Rocky Flats Environmental Technology Site

PRE-DEMOLITION SURVEY REPORT (PDSR)

Building 559 Closure Project

VERSION 0

January 31, 2005

Change Control:

Rev 1. Replaced LLW Above-Ground Equipment & Structure Map - 1/31/05.
Rev 1. Added additional text to Section 3, Summary Table Footnote #4 – 1/31/05.

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

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PRE-DEMOLITION SURVEY REPORT (PDSR)

Building 559 Closure Project

VERSION 0

January 31, 2005

Reviewed by: _____ Date: 2/2/05
Don Risoli, Quality Assurance

Reviewed by: _____ Date: 2/2/05
D.P. Snyder, RISS ESH&Q Manager

Approved by: _____ Date: 2.1.05
Mike Swartz,
K-H D&D Project Manager

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ABBREVIATIONS/ACRONYMS

ACM	Asbestos containing material
Be	Beryllium
CDPHE	Colorado Department of Public Health and the Environment
$DCGL_{EMC}$	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
HEUN	Highly Enriched Uranyl Nitrate
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
RSA	Removable Surface Activity
RSP	Radiological Safety Practices
SCO	Surface Contaminated Object
SVOCs	Semi-volatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TSA	Total surface activity
VOCs	Volatile organic compounds

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EXECUTIVE SUMMARY

A Pre-Demolition Survey (PDS) was performed to enable compliant disposition and waste management of Building 559. Because this Type 2 facility will be decommissioned, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP) to supplement the Reconnaissance Level Characterization of this Type 2 facility. Building surfaces characterized as part of this PDS included the floors, walls, equipment and ceilings. Environmental media beneath and surrounding the facility was not within the scope of this PDS and will be addressed using the Soil Disturbance Permit process and in compliance with Rocky Flats Cleanup Agreement (RFCA).

This PDS encompassed both radiological and chemical characterization to enable the 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 and Reconnaissance Level Characterization Report (RLCR).

PDS results indicate that radiological contaminates exist in excess of the PDSP (Pre-Demolition Survey Plan) unrestricted release limits. Therefore, the entire building will be managed as transuranic Low Level Waste (LLW) during demolition. Fixatives were used to immobilize loose radiological contamination. There is no beryllium or hazardous waste in excess of the PDSP unrestricted release limits. All PCB ballasts, and hazardous waste items (e.g., mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury-containing gauges, circuit boards, leaded glass, and lead-acid batteries) have been removed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. PCBs (polychlorinated biphenyls) in paint meet the unrestricted release criteria of the RSOP for Facility Disposition (specific to 40CFR 761.62c).

Asbestos abatement was conducted in Building 559 prior to the PDS. Friable and non-friable asbestos containing building materials were removed per CDPHE, Regulation No. 8, Part B, *Emission Standards for Asbestos*. There are concrete masonry unit (CMU) cinderblock walls remaining in the building that will be removed and managed as LLW Non-Friable Category 1 Asbestos Containing Materials (ACM) during building demolition.

Based upon this PDSR, Building 559 can be demolished and the waste managed as LLW. None of the concrete will be used for on-site backfill. Under-slab utilities and piping systems shall be managed as LLW during demolition.

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1 INTRODUCTION

A Pre-Demolition Survey (PDS) was performed to enable compliant disposition and waste management of Building 559. Because this Type 2 facility will be decommissioned, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP) to supplement the Reconnaissance Level Characterization of this Type 2 facility. Building surfaces characterized as a part of this PDS included floors, walls, equipment and ceilings. Environmental media beneath and surrounding the facility was not within the scope of this PDS and will be addressed using the Soil Disturbance Permit process and in compliance with RFCA.

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed, among these is Building 559. The location of this facility is shown in Attachment A, *Facility Location Map*. This facility no longer supports the RFETS mission and will be decommissioned to reduce Site infrastructure, risks and/or operating costs. Reference maps of the Building 559 room layout and the LLW areas and equipment are also included in Attachment A.

Before this Type 2 facility can be decommissioned, the Data Quality Objectives (DQOs) for a Pre-Demolition Survey (PDS) must be satisfied; this document presents the PDS results for Building 559. The PDS was conducted pursuant to the Decontamination and Decommissioning Characterization Protocol (MAN-077-DDCP) and the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). The PDS is built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report, Reconnaissance Level Characterization Report, and in-process survey and sample data.

1.1 Purpose

The purpose of this report is to communicate and document the results of the Building 559 PDS effort. A PDS is performed prior to building demolition to define the final radiological and chemical conditions of a facility. Final conditions are compared with the release limits for radiological and non-radiological contaminants. PDS 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 final radiological and chemical conditions of Building 559. Environmental media beneath and surrounding the facility is not within the scope of this PDSR and will be addressed using the Soil Disturbance Permit process and in compliance with RFCA.

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1.3 Data Quality Objectives

The Data Quality Objectives (DQOs) used in designing this PDS were the same DQOs identified in the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP), with the exception of the radiological surveys. Refer to section 2.0 of MAN-127-PDSP for these DQOs. The radiological survey Data Quality Objectives (DQOs) were met by following Radiological Safety Practice procedures 3-PRO-165-07.02, *Contamination Monitoring Requirements*, and PRO-267-RSP-09.05, *Radiological Characterization for Surface Contaminated Objects.*

2 HISTORICAL SITE ASSESSMENT

A Facility-specific Historical Site Assessment (HSA) and a Reconnaissance Level Characterization (RLC) was conducted to understand the facility history and related hazards. The HSA consisted of facility walk-downs, interviews, and document review, including review of the Historical Release Report, and were used to design the RLC. The RLC for Building 559 was performed in FY 2002 as part of the Building 559 Cluster RLCR (refer to *Reconnaissance Level Characterization Report for the Building 559 Cluster,* dated January 25, 2002, Revision 0). Based on the RLC results, Building 559 was classified as a Type 2 facility, therefore, PDS characterization was required before decommissioning of the facility. The HSA, RLC and in-process results were used to identify PDS data gaps and needs, and to develop radiological and chemical PDS characterization packages. HSA and RLC documentation are located in the RISS Characterization Project files.

3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

Radiological contamination was identified during the RLC, as well as, during the in-process stripout and decontamination phases in Building 559. Thus, extensive stripout and decontamination was required prior to the PDS. Most of the potentially contaminated equipment and system piping were removed from the building prior to PDS. Fixed radiological contamination could not be decontaminated below the PDS unrestricted release criteria without compromising the structural integrity of the building, or was too difficult to decontaminate. The radiological contamination was embedded into the concrete cracks and joints such that if the decontamination effort chased the contamination into the cracks and joints, the structural integrity of the walls would be compromised to the point of being unsafe for human occupancy. Therefore, the entire building will be removed and managed as LLW during demolition. In addition, the Filter Plenum FP-304 in Room 129 will be removed during demolition and managed as Surface Contaminated Objects (SCO) LLW. Remaining surfaces were decontaminated in order to remove as much removable contamination as practical, and then fixatives were applied to immobilize any remaining loose contamination. The building was then re-surveyed for waste disposal and LLW demolition planning purposes.

