & RCT ID #(s): 3 & 4</p>	<p style="text-align: center;">N</p> <div style="text-align: center;"> <p>0 FEET 30</p> <p>0 METERS 10</p> </div> <p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p style="text-align: center;">U.S. Department of Energy 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: 02-02231706-IN3-SC March 3, 2003</p>
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SURVEY UNIT 706-A-002
RADIOLOGICAL DATA SUMMARY - PDS

Survey Unit Description: T706A (Interior and Exterior)

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706-A-002
PDS Data Summary

<u>Total Surface Activity Measurements</u>			<u>Removable Activity Measurements</u>		
	30	30		30	30
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-11.9	dpm/100 cm ²	MIN	-0.6	dpm/100 cm ²
MAX	69.6	dpm/100 cm ²	MAX	3.9	dpm/100 cm ²
MEAN	9.2	dpm/100 cm ²	MEAN	0.0	dpm/100 cm ²
STD DEV	17.0	dpm/100 cm ²	STD DEV	0.9	dpm/100 cm ²
TRANSURANIC DCGL _w	100	dpm/100 cm ²	TRANSURANIC DCGL _w	20	dpm/100 cm ²

**SURVEY UNIT 706-A-002
TSA - DATA SUMMARY**

Manufacturer:	NE Tech				
Model:	DP-6	DP-6	DP-6	DP-6	DP-6
Instrument ID#:	1	2	3	4	6
Serial #:	2352	3126	1256	3250	2352
Cal Due Date:	7/30/03	6/4/03	6/30/03	7/13/03	7/30/03
Analysis Date:	2/17/03	2/17/03	2/17/03	2/17/03	2/17/03
Alpha Eff. (c/d):	0.228	0.224	0.234	0.228	0.228
Alpha Bkgd (cpm)	0.7	0.0	2.0	4.7	0.7
Sample Time (min)	1.5	1.5	1.5	1.5	1.5
LAB Time (min)	1.5	1.5	1.5	1.5	1.5
MDC (dpm/100cm²)	48.0	48.0	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm ²)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm ²)	Sample Net Activity (dpm/100cm ²) ^{1,2}
1	4	7.3	32.0	4.7	20.6	17.0
2	3	2.7	11.5	1.3	5.6	-3.5
3	4	19.3	84.6	7.3	32.0	69.6
4	1	1.3	5.7	2.7	11.8	-9.3
5	4	7.3	32.0	6.7	29.4	17.0
6	6	4.0	17.5	2.0	8.8	2.5
7	2	2.7	12.1	0.7	3.1	-3.0
8	6	8.7	38.2	5.3	23.2	23.1
9	2	0.7	3.1	2.7	12.1	-11.9
10	3	8.0	34.2	4.0	17.1	19.2
11	3	10.7	45.7	4.0	17.1	30.7
12	3	10.7	45.7	2.0	8.5	30.7
13	4	12.0	52.6	7.3	32.0	37.6
14	6	4.7	20.6	3.3	14.5	5.6
15	2	3.3	14.7	2.0	8.9	-0.3
16	3	2.7	11.5	4.7	20.1	-3.5
17	1	2.7	11.8	4.0	17.5	-3.2
18	3	2.7	11.5	2.0	8.5	-3.5
19	1	4.7	20.6	2.0	8.8	5.6
20	1	3.3	14.5	2.0	8.8	-0.5
21	1	4.0	17.5	3.3	14.5	2.5
22	3	2.7	11.5	2.7	11.5	-3.5
23	1	4.7	20.6	3.3	14.5	5.6
24	1	4.0	17.5	1.3	5.7	2.5
25	1	2.7	11.8	2.0	8.8	-3.2
26	6	3.3	14.5	2.7	11.8	-0.5
27	6	7.3	32.0	2.0	8.8	17.0
28	6	4.0	17.5	3.3	14.5	2.5
29	6	6.0	26.3	4.0	17.5	11.3
30	6	8.0	35.1	7.8	34.2	20.1

¹ - Average LAB used to subtract from Gross Sample Activity

15.0	Sample LAB Average
MIN	-11.9
MAX	69.6
MEAN	9.2
SD	17.0
Transuranic DCGL_w	100

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**SURVEY UNIT 706-A-002
TSA - DATA SUMMARY**

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm2)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm2)	Sample Net Activity (dpm/100cm2) ^{1,2}
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QC Measurements

12 QC	4	8.0	35.1	5.3	23.2	10.6
27 QC	3	7.3	31.2	6.0	25.6	6.8
1 - Average QC LAB used to subtract from Gross Sample Activity					24.4	QC LAB Average
					MIN	6.8
					MAX	10.6
					MEAN	8.7
					Transuranic DCGL _w	100

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**SURVEY UNIT 706-A-002
RSC - DATA SUMMARY**

Manufacturer:	Eberline	Eberline	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4	SAC-4	SAC-4
Instrument ID#:	7	8	9	10	11
Serial #:	767	767	1164	833	952
Cal Due Date:	5/13/03	5/13/03	6/17/03	2/28/03	7/9/03
Analysis Date:	2/17/03	2/17/03	2/17/03	2/17/03	2/17/03
Alpha Eff. (c/d):	0.33	0.33	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.1	0.1	0.2	0.1	0.0
Sample Time (min)	2	2	2	2	2
Bkgd Time (min)	10	10	10	10	10
MDC (dpm/100cm²)	9.0	9.0	9.0	9.0	9.0

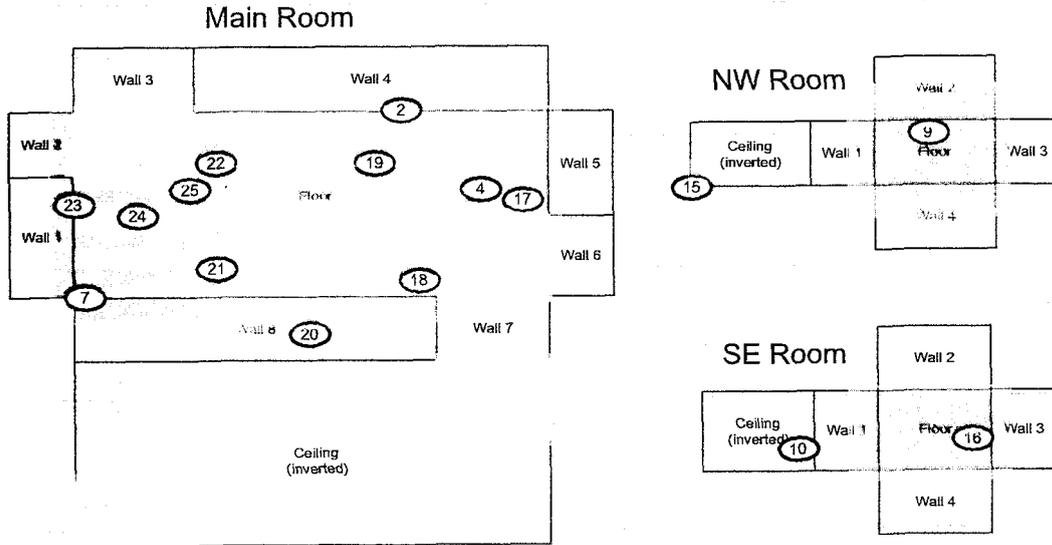
Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
1	8	0	-0.3
2	7	0	-0.3
3	9	0	-0.6
4	7	0	-0.3
5	10	0	-0.6
6	11	0	-0.3
7	7	0	-0.3
8	8	1	1.2
9	7	0	-0.3
10	7	0	-0.3
11	9	0	-0.6
12	10	3	3.9
13	11	0	-0.3
14	8	0	-0.3
15	7	0	-0.3
16	7	0	-0.3
17	7	0	-0.3
18	7	0	-0.3
19	7	0	-0.3
20	7	0	-0.3
21	7	1	1.2
22	7	0	-0.3
23	7	0	-0.3
24	7	0	-0.3
25	7	0	-0.3
26	9	0	-0.6
27	10	0	-0.6
28	11	1	1.2
29	8	0	-0.3
30	9	1	0.9
	MIN		-0.6
	MAX		3.9
	MEAN		0.0
	SD		0.9
	Transuranic DCGL_w		20

36

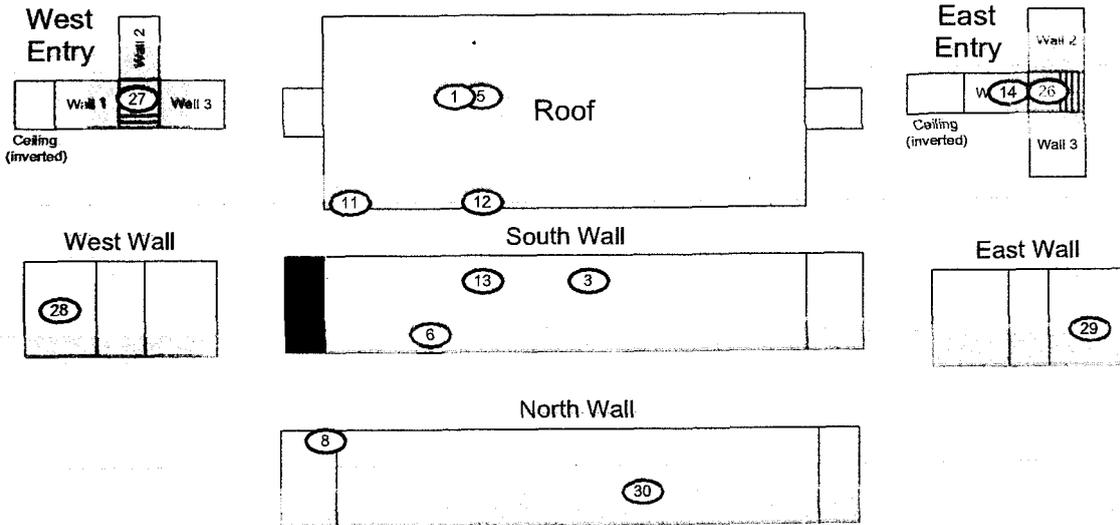
PRE-DEMOLITION SURVEY FOR AREA 2/GROUP 3

Survey Area: 2 Survey Unit: 706-A-002 Classification: 3
 Building: T706A
 Survey Unit Description: Interior & Exterior
 Total Area: 878 sq. m. Total Floor Area: 156 sq. m.

