



Rocky Flats Environmental Technology Site

TYPE 1 RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR)

AREA 5 GROUP 1 CLOSURE PROJECT Buildings 115, 116 and T117A

REVISION 0

February 25, 2003



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

ADMIN RECORD

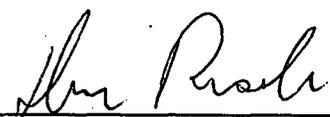
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**TYPE 1
RECONNAISSANCE LEVEL CHARACTERIZATION
REPORT (RLCR)**

**AREA 5 GROUP 1 CLOSURE PROJECT
Buildings 115, 116 and T117A**

REVISION 0

February 25, 2003

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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 5, Group 1 facilities (i.e., Buildings 115, 116 and T117A). Because these facilities were anticipated Type 1 facilities, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP) requirements. All facility surfaces were characterized in this RLC, including the interior and exterior surfaces (i.e., floor, walls, ceiling and roof). Environmental media beneath and surrounding the 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. All beryllium sample results were less than $0.1 \mu\text{g}/100\text{cm}^2$. Bulk samples of building materials suspected of containing asbestos were "None Detected". 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 can be used as backfill on site in accordance with the RFCA RSOP for Recycling Concrete.

Based upon data presented in this RLCR, the Area 5, Group 1 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 facility has been posted accordingly.

1 INTRODUCTION

A Reconnaissance Level Characterization (RLC) was performed to enable compliant disposition and waste management of the Area 5, Group 1 facilities (i.e., Buildings 115, 116 and T117A). 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 facility (i.e., floor, walls, ceiling and roof). 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.

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed, among these are the Area 5, Group 1 facilities. The location of these facilities is shown in Attachment A, *Facility Location Map*. These facilities no longer support the RFETS mission and require removal to reduce Site infrastructure, risks and/or operating costs.

Before these facilities can be removed, a Reconnaissance Level Characterization (RLC) must be conducted; this document presents the RLC results. The RLC was conducted pursuant to the Decontamination and Decommissioning Characterization Protocol (MAN-077-DDCP) and the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). The RLC 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 unrestricted release limits for radiological and non-radiological contaminants. RLC results will enable project personnel to make final disposition decisions, develop related worker health and safety controls, and estimate waste volumes by waste types.

1.2 Scope

This report presents the pre-demolition radiological and chemical conditions of the Area 5, Group 1 facilities. Environmental media beneath and surrounding the facility is 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.

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2 HISTORICAL SITE ASSESSMENT

A facility-specific Historical Site Assessment (HSA) was conducted to understand the facility histories and related hazards. The assessment consisted of facility walk-downs, interviews, and document review, including review of the Historical Release Report (refer to the D&D Characterization Protocol, MAN-077-DDCP). These assessments were used to identify data gaps and needs, and to develop radiological and chemical characterization plans. The facility-specific HSAs were documented in a *Historical Site Assessment Report (HSAR) for the Area 5, Group 1 facilities*, dated August 2002, Revision 0. Refer to Attachment B, *Historical Site Assessment Report*, for a copy of the facility-specific HSAR. In summary, the HSAR did not identify any potential for radiological and chemical hazards in the Area 5, Group 1 facilities.

3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

The Area 5, Group 1 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).

Three radiological survey packages were developed for the interiors of the Area 5, Group 1 facilities. The 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*.

One hundred ninety-eight (198) TSA measurements (66 random, 30 biased, 90 equipment and 12 QC) and one hundred eighty-six (186) RSA measurements (66 random, 30 biased, 90 equipment) were performed, and a minimum of 5% of the facility surfaces were scanned on the interior of each facility. 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.

The exterior radiological surveys for the Area 5, Group 1 facilities were performed as part of the RISS West Side Exterior PDS strategy effort (authorized by Department of Energy letter, *02-DOE-01598*, dated December 13th, 2002 and approved by CDPHE letter, *RE: Proposed Deviations From The Pre-Demolition Survey Plan (PDSP)*, dated January 27, 2003; refer to the RISS Characterization Project Files for letter copies). The RISS West Side exterior building radiological surveys and locations can be found in survey unit package EXT-B-001, *RISS West Side Building Exteriors*. Six (6) biased TSA measurements, six (6) biased RSA measurements, and a one (1) square meter scan at each of the six TSA/RSA locations were performed at biased locations on the exterior surfaces of the Area 5, Group 1 facilities. In addition, ten percent scan surveys were performed, and nine (9) biased TSA and RSA measurements were collected at biased locations on the exterior concrete surfaces of the Area 5, Group 1 facilities (e.g., sidewalks, loading docks, entryways, etc.). The RLC data collected in exterior survey unit package EXT-B-001 confirmed that the exterior surfaces of these facilities do not contain radiological contamination above the surface contamination guidelines provided in the PDSP. Radiological survey data, statistical analysis results, and survey map locations for the West-Side Exterior survey unit package EXT-B-001 are maintained in the RISS Characterization Project files.

4 CHEMICAL CHARACTERIZATION AND HAZARDS

The Area 5, Group 1 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, the justification for the sample locations and estimated sample numbers. Contaminants of concern included asbestos, beryllium, RCRA/CERCLA constituents, lead and PCBs. Refer to Attachment D, *Chemical Data Summaries and Sample Maps*, for details on sample results and sample locations.

4.1 Asbestos

A survey of building materials suspected of containing asbestos were conducted in the Area 5, Group 1 facilities in accordance with the RLCP. A CDPHE-certified asbestos inspector conducted the inspection and sampling in accordance with the *Asbestos Characterization Protocol, PRO-563-ACPR, Revision 1*. Building materials suspected of containing asbestos were identified for sampling at the discretion of the inspector.

A comprehensive, invasive asbestos inspection was conducted to determine the presence of friable and non-friable asbestos containing building materials. All bulk samples of building materials suspected of containing asbestos were negative ("None Detected"). Asbestos laboratory analysis data and sample location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps*.

4.2 Beryllium (Be)

Based on the HSAR and personnel interviews, the Area 5, Group 1 facilities are 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 $0.1 \mu\text{g}/100\text{cm}^2$ and meet the unrestricted release limits. 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 a review of the HSAR and facility walk-downs, there are no RCRA/CERCLA concerns in the Area 5, Group 1 facilities. Therefore, RCRA/CERCLA constituent sampling was not performed in these facilities as part of the RLC.

Sampling for lead in paint in the Area 5, Group 1 facilities was not performed based on the age of these buildings (constructed after 1980). 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 Area 5, Group 1 facilities may contain RCRA regulated materials such as fluorescent lights and circuit boards. A thorough inspection of each facility will be made, and all regulated materials will be removed, prior to demolition.

4.4 Polychlorinated Biphenyls (PCBs)

Based on the HSARs, interviews and facility walk-downs of the Area 5, Group 1 facilities, PCB-containing equipment was never present in the buildings. Therefore, PCB sampling was not performed in these facilities as part of this RLC.

Based on the age of Area 5, Group 1 facilities (constructed after 1980), paints used do not contain PCBs. Because these 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. Ballasts that do not indicate non PCB-containing are assumed to be PCB-containing. Ballasts that are identified as PCB containing and are leaking will be removed prior to demolition. Non leaking PCB ballasts can remain in the building and be disposed of as PCB Bulk Product Waste.

5 PHYSICAL HAZARDS

Physical hazards associated with the Area 5, Group 1 facilities consist of those common to standard industrial environments and include hazards associated with energized systems, utilities, and trips and falls. The facilities have been relatively well maintained and are in good physical condition, 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 5, Group 1 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 5, Group 1 facilities will generate a variety of wastes. Estimated waste types and waste volumes are presented below. All waste can be disposed of as sanitary waste, except PCB Bulk Product Waste. There is no radioactive or hazardous waste. PCB ballasts will be managed pursuant to Site PCB abatement and waste management procedures.

Waste Volume Estimates and Material Types							
Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste
115	8000	400	1800	3100	4200	0	None
116	8000	300	2300	1500	4200	0	None
T117A	0	3500	1500	3000	4500	0	None

8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, the Area 5, Group 1 facilities are classified as RFCA Type 1 facilities pursuant to the RFETS Decommissioning Program Plan (DPP; K-H, 1999) and are acceptable for demolition. The Type 1 classification is based on a review of historical and process knowledge, and newly acquired RLC data.

The RLC of the Area 5, Group 1 facilities was performed in accordance with the DDCP and PDSP requirements. All PDSP DQOs were met, and all data satisfied the PDSP DQA criteria. The Area 5, Group 1 facilities do not contain radiological or hazardous waste. Any PCB ballast materials 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 can be used as backfill on site in accordance with the RFCA RSOP for Recycling Concrete. Environmental media beneath and surrounding the facility will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

To ensure the Area 5, Group 1 facilities remain free of contamination and RLC data remain valid, Level 2 isolation controls have been established with the required postings to prevent the inadvertent introduction of contaminants.

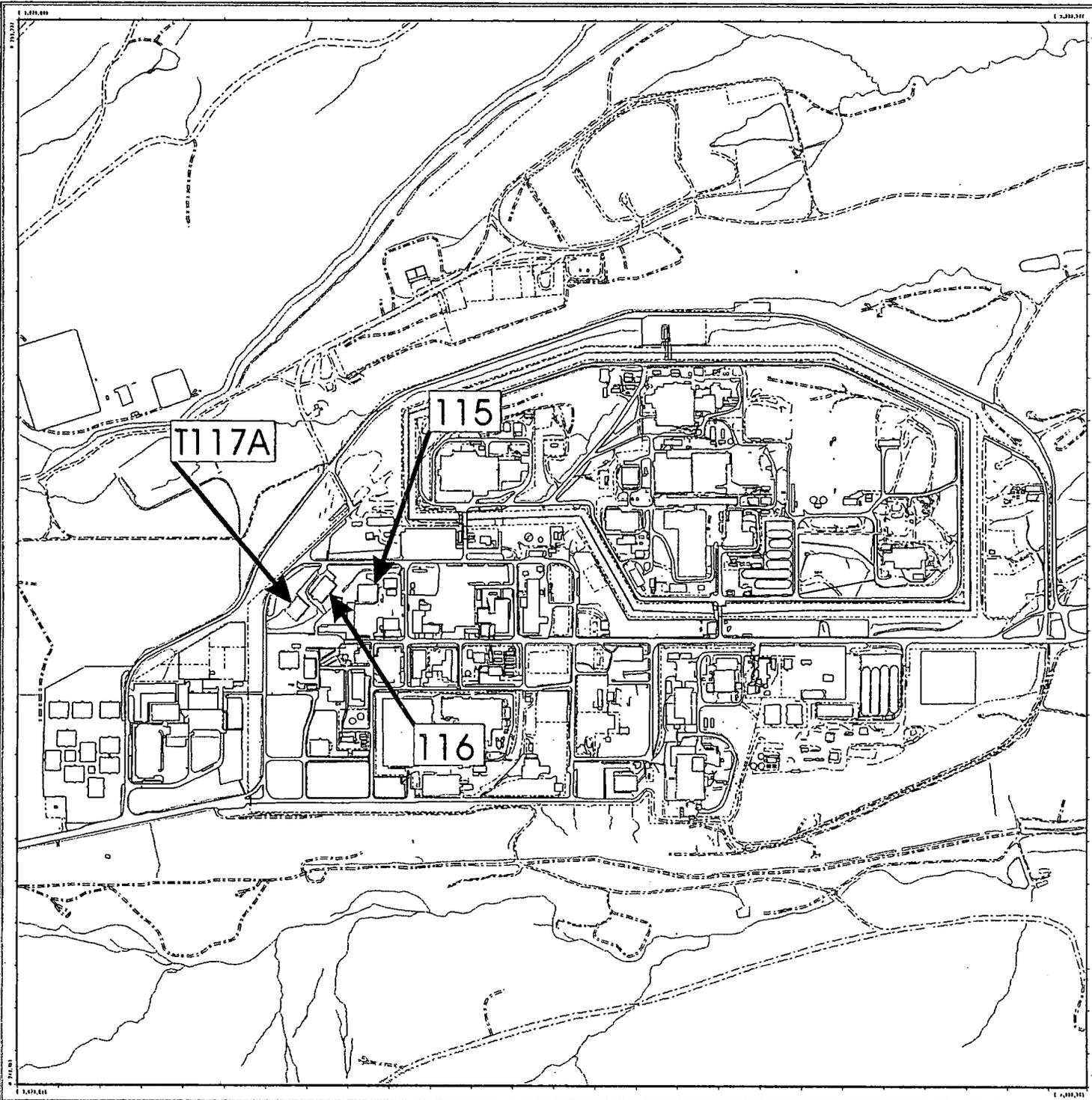
9 REFERENCES

- DOE/RFEO, 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 5 Group 1 Facilities*, dated August 2002, Revision 0.

ATTACHMENT A

Facility Location Map

H



Building Cluster 115, 116, & T117A

Standard Map Features

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

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



Scale - 1 : 12460
1 inch represents approximately 1038 feet



State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

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

Prepared by:
DynCorp
THE ART OF TECHNOLOGY

Prepared for:

Kaiser-Hill
February 18, 2003

MAP ID: FY 2002

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ATTACHMENT B

Historical Site Assessment Report

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

Facility ID: (AREA 5 GROUP 1) Trailer T117A, and Buildings 115 and 116.

Anticipated Facility Type (1, 2, or 3): Trailer T117A, and Buildings 115 and 116 are anticipated Type 1 facilities.

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

Trailers T117A

T117A is a 15,400 square-foot general field office trailer and was acquired in 1991. This modular trailer is approximately 120-feet wide by 130-feet long and is located south of Building 115. T117A has corrugated metal siding with corrugated metal skirting. The entrances have wooden stairs leading to a wooded enclosure.

The interior is primarily a cubical layout, but has several hard-walled offices, conference rooms, and rest rooms. Interior walls are wallboard, the ceiling is a drop ceiling with acoustical tiles and recessed lights. The floor is primarily covered with carpet except in the bathrooms and dock entranceways, which are covered with vinyl tile.

Trailer T117A has the following utilities: electrical, plant water, plant sanitary, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

Building 115

Building 115 is a 16,960 square foot general office Building. This Building is constructed of prefabricated insulated metal panels with a chipped -rock exterior coating, mounted to a metal frame. The building is constructed on a concrete slab. Building 115 houses the Emergency Operation Center (EOC), which is a fortified area within the building. The EOC houses a large amount of electronic surveillance and security equipment. The EOC area also has its own ventilation system and an emergency generator.

Building 115 has the following utilities: electrical, plant water, plant sanitary, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

Building 116

Building 116 is a 16,700 square foot general office Building. The building is steel-framed building with metal siding mounted to the steel frame. Building 116 was constructed on a concrete pad and has an insulated metal roof mounted to steel trusses.

Building 116 has the following utilities: electrical, plant water, plant sanitary, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

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Historical Operations

Trailers T117A

T117A has historically been used as a general office trailer. Trailer T117A has housed organizations such as DOE, Worldwide Security, KH legal, and KH Strategic planning and Integration. T117A has never housed any hazardous or radiological operations.

Building 115

Building 115 housed the site's Emergency Operations Center (EOC). The EOC area has fortified walls that enclose a large amount of electronic surveillance and security equipment. The EOC area also has its own ventilation system and an emergency generator. In addition, Building 115 has several general support offices. These offices have housed organizations such as DOE, KH Safeguards and Security personnel, and Senior KH Management. This building has never housed any hazardous or radiological operations.

Building 116

Building 116 is a general office building and has housed operations such as DOE, ES&Q, Radiological Safety, Regulatory Compliance and RISS Project Management personnel. This building has never housed any hazardous or radiological operations.

Current Operational Status

Trailer T117A, Building 115 and Building 116 are all operational.

Contaminants of Concern

Asbestos

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

None of the facilities in this HSA have asbestos postings. None of the Facilities in this HSA have had a comprehensive building inspection performed.

Beryllium (Be)

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

None of the buildings addressed in this HSA are on the List of known Be Areas.

Summarize any recent Be sampling results:

There have been no recent Be samples collected on any of these facilities.

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Lead

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

Based on the age of the facilities addressed in this HSA, lead in paint should not be a concern. No processes containing lead were conducted in these facilities.

RCRA/CERCLA Constituents

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

None of the facilities addressed in this HSA have handles or stored any RCRA/CERLA constituents other than general cleaning supplies.

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

None of the facilities in this HSA have had any spills.

Describe methods in which spills were mitigated, if any:

None of the facilities in this HSA have had any spills.

PCBs

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

PCBs were not handled in any of the facilities addressed in this HSA. Based on the age of construction of these facilities, PCBs in paint should not be an issue.

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

No PCB spills occurred in any of the facilities addressed in this HSA.

Describe methods in which spills were mitigated, if any:

No PCB spills occurred in any of the facilities addressed in this HSA.

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Radiological Contaminants

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

None of the Buildings in this HSA have radiological postings. There have been no radiological operations in any of the facilities addressed in this HSA.

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

No radiological material has been stored or handled in any of the facilities addressed in this HSA.

Describe methods in which spills were mitigated, if any:

No radiological material has been stored or handled in any of the facilities addressed in this HSA.

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

No radiological material has been stored or handled in any of the facilities addressed in this HSA.

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

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

Environmental Restoration Concerns

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

Building 116 is located near the following PAC:

- 1) PAC 100-602 "Hydraulic Oil Spill", NFA approved 1992.

Building 155 and trailer T117A are not located near or associated with any IHSSs, PACs, and UBCs.

Additional Information

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

None

References

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

Sources reviewed to complete this HSA were the RFETS Facility List, the Historical Release Report, Site Master List of RCRA Units, and the Site IHSS, PAC, and UBC databases. None of the buildings in this HSA have WSRICs. In addition, a facility walkdown and interviews were performed.