The following table summarizes the highest transuranic pre-fixative and post-fixative levels found in the LLW areas:

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559 Areas	Pre-Fixative Fixed Point Survey Results (dpm/100cm^2 α)	Pre-Fixative Removable Survey Results (dpm/100cm^2 α)	Post-Fixative Fixed Point Survey Results (dpm/100cm^2 α) (Footnotes 1&2)	Post-Fixative Removable Survey Results (dpm/100cm^2 α)
Office Areas	2,000	50	Not Taken	<20
Mechanical Area (Rooms 129, 129A, 129B, 131)	1,240	175	Not Taken	<20
Recirculation Plenum FP-304, (Room 129)	36,000	2,000	1,000	<20
Laboratory Rooms 101, 102, 103, 110, 130 Floors, walls & ceilings	198,000	1,525	Not Taken	<20
B559 Annex/Dock (Rooms 103E, 109)	9,000	160	Not Taken	<20
Recirculation Tunnel & Ducts	168,654	4,000	Not Taken	<20
Rooms 101, 102, 103, 110, 103E, 109 Floor Slab (*In-situ* Gamma Spec) (Footnote 3)	2,350,000 (Room 103) 70,100,000 (Room 130)	Not Applicable	Not Taken	Not Applicable

Table Footnotes:

1. Post-fixative fixed-point survey results were not necessary or required in most cases.
2. In some areas fixatives were not necessary or were not applied because the pre-fixative surveys were <20 dpm/100cm^2 removable.
3. *In-situ* floor scans performed by Eberline Services with an MDA of approximately 254,000 dpm/100cm^2 when activity is converted to surface contamination. Longer counts performed when activity was detected. 100% of the floor was scanned. Majority of the floor was <MDA. Post-fixative surveys were not required.
4. Rooms 129A, 129B and 129 Mezzanine were not surveyed during the pre and post LLW surveys, however, the surveys of Room 129 are representative of these areas. Rooms 129A, 129B and 129 Mezzanine have historically been non-CA mechanical areas. Only until recently, low levels of contamination have been found in Room 129 during LLW surveys. The same D&D activities that have taken place in Room 129 are also the same that have occurred in Rooms 129A, 129B and 129 Mezzanine. Therefore, the contamination potential in Rooms 129A, 129B and 129 Mezzanine are the same as Room 129.

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No removable radiological contamination existed above the unrestricted release criteria after decontamination and fixative application. Appropriate controls will be incorporated into the demolition work packages to control these hazards during demolition. Since all surfaces of Building 559 will be managed and disposed of as transuranic LLW and SCO LLW, no formal PDS radiological surveying or sampling was performed. The in-process waste disposal and LLW demolition planning surveys contained in Attachments B-1, *Pre-Fixative LLW Radiological Survey Forms* and B-2, *Post-Fixative LLW Radiological Survey Forms*, suffice as the PDS radiological surveys for this building.

4 CHEMICAL CHARACTERIZATION AND HAZARDS

Building 559 was characterized for chemical hazards per the PDSP. Chemical characterization was performed to determine the nature and extent of chemical contamination that may be present on, or in the facility. Based upon a review of historical and process knowledge, visual inspections, and PDSP DQOs, additional sampling needs were determined. A Chemical Characterization Plan was developed during the planning phase that describes sampling requirements and the justification for the sample locations and estimated sample numbers. The contaminants of concern were asbestos, beryllium, polychlorinated biphenyls (PCBs), and RCRA/CERCLA constituents. Refer to Attachments C-1 and C-2 for details on sample results and sample locations. Isolation control postings are displayed at building entrances to ensure no hazardous materials are introduced.

4.1 Asbestos

A survey of building materials suspected of containing asbestos was conducted during in-process stripout of the facility. A CDPHE-certified asbestos inspector conducted the inspections 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. Prior to the PDS, friable and non-friable asbestos abatement and satisfactory clearance sampling was conducted per CDPHE, Regulation No. 8, Part B, *Emission Standards for Asbestos*. However, there are CMU cinderblock walls and floor tiles remaining in the building that will be removed and managed as LLW Non-Friable Category 1 ACM during building demolition. On this basis, no additional asbestos sampling was required or performed as part of this PDS.

4.2 Beryllium (Be)

During the in-process stripout and decontamination phase of the Building 559 project, all areas containing potential loose beryllium contamination were decontaminated to below the unrestricted release limit of 0.2 $\mu g/100cm^2$. No beryllium areas above the beryllium PDS unrestricted release limits were ever identified outside of glove-boxes during the in-process stripout and decontamination phase (all glove-boxes have been removed). Since Building 559 was on the list of Known Beryllium Areas, both random and biased PDS sampling was required. Once the areas were isolated from adjacent work areas, random and biased beryllium PDS swipes were collected and analyzed. Sixty-one (61) random swipes and sixteen (16) biased swipes were reported as final PDS beryllium results.

Random and biased beryllium smear samples were collected in Building 559 in accordance with the PDSP and the *Beryllium Characterization Procedure,* PRO-536-BCPR, Revision 0, September 9, 1999. All beryllium PDS swipe results were less than the action levels of 0.2 $\mu g/100cm^2$ and 0.1 $\mu g/100cm^2$. Detailed PDS beryllium laboratory swipe data and location maps are contained in Attachment C-1, *Beryllium Data Summaries and Sample Maps.*

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4.3 RCRA/CERCLA Constituents [including metals, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)]

Based on a review of the Historical Site Assessment Report (HSAR), RLCR, interviews, and facility walk-downs, drains in various active laboratories of the building flowed into the recirculation tunnel. Three samples were taken, one at each end and one in the middle of the tunnel. All results were below the unrestricted-release criteria. Sampling results are summarized in Attachment C-2, *Chemical (RCRA/CERCLA/PCB) Data Summaries and Sample Maps.*

The facility contained some RCRA regulated items, such as mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury containing gauges, circuit boards, and lead-acid batteries. However, these items have been removed and managed in accordance with the Colorado Hazardous Waste Act.

4.4 Polychlorinated Biphenyls (PCBs)

Based on a review of the HSAR, RLCR, interviews, and facility walk-downs, drains in various active laboratories of the building flowed into the recirculation tunnel. Three samples were taken, one at each end and one in the middle of the tunnel. All results were below the unrestricted-release criteria. Sampling results are summarized in Attachment C-2, *Chemical (RCRA/CERCLA/PCB) Data Summaries and Sample Maps.*

Based on the age of Building 559 (constructed prior to 1980), paint used in the facility may contain PCBs, therefore, painted surfaces will be managed as PCB Bulk Product Waste. The facility may have contained PCB fluorescent light ballasts, however, all leaking PCB ballasts, and those greater than 9 pounds have been removed from the facility and managed appropriately.