T706A Interior



T706A Exterior



Scan Area

<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> ○ Smear & TSA Location ◇ Smear, TSA & Sample Location ■ Open/Inaccessible Area □ Area in Another Survey Unit 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>N</p>	<p>0 FEET 30</p> <p>0 METERS 10</p> <p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p>U.S. Department of Energy Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707 Prepared for:</p> <p>CH2MHILL Communications Group</p> <p>KAISER HILL</p> <p>MAP ID: 02-0223T760A-SC March 13, 2003</p>
	<p>Scan Survey Information Survey Instrument ID #(s) & RCT ID #(s): 3, 4, 5, & 6</p>			

SURVEY UNIT 779-A-003
RADIOLOGICAL DATA SUMMARY - PDS

Survey Unit Description: T779A (Interior and Exterior)

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779-A-003
PDS Data Summary

<u>Total Surface Activity Measurements</u>			<u>Removable Activity Measurements</u>		
	25	25		25	25
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-6.4	dpm/100 cm ²	MIN	-1.5	dpm/100 cm ²
MAX	98.0	dpm/100 cm ²	MAX	1.5	dpm/100 cm ²
MEAN	11.3	dpm/100 cm ²	MEAN	-0.2	dpm/100 cm ²
STD DEV	22.0	dpm/100 cm ²	STD DEV	1.1	dpm/100 cm ²
TRANSURANIC DCGL _w	100	dpm/100 cm ²	TRANSURANIC DCGL _w	20	dpm/100 cm ²

**SURVEY UNIT 779-A-003
TSA - DATA SUMMARY**

Manufacturer:	NE Tech				
Model:	DP-6	DP-6	DP-6	DP-6	DP-6
Instrument ID#:	1	2	3	9	10
Serial #:	3250	3125	1261	1261	3125
Cal Due Date:	7/13/03	4/21/03	6/19/03	6/19/03	4/21/03
Analysis Date:	2/8/03	2/7/03	2/7/03	2/11/03	2/12/03
Alpha Eff. (c/d):	0.219	0.211	0.207	0.207	0.211
Alpha Bkgd (cpm)	2.7	0.7	2.0	0.7	2.0
Sample Time (min)	1.5	1.5	1.5	1.5	1.5
LAB Time (min)	1.5	1.5	1.5	1.5	1.5
MDC (dpm/100cm ²)	48.0	48.0	48.0	48.0	48.0

Manufacturer:	NE Tech	NE Tech	NE Tech
Model:	DP-6	DP-6	DP-6
Instrument ID#:	11	12	17
Serial #:	3126	1261	1261
Cal Due Date:	6/4/03	6/19/03	6/19/03
Analysis Date:	2/12/03	2/12/03	2/13/03
Alpha Eff. (c/d):	0.226	0.207	0.207
Alpha Bkgd (cpm)	2.7	2.0	1.3
Sample Time (min)	1.5	1.5	1.5
LAB Time (min)	1.5	1.5	1.5
MDC (dpm/100cm ²)	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm ²)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm ²)	Sample Net Activity (dpm/100cm ²) ^{1,2}
1	11	6.0	26.5	1.3	5.8	16.9
2	3	6.7	32.4	2.7	13.0	22.7
3	2	2.7	12.8	2.0	9.5	3.1
4	12	6.7	32.4	1.3	6.3	22.7
5	10	8.7	41.2	3.3	15.6	31.5
6	2	2.7	12.8	3.3	15.6	3.1
7	9	1.3	6.3	0.0	0.0	-3.4
8	3	2.7	13.0	3.3	15.9	3.3
9	2	0.7	3.3	0.7	3.3	-6.4
10	11	5.3	23.5	2.7	11.9	13.8
11	3	4.0	19.3	5.3	25.6	9.6
12	3	2.7	13.0	1.3	6.3	3.3
13	2	2.7	12.8	2.0	9.5	3.1
14	3	0.7	3.4	1.3	6.3	-6.3
15	2	2.0	9.5	2.0	9.5	-0.2
16	3	2.7	13.0	1.3	6.3	3.3
17	2	6.0	28.4	2.7	12.8	18.7
18	3	1.3	6.3	2.0	9.7	-3.4
19	2	3.3	15.6	2.0	9.5	5.9
20	3	4.0	19.3	0.0	0.0	9.6
21	2	1.3	6.2	0.0	0.0	-3.5
22	3	1.3	6.3	1.3	6.3	-3.4
23*	17	22.3	107.7	3.7	17.9	98.0
24	10	11.3	53.6	2.7	12.8	43.9
25	12	1.3	6.3	2.7	13.0	-3.4

1 - Average LAB used to subtract from Gross Sample Activity
 2 - The initial Sample Net Activity for location 23 was 126.0 dpm/100cm².
 This location was re-surveyed after a decay period. Re-survey results are reported.

9.7	Sample LAB Average
MIN	-6.4
MAX	98.0
MEAN	11.3
SD	22.0
Transuranic DCGL _w	100

QC Measurements

1 QC	1	5.3	24.2	2.7	12.3	11.9
17 QC	1	4.0	18.3	2.7	12.3	5.9

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

12.3	QC LAB Average
MIN	5.9
MAX	11.9
MEAN	8.9
Transuranic DCGL _w	100

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**SURVEY UNIT 779-A-003
RSC - DATA SUMMARY**

Manufacturer:	Eberline	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4	SAC-4
Instrument ID#:	5	6	7	8
Serial #:	767	1164	833	952
Cal Due Date:	5/13/03	6/17/03	2/28/03	7/9/03
Analysis Date:	2/7/03	2/7/03	2/7/03	2/7/03
Alpha Eff. (c/d):	0.33	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.5	0.4	0.3	0.1
Sample Time (min)	2	2	2	2
Bkgd Time (min)	10	10	10	10
MDC (dpm/100cm²)	9.0	9.0	9.0	9.0

Manufacturer:	Eberline	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4	SAC-4
Instrument ID#:	13	14	15	16
Serial #:	767	1164	833	952
Cal Due Date:	5/13/03	6/17/03	2/28/03	7/9/03
Analysis Date:	2/12/03	2/12/03	2/12/03	2/12/03
Alpha Eff. (c/d):	0.33	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.2	0.4	0.2	0.0
Sample Time (min)	2	2	2	2
Bkgd Time (min)	10	10	10	10
MDC (dpm/100cm²)	9.0	9.0	9.0	9.0

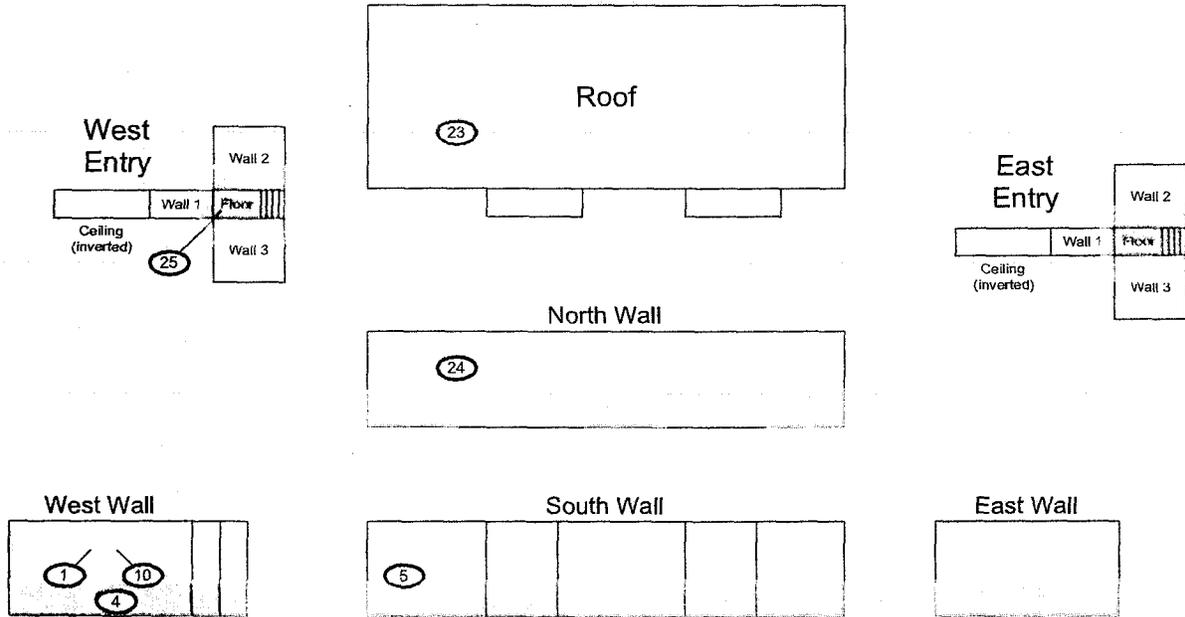
Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
1	13	1	0.9
2	5	0	-1.5
3	6	0	-1.2
4	14	0	-1.2
5	15	0	-0.6
6	7	0	-0.9
7	9	1	1.5
8	8	1	1.2
9	5	0	-1.5
10	16	1	1.5
11	6	0	-1.2
12	7	0	-0.9
13	8	0	-0.3
14	5	0	-1.5
15	6	0	-1.2
16	7	1	0.6
17	8	0	-0.3
18	5	0	-1.5
19	6	0	-1.2
20	7	1	0.6
21	8	0	-0.3
22	5	2	1.5
23	13	1	0.9
24	14	1	0.3
25	15	1	0.9
		MIN	-1.5
		MAX	1.5
		MEAN	-0.2
		SD	1.1
		Transuranic DCGL_w	20

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PRE-DEMOLITION SURVEY FOR AREA 2/GROUP 3

Survey Area: 2 Survey Unit: 779-A-003 Classification: 3
 Building: T779A
 Survey Unit Description: Interior & Exterior
 Total Area: 930 sq. m. Total Floor Area: 118 sq. m.

T779A Exterior



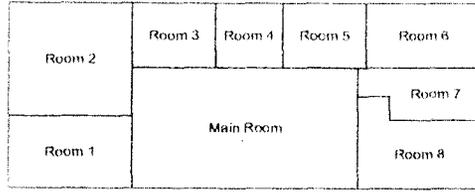
Scan Area

<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Smear & TSA Location Smear, TSA & Sample Location Open/Inaccessible Area Area in Another Survey Unit 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>N</p>	<p>0 FEET 30</p> <p>0 METERS 10</p>	<p>U.S. Department of Energy Rocky Flats Environmental Technology Site</p>
	<p>Scan Survey Information Survey Instrument ID #(s): & RCT ID #(s): <u>1,4,9,10,11,12</u></p>	<p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p>Prepared by: GIS Dept. 303-966-7707 Prepared for:</p>	<p> CH2MHILL Communications Group</p> <p> KAISER HILL</p>

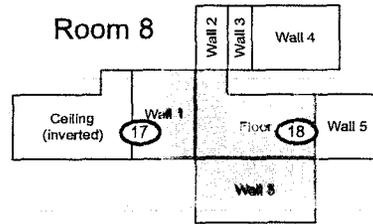
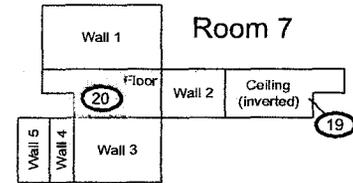
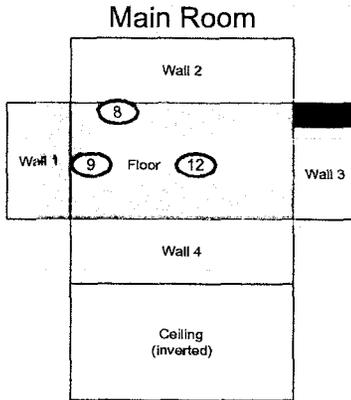
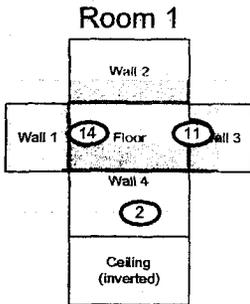
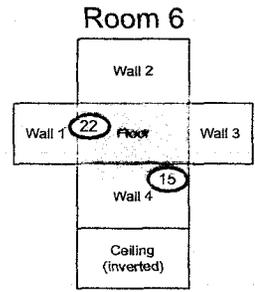
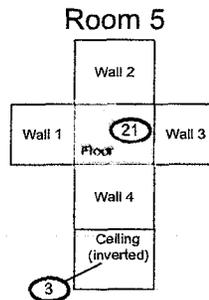
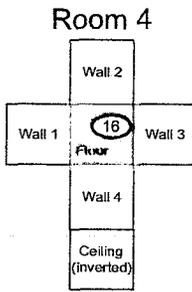
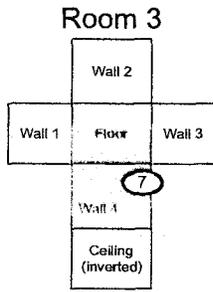
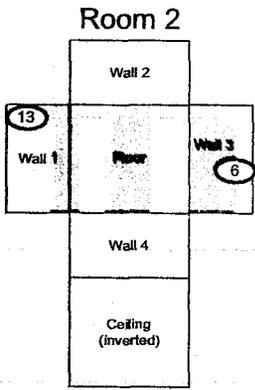
42

PRE-DEMOLITION SURVEY FOR AREA 2/GROUP 3

Survey Area: 2 Survey Unit: 779-A-003 Classification: 3
 Building: T779A
 Survey Unit Description: Interior & Exterior
 Total Area: 930 sq. m. Total Floor Area: 118 sq. m.