Waste Volume Estimates and Material Types

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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)
Trailer T177A	None	3500	1500	3000	4500	TBD	N/A
Building 115	8000	400	1800	3100	4200	TBD	N/A
Building 116	8000	300	2300	1500	4200	TBD	N/A

Further Actions

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

Begin the RLC/PDS process.

Note:

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

Prepared By:

Doug Bryant
Name



Signature

August 2002
Date

ATTACHMENT C

Radiological Data Summaries and Survey Maps

**SURVEY UNIT 115-A-001
RADIOLOGICAL DATA SUMMARY - PDS**

Survey Unit Description: B115 (Interior)

115-A-001
PDS Data Summary

Total Surface Activity Measurements

62	62
Number Required	Number Obtained

MIN	-17.3	dpm/100 cm ²
MAX	79.5	dpm/100 cm ²
MEAN	8.4	dpm/100 cm ²
STD DEV	18.4	dpm/100 cm ²

TRANSURANIC DCGL _w	100	dpm/100 cm ²
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Removable Activity Measurements

62	62
Number Required	Number Obtained

MIN	-1.5	dpm/100 cm ²
MAX	4.5	dpm/100 cm ²
MEAN	0.4	dpm/100 cm ²
STD DEV	1.4	dpm/100 cm ²

TRANSURANIC DCGL _w	20	dpm/100 cm ²
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**SURVEY UNIT 115-A-001
TSA - DATA SUMMARY**

Manufacturer:	NE Tech					
Model:	DP-6	DP-6	DP-6	DP-6	DP-6	DP-6
Instrument ID#:	1	3	4	5	8	10
Serial #:	1379	3115	1366	2344	1366	1261
Cal Due Date:	6/3/03	6/4/03	6/26/03	7/16/03	6/26/03	6/19/03
Analysis Date:	1/29/03	1/29/03	1/29/03	1/29/03	1/29/03	2/3/03
Alpha Eff. (c/d):	0.214	0.228	0.219	0.224	0.219	0.207
Alpha Bkgd (cpm)	0.7	0.7	1.3	4.7	1.3	0.0
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	4	3.3	15.1	4.7	21.5	-2.2
2	4	2.7	12.3	6.0	27.4	-4.9
3	5	9.3	41.5	7.3	32.6	24.3
4	4	11.3	51.6	4.7	21.5	34.3
5	5	9.3	41.5	7.3	32.6	24.3
6	4	8.7	39.7	6.7	30.6	22.5
7	4	3.3	15.1	7.3	33.3	-2.2
8	4	12.7	58.0	6.0	27.4	40.7
9	5	8.0	35.7	2.0	8.9	18.5
10	4	7.3	33.3	5.3	24.2	16.1
11	5	2.0	8.9	2.0	8.9	-8.3
12	4	6.7	30.6	8.0	36.5	13.3
13*	5	2.0	8.9	0.7	3.1	-8.3
14	5	6.7	29.9	6.0	26.8	12.6
15	4	11.3	51.6	8.0	36.5	34.3
16	3	4.0	17.5	4.0	17.5	0.3
17	4	14.7	67.1	8.0	36.5	49.9
18	5	12.7	56.7	2.7	12.1	39.4
19	5	3.3	14.7	4.0	17.9	-2.5
20	4	11.3	51.6	8.0	36.5	34.3
21	4	4.0	18.3	2.0	9.1	1.0
22	1	3.3	15.4	6.0	28.0	-1.8
23	4	8.0	36.5	8.0	36.5	19.3
24	1	3.3	15.4	2.7	12.6	-1.8
25	3	8.0	35.1	4.0	17.5	17.8
26*	3	3.3	14.5	2.0	8.8	-2.8
27	3	4.7	20.6	4.7	20.6	3.3
28	3	3.3	14.5	6.7	29.4	-2.8
29	3	6.7	29.4	5.3	23.2	12.1
30	3	10.0	43.9	2.7	11.8	26.6
31	3	8.6	37.7	5.3	23.2	20.5
32	3	4.7	20.6	4.0	17.5	3.3
33	1	0.0	0.0	0.0	0.0	-17.3
34	1	2.0	9.3	2.0	9.3	-7.9
35	1	0.7	3.3	1.3	6.1	-14.0

**SURVEY UNIT 115-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}
36	1	2.0	9.3	1.3	6.1	-7.9
37	1	5.3	24.8	1.3	6.1	7.5
38	1	1.3	6.1	0.0	0.0	-11.2
39	1	2.0	9.3	0.7	3.3	-7.9
40	1	5.3	24.8	1.3	6.1	7.5
41	1	1.3	6.1	2.7	12.6	-11.2
42	1	20.7	96.7	2.7	12.6	79.5
43	1	0.7	3.3	0.7	3.3	-14.0
44	1	1.3	6.1	2.0	9.3	-11.2
45	1	4.7	22.0	1.3	6.1	4.7
46	1	9.3	43.5	4.7	22.0	26.2
47	1	5.3	24.8	6.0	28.0	7.5
48	1	0.7	3.3	0.7	3.3	-14.0
49	1	2.7	12.6	0.7	3.3	-4.6
50	1	4.0	18.7	2.7	12.6	1.4
51	1	6.0	28.0	6.0	28.0	10.8
52	1	8.7	40.7	2.0	9.3	23.4
53	1	4.0	18.7	2.0	9.3	1.4
54	1	5.3	24.8	5.3	24.8	7.5
55	1	9.0	42.1	2.7	12.6	24.8
56	1	6.0	28.0	2.7	12.6	10.8
57	1	0.0	0.0	0.7	3.3	-17.3
58	1	2.7	12.6	3.3	15.4	-4.6
59	1	4.7	22.0	4.7	22.0	4.7
60	1	6.7	31.3	6.7	31.3	14.0
61	1	1.3	6.1	0.7	3.3	-11.2
62	3	6.7	29.4	4.0	17.5	12.1

1 - Average LAB used to subtract from Gross Sample Activity

17.3	Sample LAB Average
MIN	-17.3
MAX	79.5
MEAN	8.4
SD	18.4
Transuranic DCGL _w	100

QC Measurements

25 QC	6	6.7	30.6	8.0	36.5	7.5
50 QC	6	6.7	30.6	8.0	36.5	7.5
32 QC	10	4.0	19.3	0.0	0.0	-3.8
42 QC	10	6.7	32.4	4.0	19.3	9.3

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

23.1	QC LAB Average
MIN	-3.8
MAX	9.3
MEAN	5.1
Transuranic DCGL _w	100

**SURVEY UNIT 115-A-001
RSC - DATA SUMMARY**

Manufacturer:	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4
Instrument ID#:	7	8	9
Serial #:	767	1164	833
Cal Due Date:	5/13/03	6/17/03	2/28/03
Analysis Date:	1/30/03	1/30/03	1/30/03
Alpha Eff. (c/d):	1/0/00	0.33	0.33
Alpha Bkgd (cpm)	0.2	0.1	0.5
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	8	0	-0.3
2	9	1	0.0
3	7	2	2.4
4	8	2	2.7
5	9	4	4.5
6	7	2	2.4
7	8	1	1.2
8	9	1	0.0
9	7	1	0.9
10	8	0	-0.3
11	9	0	-1.5
12	7	0	-0.6
13	8	0	-0.3
14	9	1	0.0
15	7	0	-0.6
16	8	0	-0.3
17	9	1	0.0
18	7	2	2.4
19	8	0	-0.3
20	9	0	-1.5
21	7	2	2.4
22	8	1	1.2
23	9	1	0.0
24	7	2	2.4
25	8	1	1.2
26	9	0	-1.5
27	7	0	-0.6
28	8	1	1.2
29	9	2	1.5
30	7	3	3.9
31	8	0	-0.3
32	7	0	-0.6
33	8	1	1.2
34	9	1	0.0
35	7	2	2.4
36	8	1	1.2
37	9	0	-1.5
38	7	0	-0.6
39	8	0	-0.3
40	9	1	0.0
41	7	0	-0.6
42	8	0	-0.3

**SURVEY UNIT 115-A-001
RSC - DATA SUMMARY**

43	9	3	3.0
44	7	1	0.9
45	8	0	-0.3
46	9	2	1.5
47	7	1	0.9
48	8	0	-0.3
49	9	0	-1.5
50	7	1	0.9
51	8	0	-0.3
52	9	0	-1.5
53	7	0	-0.6
54	8	0	-0.3
55	9	2	1.5
56	7	2	2.4
57	8	0	-0.3
58	9	0	-1.5
59	7	1	0.9
60	8	0	-0.3
61	9	0	-1.5
62	7	1	0.9
		MIN	-1.5
		MAX	4.5
		MEAN	0.4
		SD	1.4
		Transuranic DCGL_w	20

**SURVEY UNIT 116-A-002
RADIOLOGICAL DATA SUMMARY - PDS**

Survey Unit Description: B116 (Interior)

116-A-002
PDS Data Summary

<u>Total Surface Activity Measurements</u>			<u>Removable Activity Measurements</u>		
	63	63		63	63
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-9.2	dpm/100 cm ²	MIN	-0.9	dpm/100 cm ²
MAX	66.5	dpm/100 cm ²	MAX	5.2	dpm/100 cm ²
MEAN	17.4	dpm/100 cm ²	MEAN	0.2	dpm/100 cm ²
STD DEV	19.1	dpm/100 cm ²	STD DEV	1.2	dpm/100 cm ²
TRANSURANIC DCGL _w	100	dpm/100 cm ²	TRANSURANIC DCGL _w	20	dpm/100 cm ²

**SURVEY UNIT 116-A-002
TSA - DATA SUMMARY**

Manufacturer:	NE Tech	NE Tech	NE Tech
Model:	DP-6	DP-6	DP-6
Instrument ID#:	5	6	8
Serial #:	1261	1366	1261
Cal Due Date:	6/19/03	6/26/03	6/19/03
Analysis Date:	2/4/03	2/4/03	2/4/03
Alpha Eff. (c/d):	0.207	0.219	0.207
Alpha Bkgd (cpm)	1.3	2.7	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	5	4.0	19.3	2.7	13.0	0.5
2	6	3.3	15.1	5.3	24.2	-3.8
3	6	13.3	60.7	7.3	33.3	41.9
4	6	8.7	39.7	8.0	36.5	20.9
5	6	11.3	51.6	6.7	30.6	32.7
6	6	2.3	10.5	4.7	21.5	-8.4
7	6	18.7	85.4	5.3	24.2	66.5
8	5	3.3	15.9	3.3	15.9	-2.9
9	5	8.0	38.6	2.7	13.0	19.8
10	6	3.3	15.1	6.0	27.4	-3.8
11	8	2.7	13.0	1.3	6.3	-5.8
12	5	4.0	19.3	0.7	3.4	0.5
13	6	8.7	39.7	6.7	30.6	20.9
14	6	7.3	33.3	5.3	24.2	14.5
15	5	4.0	19.3	4.0	19.3	0.5
16	5	2.0	9.7	2.0	9.7	-9.2
17	6	10.7	48.9	8.0	36.5	30.0
18	5	10.7	51.7	2.7	13.0	32.8
19	6	7.3	33.3	7.3	33.3	14.5
20	6	7.3	33.3	7.3	33.3	14.5
21	6	9.3	42.5	4.7	21.5	23.6
22	6	10.7	48.9	8.0	36.5	30.0
23	5	2.3	11.1	2.0	9.7	-7.7
24	5	3.3	15.9	0.0	0.0	-2.9
25	5	2.0	9.7	1.3	6.3	-9.2
26	5	2.7	13.0	2.0	9.7	-5.8
27	5	4.0	19.3	2.0	9.7	0.5
28	5	6.0	29.0	1.3	6.3	10.1
29	5	5.7	27.5	3.2	15.5	8.7
30	5	3.3	15.9	4.7	22.7	-2.9
31	5	11.3	54.6	4.0	19.3	35.7
32	5	8.0	38.6	2.7	13.0	19.8

**SURVEY UNIT 116-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}
33	5	2.7	13.0	5.3	25.6	-5.8
34	6	7.3	33.3	4.7	21.5	14.5
35	5	2.7	13.0	4.7	22.7	-5.8
36	5	6.7	32.4	2.7	13.0	13.5
37	6	11.3	51.6	3.3	15.1	32.7
38	6	12.7	58.0	6.7	30.6	39.1
39	6	15.3	69.9	4.7	21.5	51.0
40	6	12.0	54.8	4.7	21.5	35.9
41	5	4.0	19.3	1.3	6.3	0.5
42	5	12.7	61.4	4.7	22.7	42.5
43	5	10.0	48.3	2.7	13.0	29.5
44	5	9.3	44.9	4.0	19.3	26.1
45	5	8.0	38.6	2.0	9.7	19.8
46	5	6.7	32.4	3.2	15.5	13.5
47	5	9.0	43.5	2.0	9.7	24.6
48	6	10.0	45.7	7.3	33.3	26.8
49	6	6.0	27.4	4.7	21.5	8.5
50	6	16.0	73.1	6.7	30.6	54.2
51	6	14.0	63.9	8.0	36.5	45.1
52	5	8.7	42.0	2.7	13.0	23.2
53	5	10.7	51.7	2.0	9.7	32.8
54	5	12.0	58.0	4.7	22.7	39.1
55	6	12.0	54.8	5.3	24.2	35.9
56	5	9.3	44.9	4.0	19.3	26.1
57	6	16.0	73.1	8.0	36.5	54.2
58	6	11.3	51.6	5.3	24.2	32.7
59	5	3.3	15.9	0.7	3.4	-2.9
60	5	4.7	22.7	0.7	3.4	3.8
61	8	2.7	13.0	0.7	3.4	-5.8
62	8	2.7	13.0	0.7	3.4	-5.8
63	5	8.0	38.6	3.3	15.9	19.8

1 - Average LAB used to subtract from Gross Sample Activity

18.9	Sample LAB Average
MIN	-9.2
MAX	66.5
MEAN	17.4
SD	19.1
Transuranic DCGL _w	100

QC Measurements

57 QC	8	2.7	13.0	4.7	22.7	-2.2
13 QC	8	3.3	15.9	3.3	15.9	0.7
39 QC	8	4.7	22.7	3.3	15.9	7.5
50 QC	8	5.3	25.6	1.3	6.3	10.4

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

15.2	QC LAB Average
MIN	-2.2
MAX	10.4
MEAN	4.1
Transuranic DCGL _w	100

**SURVEY UNIT 116-A-002
RSC - DATA SUMMARY**

Manufacturer:	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4
Instrument ID#:	9	10	11
Serial #:	767	1164	833
Cal Due Date:	5/13/03	6/17/03	2/28/03
Analysis Date:	2/5/03	2/5/03	2/5/03
Alpha Eff. (c/d):	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.1	0.0	0.3
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	9	0	-0.3
2	10	1	1.5
3	11	1	0.6
4	12	0	-0.9
5	9	1	1.2
6	10	0	0.0
7	11	0	-0.9
8	12	0	-0.9
9	9	1	1.2
10	10	0	0.0
11	11	0	-0.9
12	12	0	-0.9
13	9	0	-0.3
14	10	0	0.0
15	11	4	5.2
16	12	0	-0.9
17	9	1	1.2
18	10	1	1.5
19	11	0	-0.9
20	12	0	-0.9
21	9	0	-0.3
22	10	0	0.0
23	9	0	-0.3
24	9	2	2.7
25	10	0	0.0
26	11	1	0.6
27	12	0	-0.9
28	9	0	-0.3
29	10	1	1.5
30	11	0	-0.9
31	12	0	-0.9
32	9	1	1.2
33	10	0	0.0
34	11	1	0.6
35	12	0	-0.9
36	9	2	2.7
37	10	0	0.0
38	11	2	2.1
39	12	1	0.6
40	9	1	1.2
41	10	0	0.0
42	11	0	-0.9
43	12	0	-0.9
44	9	0	-0.3
45	10	0	0.0
46	11	0	-0.9
47	9	0	-0.3
48	10	1	1.5
49	11	0	-0.9
50	12	0	-0.9
51	9	0	-0.3
52	10	0	0.0
53	11	0	-0.9

**SURVEY UNIT 116-A-002
RSC - DATA SUMMARY**

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
54	12	0	-0.9
55	11	1	0.6
56	12	1	0.6
57	12	0	-0.9
58	11	1	0.6
59	10	0	0.0
60	9	0	-0.3
61	12	1	0.6
62	11	1	0.6
63	10	2	3.0
		MIN	-0.9
		MAX	5.2
		MEAN	0.2
		SD	1.2
		Transuranic DCGL_w	20

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**SURVEY UNIT T117A-A-003
RADIOLOGICAL DATA SUMMARY - PDS**

Survey Unit Description: T117A (Interior)

T117A-A-003
PDS Data Summary

<u>Total Surface Activity Measurements</u>			<u>Removable Activity Measurements</u>		
	61	61		61	61
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-14.4	dpm/100 cm ²	MIN	-0.9	dpm/100 cm ²
MAX	61.3	dpm/100 cm ²	MAX	6.1	dpm/100 cm ²
MEAN	11.7	dpm/100 cm ²	MEAN	0.5	dpm/100 cm ²
STD DEV	16.6	dpm/100 cm ²	STD DEV	1.3	dpm/100 cm ²
TRANSURANIC DCGL _w	100	dpm/100 cm ²	TRANSURANIC DCGL _w	20	dpm/100 cm ²