5 PHYSICAL HAZARDS

Physical hazards associated with Building 559 are those common to standard industrial environments, and include hazards associated with energized systems, utilities, and trips and falls. There is a large re-circulation air tunnel underneath Rooms 101, 102 and 103 slab that is about 8 feet wide and 8 feet deep. There are no other unique hazards associated with the facility. The facility has been relatively well maintained and is in good physical condition, therefore, does not present hazards associated with building deterioration. Physical hazards are controlled by the Site Occupational Safety and Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practices.

6 DATA QUALITY ASSESSMENT

Data used in making management decisions for the decommissioning of Building 559, and consequent waste management, are of adequate quality to support the decisions documented in this report. The data presented in this report (Attachments B and C) were verified and validated relative to DOE quality requirements, applicable EPA guidance, and original project DQOs.

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 D.

7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The decommissioning of Building 559 will generate transuranic LLW-PCB Bulk Product Waste; this waste will be removed and sent to appropriate offsite landfills. There are CMU cinderblock walls and floor tiles remaining in the building that will be removed and managed as LLW Non-Friable Category 1 ACM during building demolition. Estimated waste volumes are presented below. All ballasts and hazardous waste items have been removed and managed pursuant to Site PCB and waste management procedures.

WASTE TYPES AND VOLUME ESTIMATES							
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)**
559	142,600 – LLW	0	1,300 – LLW	0	3,700 - LLW	LLW CMU walls - 4,500	LLW Built-up Roof - 6,700

8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, Building 559 is ready for demolition. Various surfaces within Building 559 could not be decontaminated below the PDSP radiological unrestricted release limits without compromising the structural integrity of the building, or were too difficult to decontaminate. Therefore, the entire building will be removed and managed as transuranic LLW during demolition.

Building 559 does not possess beryllium or chemical contamination in excess of the PDSP unrestricted release limits. All PCB ballasts and hazardous waste items (e.g., mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury-containing gauges, circuit boards, leaded glass, and lead-acid batteries) have been removed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations.

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Asbestos abatement was conducted in Building 559 prior to the PDS. Friable and non-friable asbestos containing building materials were removed per CDPHE, Regulation No. 8, Part B, Emission Standards for Asbestos. However, there are CMU cinderblock walls and floor tiles still remaining in the building that will be removed and managed as LLW Non-Friable Category 1 ACM during building demolition.

The PDS for Building 559 was performed in accordance with the DDCP and PDSP, all PDSP DQOs were met, and all data satisfied the PDSP DQA criteria. 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. Based upon this PDSR, Building 559 can be demolished and the waste managed as LLW. None of the concrete will be used for on-site backfill. Under-slab utilities and piping systems shall be managed as LLW during demolition.

REFERENCES

DOE/RFFO, CDPHE, EPA, 1996. *Rocky Flats Cleanup Agreement (RFCA),* July 19, 1996.

DOE Order 5400.5, *"Radiation Protection of the Public and the Environment."*

DOE Order 414.1A, *"Quality Assurance."*

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. 4, 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* (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.*

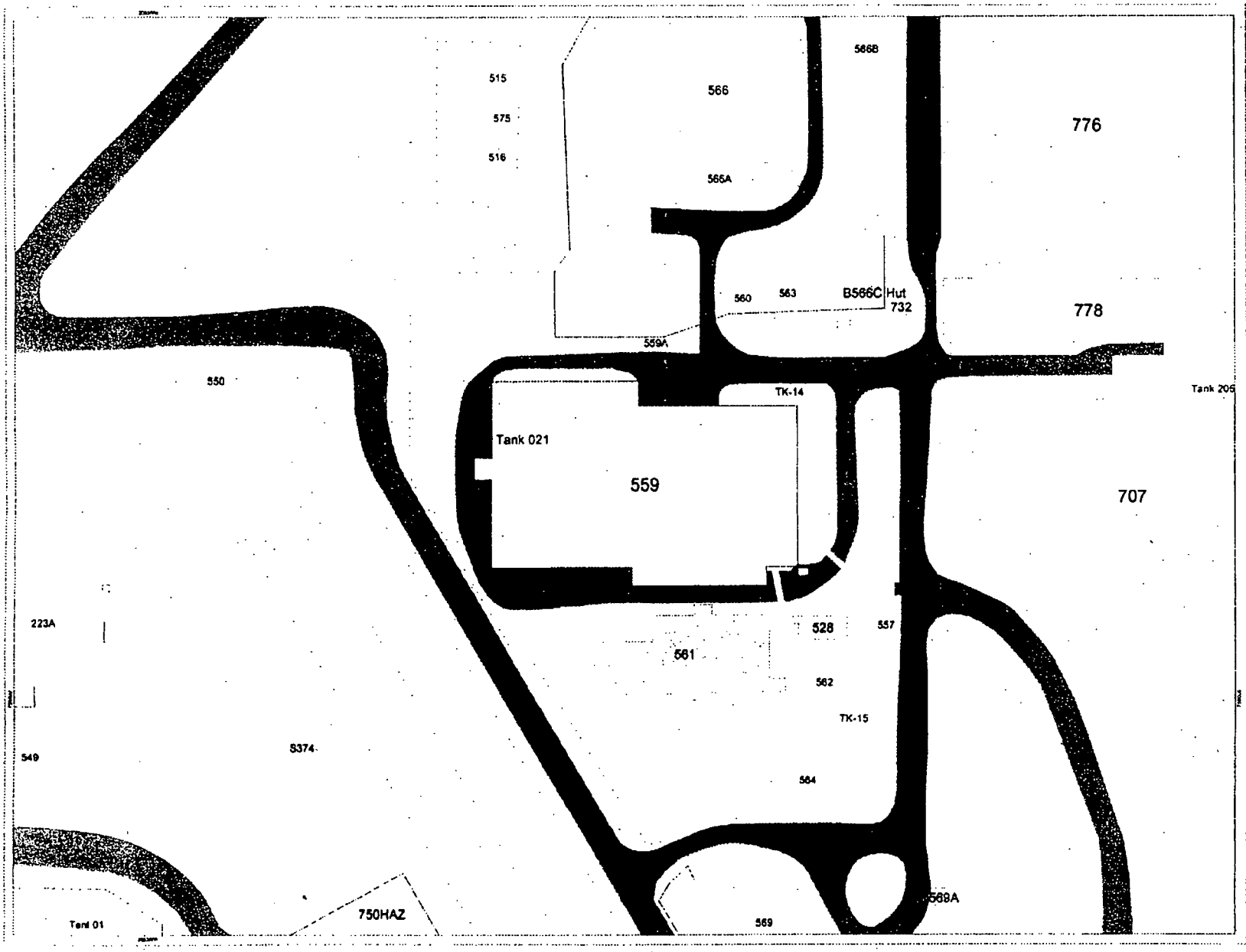
RFETS, *Environmental Waste Compliance* Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal.