T779A Interior



Scan Area

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):
1,4,9,10,11,12

N
↑

0 FEET 30

 0 METERS 10

1 inch = 24 feet 1 grid sq. = 1 sq. m.

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

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

CH2MHILL
 Communications Group

MAP ID: 02-0223\T779A-IN-SC February 20, 2003

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SURVEY UNIT 928-A-004
RADIOLOGICAL DATA SUMMARY - PDS

Survey Unit Description: B928 (Interior and Exterior)

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928-A-004
PDS Data Summary

<u>Total Surface Activity Measurements</u>			<u>Removable Activity Measurements</u>		
	25	25		25	
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-8.9	dpm/100 cm ²	MIN	-0.9	dpm/100 cm ²
MAX	56.4	dpm/100 cm ²	MAX	2.1	dpm/100 cm ²
MEAN	19.5	dpm/100 cm ²	MEAN	-0.1	dpm/100 cm ²
STD DEV	18.7	dpm/100 cm ²	STD DEV	0.8	dpm/100 cm ²
TRANSURANIC DCGL _w	100	dpm/100 cm ²	TRANSURANIC DCGL _w	20	dpm/100 cm ²

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**SURVEY UNIT 928-A-004
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	3	4
Serial #:	3126	1366	3115	1417
Cal Due Date:	6/4/03	6/26/03	6/4/03	7/28/03
Analysis Date:	3/3/03	3/3/03	3/3/03	3/3/03
Alpha Eff. (e/d):	0.225	0.219	0.228	0.217
Alpha Bkgd (cpm)	1.3	2.0	2.0	3.3
Sample Time (min)	1.5	1.5	1.5	1.5
LAB Time (min)	1.5	1.5	1.5	1.5
MDC (dpm/100cm²)	48.0	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm ²)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm ²)	Sample Net Activity (dpm/100cm ²) ^{1,2}
1	1	7.3	32.4	2.7	12.0	17.7
2	3	13.3	58.3	0.0	0.0	43.6
3	3	13.3	58.3	4.7	20.6	43.6
4	3	6.7	29.4	2.7	11.8	14.7
5	1	5.3	23.6	4.7	20.9	8.9
6	1	8.7	38.7	3.3	14.7	24.0
7	1	10.7	47.6	3.3	14.7	32.9
8	1	16.0	71.1	1.3	5.8	56.4
9	3	5.3	23.2	8.0	35.1	8.5
10	1	1.3	5.8	3.3	14.7	-8.9
11	1	11.3	50.2	0.7	3.1	35.5
12	3	9.3	40.8	4.7	20.6	26.1
13	1	4.7	20.9	2.7	12.0	6.2
14	1	4.0	17.8	2.7	12.0	3.1
15	1	6.0	26.7	3.3	14.7	12.0
16	1	4.7	20.9	1.3	5.8	6.2
17	1	3.3	14.7	2.7	12.0	0.0
18	2	14.7	67.1	5.3	24.2	52.4
19	1	3.3	14.7	6.0	26.7	0.0
20	1	1.3	5.8	2.7	12.0	-8.9
21	1	2.7	12.0	4.7	20.9	-2.7
22	1	11.3	50.2	5.3	23.6	35.5
23	4	8.0	36.9	0.7	3.2	22.2
24	4	9.4	43.3	0.0	0.0	28.6
25	1	10.0	44.4	6.0	26.7	29.7

1 - Average LAB used to subtract from Gross Sample Activity

14.7	Sample LAB Average
MIN	-8.9
MAX	56.4
MEAN	19.5
SD	18.7
Transuranic DCGL _w	100

QC Measurements

24 QC	1	4.7	20.9	4.0	17.8	10.4
6 QC	4	3.3	15.2	0.7	3.2	4.7

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

10.5	QC LAB Average
MIN	4.7
MAX	10.4
MEAN	7.5
Transuranic DCGL _w	100

46

**SURVEY UNIT 928-A-004
RSC - DATA SUMMARY**

Manufacturer:	Eberline	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4	SAC-4
Instrument ID#:	5	6	7	8
Serial #:	767	1164	830	952
Cal Due Date:	5/13/03	6/17/03	8/25/03	7/9/03
Analysis Date:	3/3/03	3/3/03	3/3/03	3/3/03
Alpha Eff. (c/d):	0.33	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.3	0.2	0.1	0.1
Sample Time (min)	2	2	2	2
Bkgd Time (min)	10	10	10	10
MDC (dpm/100cm²)	9.0	9.0	9.0	9.0

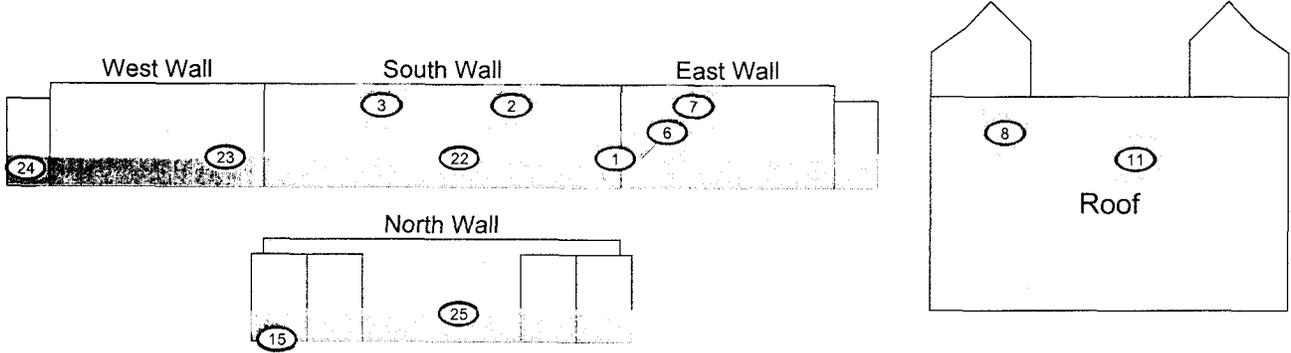
Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
1	5	2	2.1
2	6	1	0.9
3	7	1	1.2
4	8	0	-0.3
5	5	0	-0.9
6	6	0	-0.6
7	7	0	-0.3
8	8	0	-0.3
9	5	0	-0.9
10	6	0	-0.6
11	7	0	-0.3
12	8	0	-0.3
13	5	0	-0.9
14	6	0	-0.6
15	7	0	-0.3
16	8	1	1.2
17	5	0	-0.9
18	6	0	-0.6
19	7	0	-0.3
20	8	0	-0.3
21	5	0	-0.9
22	6	0	-0.6
23	7	0	-0.3
24	8	1	1.2
25	5	1	0.6
		MIN	-0.9
		MAX	2.1
		MEAN	-0.1
		SD	0.8
		Transuranic DCGL_w	20

47

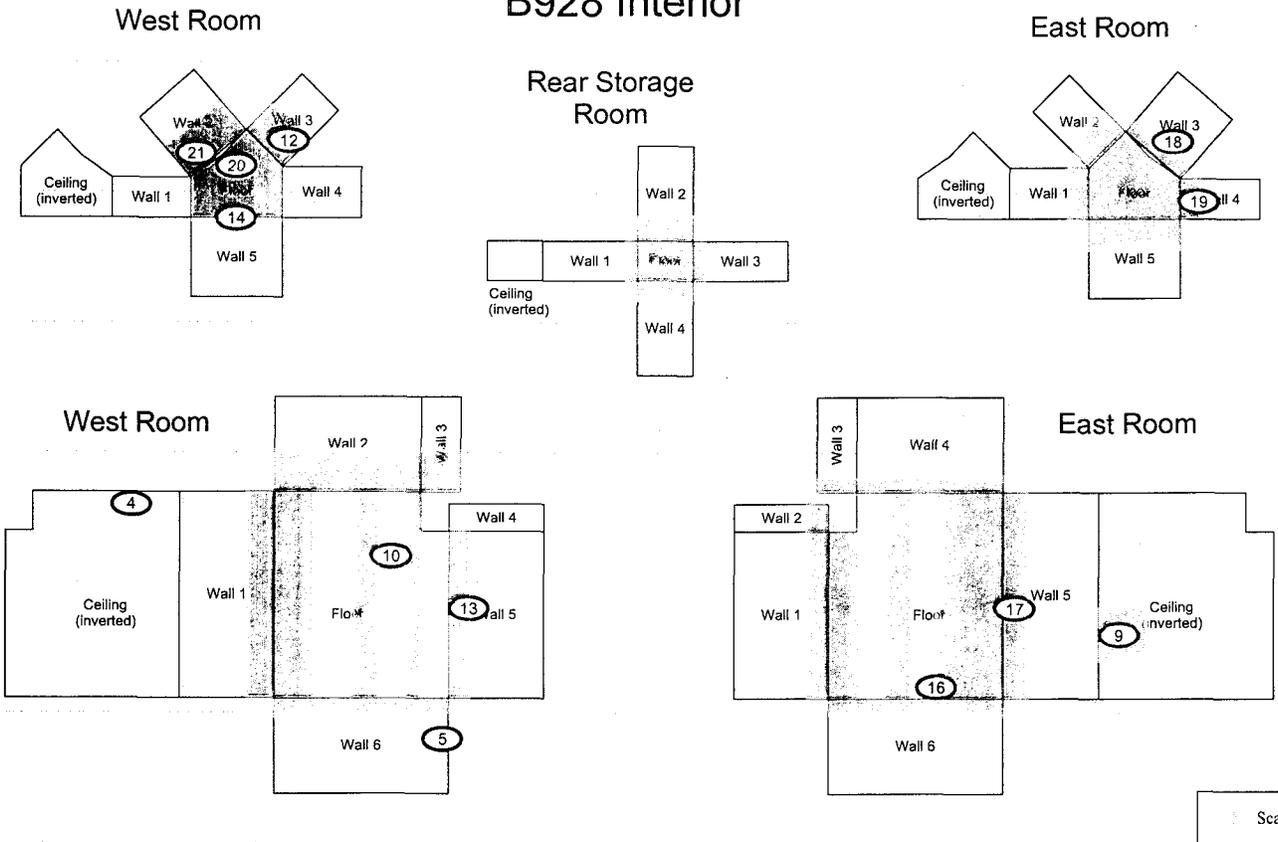
PRE-DEMOLITION SURVEY FOR AREA 2/GROUP 3

Survey Area: 2 Survey Unit: 928-A-004 Classification: 3
 Building: 928
 Survey Unit Description: Interior & Exterior
 Total Area: 892 sq. m. Total Floor Area: 133 sq. m.