**SURVEY UNIT T117A-A-003
TSA - DATA SUMMARY**

Manufacturer:	NE Tech					
Model:	DP-6	DP-6	DP-6	DP-6	DP-6	DP-6
Instrument ID#:	1	2	4	5	10	11
Serial #:	1445	1366	3125	3125	1445	3125
Cal Due Date:	6/30/03	6/26/03	4/21/03	4/21/03	6/30/03	4/21/03
Analysis Date:	1/22/03	1/22/03	1/22/03	1/22/03	1/23/03	1/23/03
Alpha Eff. (c/d):	0.224	0.219	0.216	0.216	0.224	0.216
Alpha Bkgd (cpm)	2.0	3.3	1.3	1.3	2.7	1.3
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	8.0	36.5	2.7	12.3	18.9
2	2	17.3	79.0	7.3	33.3	61.3
3	1	6.7	29.9	5.3	23.7	12.2
4	1	5.3	23.7	0.7	3.1	6.0
5	2	11.3	51.6	6.7	30.6	33.9
6	1	6.7	29.9	4.0	17.9	12.2
7	1	7.3	32.6	6.0	26.8	14.9
8	2	14.0	63.9	8.0	36.5	46.3
9	1	4.0	17.9	3.3	14.7	0.2
10	1	8.7	38.8	5.3	23.7	21.2
11	2	10.0	45.7	6.0	27.4	28.0
12	2	12.7	58.0	6.7	30.6	40.3
13	2	4.0	18.3	2.7	12.3	0.6
14	1	8.0	35.7	5.3	23.7	18.0
15	2	4.7	21.5	6.7	30.6	3.8
16	1	17.3	77.2	4.7	21.0	59.6
17	2	16.0	73.1	8.0	36.5	55.4
18	2	12.0	54.8	6.7	30.6	37.1
19	1	2.7	12.1	3.3	14.7	-5.6
20	1	12.7	56.7	7.3	32.6	39.0
21	1	4.0	17.9	3.3	14.7	0.2
22	2	5.2	23.7	2.0	9.1	6.1
23	5	6.0	27.8	7.3	33.8	10.1
24	1	7.3	32.6	3.3	14.7	14.9
25	1	5.3	23.7	4.7	21.0	6.0
26	1	8.0	35.7	6.0	26.8	18.0
27	5	3.3	15.3	3.3	15.3	-2.4
28	1	5.3	23.7	5.3	23.7	6.0
29	5	3.3	15.3	1.3	6.0	-2.4
30	5	8.0	37.0	0.0	0.0	19.4
31	5	4.0	18.5	5.3	24.5	0.8
32	11	2.7	12.5	2.0	9.3	-5.2

**SURVEY UNIT T117A-A-003
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}
33	11	4.0	18.5	2.0	9.3	0.8
34	11	6.0	27.8	4.0	18.5	10.1
35	11	3.3	15.3	2.0	9.3	-2.4
36	11	2.7	12.5	2.0	9.3	-5.2
37	11	0.7	3.2	2.0	9.3	-14.4
38	11	4.0	18.5	1.3	6.0	0.8
39	11	3.3	15.3	2.7	12.5	-2.4
40	11	4.0	18.5	3.3	15.3	0.8
41	11	6.0	27.8	5.3	24.5	10.1
42	11	5.3	24.5	2.0	9.3	6.9
43	11	6.0	27.8	4.0	18.5	10.1
44	11	9.3	43.1	3.3	15.3	25.4
45	11	6.0	27.8	2.0	9.3	10.1
46	11	2.7	12.5	2.7	12.5	-5.2
47	11	3.3	15.3	2.0	9.3	-2.4
48	11	2.7	12.5	2.0	9.3	-5.2
49	11	10.0	46.3	1.3	6.0	28.6
50	11	5.3	24.5	3.3	15.3	6.9
51	11	5.3	24.5	3.3	15.3	6.9
52	11	6.0	27.8	3.3	15.3	10.1
53	11	5.3	24.5	4.0	18.5	6.9
54	4	4.0	18.5	2.0	9.3	0.8
55	4	4.0	18.5	4.7	21.8	0.8
56	4	6.7	31.0	5.3	24.5	13.3
57	4	4.7	21.8	5.3	24.5	4.1
58	4	5.3	24.5	2.0	9.3	6.9
59	4	6.0	27.8	2.0	9.3	10.1
60	4	2.7	12.5	5.3	24.5	-5.2
61	4	6.0	27.8	1.3	6.0	10.1

1 - Average LAB used to subtract from Gross Sample Activity

17.7	Sample LAB Average
MIN	-14.4
MAX	61.3
MEAN	11.7
SD	16.6
Transuranic DCGL _w	100

QC Measurements

5 QC	10	9.3	43.1	1.3	6.0	23.8
8 QC	10	10	46.3	4	18.5	27.1
18 QC	10	12	55.6	8	37.0	36.3
17 QC	10	8	37.0	3.3	15.3	17.8

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

19.2	QC LAB Average
MIN	17.8
MAX	36.3
MEAN	26.3
Transuranic DCGL _w	100

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**SURVEY UNIT T117A-A-003
RSC - DATA SUMMARY**

Manufacturer:	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4
Instrument ID#:	5	6	13
Serial #:	767	1164	833
Cal Due Date:	5/13/03	6/17/03	2/28/03
Analysis Date:	1/22/03	1/22/03	1/22/03
Alpha Eff. (e/d):	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.0	0.0	0.0
Sample Time (min)	2	2	2
Bkgd Time (min)	10	10	10
MDC (dpm/100cm²)	9.0	9.0	9.0

Manufacturer:	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4
Instrument ID#:	12	13	14
Serial #:	767	1164	833
Cal Due Date:	5/13/03	6/17/03	2/28/03
Analysis Date:	1/23/03	1/23/03	1/23/03
Alpha Eff. (e/d):	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.0	0.1	0.3
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	6	2	3.0
2	7	0	0.0
3	8	0	0.0
4	9	0	0.0
5	6	1	1.5
6	7	0	0.0
7	8	0	0.0
8	9	1	1.5
9	6	0	0.0
10	7	0	0.0
11	8	0	0.0
12	9	0	0.0
13	6	0	0.0
14	7	0	0.0
15	8	2	3.0
16	9	1	1.5
17	6	1	1.5
18	7	0	0.0
19	8	0	0.0
20	9	0	0.0
21	6	2	3.0
22	7	1	1.5
23	8	0	0.0
24	9	0	0.0
25	6	1	1.5
26	7	1	1.5
27	8	1	1.5
28	9	0	0.0
29	6	0	0.0
30	7	0	0.0
31	8	0	0.0
32	12	0	0.0
33	13	0	-0.3
34	14	0	-0.9
35	15	0	-0.9
36	12	1	1.5
37	13	0	-0.3
38	14	1	0.6
39	15	0	-0.9
40	12	1	1.5

**SURVEY UNIT T117A-A-003
RSC - DATA SUMMARY**

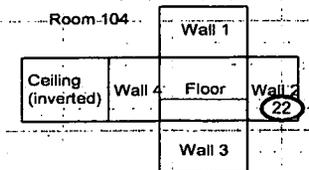
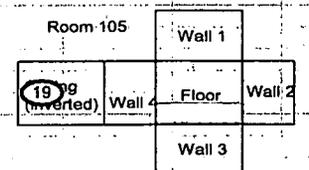
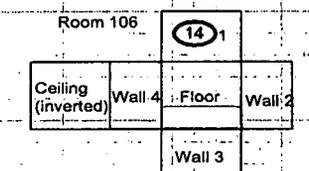
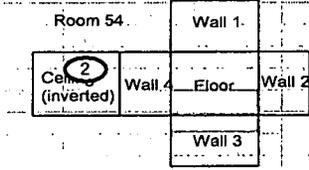
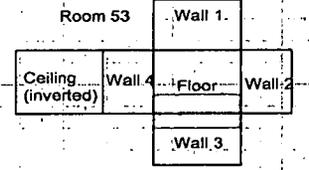
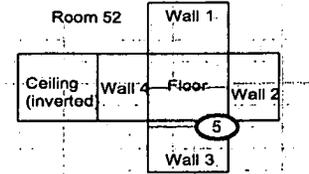
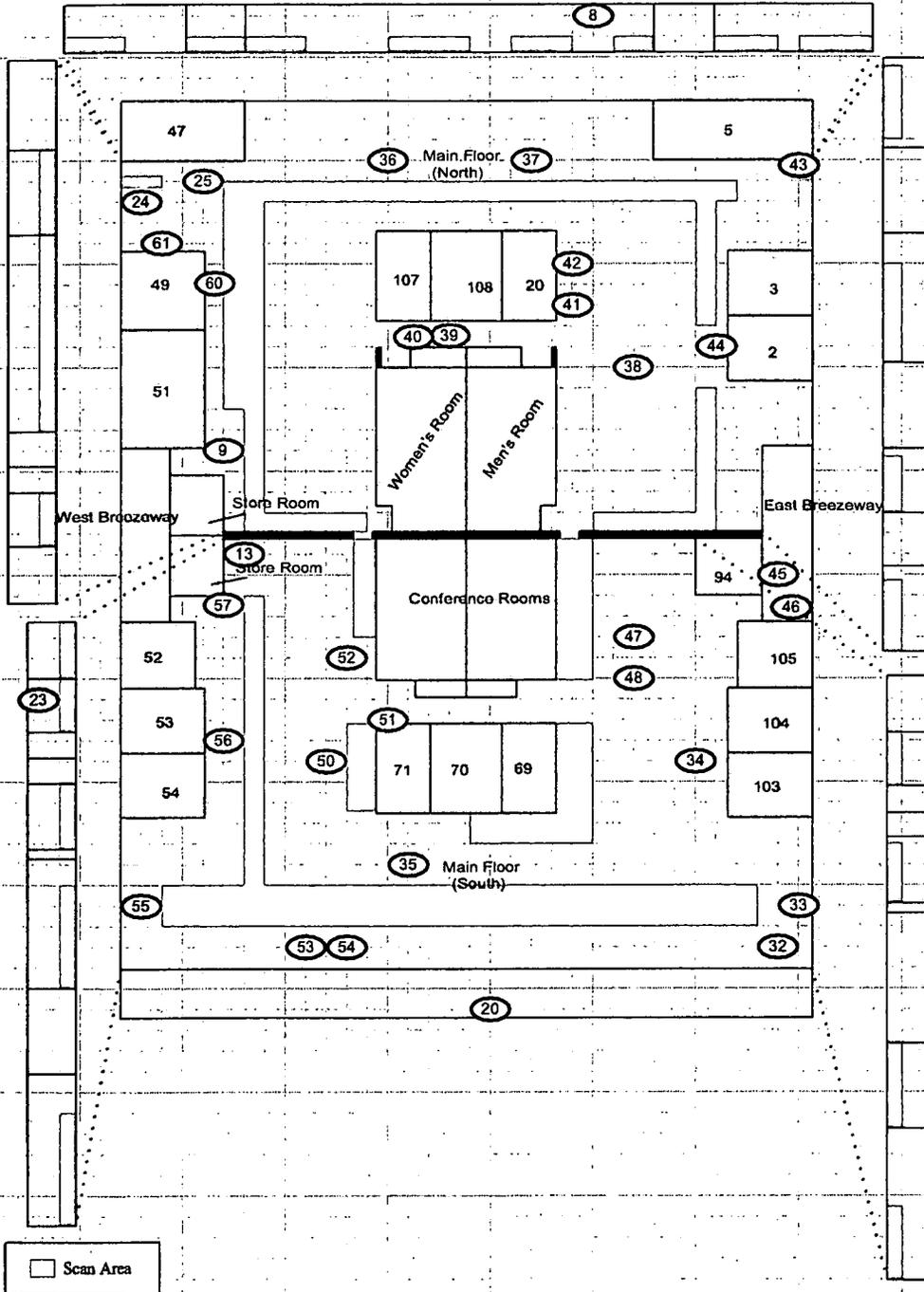
Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
41	13	0	-0.3
42	14	0	-0.9
43	15	1	0.6
44	12	1	1.5
45	13	0	-0.3
46	14	0	-0.9
47	15	0	-0.9
48	12	0	0.0
49	13	0	-0.3
50	14	0	-0.9
51	15	0	-0.9
52	12	0	0.0
53	13	0	-0.3
54	8	4	6.1
55	9	2	3.0
56	6	1	1.5
57	7	0	0.0
58	8	1	1.5
59	9	0	0.0
60	6	1	1.5
61	7	1	1.5
		MIN	-0.9
		MAX	6.1
		MEAN	0.5
		SD	1.3
		Transuranic DCGL_{av}	20

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PRE-DEMOLITION SURVEY FOR T117A BUILDING

Survey Area: 5 Survey Unit: T117A-A-003 Classification: 3
 Building: T117A
 Survey Unit Description: Interior
 Total Area: 4485 sq. m. Total Floor Area: 1346 sq. m.

T117A Interior

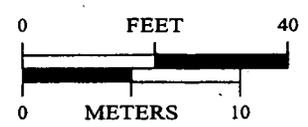


□ Scan Area

SURVEY MAP LEGEND

- ⊙ Smear & TSA Location
- ⬠ Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Location

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Scan Survey Information
 Survey Instrument ID #(s) & RCT ID #(s):
 1,2,3,5,11

1 inch = 30 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy
 Rocky Flats Environmental Technology Site
 Prepared by: GIS Dept. 303-866-7707 Prepared for:
DynCorp
 THE ART OF TECHNOLOGY

 MAP ID: 02-0888/T117A-IN1-Scn Feb. 5, 2003

44

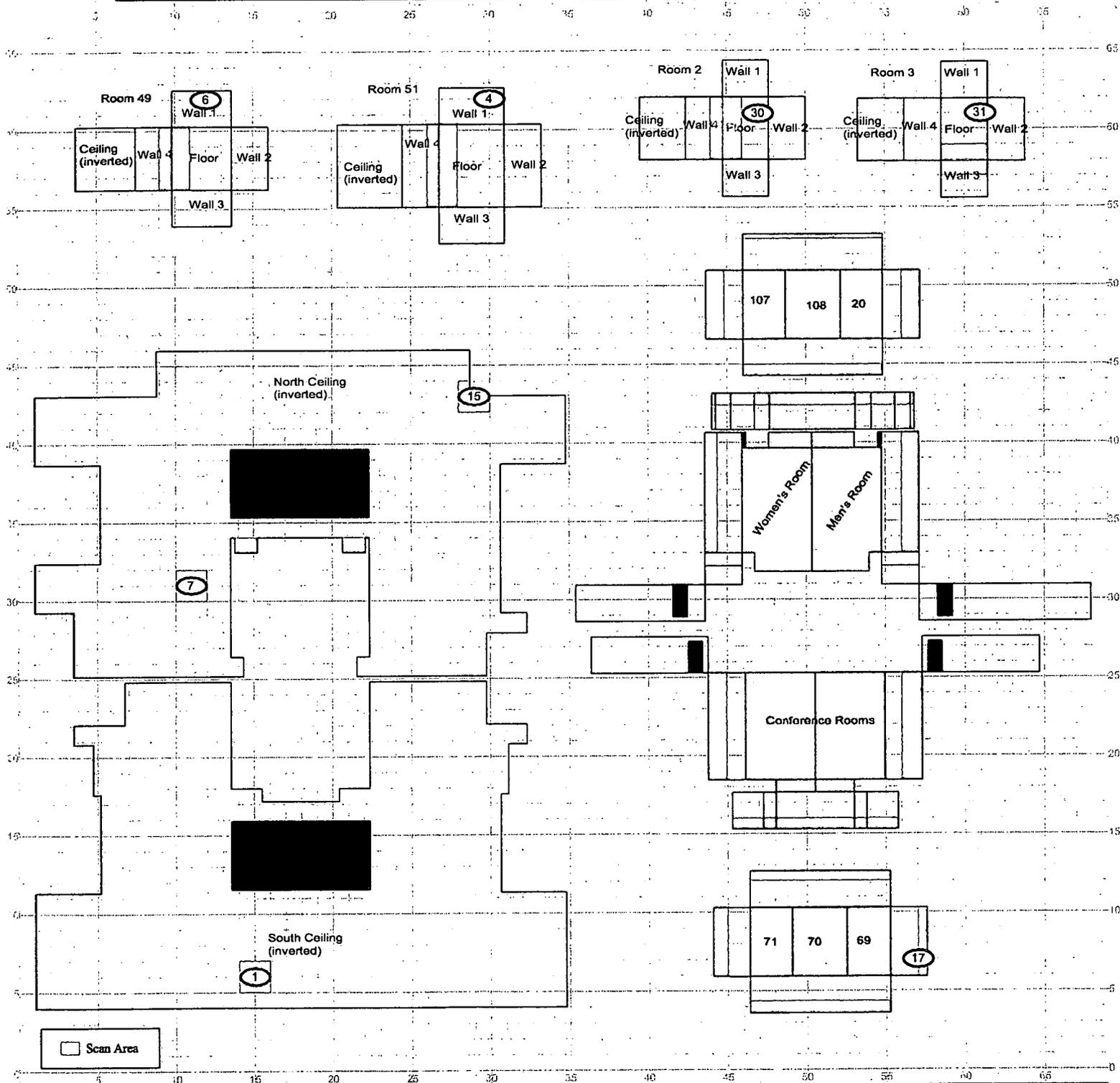
PRE-DEMOLITION SURVEY FOR T117A BUILDING

Survey Area: 5
 Building: T117A
 Survey Unit Description: Interior
 Total Area: 4485 sq. m.

Survey Unit: T117A-A-003

Classification: 3

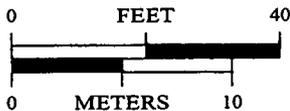
Total Floor Area: 1346 sq. m.



SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Location

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1 inch = 30 feet 1 grid sq. = 1 sq. m.