RFETS, *RFCA RSOP for Recycling Concrete,* September 28, 1999

Reconnaissance Level Characterization Report for the Building 559 Cluster, Dated January 25, 2002, Revision 0

ATTACHMENT A

Facility Location Map
and
Reference Maps



Rocky Flats Environmental Technology Site

Building 559 Location Map

Map Features

- Buildings Remaining
- 559
- D&D Facility
- Paved Roads
- Dirt Roads
- Railroad Removed
- Railroad Remaining
- Fence Removed
- Fence Remaining
- Streams

N

Feet = 1:400
1 inch equals 33 feet

State Plane Coordinate Projection
Colorado Central Zone (3476)
Datum: NAD27

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

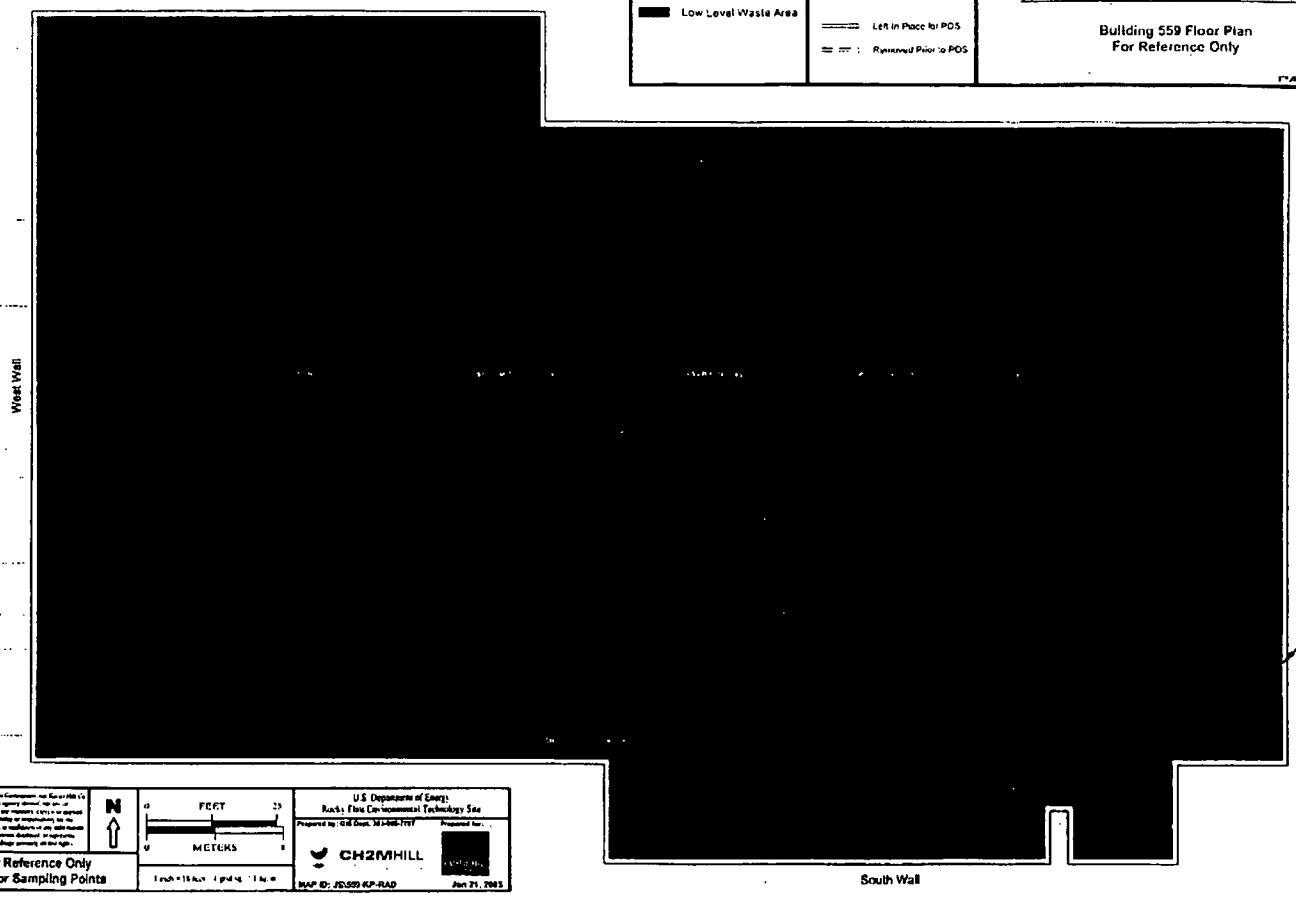
GIS Dept (303) 966-7707

CH2MHILL

KAISER-HILL

W:\Bldg_chart\Project\USA\4-559 Center\Bldg559_LocPlan.mxd

SURVEY UNIT KEY	INTERIOR WALL KEY	PRE-DEMOLITION SURVEY FOR BUILDING 559
Low Level Waste Area	Left in Place for POS Removed Prior to POS	Building 559 Floor Plan For Reference Only PAGE 1 OF 1



For Reference Only
Not For Sampling Points

N

0 FEET 25
0 METERS 8

U.S. Department of Energy
Rocky Flats Environmental Technology Site
CH2MHILL
MAP ID: JS559 KP-RAD
Jan 21, 2005