B928 Exterior



B928 Interior



Scan Area

<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Smear & TSA Location Smear, TSA & Sample Location Open/Inaccessible Area Area in Another Survey Unit 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>N ↑</p>	<p>0 FEET 30</p> <p>0 METERS 10</p>	<p>U.S. Department of Energy Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707 Prepared for:</p> <p> CH2MHILL Communications Group</p> <p> KAISER HILL</p> <p>MAP ID: 02-02231928-SC March 12, 2003</p>
<p>Scan Survey Information Survey Instrument ID #(s) & RCT ID #(s): 2, 3, & 4</p>		<p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>		

ATTACHMENT D

Chemical Data Summaries and Sample Maps

Asbestos Data Summary

Sample Number	Map Survey Point Location	Room	Material Sampled & Location	Analytical Results
Building 706				
706-03112003-315-201	1	North Entry	Beige paint on exterior CMU wall	None Detected
706-03112003-315-202	2	Roof	Black tar roofing with silver paint at base of vent	15 % Chrysotile
706-03112003-315-203	3	Exterior	Beige and green paint on CMU, north wall	None Detected
706-03112003-315-204	4	Exterior	Beige and green paint on CMU, north wall	None Detected
706-03112003-315-205	5	Exterior	Beige and green paint on CMU, north wall	None Detected
706-03112003-315-206	6	Exterior	Beige and green paint on CMU, north wall	None Detected
706-03112003-315-207	7	Exterior	White caulking at window, north wall	None Detected
706-03112003-315-208	8	102	Gray window glazing, north wall	Trace of Chrysotile; < 0.25 % by Point Count
706-03112003-315-209	9	108	Gray window glazing, south wall	Trace of Chrysotile; < 0.25 % by Point Count
706-03112003-315-210	10	105	9" white, turquoise and brown vinyl floor tile with black mastic	Black Mastic, 15 % Chrysotile; White & Blue tile, 5 % Chrysotile
706-03112003-315-211	11	103	9" white and black vinyl floor tile with black mastic	Black Mastic, 15 % Chrysotile; White & Black tile, 5 % Chrysotile
706-03112003-315-212	12	102	Green paint on CMU, west wall	None Detected
706-03112003-315-213	13	100	White floor leveler in entryway	None Detected
706-03112003-315-214	14	101	Elbow < 6" OD at air handler, white friable TSI	10 % Chrysotile; 10 % Amosite
706-03112003-315-215	15	104	Valve fitting < 6" OD on DCW supply line, white friable TSI	10 % Chrysotile; 15 % Crocidolite
706-03112003-315-216	16	104	Elbow < 6" OD for DHW, white friable TSI	10 % Chrysotile; 15 % Crocidolite
706-03112003-315-217	17	104	Hard pipe insulation > 6" OD on Condensate Pumped SD PSI, gray friable TSI	20 % Amosite
706-03112003-315-218	18	104	Hard pipe insulation < 6" OD on Condensate Pumped SD PSI, gray friable TSI	22 % Amosite
706-03112003-315-219	19	104	Light blue paint on CMU, north wall	None Detected
706-03112003-315-220	20	102	Beige and green paint on CMU, north wall	None Detected
706-03112003-315-221	21	113	Beige paint on CMU, south wall	None Detected
706-03112003-315-222	22	100	Beige and green paint on CMU, east wall	None Detected
706-03112003-315-223	23	102	Blue base coat with yellow adhesive	None Detected
706-03112003-315-224	24	111	Blue base coat with yellow adhesive	None Detected
Building 928				
928-03112003-315-201	1	West	White paint on CMU, east wall	None Detected

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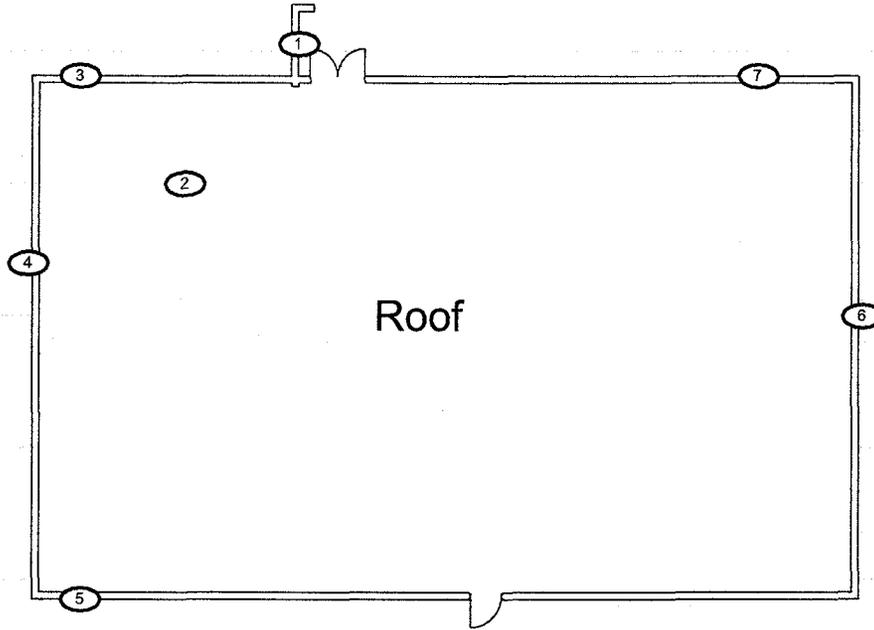
Sample Number	Map Survey Point Location	Room	Material Sampled & Location	Analytical Results
928-03112003-315-202	2	West Tank	White paint on CMU, east wall	None Detected
928-03112003-315-203	3	West	White paint on CMU, west wall	None Detected
928-03112003-315-204	4	East	White paint on CMU, east wall	None Detected
928-03112003-315-205	5	East	White paint on CMU, west wall	None Detected
Building T706A				
T706A-03112003-315-201	1	Northwest	Drywall with white orange peel texture	None Detected
T706A-03112003-315-202	2	Northwest	Drywall and joint compound with white orange peel texture	None Detected
T706A-03112003-315-203	3	Northwest	Dark brown base cove with black mastic	None Detected
T706A-03112003-315-204	4	Northwest	2' x 4' white acoustical	None Detected
Building T779A				
T779A-03112003-315-201	1	2	2' x 4' white acoustical drop ceiling tile with texture	None Detected
T779A-03112003-315-202	2	Main	2' x 4' white acoustical drop ceiling tile with texture	None Detected
T779A-03112003-315-203	3	2	Drywall	None Detected
T779A-03112003-315-204	4	Main	Drywall	None Detected
T779A-03112003-315-205	5	2	Dark brown base cove with black mastic	None Detected