Scan Survey Information
 Survey Instrument ID #(s) & RCT ID #(s):
 1,2,3,5,11

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

Prepared by: GIS Dept. 303-866-7707

Prepared for:

DynCorp

THE ART OF TECHNOLOGY

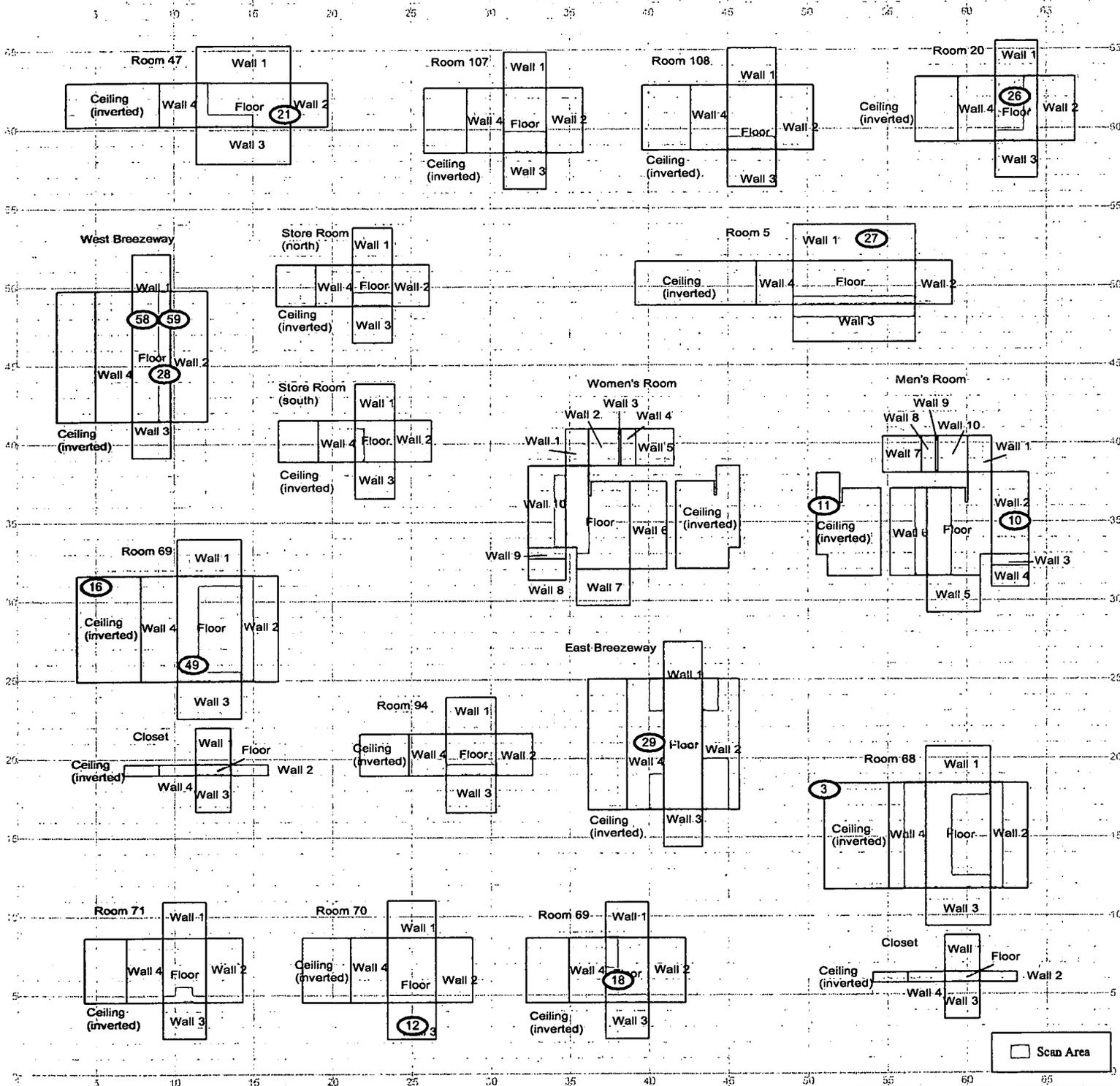


MAP ID: 02-0888/T117A-IN2-Scn Feb. 5, 2003

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PRE-DEMOLITION SURVEY FOR T117A BUILDING

Survey Area: 5 Survey Unit: T117A-A-003 Classification: 3
 Building: T117A
 Survey Unit Description: Interior
 Total Area: 4485 sq. m. Total Floor Area: 1346 sq. m.

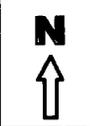


□ Scan Area

SURVEY MAP LEGEND

- Smear & TSA Location
- ◇ Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Location

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0 FEET 40

0 METERS 10

1 inch = 30 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:

DynCorp
 THE ART OF TECHNOLOGY

MAP ID: 02-0888/T117A-IN3-Scn Feb. 5, 2003

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ATTACHMENT D

Chemical Data Summaries and Sample Maps

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Asbestos Data Summary

Sample Number	Map Location Point	Room	Material Sampled & Location	Analytical Results
Building T117A – RIN03Z0990				
T117A-02112003-315-201	1	62	2' x 4' white acoustical drop ceiling tile with small "worm" pattern	None Detected
T117A-02112003-315-202	2	Hall	Drywall only at deck above drop ceiling	None Detected
T117A-02112003-315-203	3	Hall	Drywall and joint compound at deck above drop ceiling	None Detected
T117A-02112003-315-204	4	107	2' x 4' white acoustical drop ceiling tile with small "worm" pattern (Facility Conference)	None Detected
T117A-02112003-315-205	5	107	Drywall only under tan and gray fabric, exterior wall	None Detected
T117A-02112003-315-206	6	Store Room	White and beige linoleum with adhesive, next to Women's Restroom	None Detected
T117A-02112003-315-207	7	Men's	White and beige linoleum with yellow adhesive	None Detected
T117A-02112003-315-208	8	Men's	Beige base cove with yellow adhesive	None Detected
T117A-02112003-315-209	9	Women's	White and beige linoleum with yellow adhesive	None Detected
T117A-02112003-315-210	10	Store Room	2' x 4' white acoustical drop ceiling tile with small "worm" pattern, next to Men's	None Detected
Building 116 – RIN03Z0990				
116-02112003-315-201	1	Main	2' x 4' white acoustical drop ceiling tile with small "worm" pattern	None Detected
116-02112003-315-202	2	Main	Beige painted drywall	None Detected
116-02112003-315-203	3	Main	Beige painted drywall	None Detected
116-02112003-315-204	4	Main	White painted drywall	None Detected
116-02112003-315-205	5	Main	2' x 4' white acoustical drop ceiling tile with small "worm" pattern	None Detected
116-02112003-315-206	6	Main	2' x 4' white acoustical drop ceiling tile with small "worm" pattern	None Detected
116-02112003-315-207	7	Men's	Blue and gray speckled linoleum	None Detected
116-02112003-315-208	8	Men's	Reddish brown base cove and adhesive	None Detected
116-02112003-315-209	9	Hall	Beige fabric drywall	None Detected
116-02112003-315-210	10	Hall	Beige fabric drywall	None Detected
Building 115 – RIN03Z0990				
115-02182003-315-201	1	Men's	Beige and brown linoleum	None Detected
115-02182003-315-202	2	Men's	Drywall under beige fabric	None Detected
115-02182003-315-203	3	106	Beige painted drywall, south wall	None Detected
115-02182003-315-204	4	106	Drywall under beige and brown fabric, west wall	None Detected
115-02182003-315-205	5	106	Brown base cove with yellow adhesive	None Detected
115-02182003-315-206	6	106	2' x 4' white acoustical drop ceiling tile with small "worm" pattern	None Detected
115-02182003-315-207	7	106	2' x 4' white acoustical drop ceiling tile with large "worm" pattern	None Detected
115-02182003-315-208	8	106	Drywall above drop ceiling	None Detected
115-02182003-315-209	9	East Hallway	2' x 4' white acoustical drop ceiling tile with small "worm" pattern	None Detected
115-02182003-315-210	10	East Hallway	2' x 4' white acoustical drop ceiling tile with large "worm" pattern	None Detected

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Asbestos Data Summary
(continued)

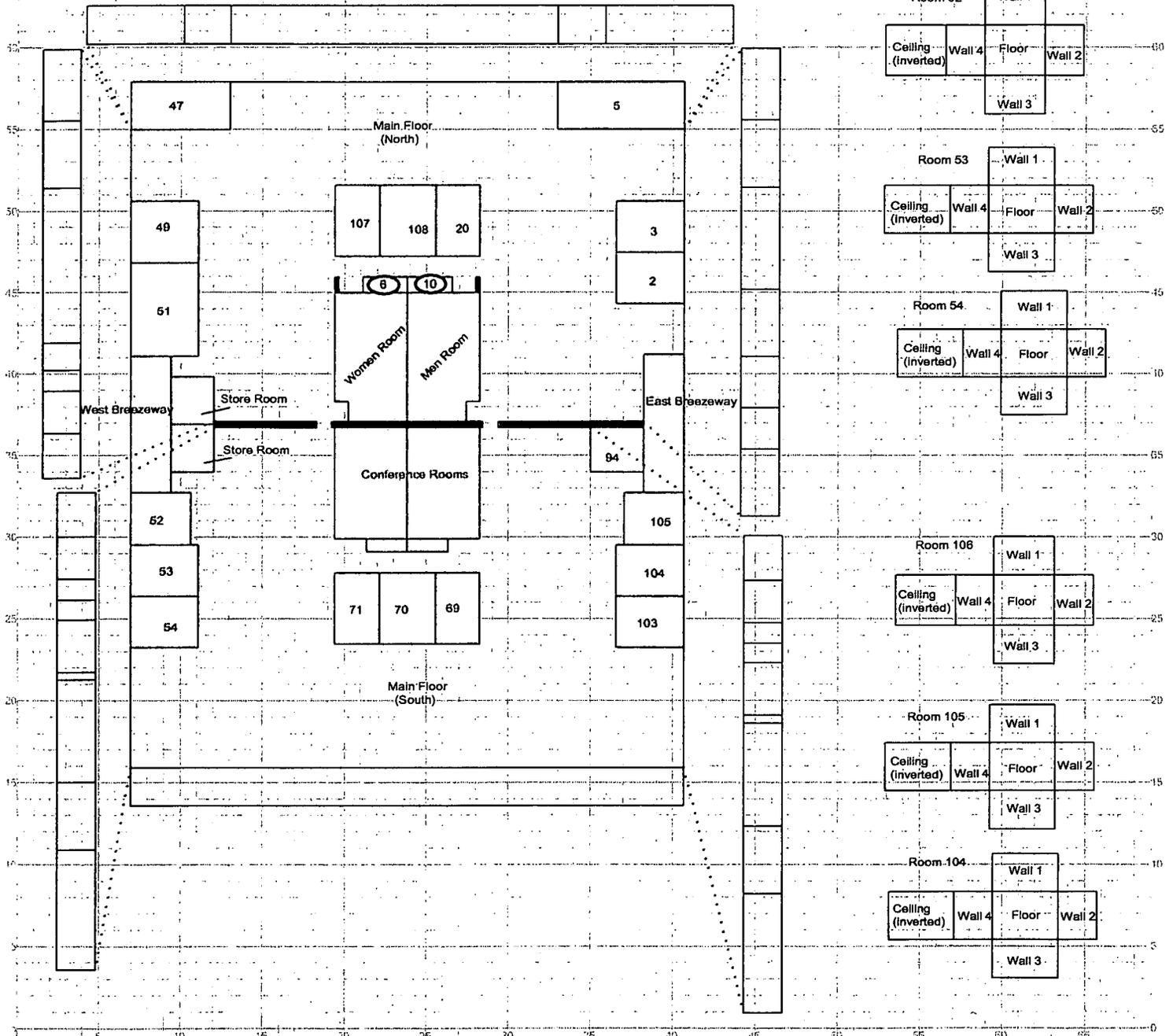
Sample Number	Map Location Point	Room	Material Sampled & Location	Analytical Results
Building 115 – RIN03Z0990				
115-02182003-315-211	11	West Hallway	2' x 4' white acoustical drop ceiling tile with large "worm" pattern	None Detected
115-02182003-315-212	12	West Hallway	2' x 4' white acoustical drop ceiling tile with small "worm" pattern	None Detected
115-02182003-315-213	13	West Hallway	Brown base cove with yellow adhesive	None Detected
115-02182003-315-214	14	115	Gray base cove with yellow adhesive, south wall	None Detected
115-02182003-315-215	15	115	Gray base cove with yellow adhesive, west wall	None Detected
115-02182003-315-216	16	115	Gray base cove with yellow adhesive, west wall	None Detected
115-02182003-315-217	17	Women's	Brown and beige linoleum	None Detected
115-02182003-315-218	18	110	12" brown and white vinyl floor tile with adhesive	None Detected
115-02182003-315-219	19	110	12" brown and white vinyl floor tile with adhesive	None Detected

CHEMICAL SAMPLE MAP

Building T117A Asbestos

PAGE 1 OF 3

T117A Interior

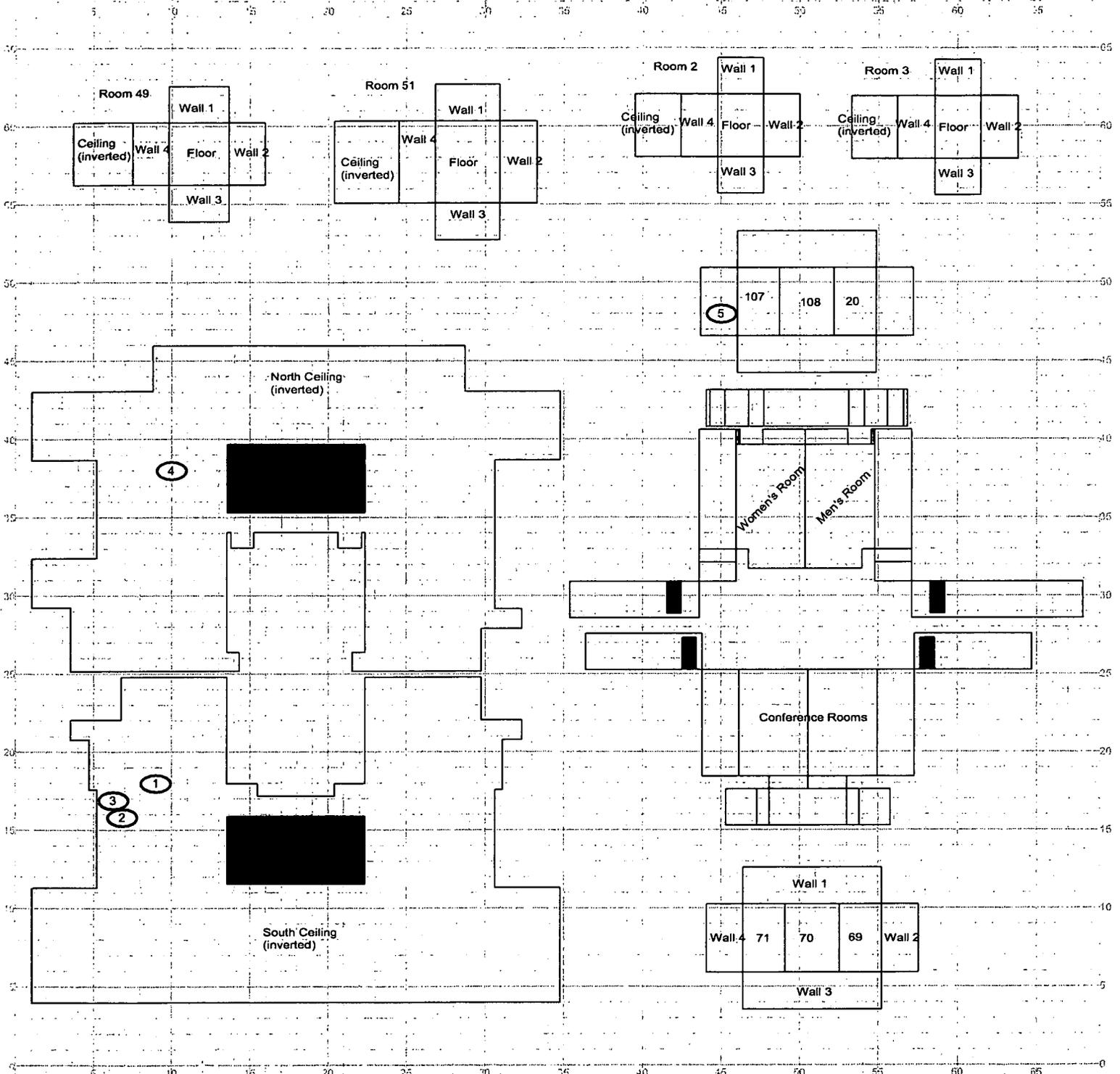


<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their 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> Open/Inaccessible Area</p> <p> Refer to Expanded Room Location Fig. 3 for Actual Location - Samples 6 & 10</p>	<p style="text-align: center;">N</p> <p style="text-align: center;">↑</p> <div style="text-align: center;"> <p>0 FEET 40</p> <p>0 METERS 10</p> </div> <p>1 inch = 30 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. 303-866-7707 Prepared for:</p> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <p>DynCorp</p> <p>THE ART OF TECHNOLOGY</p> </div> <div style="text-align: center;"> <p>KAISER HILL</p> </div> </div> <p>MAP ID: 02-0888/T117A-IN1-ASS Feb. 24, 2003</p>
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CHEMICAL SAMPLE MAP