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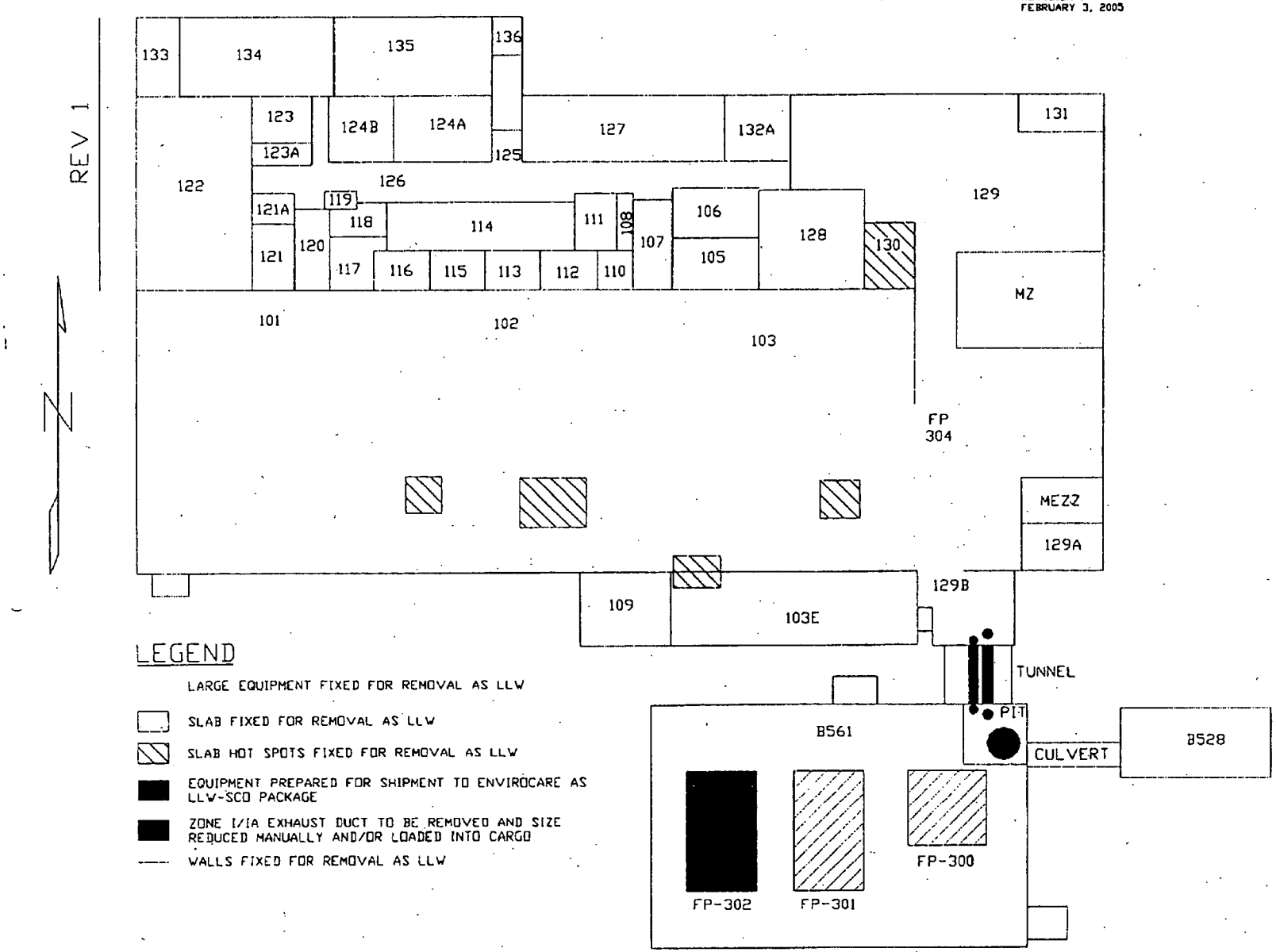
BUILDING 559 COMPLEX MAP

ABOVE GROUND EQUIPMENT AND STRUCTURES BEING REMOVED AS LLW

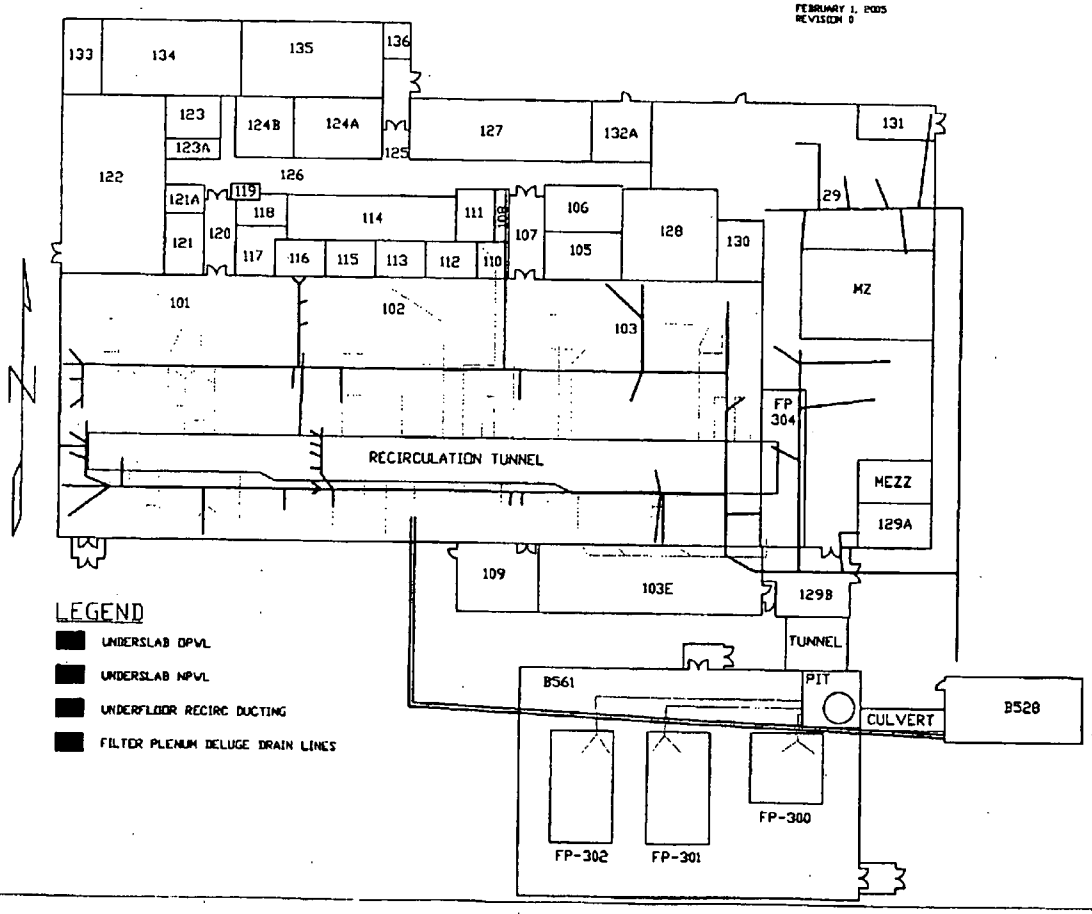
REVISION 1
FEBRUARY 3, 2005



BUILDING 559 COMPLEX MAP

UNDER SLAB PIPING AND DUCTING BEING REMOVED AS LLW

FEBRUARY 1, 2005
REVISION 0



ATTACHMENT B-1

Pre-Fixative LLW Radiological Survey Forms

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Eberline	Mfg.	NE Electra	Mfg.	NE Electra
Model	Sac 4	Model	DP-6	Model	DP-6
Serial #	924	Serial #	662	Serial #	1379
Cal Due	2/4/05	Cal Due	3/30/05	Cal Due	5/9/05
Bkg	0.2 cpmα	Bkg	1.0 cpmα	Bkg	6.0 cpmα
Efficiency	33.00 %	Efficiency	21.80 %	Efficiency	21.90 %
MDA	20 dpmα	MDA	34 dpmα	MDA	64 dpmα
Mfg.	N/A	Mfg.	NE Electra	Mfg.	NE Electra
Model	N/A	Model	DP-6	Model	DP-6
Serial #	N/A	Serial #	662	Serial #	1379
Cal Due	N/A	Cal Due	3/30/05	Cal Due	5/9/05
Bkg	N/A cpmβ	Bkg	678.0 cpmβ	Bkg	737.0 cpmβ
Efficiency	N/A %	Efficiency	22.00 %	Efficiency	22.00 %
MDA	N/A dpmβ	MDA	745 dpmβ	MDA	745 dpmβ