CHEMICAL SAMPLE MAP

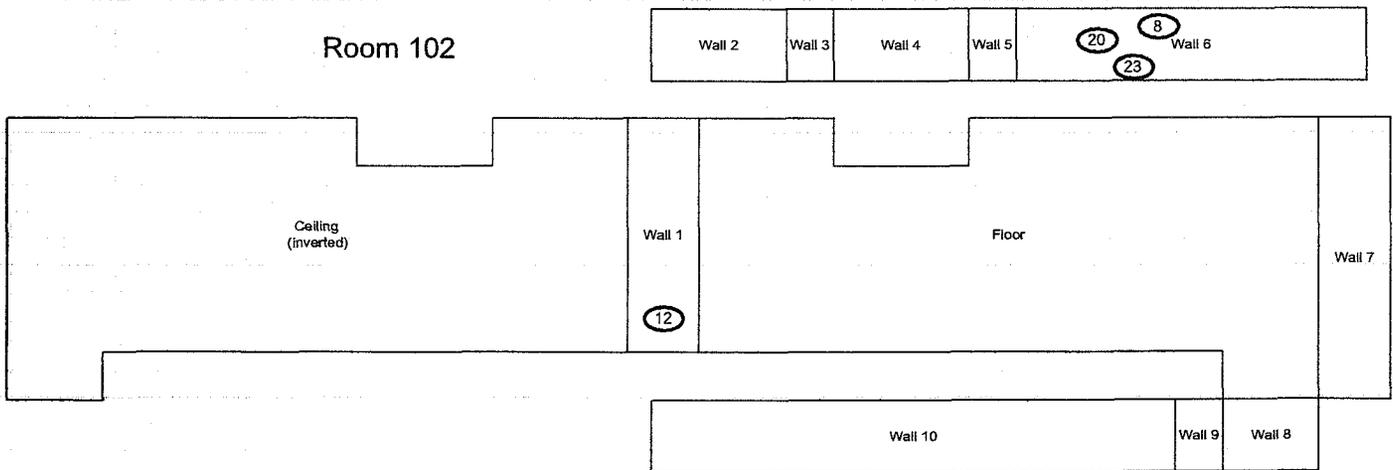
Building 706 Interior Asbestos

PAGE 1 OF 2

B706 Exterior



B706 Interior



<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>N</p>	<p>0 FEET 30</p> <p>0 METERS 10</p> <p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p style="text-align: center;">U.S. Department of Energy 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 style="text-align: center;">MAP ID: 02-0223\706-IN1-ASB March 25, 2003</p>
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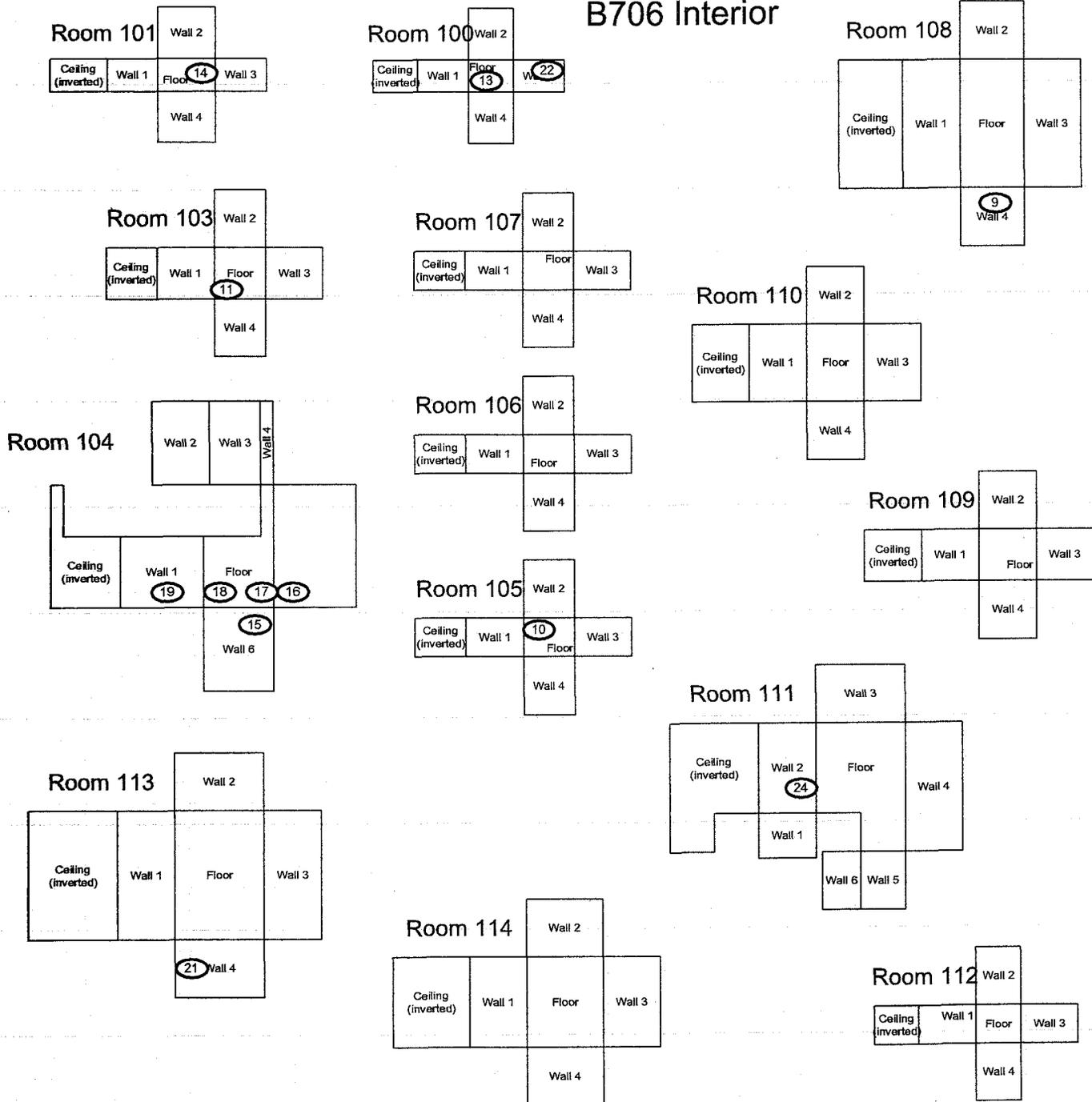
52

CHEMICAL SAMPLE MAP

Building 706 Interior Asbestos

PAGE 2 OF 2

B706 Interior



<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>N</p>	<p style="text-align: center;">0 FEET 30</p> <p style="text-align: center;">0 METERS 10</p> <p style="text-align: center;">1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p>U.S. Department of Energy 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: 02-02231706-IN2-ASB March 25, 2003</p>
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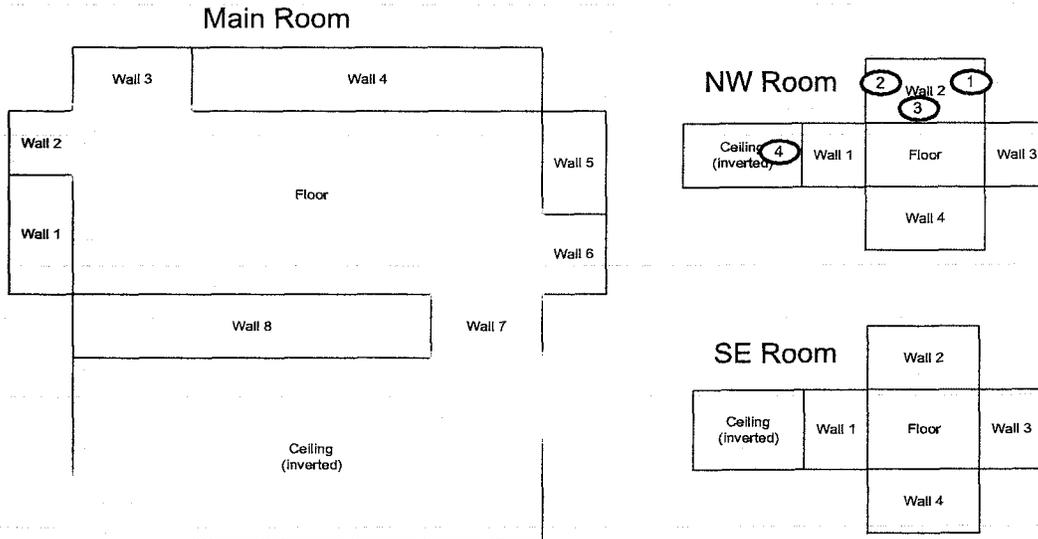
53

CHEMICAL SAMPLE MAP

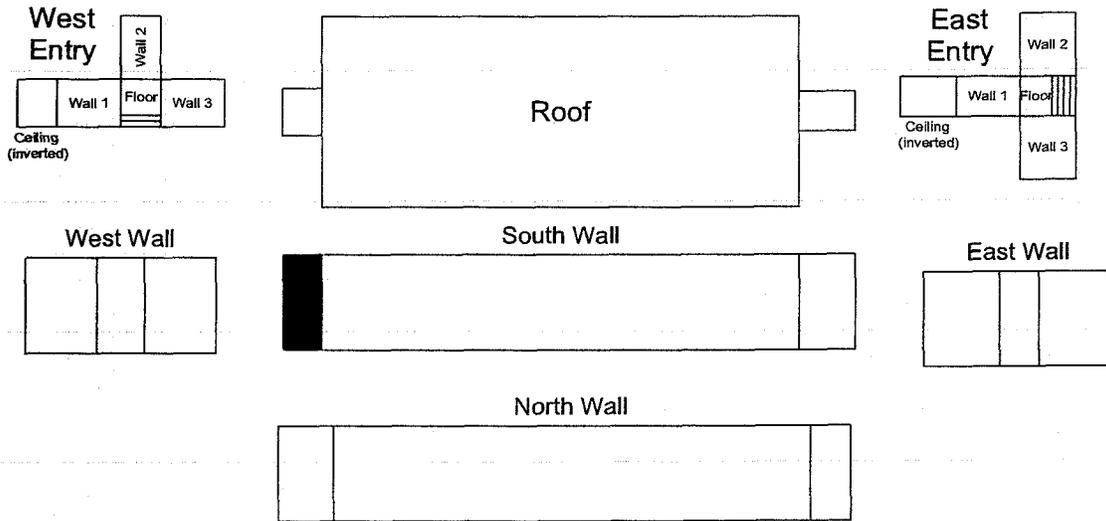
Building T706A Interior Asbestos

PAGE 1 OF 1

T706A Interior



T706A Exterior



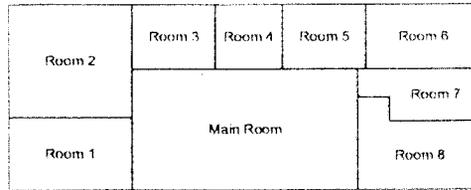
<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their 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>N</p>	<p>0 FEET 30</p> <p>0 METERS 10</p> <p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p>U.S. Department of Energy Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707 Prepared for:</p> <p> CH2MHILL Communications Group</p> <p> KAISER HILL</p> <p>MAP ID: 02-0223\T760A-ASB March 25, 2003</p>
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54

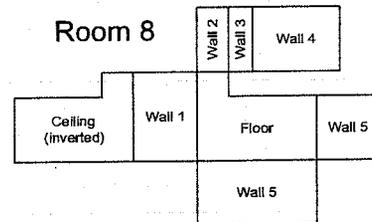
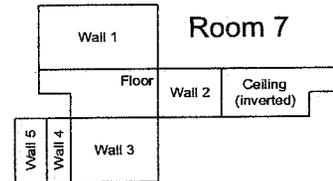
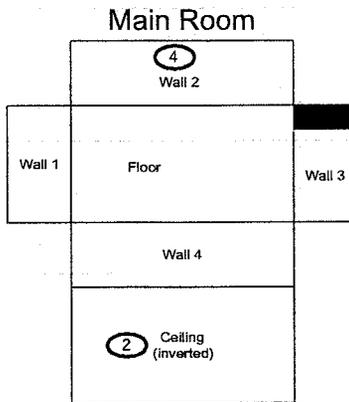
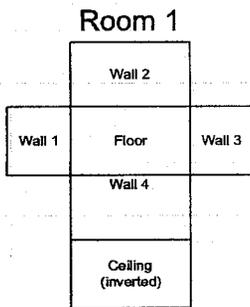
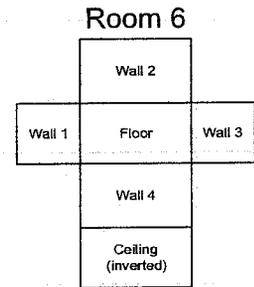
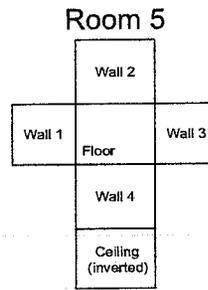
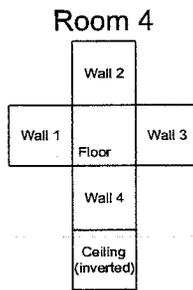
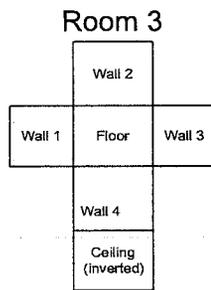
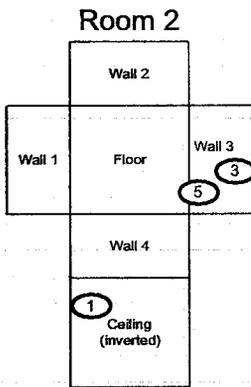
CHEMICAL SAMPLE MAP

**Building: T779A Interior
Asbestos**

PAGE 1 OF 1



T779A Interior



<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>N</p>	<p style="text-align: center;">0 FEET 30</p> <p style="text-align: center;">0 METERS 10</p>	<p>U.S. Department of Energy 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>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p> <p>MAP ID: 02-0223\T779A-ASB March 25, 2003</p>
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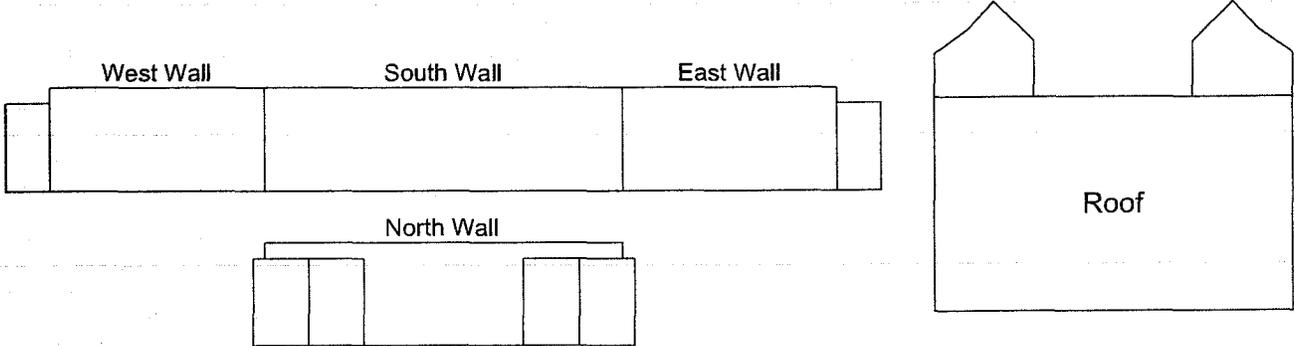
55