Building T117A Asbestos

PAGE 2 OF 3

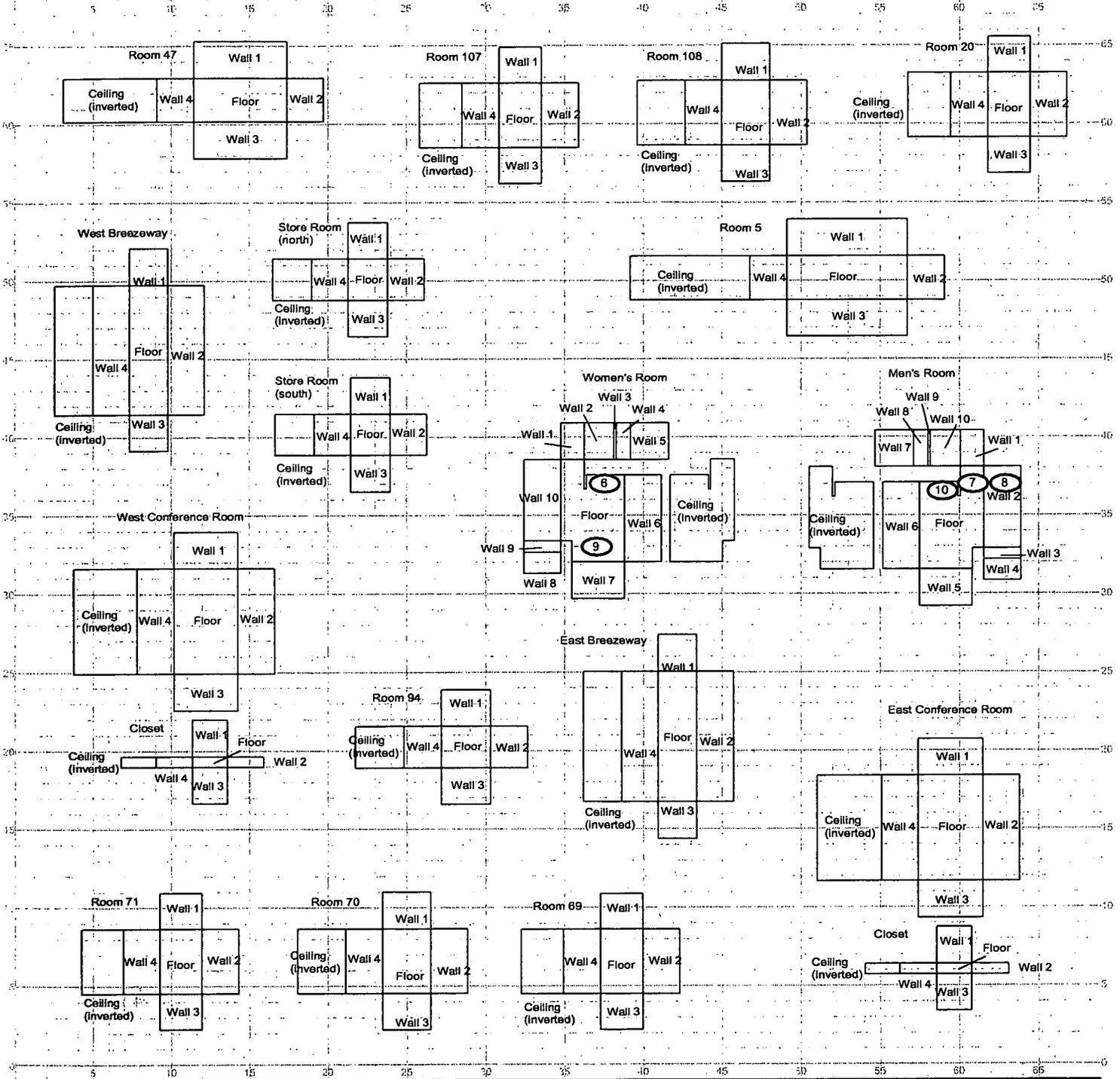


<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location 	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their 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> Open/Inaccessible Area</p> <p> Not Applicable</p>	<p style="text-align: center;">N</p> <p style="text-align: center;">↑</p>	<p style="text-align: center;">0 FEET 40</p> <p style="text-align: center;"></p> <p style="text-align: center;">0 METERS 10</p> <p style="text-align: center;">1 inch = 30 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> <p style="text-align: center;">DynCorp THE ART OF TECHNOLOGY</p> <div style="display: flex; justify-content: space-between;"> </div> <p style="text-align: center;">MAP ID: 02-0888/T117A-IN2-ASB Feb. 24, 2003</p>
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CHEMICAL SAMPLE MAP

Building T117A
Asbestos

PAGE 3 OF 3



<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 style="text-align: center;">↑</p>	<p style="text-align: center;">0 FEET 40</p> <p style="text-align: center;">0 METERS 10</p> <p style="text-align: center;">1 inch = 30 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. 303-866-7707 Prepared for:</p> <p style="text-align: center;">DynCorp THE ART OF TECHNOLOGY</p> <div style="display: flex; justify-content: space-between;"> </div> <p style="text-align: center;">MAP ID: 02-0888/T117A-IN3-ASB Feb. 24, 2003</p>
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Beryllium Data Summary

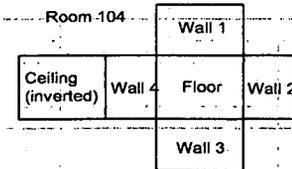
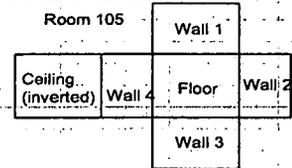
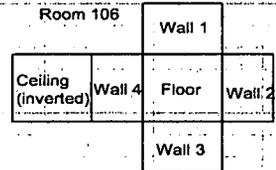
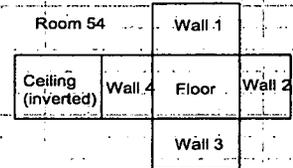
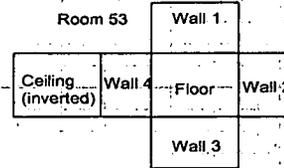
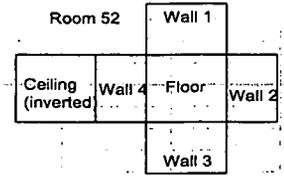
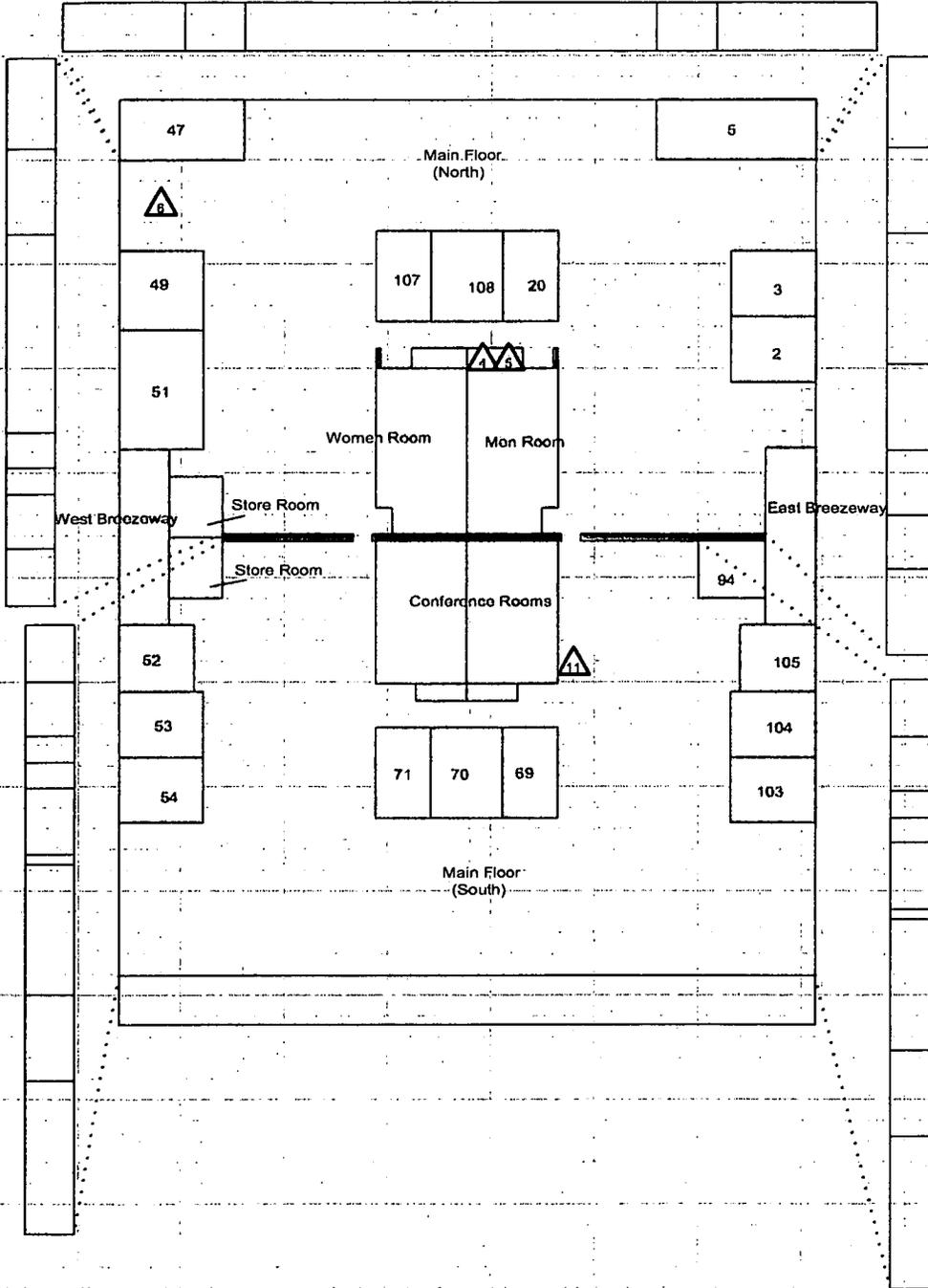
Sample Number	Map Point	Room	Sample Location	Result (ug/100 cm ³)
T117A-02112003-315-101	1	Hall	Top of fluorescent light fixture, hall at Rooms 52 and 53	< 0.1
T117A-02112003-315-102	2	Hall	On louvers of HVAC ceiling diffuser	< 0.1
T117A-02112003-315-103	3	107	Top of fluorescent light fixture, Facility Conference Room	< 0.1
T117A-02112003-315-104	4	Store Room	On fluorescent light fixture, store room by Men's Restroom	< 0.1
T117A-02112003-315-105	5	Store Room	On brown fitting of fire suppression pipes, store room by Men's Restroom	< 0.1
T117A-02112003-315-106	6	NW Door	On top of metal book case	< 0.1
T117A-02112003-315-107	7	5	On east window sill	< 0.1
T117A-02112003-315-108	8	East Brezeway	On linoleum at east wall	< 0.1
T117A-02112003-315-109	9	105	Top of fluorescent light fixture at cube to the west	< 0.1
T117A-02112003-315-110	10	Hall	Top of fluorescent light fixture in hall by conference room	< 0.1
T117A-02112003-315-111	11	Floor	Inside HVAC cold air return on floor by conference room	< 0.1
T117A-02112003-315-112	12	West Brezeway	On south window sill	< 0.1
T117A-02112003-315-113	13	West Brezeway	On top of lighted exit sign at entrance	< 0.1
T117A-02112003-315-114	14	Men's	On top of file cabinet, SE corner	< 0.1
T117A-02112003-315-115	15	Conference Room	Top of 2' x 4' white acoustical drop ceiling tile with small "worm" pattern	< 0.1
Building T117A - RIN03Z0956				
T115-02182003-315-101	1	114	Top of fluorescent light fixture	< 0.1
T115-02182003-315-101	2	East/West Hallway	Top of 2' x 4' white acoustical drop ceiling tile	< 0.1
T115-02182003-315-101	3	Front Hallway	Top of fluorescent light fixture	< 0.1
T115-02182003-315-101	4	101	Top of gray fire control box	< 0.1
T115-02182003-315-101	5	East/West Hallway	Top of fluorescent light fixture	< 0.1
Building 115 - 03Z0991				
T116-02112003-315-101	1	Main	Top of fluorescent light fixture	< 0.1
T116-02112003-315-108	8	Main	Top of fluorescent light fixture in hallway	< 0.1
T116-02112003-315-109	9	Main	On louvers of HVAC diffuser at Matt's cube	< 0.1
T116-02112003-315-110	10	Main	On charcoal colored plextiglass diffuser above desk	< 0.1
T116-02112003-315-111	11	Main	Top of fluorescent light fixture in south entryway	< 0.1
T116-02112003-315-112	12	Main	On southwest window sill	< 0.1
T116-02112003-315-113	13	Main	On louvers of HVAC diffuser	< 0.1
T116-02112003-315-114	14	Main	On floor of Storage room	< 0.1
T116-02112003-315-115	15	Main	Top of red fire alarm control panel	< 0.1
Building 116 - RIN03Z0956				
T116-02112003-315-101	1	Main	Top of fluorescent light fixture	< 0.1
T116-02112003-315-102	2	Main	Top of fluorescent light fixture	< 0.1
T116-02112003-315-103	3	Main	Top of short partition cube wall	< 0.1
T116-02112003-315-104	4	Main	Top of HVAC diffuser	< 0.1
T116-02112003-315-105	5	Men's	On linoleum floor	< 0.1
T116-02112003-315-106	6	Main	On Andre's metal cabinet	< 0.1
T116-02112003-315-107	7	Main	On cable track at wall	< 0.1
T116-02112003-315-108	8	Main	Top of fluorescent light fixture in hallway	< 0.1
T116-02112003-315-109	9	Main	On louvers of HVAC diffuser at Matt's cube	< 0.1
T116-02112003-315-110	10	Main	On charcoal colored plextiglass diffuser above desk	< 0.1
T116-02112003-315-111	11	Main	Top of fluorescent light fixture in south entryway	< 0.1
T116-02112003-315-112	12	Main	On southwest window sill	< 0.1
T116-02112003-315-113	13	Main	On louvers of HVAC diffuser	< 0.1
T116-02112003-315-114	14	Main	On floor of Storage room	< 0.1
T116-02112003-315-115	15	Main	Top of red fire alarm control panel	< 0.1

CHEMICAL SAMPLE MAP

**Building T117A
Beryllium**

PAGE 1 OF 3

T117A Interior

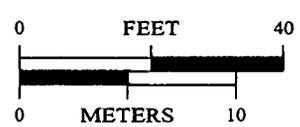


SURVEY MAP LEGEND

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

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- Open/Inaccessible Area
- Refer to Expanded Room Location Pg. 3 for Actual Location - Samples 4 & 5



1 inch = 30 feet 1 grid sq. = 1 sq. m.

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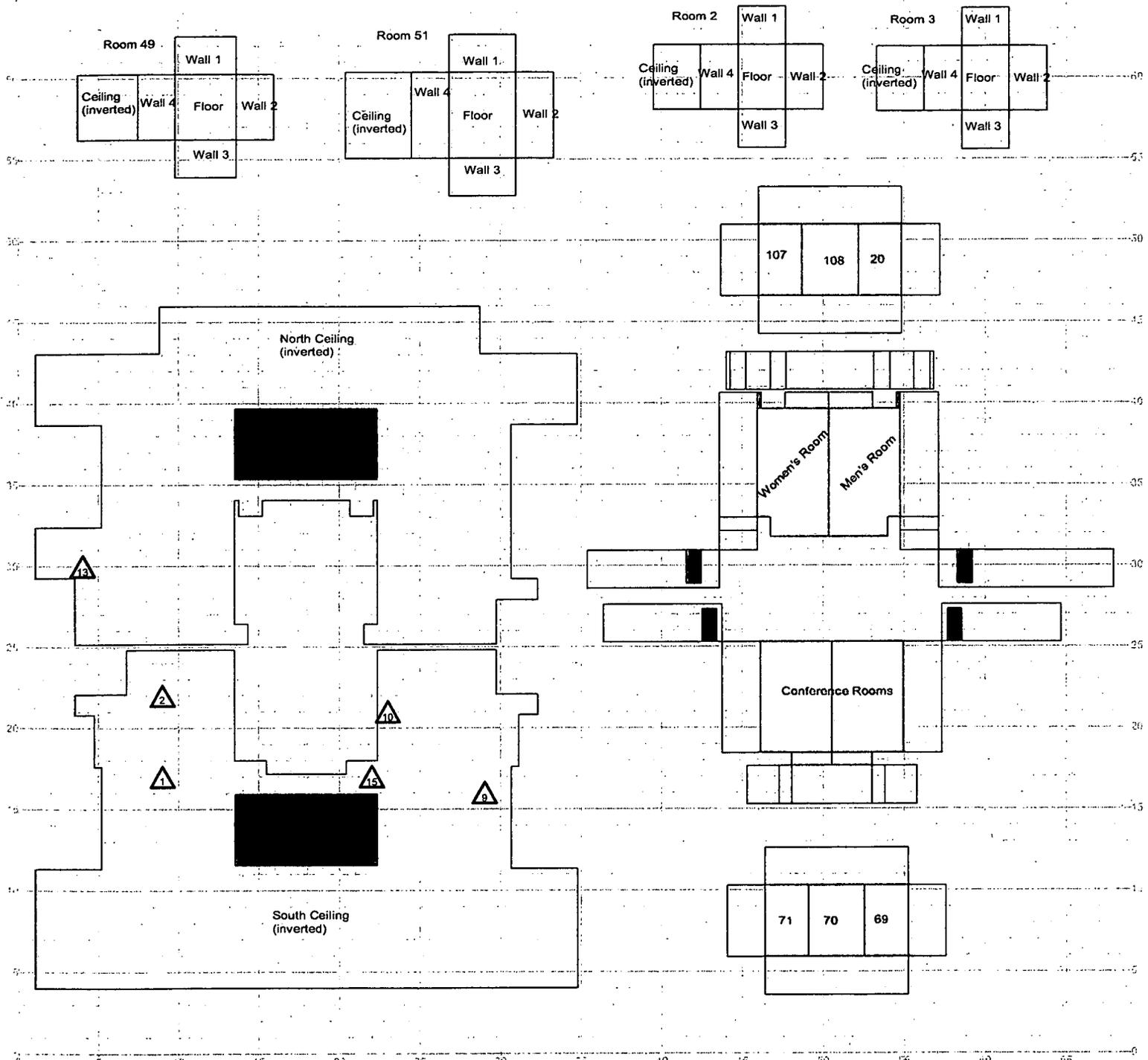
MAP ID: 02-0888/T117A-IN1-BE Feb. 25, 2003