Survey Tracking # N/A
Survey Type: Contamination
Building: 559
Location: Office area
Purpose: LLW Characterization (Pre-Fix)
RWP #: N/A
Date: 1/6/05

[redacted]

COPY

PRN/REN # : N/A

Comments: Nuclide of concern is Plutonium. Survey performed to document contamination levels of 559 office area prior to LLW disposal. Performed direct readings and swipe of floors, walls, and remaining equipment in 559 offices. Beta efficiencies listed reflect correction for Depleted Uranium (DU), calibrated efficiencies for Electra # 662 is 30.5%.

Survey Results

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	Rm 132 A floor inside cabinet	<20	200	<64	N/A	N/A	N/A
2	Rm 132 A floor	<20	<64	N/A	N/A	N/A	N/A
3	Rm 132 A floor	<20	<64	N/A	N/A	N/A	N/A
4	Rm 132 A wall	<20	<64	<64	N/A	N/A	N/A
5	Rm 132 A wall	<20	<64	N/A	N/A	N/A	N/A
6	Rm 132 A wall	<20	<64	N/A	N/A	N/A	N/A
7	Rm 132 A wall	<20	<64	<64	N/A	N/A	N/A
8	Rm 132 A wall	<20	<64	N/A	N/A	N/A	N/A
9	Rm 132 A ceiling /horizontal	<20	<64	<64	N/A	N/A	N/A
10	Rm 132 A ceiling /horizontal	<20	<64	N/A	N/A	N/A	N/A
11	Rm 128 floor	<20	<64	N/A	N/A	N/A	N/A
12	Rm 128 floor	<20	<64	N/A	N/A	N/A	N/A
13	Rm 128 floor	<20	<64	<64	N/A	N/A	N/A
14	Rm 128 wall	<20	110	N/A	N/A	N/A	N/A
15	Rm 128 wall on ledge	<20	200	N/A	N/A	N/A	N/A
16	Rm 128 wall	<20	<64	N/A	N/A	N/A	N/A
17	Rm 128 wall	<20	<64	N/A	N/A	N/A	N/A
18	Rm 128 wall	<20	<64	<64	N/A	N/A	N/A
19	Rm 128 ceiling /horizontal	<20	<64	N/A	N/A	N/A	N/A
20	Rm 128 ceiling/horizontal	<20	<64	<64	N/A	N/A	N/A

Date Reviewed: 1/13/05 RS Supervisi [redacted]

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

#	LOCATION	ALPHA Swipe	ALPHA Direct	ALPHA Wipe	BETA Swipe	BETA Direct	BETA Wipe
		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
21	Rm 106 floor	<20	<64	<64	N/A	N/A	N/A
22	Rm 106 floor	<20	<64	N/A	N/A	N/A	N/A
23	Rm 106 wall	<20	<64	N/A	N/A	N/A	N/A
24	Rm 106 wall	<20	<64	<64	N/A	N/A	N/A
25	Rm 106 wall	<20	<64	N/A	N/A	N/A	N/A
26	Rm 106 wall	<20	<64	N/A	N/A	N/A	N/A
27	Rm 106 wall	<20	<64	N/A	N/A	N/A	N/A
28	Rm 106 ceiling	<20	<64	<64	N/A	N/A	N/A
29	Rm 106 ceiling	<20	<64	N/A	N/A	N/A	N/A
30	Rm 106 ceiling	<20	<64	N/A	N/A	N/A	N/A
31	Rm 105 floor	<20	<64	N/A	N/A	N/A	N/A
32	Rm 105 floor	<20	<64	N/A	N/A	N/A	N/A
33	Rm 105 floor	<20	<64	N/A	N/A	N/A	N/A
34	Rm 105 wall	<20	<64	<64	N/A	N/A	N/A
35	Rm 105 wall	<20	<64	N/A	N/A	N/A	N/A
36	Rm 105 wall	<20	<64	N/A	N/A	N/A	N/A
37	Rm 105 wall	<20	<64	N/A	N/A	N/A	N/A
38	Rm 105 wall	<20	<64	N/A	N/A	N/A	N/A
39	Rm 105 wall	<20	<64	N/A	N/A	N/A	N/A
40	Rm 105 ceiling	<20	<64	<64	N/A	N/A	N/A
41	Rm 127 floor	<20	**150**	N/A	N/A	N/A	N/A
42	Rm 127 floor	<20	<64	N/A	N/A	N/A	N/A
43	Rm 127 floor	<20	<64	N/A	N/A	N/A	N/A
44	Rm 127 floor	<20	<64	N/A	N/A	N/A	N/A
45	Rm 127 floor	<20	<64	<64	N/A	N/A	N/A
46	Rm 127 floor	<20	**325**	<64	N/A	N/A	N/A
47	Rm 127 wall	<20	<64	N/A	N/A	N/A	N/A
48	Rm 127 wall	<20	<64	N/A	N/A	N/A	N/A
49	Rm 127 wall	<20	<64	N/A	N/A	N/A	N/A
50	Rm 127 wall	<20	<64	N/A	N/A	N/A	N/A
51	Rm 127 wall	<20	<64	N/A	N/A	N/A	N/A
52	Rm 127 wall	<20	<64	<64	N/A	N/A	N/A
53	Rm 127 wall	<20	<64	N/A	N/A	N/A	N/A
54	Rm 127 wall	<20	<64	N/A	N/A	N/A	N/A
55	Rm 127 wall	<20	<64	N/A	N/A	N/A	N/A
56	Rm 127 ventilation system equipment	<20	<64	<64	N/A	N/A	N/A
57	Rm 127 ceiling	<20	<64	<64	N/A	N/A	N/A
58	Rm 127 ceiling	<20	<64	N/A	N/A	N/A	N/A
59	Rm 127 ceiling	<20	<64	N/A	N/A	N/A	N/A
60	Rm 127 ceiling	<20	<64	N/A	N/A	N/A	N/A
61	Rm 111 floor	<20	<64	N/A	N/A	N/A	N/A
62	Rm 111 wall	<20	<64	<64	N/A	N/A	N/A
63	Rm 111 wall	<20	<64	N/A	N/A	N/A	N/A
64	Rm 111 wall	<20	<64	N/A	N/A	N/A	N/A
65	Rm 111 ceiling	<20	<64	<64	N/A	N/A	N/A
66	Rm 108 floor	<20	**450**	N/A	N/A	N/A	N/A
67	Rm 108 wall	<20	**350**	N/A	N/A	N/A	N/A
68	Rm 108 wall	<20	**300**	<64	N/A	N/A	N/A
69	Rm 108 wall	<20	<64	N/A	N/A	N/A	N/A
70	Rm 108 wall	<20	<64	N/A	N/A	N/A	N/A