CHEMICAL SAMPLE MAP

Building 928 Interior Asbestos

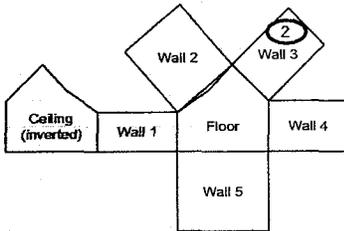
PAGE 1 OF 1

B928 Exterior

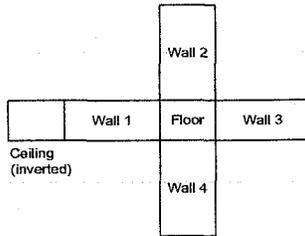


B928 Interior

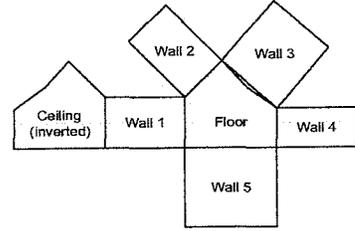
West Tank Room



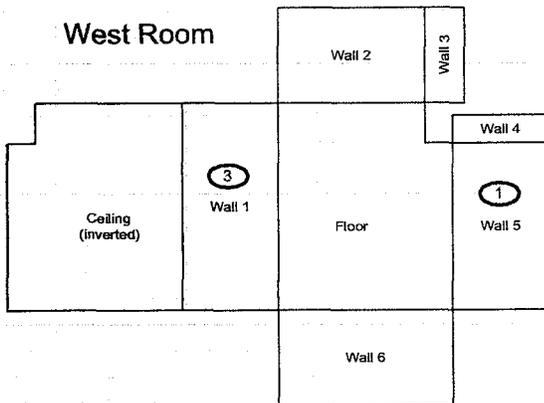
Rear Storage Room



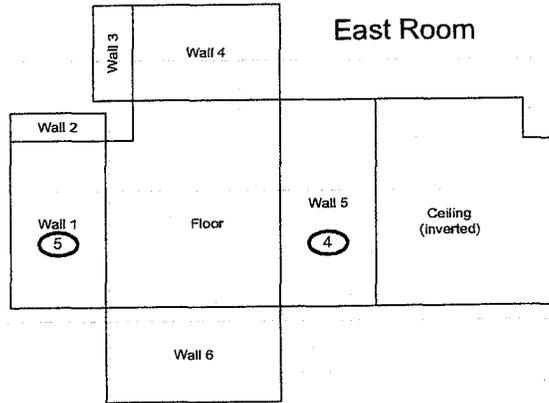
East Tank Room



West Room



East Room



<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>N</p>	<p>0 FEET 30</p> <p>0 METERS 10</p> <p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p>U.S. Department of Energy 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: 02-0223/928-ASB March 25, 2003</p>
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Beryllium Data Summary

Sample Number	Map Survey Point Location	Room	Sample Location	Result (µg/100 cm ²)
Building 706				
706-03112003-315-101	1	101	Top of elbow in Mechanical room	<0.1
706-03112003-315-102	2	104	Top of electrical panel, west wall	<0.1
706-03112003-315-103	3	102	Louvers of HVAC supply diffuser, ceiling	<0.1
706-03112003-315-104	4	111	Top of fluorescent light fixture	<0.1
706-03112003-315-105	5	102	Top of electrical panel, north wall	<0.1
Building 928				
928-03112003-315-101	1	West	On concrete floor	<0.1
928-03112003-315-102	2	West	Top of red fire suppression line	<0.1
928-03112003-315-103	3	West Tank	Top of red fire suppression line	<0.1
928-03112003-315-104	4	East	Top of red fire suppression line	<0.1
928-03112003-315-105	5	East	Top of "Gas Mask" storage case, east wall	<0.1
Building T706A				
T706A-03112003-315-101	1	Main	Top of electrical panel, west wall	<0.1
T706A-03112003-315-102	2	Main	Inside cold air return on floor	<0.1
T706A-03112003-315-103	3	Main	Top of electrical track/window sill, north wall	<0.1
T706A-03112003-315-104	4	Main	Top of LSDW speaker, west wall	<0.1
T706A-03112003-315-105	5	Northwest	Top of cable box, north wall	<0.1
Building T779A				
T779A-03112003-315-101	1	2	Top of red Fire Alarm panel, west wall	<0.1
T779A-03112003-315-102	2	Main	Top of locker labeled "Foreman"	<0.1
T779A-03112003-315-103	3	8	Top of fluorescent light fixture	<0.1
T779A-03112003-315-104	4	7	Top of LSDW speaker, east wall	<0.1
T779A-03112003-315-105	5	Main	Top of LSDW speaker, north wall	<0.1

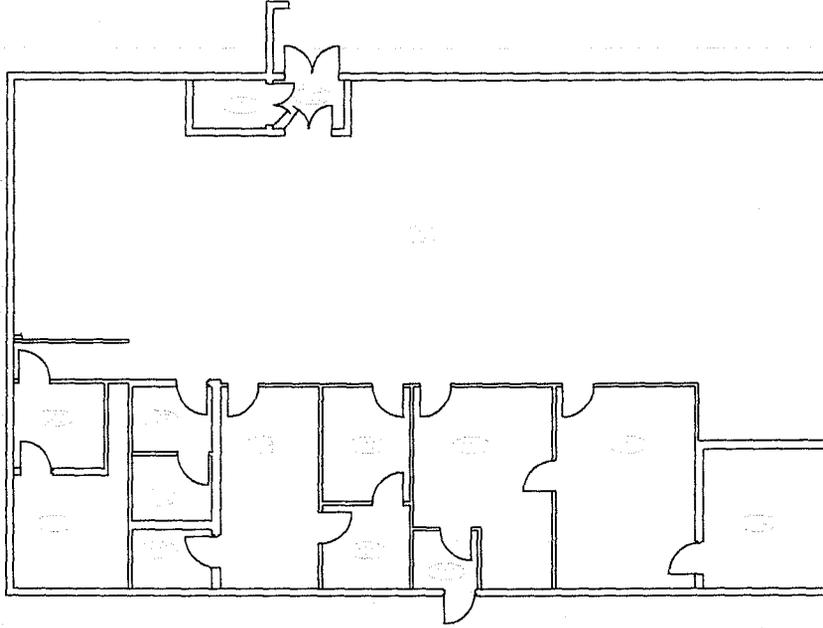
57

CHEMICAL SAMPLE MAP

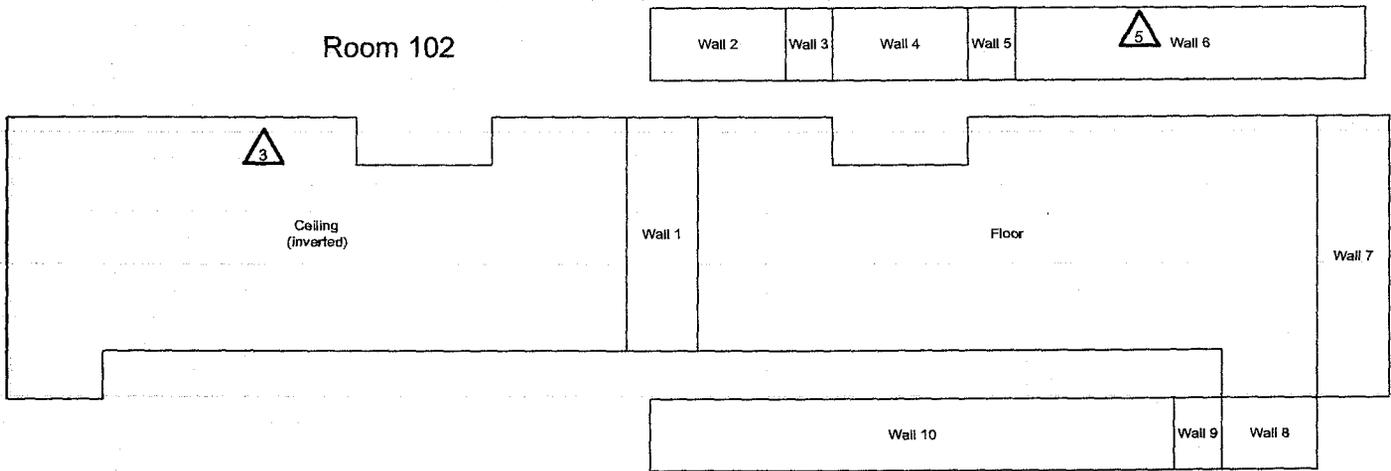
Building 706 Interior
Beryllium

PAGE 1 OF 2

B706 Floor Plan



B706 Interior



SURVEY MAP LEGEND Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location	Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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.		0 FEET 30 	U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: GIS Dept. 303-966-7707 Prepared for:
			0 METERS 10 	
Open/Inaccessible Area Area in Another Survey Unit	1 inch = 24 feet 1 grid sq. = 1 sq. m.		MAP ID: 02-02231706-IN1-BE March 25, 2003	