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CHEMICAL SAMPLE MAP

Building T117A
Beryllium

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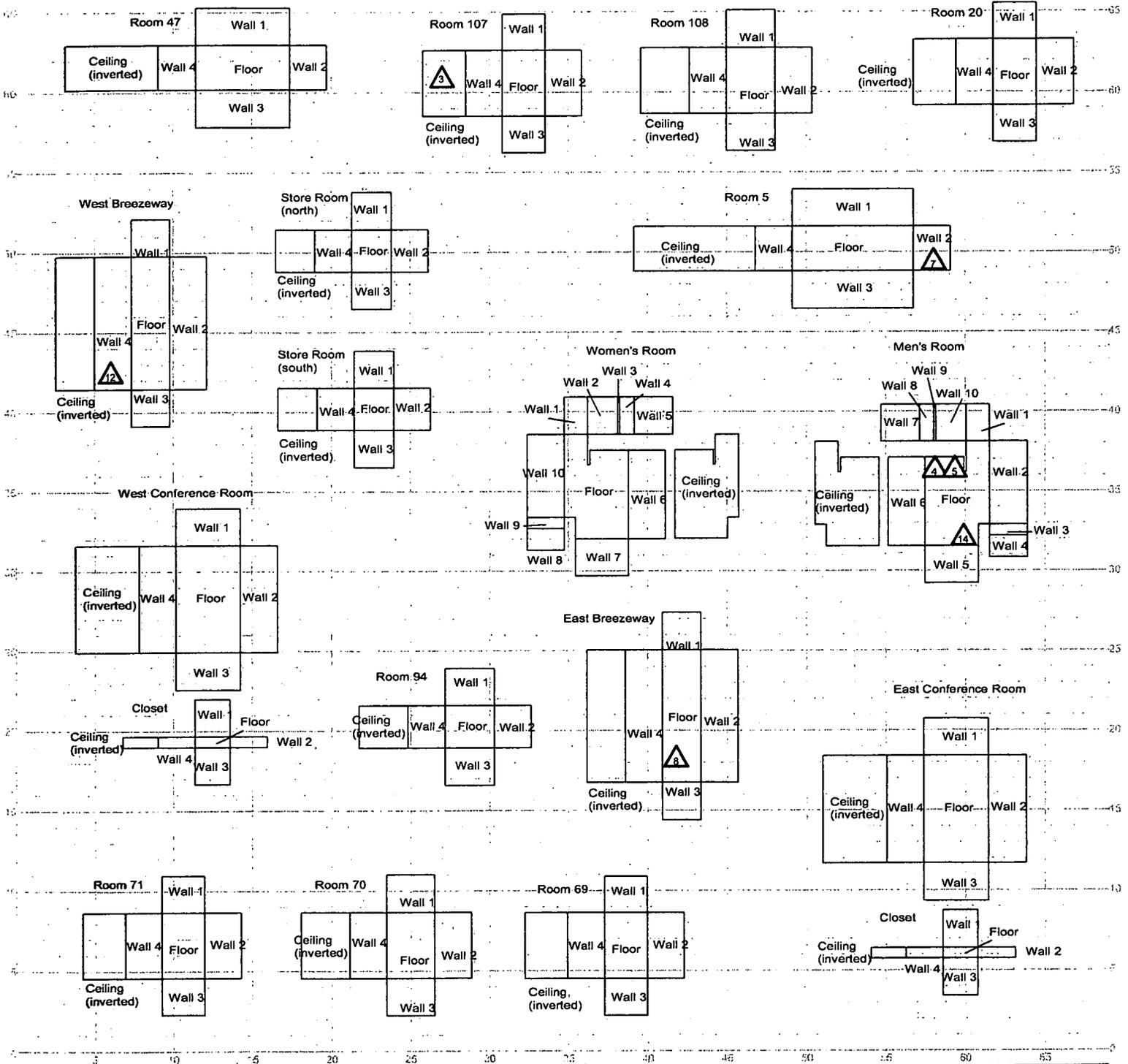
<p>SURVEY MAP LEGEND</p> <ul style="list-style-type: none"> ⊙ Asbestos Sample Location ⚠ Beryllium Sample Location ■ Lead Sample Location ◆ RCRA/CERCLA Sample Location ⊙ PCB Sample Location 		<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any 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>FEET</p> <p>0 40</p> <p>METERS</p> <p>0 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>DynCorp THE ART OF TECHNOLOGY</p> <p>KAISER HILL CORPORATION</p> <p>MAP ID: 02-0888/T117A-IN2-BE Feb. 25, 2003</p>
		<p>■ Open/Inaccessible Area</p> <p>□ Refer to Pg. 3 for Expanded Room Location</p>	<p>1 inch = 30 feet 1 grid sq. = 1 sq. m.</p>		

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CHEMICAL SAMPLE MAP

Building T117A
Beryllium

PAGE 3 OF 3



SURVEY MAP LEGEND

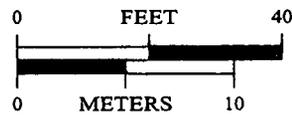
- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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N



- Open/Inaccessible Area
- Not Applicable



1 inch = 30 feet 1 grid sq. = 1 sq. m.

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Rocky Flats Environmental Technology Site

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Prepared for:

DynCorp

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MAP ID: 02-0888/T117A-IN3-BE Feb. 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 5, Group 1 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 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.

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 Area 5, Group 1 facilities meet the unrestricted release criteria with the confidences stated herein.

Table E-1 V&V of Radiological Surveys – Area 5 Group 1 Facilities

V&V CRITERIA, RADIOLGICAL SURVEYS		K-H RSP 16.00 Series MARSSIM (NUREG-1575)		
QUALITY REQUIREMENTS				
	Parameters	Measure	Frequency	COMMENTS
ACCURACY	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 115-A-001, 116-A-002, T117A-A-003 (interior) and EXT-B-001 (exterior).	statistical and biased	NA	Random w/ statistical confidence.
	Survey Maps	NA	NA	Random and biased measurement locations controlled/mapped to ±1m.
	Controlling Documents (Characterization Pkg; RSPs)	qualitative	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.
COMPARABILITY	units of measure	dpm/100cm ²	NA	Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual surveys usable results vs. unusable	>95% >95%	NA	See Table E-4 for details.
SENSITIVITY	Detection limits	TSA: ≤50 dpm/100cm ² RA: ≤10 dpm/100cm ²	all measures	MDAs ≤ 50% DCGL _w per MARSSIM guidelines.

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Table E-2 V&V of Asbestos Results – Area 5 Group 1 Facilities

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
ASBESTOS	METHOD: EPA 600/R-93/116	LAB ---->	Reservoirs Environmental, Inc	
QUALITY REQUIREMENT		RIN ---->	RIN03Z0990	COMMENTS
		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	≥ 39 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
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	See original Chemical Characterization Plan (planning document); for field/sampling procedures (located in project file;) thorough documentation of the planning, sampling/analysis process, and data reduction into formats.
COMPARABILITY	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 5 Group 1 Facilities

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		COMMENTS
BERYLLIUM	Prep: NMAM 7300 METHOD: OSHA ID-125G	LAB ---->	Johns Manville, Littleton, Co.	
QUALITY REQUIREMENTS		RIN ---->	RIN03Z0991 (B115) RIN03Z0956 (B116 and T117A)	
		Measure	Frequency	
ACCURACY	Calibrations Initial	linear calibration	≥1	
	Continuing	80%<%R<120%	≥1	
	LCS/MS	80%<%R<120%	≥1	
	Blanks - lab & field	<MDL	≥1	
	interference check std (ICP)	NA	NA	
PRECISION	LCSD	80%<%R<120% (RPD<20%)	≥1	
	field duplicate	all results < RL	≥1	
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 usable results vs. unusable	>95% >95%	NA	
SENSITIVITY	detection limits	MDL of 0.012 ug/100cm ²	all measures	

Table E-4 Data Completeness Summary - Area 5 Group 1 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	B115 (interior)	12 biased (interior)	19 biased (interior)	No ACM present, all results are < 1% by volume	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116 RIN03Z0990
Asbestos	B116 (interior)	9 biased (interior)	10 biased (interior)	No ACM present, all results are < 1% by volume	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116 RIN03Z0990
Asbestos	T117A (interior)	9 biased (interior)	10 biased (interior)	No ACM present, all results are < 1% by volume	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116 RIN03Z0990
Beryllium	B115 (interior)	5 biased (interior)	5 biased (interior)	No beryllium contamination found at any location, all results are below associated action levels	OSHA ID-125G RIN03Z0991 No results above action level (0.2ug/100cm ²) or investigative level (0.1 ug/100cm ²).
Beryllium	B116 (interior)	5 biased (interior)	15 biased (interior)	No beryllium contamination found at any location, all results are below associated action levels	OSHA ID-125G RIN03Z0956 (Samples #s 116-02112003-315-101 through 116-02112003-315-115) No results above action level (0.2ug/100cm ²) or investigative level (0.1 ug/100cm ²).
Beryllium	T117A (interior)	5 biased (interior)	15 biased (interior)	No beryllium contamination found, all results are below associated action levels	OSHA ID-125G [sample #s 116 through 120 are blanks] RIN03Z0956 (Samples #s T117A-02112003-315-101 through T117A-02112003-315-115) No results above action level (0.2ug/100cm ²) or investigative level (0.1 ug/100cm ²).

Table E-4 Data Completeness Summary - Area 5 Group 1 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.)
Radiological	Survey Area 5 Survey Unit: 115-A-001 B115 (interior)	32 α TSA (22 random/10 biased) and 32 α Smears (22 random/10 biased) 30 α TSA and 30 α Smears (equipment) 4 QC TSA 5% scan	32 α TSA (22 random/10 biased) and 32 α Smears (22 random/10 biased) 30 α TSA and 30 α Smears (equipment) 4 QC TSA 5% scan	No elevated contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.
Radiological	Survey Area 5 Survey Unit: 116-A-002 B116 (interior)	33 α TSA (23 random/10 biased) and 33 α Smears (23 random/10 biased) 30 α TSA and 30 α Smears (equipment) 4 QC TSA 5% scan	33 α TSA (23 random/10 biased) and 33 α Smears (23 random/10 biased) 30 α TSA and 30 α Smears (equipment) 4 QC TSA 5% scan	No elevated contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.

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Table E-4 Data Completeness Summary - Area 5 Group 1 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.)
Radiological	Survey Area 5 Survey Unit: T117A-A-003 T117A (interior)	31 α TSA (21 random/10 biased) and 31 α Smears (21 random/10 biased) 30 α TSA and 30 α Smears (equipment) 4 QC TSA 5% scan	31 α TSA (21 random/10 biased) and 31 α Smears (21 random/10 biased) 30 α TSA and 30 α Smears (equipment) 4 QC TSA 5% scan	No elevated contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.

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Integrated Chemical Management System Short Chemical Report

Barcode	Chemical Name	Manufacturer	Profile Id	Bldg	Room	Location	Size	Units	Status	Inv. Date
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Total Containers: 0

Integrated Chemical Management System Short Chemical Report

5/1/03

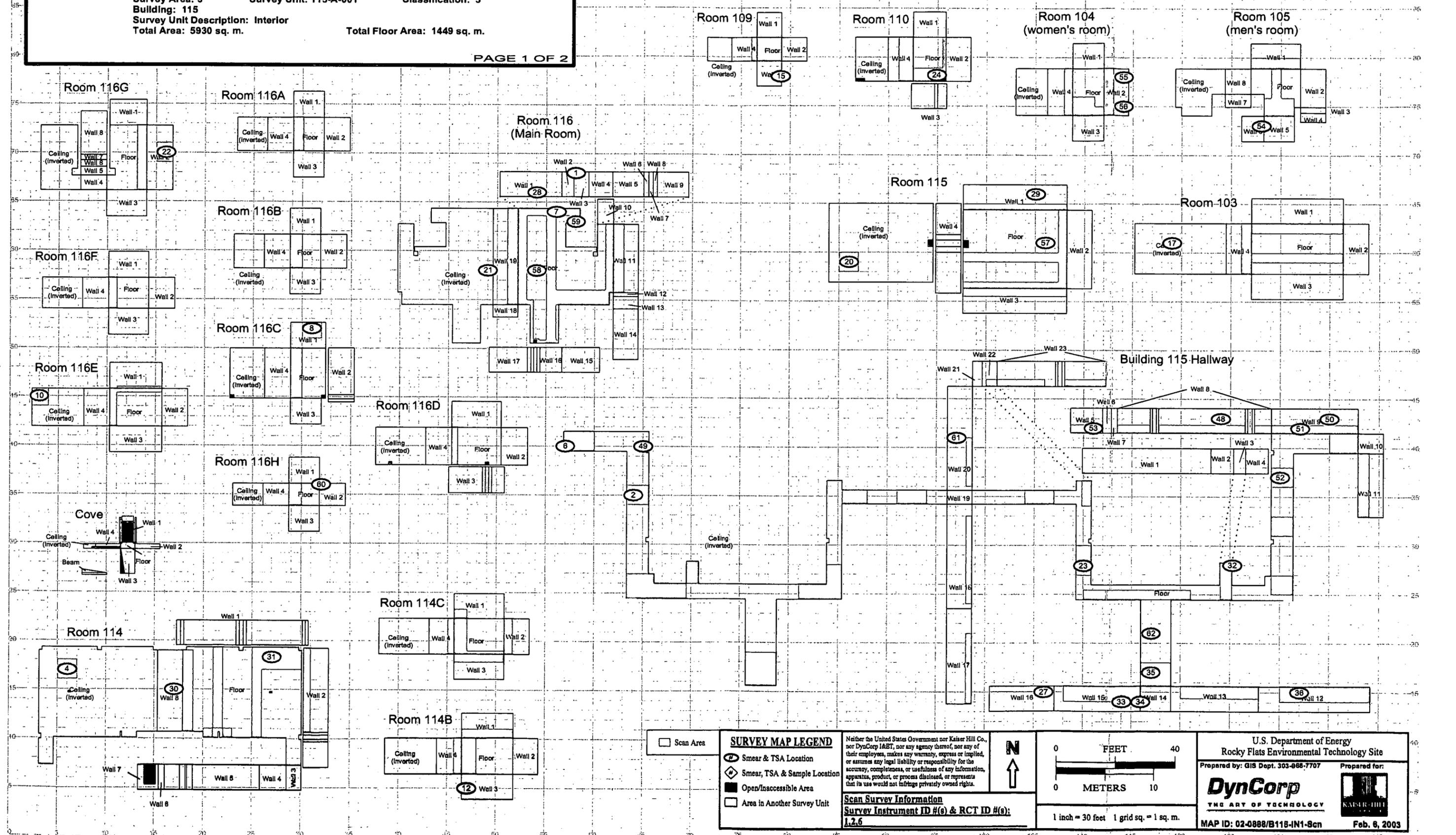
Barcode	Chemical Name	Manufacturer	Profile Id	Blug	Room	Location	Size	Units	Status	Inv. Date
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Total Containers: 0

PRE-DEMOLITION SURVEY FOR 115 BUILDING

Survey Area: 5 Survey Unit: 115-A-001 Classification: 3
 Building: 115
 Survey Unit Description: Interior
 Total Area: 5930 sq. m. Total Floor Area: 1449 sq. m.