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

#	LOCATION	ALPHA Swipe	ALPHA Direct	ALPHA Wipe	BETA Swipe	BETA Direct	BETA Wipe
		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
71	Rm 108 ceiling	<20	**150**	N/A	N/A	N/A	N/A
72	Rm 114 floor	<20	<64	<64	N/A	N/A	N/A
73	Rm 114 floor	<20	<64	N/A	N/A	N/A	N/A
74	Rm 114 floor	<20	<64	<64	N/A	N/A	N/A
75	Rm 114 floor	<20	<64	N/A	N/A	N/A	N/A
76	Rm 114 wall	<20	<64	N/A	N/A	N/A	N/A
77	Rm 114 wall	<20	<64	<64	N/A	N/A	N/A
78	Rm 114 wall	<20	<64	N/A	N/A	N/A	N/A
79	Rm 114 wall	<20	<64	N/A	N/A	N/A	N/A
80	Rm 114 wall	<20	<64	N/A	N/A	N/A	N/A
81	Rm 114 wall	<20	<64	N/A	N/A	N/A	N/A
82	Rm 114 ceiling	**50**	**200**	N/A	N/A	N/A	N/A
83	Rm 114 ceiling	<20	<64	N/A	N/A	N/A	N/A
84	Rm 124 B floor	<20	**150**	<64	N/A	N/A	N/A
85	Rm 124 B floor	<20	**150**	N/A	N/A	N/A	N/A
86	Rm 124 B floor	<20	**200**	N/A	N/A	N/A	N/A
87	Rm 124 B wall	<20	<64	N/A	N/A	N/A	N/A
88	Rm 124 B wall	<20	<64	<64	N/A	N/A	N/A
89	Rm 124 B wall	<20	<64	N/A	N/A	N/A	N/A
90	Rm 124 B wall	<20	<64	N/A	N/A	N/A	N/A
91	Rm 124 B ceiling	<20	<64	N/A	N/A	N/A	N/A
92	Rm 124 A floor	<20	**200**	<64	N/A	N/A	N/A
93	Rm 124 A floor	<20	**150**	N/A	N/A	N/A	N/A
94	Rm 124 A floor	<20	**200**	N/A	N/A	N/A	N/A
95	Rm 124 A wall	<20	<64	<64	N/A	N/A	N/A
96	Rm 124 A wall	<20	<64	N/A	N/A	N/A	N/A
97	Rm 124 A wall	<20	<64	N/A	N/A	N/A	N/A
98	Rm 124 A wall	<20	<64	N/A	N/A	N/A	N/A
99	Rm 124 A ceiling	<20	<64	<64	N/A	N/A	N/A
100	Rm 124 A ceiling	<20	<64	N/A	N/A	N/A	N/A
101	Rm 112 floor	<20	<64	N/A	N/A	N/A	N/A
102	Rm 112 wall	<20	<64	N/A	N/A	N/A	N/A
103	Rm 112 wall	<20	<64	<64	N/A	N/A	N/A
104	Rm 112 wall	<20	<64	N/A	N/A	N/A	N/A
105	Rm 112 ceiling	<20	<64	N/A	N/A	N/A	N/A
106	Rm 113 floor	<20	<64	<64	N/A	N/A	N/A
107	Rm 113 floor	<20	<64	N/A	N/A	N/A	N/A
108	Rm 113 wall	<20	<64	N/A	N/A	N/A	N/A
109	Rm 113 wall	<20	<64	<64	N/A	N/A	N/A
110	Rm 113 wall	<20	<64	N/A	N/A	N/A	N/A
111	Rm 113 wall	<20	<64	N/A	N/A	N/A	N/A
112	Rm 113 ceiling	<20	<64	<64	N/A	N/A	N/A
113	Rm 115 floor	<20	<64	N/A	N/A	N/A	N/A
114	Rm 115 floor	<20	<64	<64	N/A	N/A	N/A
115	Rm 115 wall	<20	<64	N/A	N/A	N/A	N/A
116	Rm 115 wall	<20	<64	N/A	N/A	N/A	N/A
117	Rm 115 wall	<20	<64	N/A	N/A	N/A	N/A
118	Rm 115 wall	<20	<64	<64	N/A	N/A	N/A
119	Rm 115 wall	<20	<64	N/A	N/A	N/A	N/A
120	Rm 115 ceiling	<20	<64	N/A	N/A	N/A	N/A