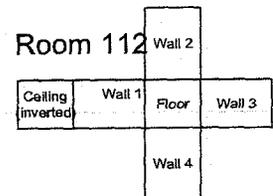
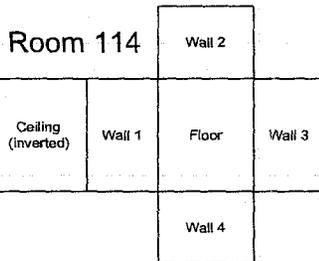
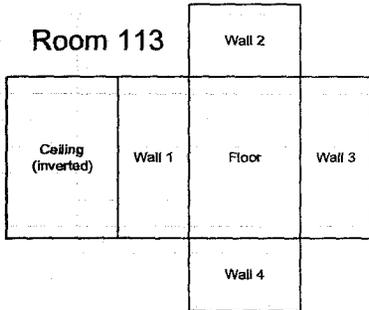
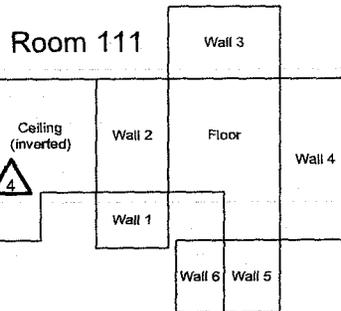
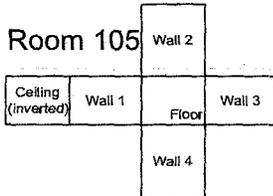
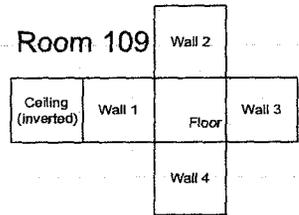
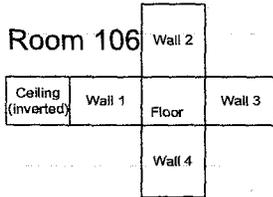
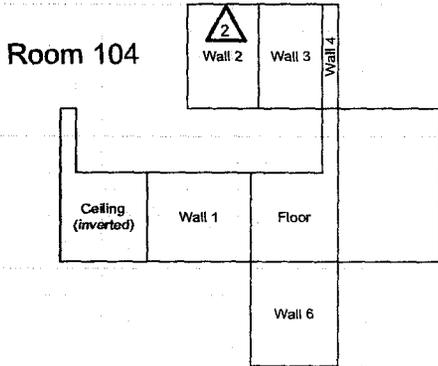
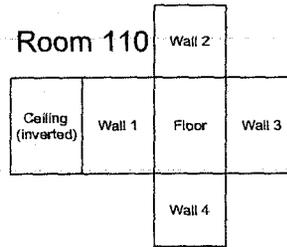
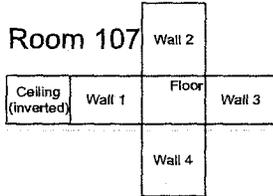
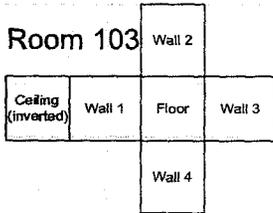
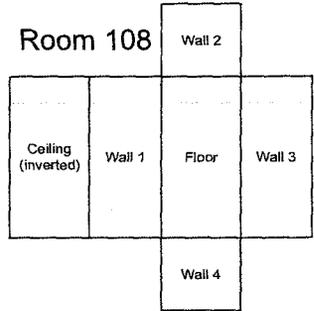
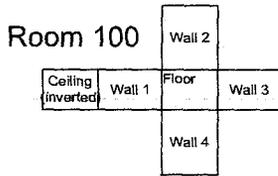
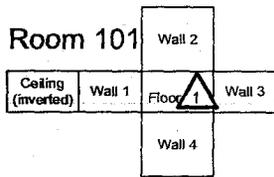
98

CHEMICAL SAMPLE MAP

Building 706 Interior Beryllium

PAGE 2 OF 2

B706 Interior



<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>N</p>	<p style="text-align: center;">0 FEET 30</p> <p style="text-align: center;">0 METERS 10</p>	<p>U.S. Department of Energy 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>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p> <p>MAP ID: 02-02231706-IN2-BE March 25, 2003</p>
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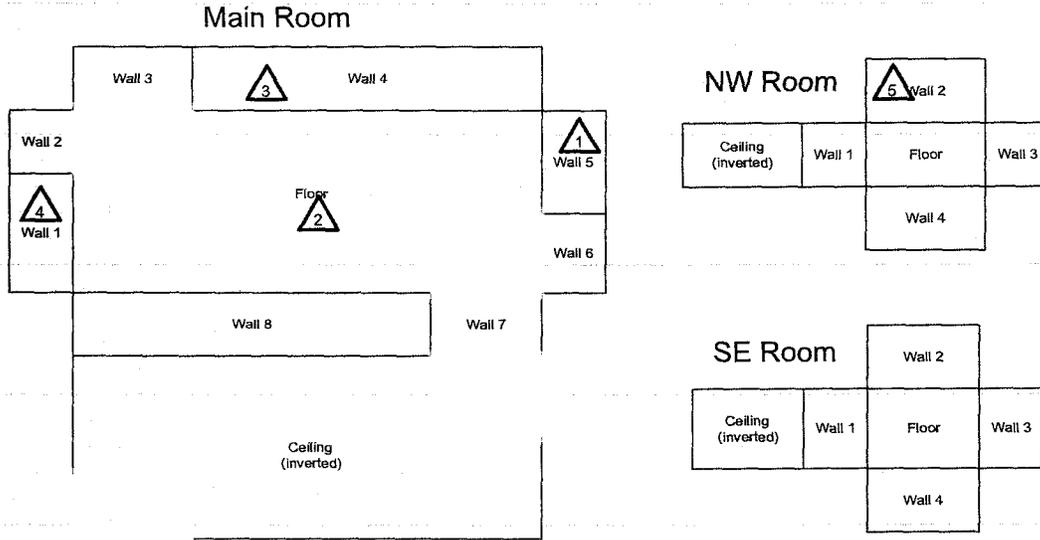
59

CHEMICAL SAMPLE MAP

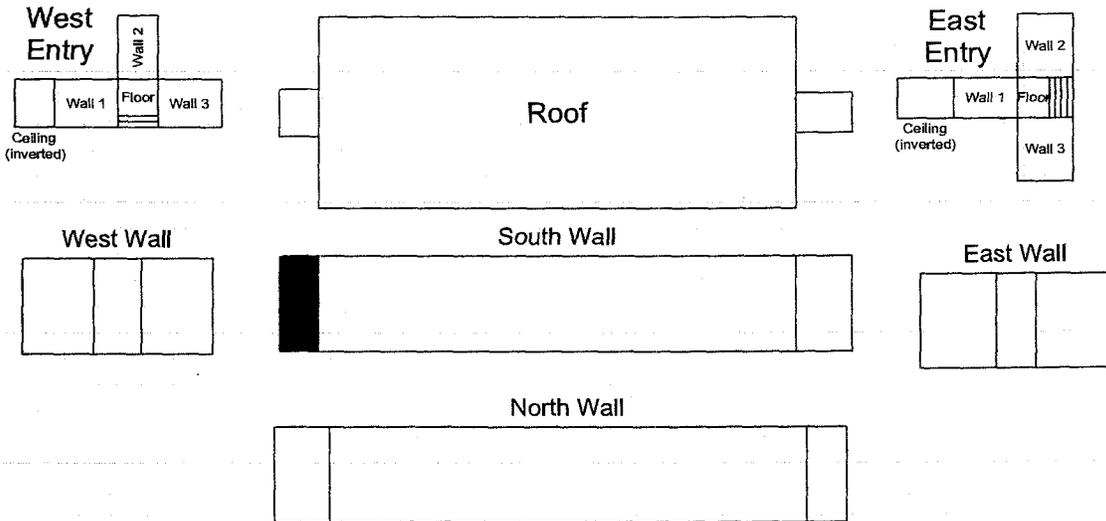
Building T706A Interior
Beryllium

PAGE 1 OF 1

T706A Interior



T706A Exterior



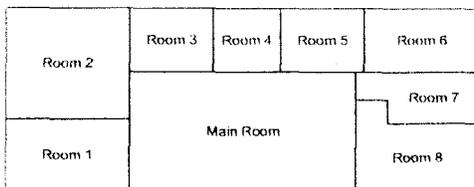
<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their 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 style="text-align: center;">N ↑</p>	<p>0 FEET 30</p> <p>0 METERS 10</p> <p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p style="text-align: center;">U.S. Department of Energy Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707 Prepared for:</p> <div style="display: flex; justify-content: space-between;">   </div> <p>MAP ID: 02-0223/T760A-BE March 25, 2003</p>
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60

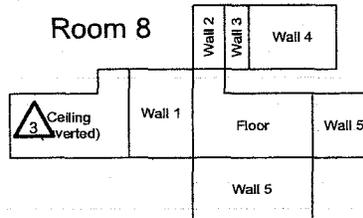
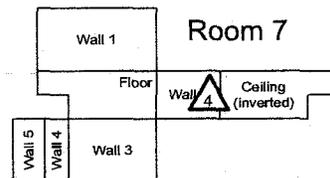
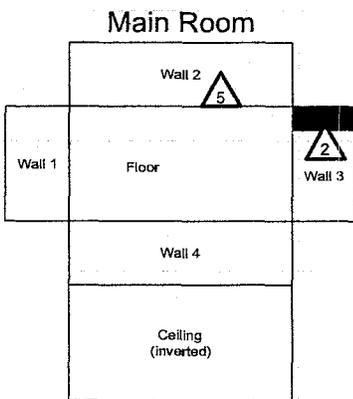
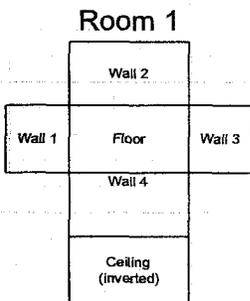
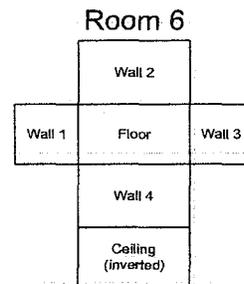
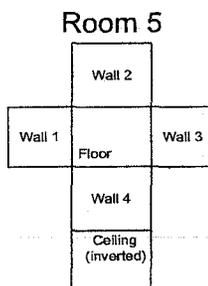
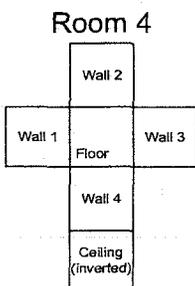
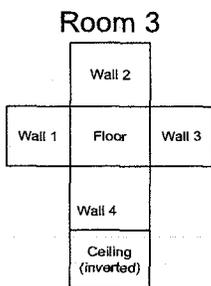
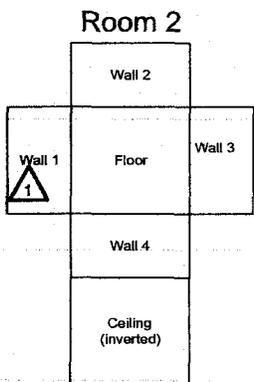
CHEMICAL SAMPLE MAP

Building T779A Interior Beryllium

PAGE 1 OF 1



T779A Interior



<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&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>N</p>	<p>0 FEET 30</p> <p>0 METERS 10</p> <p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>	<p style="text-align: center;">U.S. Department of Energy 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 style="text-align: center;">MAP ID: 02-0223\T779A-BE March 25, 2003</p>
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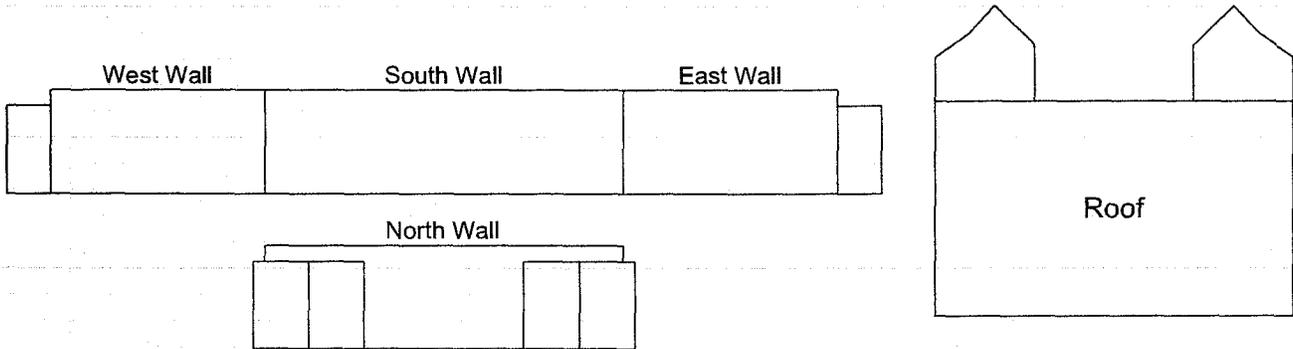
61