PAGE 1 OF 2

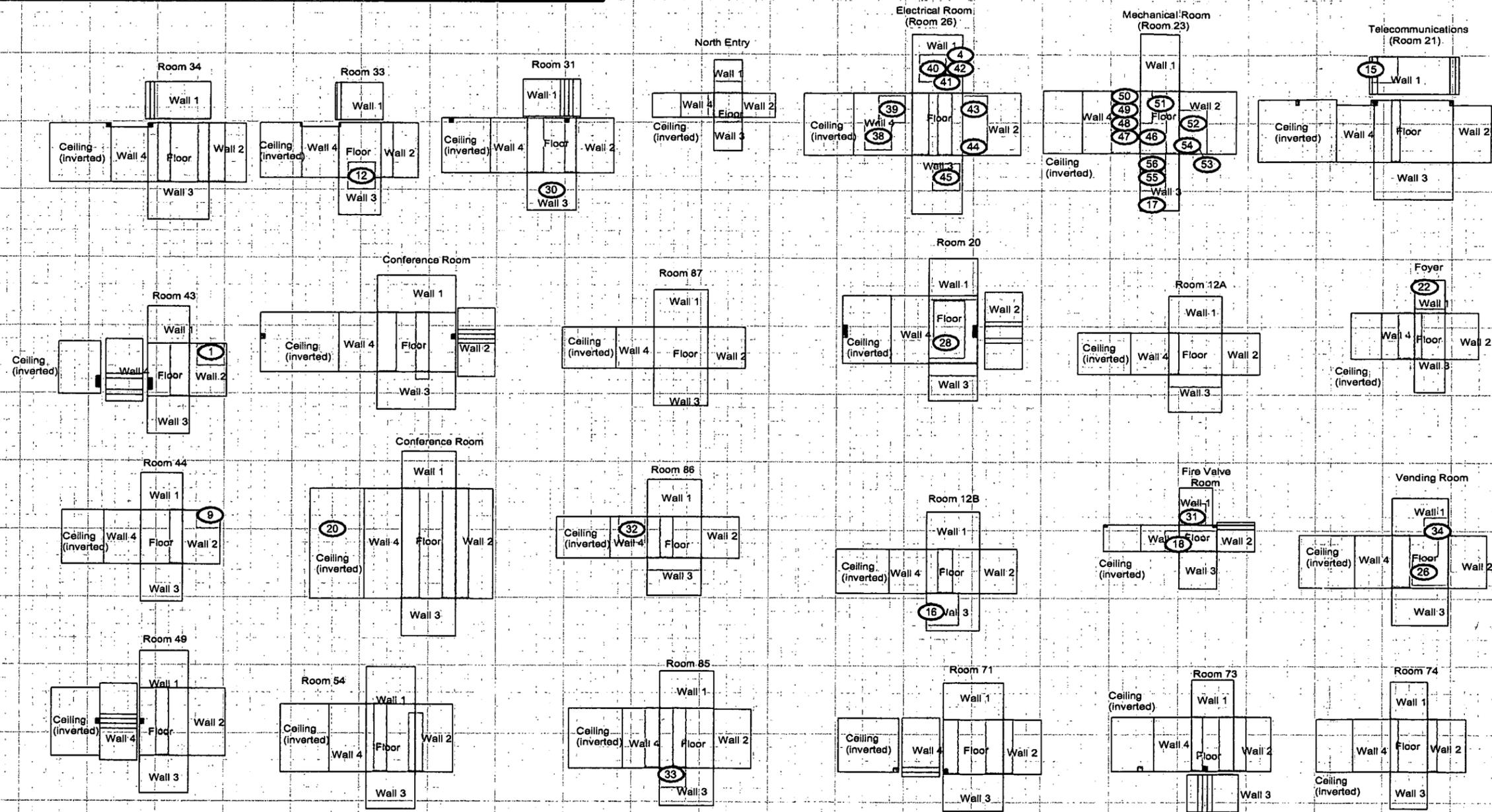


<p>☐ Scan Area</p> <p>⊙ Smear & TSA Location</p> <p>⊙ Smear, TSA & Sample Location</p> <p>■ Open/Inaccessible Area</p> <p>☐ Area in Another Survey Unit</p>	<p>SURVEY MAP LEGEND</p>	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&BT, nor any agency thereof, nor any of their 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>↑</p>	<p>0 FEET 40</p> <p>0 METERS 10</p>	<p>U.S. Department of Energy Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-868-7707</p> <p>DynCorp THE ART OF TECHNOLOGY</p> <p>MAP ID: 02-0888/B115-IN1-Scn</p>
	<p>Scan Survey Information</p> <p>Survey Instrument ID #(s) & RCT ID #(s): 1,2,6</p>				

1 inch = 30 feet 1 grid sq. = 1 sq. m.

PRE-DEMOLITION SURVEY FOR 116 BUILDING

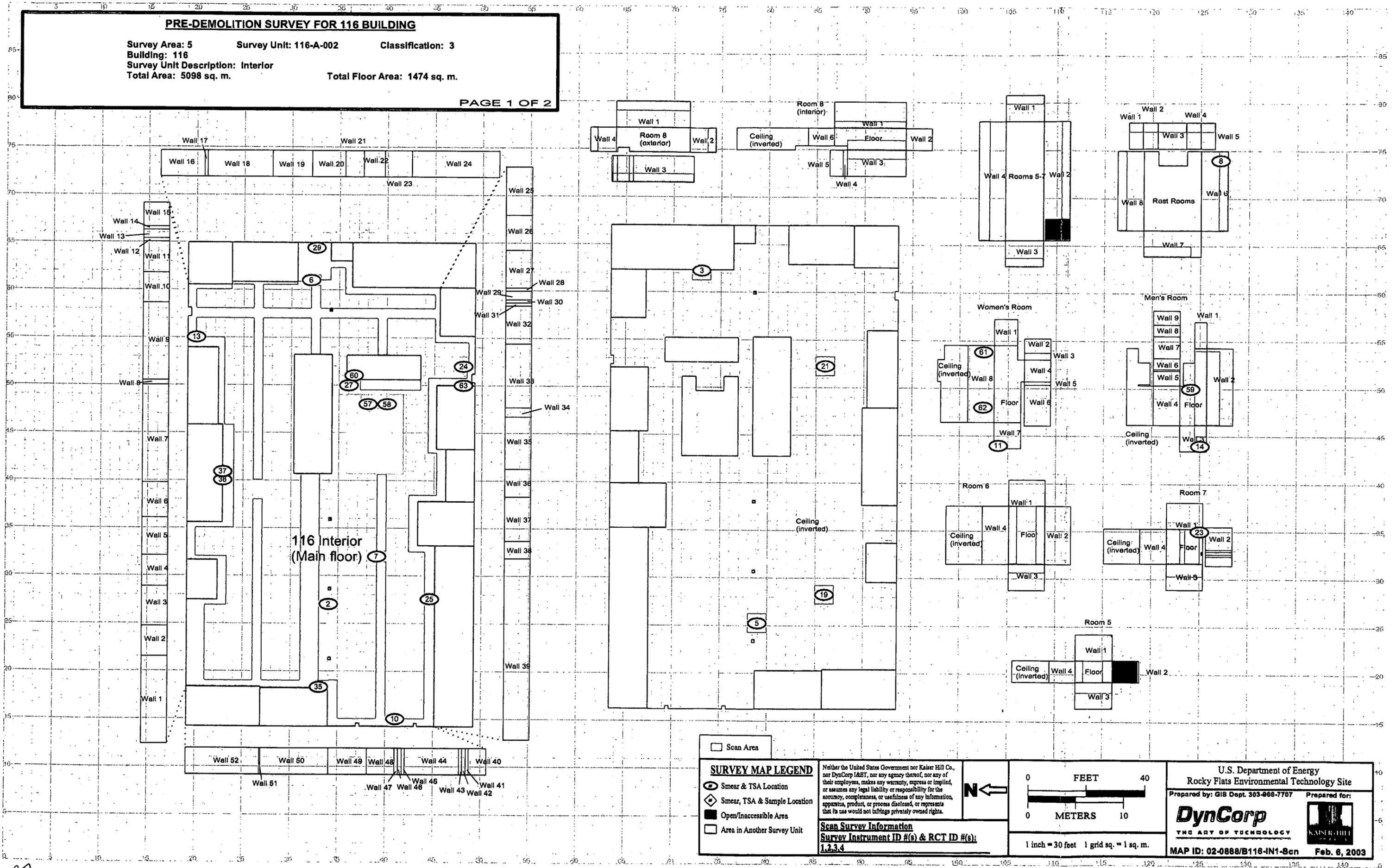
Survey Area: 5 Survey Unit: 116-A-002 Classification: 3
 Building: 116
 Survey Unit Description: Interior
 Total Area: 5098 sq. m. Total Floor Area: 1474 sq. m.



<p>□ Scan Area</p>	<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&BT, 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): 1,2,3,4</p>	<p>N ←</p>	<p>0 FEET 40 0 METERS 10</p> <p>1 inch = 30 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. 303-868-7707 Prepared for:</p> <p>DynCorp THE ART OF TECHNOLOGY</p> <p>MAP ID: 02-0888/B116-IN2-Scn Feb. 6, 2003</p>
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PRE-DEMOLITION SURVEY FOR 116 BUILDING

Survey Area: 5 Survey Unit: 116-A-002 Classification: 3
 Building: 116
 Survey Unit Description: Interior
 Total Area: 5098 sq. m. Total Floor Area: 1474 sq. m.

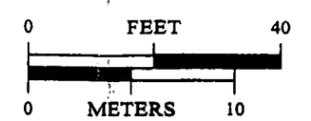


SURVEY MAP LEGEND

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

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Scan Survey Information
 Survey Instrument ID #(s) & RCT ID #(s):
 1,2,3,4



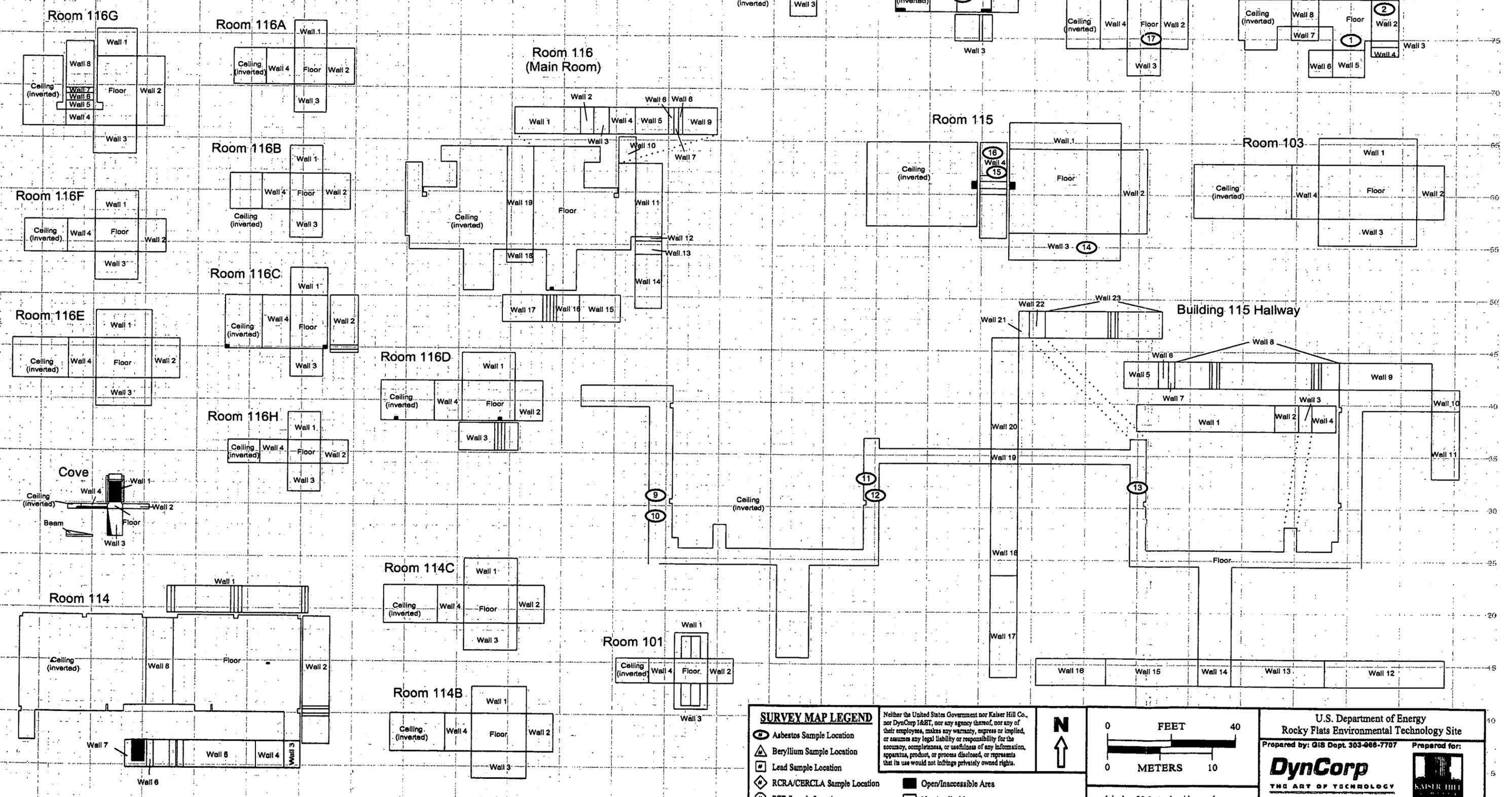
1 inch = 30 feet 1 grid sq. = 1 sq. m.

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DynCorp
 THE ART OF TECHNOLOGY
 MAP ID: 02-0888/B116-IN1-Scn Feb. 6, 2003

CHEMICAL SAMPLE MAP

Building 115
Asbestos

PAGE 1 OF 2

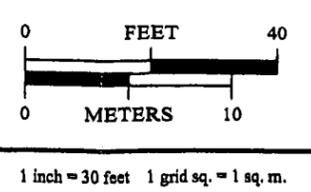


SURVEY MAP LEGEND

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

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- Open/Inaccessible Area
- Not Applicable



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

Prepared by: GIS Dept. 303-466-7707 Prepared for:

DynCorp
THE ART OF TECHNOLOGY

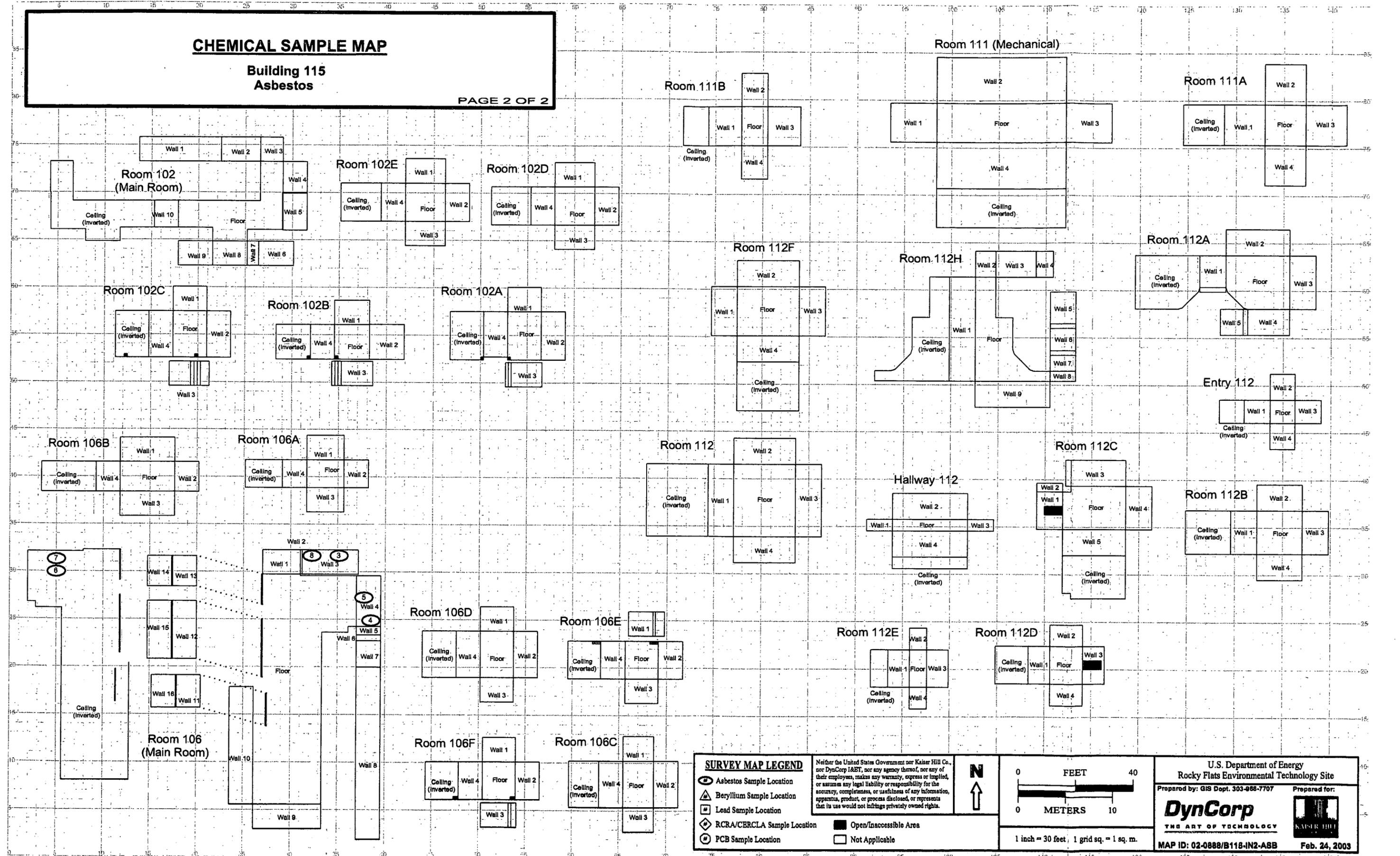
Kaiser Hill

MAP ID: 02-0888/B115-IN1-ASS Feb. 24, 2003

CHEMICAL SAMPLE MAP

Building 115
Asbestos

PAGE 2 OF 2



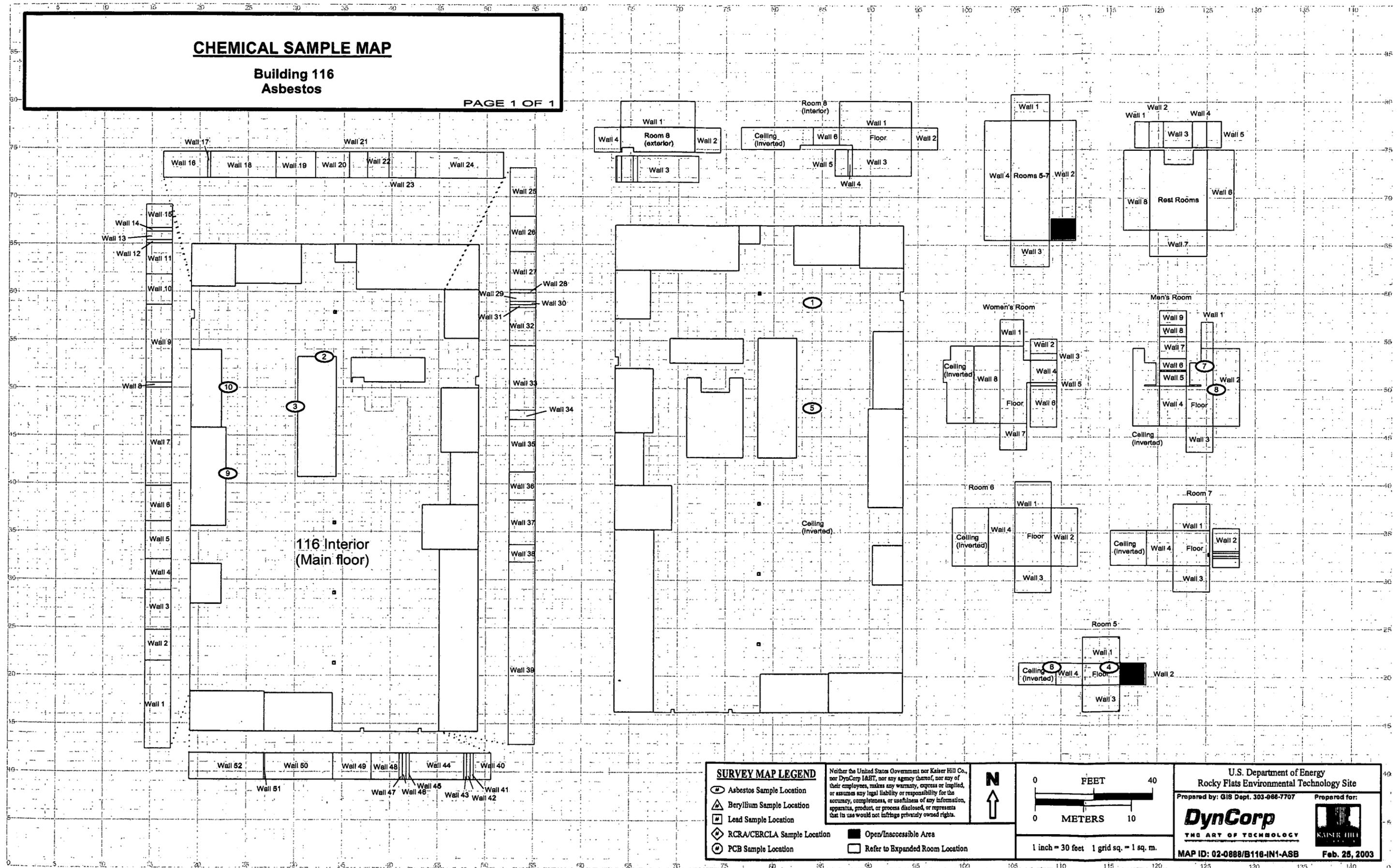
SURVEY MAP LEGEND (7) Asbestos Sample Location (8) Beryllium Sample Location (9) Lead Sample Location (10) RCRA/CERCLA Sample Location (11) PCB Sample Location		Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, 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.	N 	0 FEET 40 0 METERS 10 1 inch = 30 feet, 1 grid sq. = 1 sq. m.	U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: GIS Dept. 303-888-7707 DynCorp THE ART OF TECHNOLOGY MAP ID: 02-0888/B118-IN2-ASB Feb. 24, 2003
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CHEMICAL SAMPLE MAP

Building 116
Asbestos

PAGE 1 OF 1



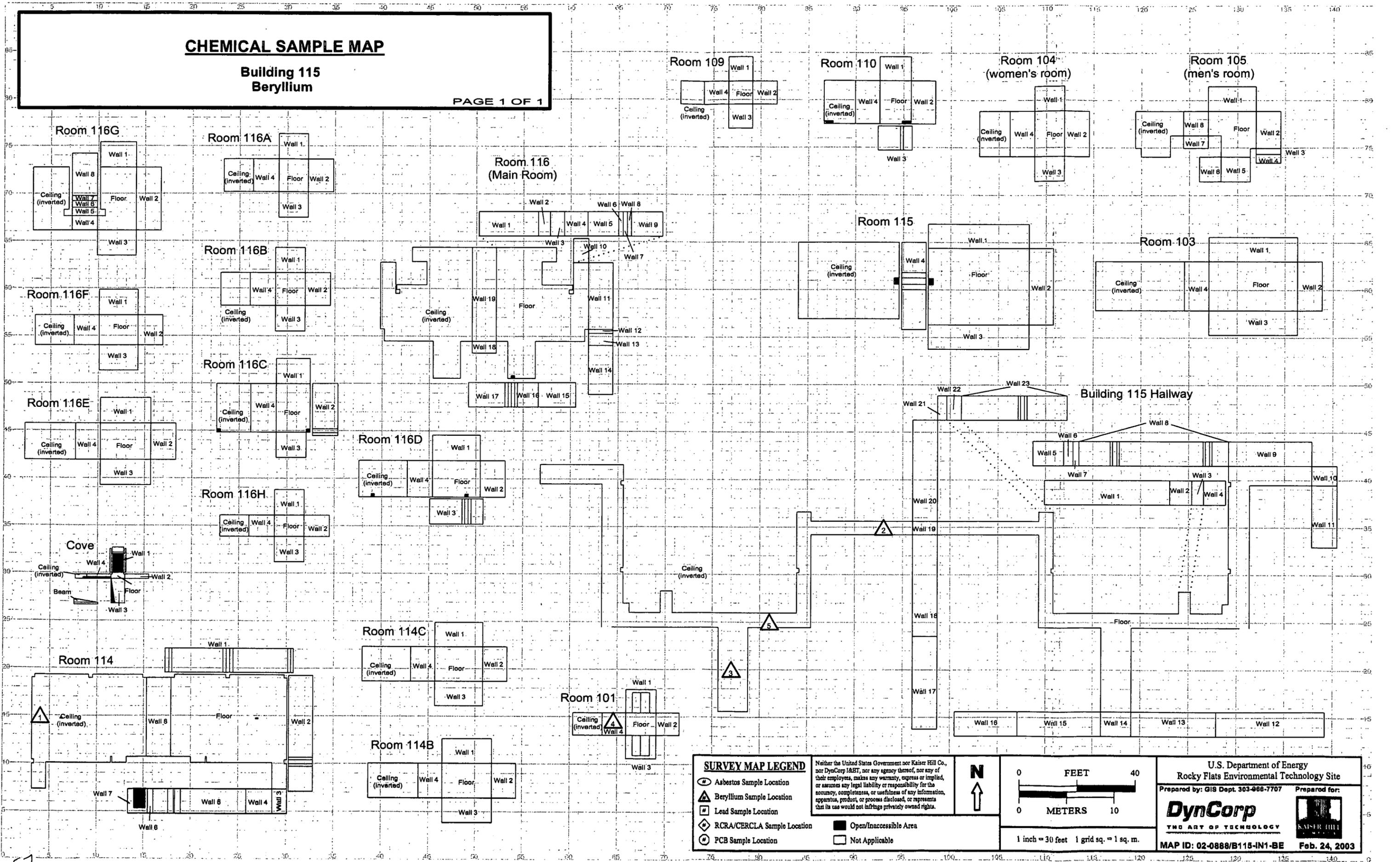
SURVEY MAP LEGEND (Circled Number) Asbestos Sample Location (Triangle) Beryllium Sample Location (Square) Lead Sample Location (Diamond) RCRA/CERCLA Sample Location (Circle with X) PCB Sample Location		Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, 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.	N 	0 FEET 40 0 METERS 10 1 inch = 30 feet 1 grid sq. = 1 sq. m.	U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: G18 Dept. 303-866-7707 DynCorp THE ART OF TECHNOLOGY MAP ID: 02-0888/B116-IN1-ASB Feb. 25, 2003
(Shaded Area) Open/Inaccessible Area (Empty Box) Refer to Expanded Room Location					

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CHEMICAL SAMPLE MAP

Building 115
Beryllium

PAGE 1 OF 1

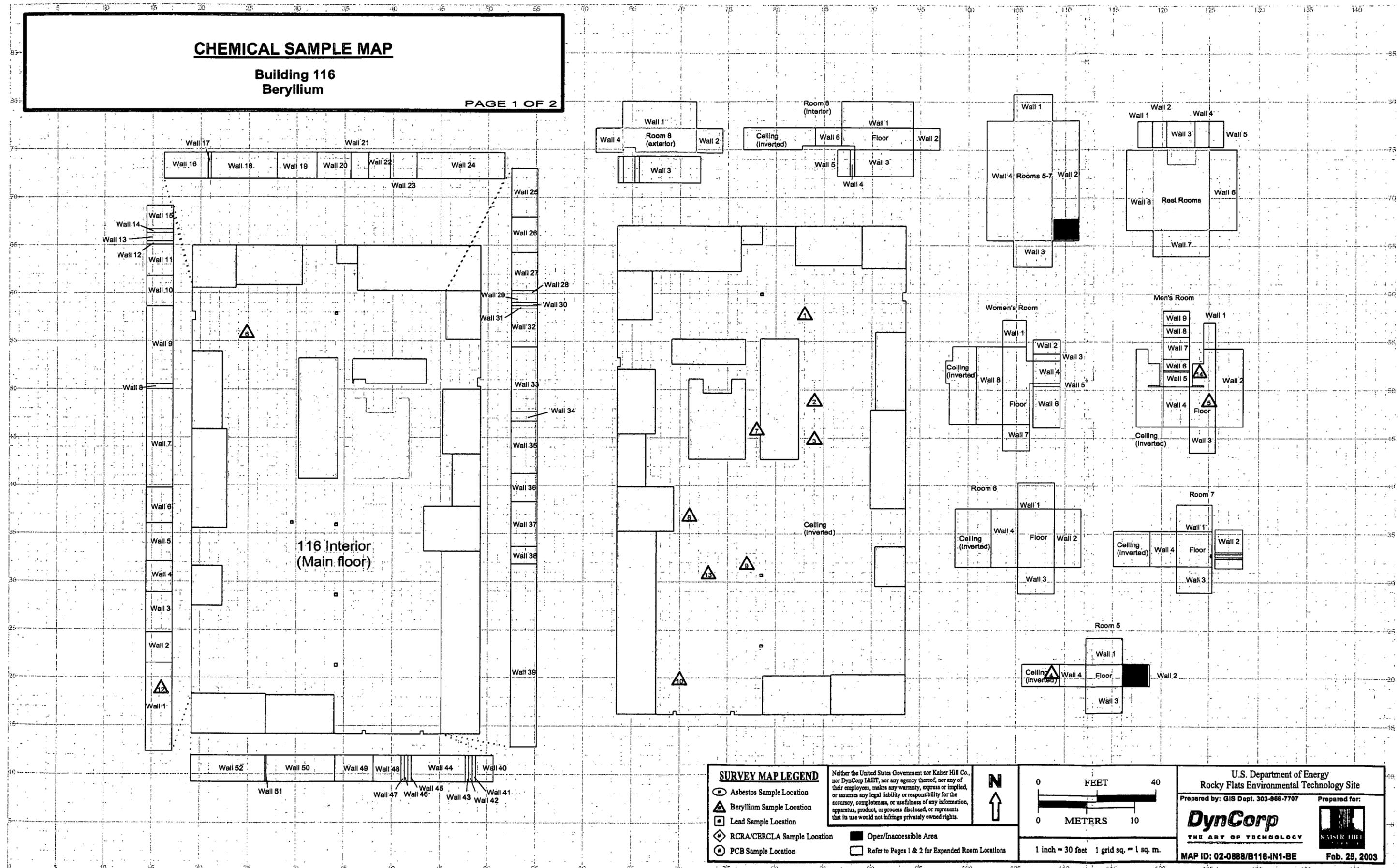


SURVEY MAP LEGEND <ul style="list-style-type: none"> Asbestos Sample Location Beryllium Sample Location Lead Sample Location RCRA/CERCLA Sample Location PCB Sample Location Open/Inaccessible Area Not Applicable 		<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency 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 40</p> <p>0 METERS 10</p> <p>1 inch = 30 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. 303-666-7707 Prepared for:</p> <p>DynCorp THE ART OF TECHNOLOGY</p> <p>Kaiser Hill</p> <p>MAP ID: 02-0888/B115-IN1-BE Feb. 24, 2003</p>
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CHEMICAL SAMPLE MAP

Building 116
Beryllium

PAGE 1 OF 2

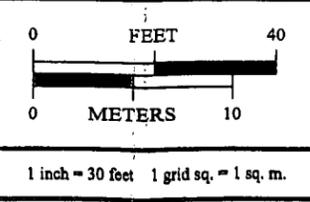
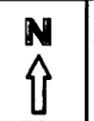


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SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Open/Inaccessible Area
- Refer to Pages 1 & 2 for Expanded Room Locations

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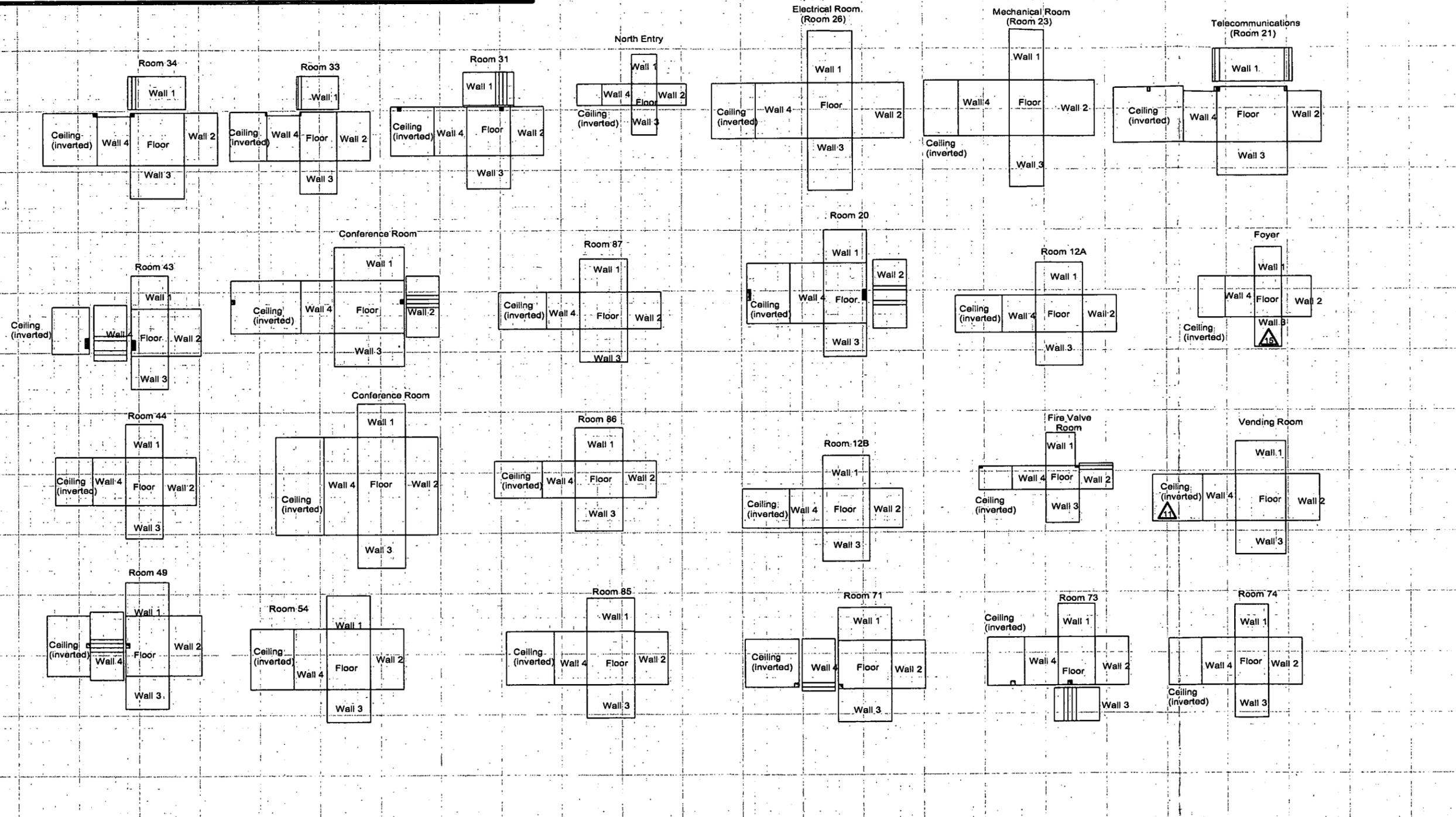
DynCorp
THE ART OF TECHNOLOGY

MAP ID: 02-0888/B116-IN1-BE Feb. 28, 2003

CHEMICAL SAMPLE MAP

Building 116
Beryllium

PAGE 2 OF 2



SURVEY MAP LEGEND ◻ Asbestos Sample Location ▲ Beryllium Sample Location ◻ Lead Sample Location ◊ RCRA/CERCLA Sample Location ○ PCB Sample Location ■ Open/Inaccessible Area □ Not Applicable		Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ST, 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.	N 	0 FEET 40 0 METERS 10 1 inch = 36 feet 1 grid sq. = 1 sq. m.	U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: GIS Dept. 303-886-7707 Prepared for: DynCorp THE ART OF TECHNOLOGY KAISER HILL MAP ID: 02-0888/B116-IN2-8E Feb. 25, 2003
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