CHEMICAL SAMPLE MAP

Building 928 Interior Beryllium

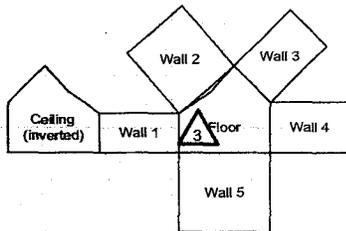
PAGE 1 OF 1

B928 Exterior

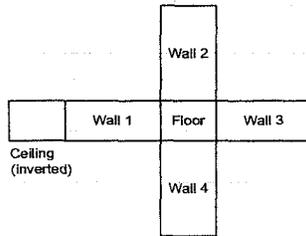


B928 Interior

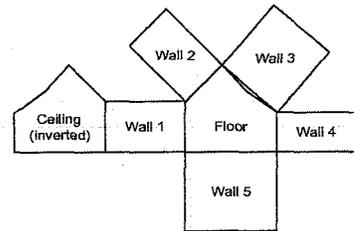
West Tank Room



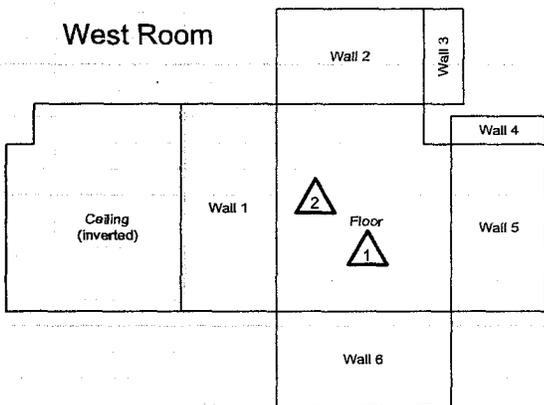
Rear Storage Room



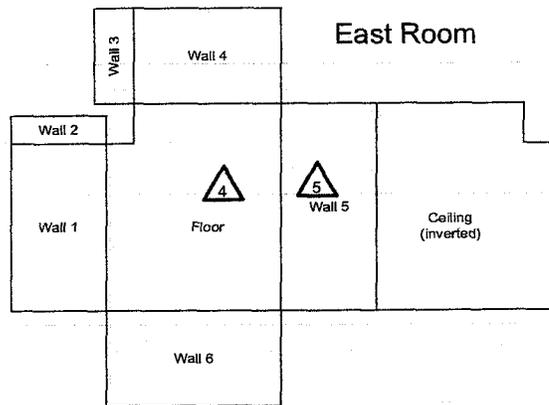
East Tank Room



West Room



East Room

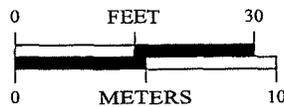


SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit



1 inch = 24 feet 1 grid sq. = 1 sq. m.

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

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2MHILL
Communications Group



MAP ID: 02-02231928-BE

March 25, 2003

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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 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 the Area 2, Group 3 facilities 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_w (100 dpm/100cm²) and the Uranium DCGL_w (5,000 dpm/100cm²) 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 uncertainties, except the following ACM:

- Asbestos containing materials (friable and Category 1 and 2 non-friable) identified in Building 706 at eight locations greater than 1% by volume will be managed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Safety (CDPHE) regulations prior to demolition activities.

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 was verified as acceptable. All results meet the PDS unrestricted release criteria.

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, the Area2, Group 3 facilities meet the unrestricted release criteria with the confidences stated herein.

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Table E-1 V&V of Radiological Results - Area 2, Group 3 Facilities

V&V CRITERIA, RADIOLOGICAL SURVEYS		K-H RSP 16.00 Series MARSSIM (NUREG-1575)		COMMENTS
QUALITY REQUIREMENTS		Measure	frequency	
ACCURACY	Parameters			
	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.)
PRECISION	field duplicate measurements for TSA	≥ 5% of real survey points	≥ 10% of reals	N/A
REPRESENTATIVENESS	MARSSIM methodology: Survey Units 706-A-001, 706-A-002, 779-A-003 and 928-A-004. Survey Maps	statistical and biased	NA	Random w/ statistical confidence.
	Controlling Documents (Characterization Pkg; RSPs)	NA	NA	Random and biased measurement locations controlled/mapped to ± 1m.
COMPARABILITY	units of measure	dpm/100cm ²	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. Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual surveys usable results vs. unusable detection limits	>95% >95%	NA	See Table E-4 for details.
SENSITIVITY		TSA: ≤ 50 dpm/100cm ² RA: ≤ 10 dpm/100cm ²	all measures	MDAs ≤ 50% DCCGL _w per MARSSIM guidelines.

Table E-2 V&V of Asbestos Results - Area 2, Group 3 Facilities

V&V CRITERIA, CHEMICAL ANALYSES ASBESTOS	METHODOLOGY METHOD: EPA 600/R-93/116	DATA PACKAGE		COMMENTS
		LAB	Frequency	
		Reservoirs Environmental, Inc	≥1	
		RIN	03Z1185	
	QUALITY REQUIREMENT	Measure	Frequency	
ACCURACY	Calibrations: Initial/continuing	Below detectable amounts	≥1	Semi-quantitative, per (microscopic) visual estimation.
PRECISION	Actual Number Sampled LCSD Lab duplicates	all below detectable amounts	≥ 38 samples	Semi-quantitative, per (microscopic) visual estimation.
REPRESENTATIVENESS	COC	Qualitative	NA	Chain-of-Custody intact: completed paperwork, containers w/ custody seals.
	Hold times/preservation	Qualitative	NA	N/A
COMPARABILITY	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	See original Chemical Characterization Package (planning document); for field/sampling procedures (located in project file); thorough documentation of the planning, sampling/analysis process, and data reduction into formats.
	Measurement Units	% by bulk volume	NA	Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	Qualitative	NA	See Table E-4; final number of samples at Certified Inspector's discretion.
SENSITIVITY	Detection limits	<1% by volume	all measures	N/A

Table E-3 V&V of Beryllium Results - Area 2, Group 3 Facilities

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE	
BERYLLIUM	Prep: NMAM 7300 METHOD: OSHA ID-125G	LAB ---->	Johns Manville, Littleton, Co. 03Z1186
QUALITY REQUIREMENTS		Measure	frequency
ACCURACY	Calibrations	linear calibration	≥1
	Initial	80%<%R<120%	≥1
	Continuing	80%<%R<120%	≥1
	LCS/MS	<MDL	≥1
	Blanks - lab & field	NA	NA
PRECISION	interference check std (ICP)	80%<%R<120% (RPD<20%)	≥1
	LCSD	all results < RL	≥1
	field duplicate	Qualitative	NA
REPRESENTATIVENESS	COC	Qualitative	NA
	hold times/preservation	Qualitative	NA
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA
COMPARABILITY	measurement units	ug/100cm ²	NA
COMPLETENESS	Plan vs. Actual samples	>95%	NA
	usable results vs. unusable	>95%	NA
SENSITIVITY	detection limits	MDL of	
		0.012 ug/100cm ²	all measures
		<p>COMMENTS</p> <p>No qualifications significant enough to change project decisions, i.e., classification of Type 1 facilities confirmed. All results were below associated action levels.</p>	

Table E-4 Data Completeness Summary - Area 2, Group 3 Facilities

ANALYTE	Building/Area /Unit	Sample Number Planned (Real & QC) ^A	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Asbestos	Building 706	19 biased (interior)	24 biased (interior)	ACM present, > 1% by volume (8 locations)	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116 RIN03Z1185 Eight locations identified with ACM greater than 1% by volume: range of 5% to 15% Chrysotile, 10% to 20% Amosite and 15% Crocidolite. The ACM will be managed and disposed of in accordance with CDPHE Regulation 8 requirements.
Asbestos	T760A	6 biased (interior)	4 biased (interior)	No ACM present, all results < 1% by volume	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116
Asbestos	T779A	6 biased (interior)	5 biased (interior)	No ACM present, all results < 1% by volume	RIN03Z1185 40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116
Asbestos	Building 928	6 biased (interior)	5 biased (interior)	No ACM present, all results < 1% by volume	RIN03Z1185 40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116
Beryllium	Building 706	5 biased (interior)	5 biased (interior)	No contamination found, all results are less than associated action levels	RIN03Z1185 OSHA ID-125G – RIN03Z1186 No results above action level (0.2ug/100cm ²) or investigative level (0.1 ug/100cm ²).
Beryllium	T706A	5 biased (interior)	5 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G – RIN03Z1186 No results above action level (0.2ug/100cm ²) or investigative level (0.1 ug/100cm ²).

Table E-4 Data Completeness Summary - Area 2, Group 3 Facilities

ANALYTE	Building/Area /Unit	Sample Number Planned (Real & QC) ^A	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Beryllium	T779A	5 biased (interior)	5 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G - RIN03Z1186 No results above action level (0.2ug/100cm ²) or investigative level (0.1 ug/100cm ²).
Beryllium	Building 928	5 biased (interior)	5 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G - RIN03Z1186 No results above action level (0.2ug/100cm ²) or investigative level (0.1 ug/100cm ²).
Radiological	Survey Area 2 Survey Unit: 706-A-001 Building 706 (interior and exterior)	30 α TSA (15 random and 15 biased) and 30 α Smears (15 random and 15 biased) 2 QC TSA 5% scan	30 α TSA (15 random and 15 biased) and 30 α Smears (15 random and 15 biased) 2 QC TSA 5% scan	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.
Radiological	Survey Area 2 Survey Unit: 706-A-002 T706A (interior and exterior)	30 α TSA (15 random and 15 biased) and 30 α Smears (15 random and 15 biased) 2 QC TSA 5% scan	30 α TSA (15 random and 15 biased) and 30 α Smears (15 random and 15 biased) 2 QC TSA 5% scan	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.

Table E-4 Data Completeness Summary - Area 2, Group 3 Facilities

ANALYTE	Building/Area /Unit	Sample Number Planned (Real & QC) ^A	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Radio logical	Survey Area 2 Survey Unit: 779-A-003 T779A (interior and exterior)	25 α TSA (15 random and 10 biased) and 25 α Smears (15 random and 10 biased) 2 QC TSA 5% scan	25 α TSA (15 random and 10 biased) and 25 α Smears (15 random and 10 biased) 2 QC TSA 5% scan	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable. Initial Sample Net Activity at location #23 (126.0 dpm/100 cm ²) greater than the Transuranic DCGL _w (100 dpm/100 cm ²). Location was allowed to decay per RSP 16.02 and re-surveyed. Re-survey result was less than the Transuranic DCGL _w (100 dpm/100 cm ²) and is the value reported in the TSA Data Summary.
Radio logical	Survey Area 2 Survey Unit: 928-A-004 Building 928 (interior and exterior)	25 α TSA (15 random and 10 biased) and 25 α Smears (15 random and 10 biased) 2 QC TSA 5% scan	25 α TSA (15 random and 10 biased) and 25 α Smears (15 random and 10 biased) 2 QC TSA 5% scan	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.

^A Number of asbestos samples required is an estimate only, final number of samples is at the discretion of the IH.