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

#	LOCATION	ALPHA Swipe	ALPHA Direct	ALPHA Wipe	BETA Swipe	BETA Direct	BETA Wipe
		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
121	Rm 116 floor	<20	375	N/A	N/A	N/A	N/A
122	Rm 116 floor	<20	<64	N/A	N/A	N/A	N/A
123	Rm 116 wall	<20	<64	N/A	N/A	N/A	N/A
124	Rm 116 wall	<20	<64	<64	N/A	N/A	N/A
125	Rm 116 wall	<20	<64	N/A	N/A	N/A	N/A
126	Rm 116 ceiling	<20	<64	N/A	N/A	N/A	N/A
127	Rm 118 floor	<20	300	N/A	N/A	N/A	N/A
128	Rm 118 floor	<20	<64	<64	N/A	N/A	N/A
129	Rm 118 wall	<20	<64	N/A	N/A	N/A	N/A
130	Rm 118 wall	<20	<64	N/A	N/A	N/A	N/A
131	Rm 118 wall	<20	<64	N/A	N/A	N/A	N/A
132	Rm 118 wall	<20	<64	N/A	N/A	N/A	N/A
133	Rm 119 floor	<20	<64	<64	N/A	N/A	N/A
134	Rm 119 wall	<20	<64	N/A	N/A	N/A	N/A
135	Rm 119 wall	<20	<64	N/A	N/A	N/A	N/A
136	Rm 119 ceiling	<20	<64	N/A	N/A	N/A	N/A
137	Rm 120 floor	<20	<64	N/A	N/A	N/A	N/A
138	Rm 120 floor	<20	<64	N/A	N/A	N/A	N/A
139	Rm 120 floor	<20	<64	N/A	N/A	N/A	N/A
140	Rm 120 wall	<20	<64	N/A	N/A	N/A	N/A
141	Rm 120 wall	<20	<64	N/A	N/A	N/A	N/A
142	Rm 120 wall	<20	<64	N/A	N/A	N/A	N/A
143	Rm 120 wall	<20	<64	<64	N/A	N/A	N/A
144	Rm 120 wall	<20	<64	N/A	N/A	N/A	N/A
145	Rm 120 ceiling	<20	<64	N/A	N/A	N/A	N/A
146	Rm 107 floor	<20	<64	<64	N/A	N/A	N/A
147	Rm 107 floor	<20	<64	N/A	N/A	N/A	N/A
148	Rm 107 wall	<20	1500	<64	N/A	N/A	N/A
149	Rm 107 wall	<20	<64	N/A	N/A	N/A	N/A
150	Rm 107 wall	<20	<64	N/A	N/A	N/A	N/A
151	Rm 107 wall	<20	<64	<64	N/A	N/A	N/A
152	Rm 107 wall	<20	<64	N/A	N/A	N/A	N/A
153	Rm 107 ceiling	<20	<64	N/A	N/A	N/A	N/A
154	Rm 107 ceiling	<20	<64	N/A	N/A	N/A	N/A
155	Rm 107 doors	<20	150	<64	N/A	N/A	N/A
156	Rm 117 floor	<20	<64	N/A	N/A	N/A	N/A
157	Rm 117 floor	<20	<64	N/A	N/A	N/A	N/A
158	Rm 117 wall	<20	<64	N/A	N/A	N/A	N/A
159	Rm 117 wall	<20	<64	<64	N/A	N/A	N/A
160	Rm 117 wall	<20	<64	N/A	N/A	N/A	N/A
161	Rm 117 ceiling	<20	<64	N/A	N/A	N/A	N/A
162	Rm 117 wall	<20	<64	N/A	N/A	N/A	N/A
163	Rm 117 wall	<20	<64	N/A	N/A	N/A	N/A
164	Rm 136 floor	<20	<64	<64	N/A	N/A	N/A
165	Rm 136 wall	<20	<64	N/A	N/A	N/A	N/A
166	Rm 136 wall	<20	<64	N/A	N/A	N/A	N/A
167	Rm 136 wall	<20	<64	N/A	N/A	N/A	N/A
168	Rm 136 ceiling	<20	<64	<64	N/A	N/A	N/A
169	Rm 123 A floor	<20	<64	N/A	N/A	N/A	N/A
170	Rm 123 A wall on tile	<20	150	N/A	N/A	N/A	N/A

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
171	Rm 123 A wall	<20	<64	N/A	N/A	N/A	N/A
172	Rm 123 A wall	<20	<64	N/A	N/A	N/A	N/A
173	Rm 123 A ceiling	<20	<64	N/A	N/A	N/A	N/A
174	Rm 123 floor	<20	<64	<68	N/A	N/A	N/A
175	Rm 123 floor	<20	<64	N/A	N/A	N/A	N/A
176	Rm 123 wall	<20	<64	N/A	N/A	N/A	N/A
177	Rm 123 wall	<20	<64	N/A	N/A	N/A	N/A
178	Rm 123 wall	<20	<64	N/A	N/A	N/A	N/A
179	Rm 123 wall	<20	<64	N/A	N/A	N/A	N/A
180	Rm 123 ceiling	<20	<64	N/A	N/A	N/A	N/A
181	Rm 121 A floor	<20	<64	N/A	N/A	N/A	N/A
182	Rm 121 A wall	<20	<64	N/A	N/A	N/A	N/A
183	Rm 121 A wall	<20	<64	N/A	N/A	N/A	N/A
184	Rm 121 A wall	<20	<64	N/A	N/A	N/A	N/A
185	Rm 121 A ceiling	<20	<64	<64	N/A	N/A	N/A
186	Rm 122 A floor	<20	<64	N/A	N/A	N/A	N/A
187	Rm 122 A floor	<20	<64	N/A	N/A	N/A	N/A
188	Rm 122 A wall	<20	<64	<64	N/A	N/A	N/A
189	Rm 122 A wall	<20	<64	N/A	N/A	N/A	N/A
190	Rm 122 A wall	<20	<64	N/A	N/A	N/A	N/A
191	Rm 122 A wall	<20	<64	N/A	N/A	N/A	N/A
192	Rm 122 A ceiling	<20	<64	N/A	N/A	N/A	N/A
193	Rm 121 floor	<20	**150**	<64	N/A	N/A	N/A
194	Rm 121 floor	<20	**150**	N/A	N/A	N/A	N/A
195	Rm 121 wall	<20	**200**	N/A	N/A	N/A	N/A
196	Rm 121 wall	<20	**200**	N/A	N/A	N/A	N/A
197	Rm 121 wall	<20	**200**	N/A	N/A	N/A	N/A
198	Rm 121 wall	<20	**200**	<64	N/A	N/A	N/A
199	Rm 121 ceiling	<20	<64	N/A	N/A	N/A	N/A
200	Rm 121 ceiling	<20	<64	N/A	N/A	N/A	N/A
201	Rm 133 floor	<20	<64	N/A	N/A	N/A	N/A
202	Rm 133 floor	<20	<64	N/A	N/A	N/A	N/A
203	Rm 133 wall	<20	<64	<64	N/A	N/A	N/A
204	Rm 133 wall	<20	<64	N/A	N/A	N/A	N/A
205	Rm 133 wall	<20	<64	N/A	N/A	N/A	N/A
206	Rm 133 wall	<20	<64	N/A	N/A	N/A	N/A
207	Rm 133 wall	<20	<64	N/A	N/A	N/A	N/A
208	Rm 133 ceiling	<20	<64	N/A	N/A	N/A	N/A
209	Rm 133 ceiling	<20	<64	<64	N/A	N/A	N/A
210	Rm 122 floor	<20	**400**	N/A	N/A	N/A	N/A
211	Rm 122 floor	<20	**2000**	N/A	N/A	N/A	N/A
212	Rm 122 floor	<20	**200**	N/A	N/A	N/A	N/A
213	Rm 122 floor	<20	**300**	<64	N/A	N/A	N/A
214	Rm 122 floor	<20	**1000**	N/A	N/A	N/A	N/A
215	Rm 122 floor	<20	<64	N/A	N/A	N/A	N/A
216	Rm 122 floor	<20	<64	N/A	N/A	N/A	N/A
217	Rm 122 wall	<20	**650**	N/A	N/A	N/A	N/A
218	Rm 122 wall	<20	<64	N/A	N/A	N/A	N/A
219	Rm 122 wall	<20	<64	<64	N/A	N/A	N/A
220	Rm 122 wall	<20	<64	N/A	N/A	N/A	N/A

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

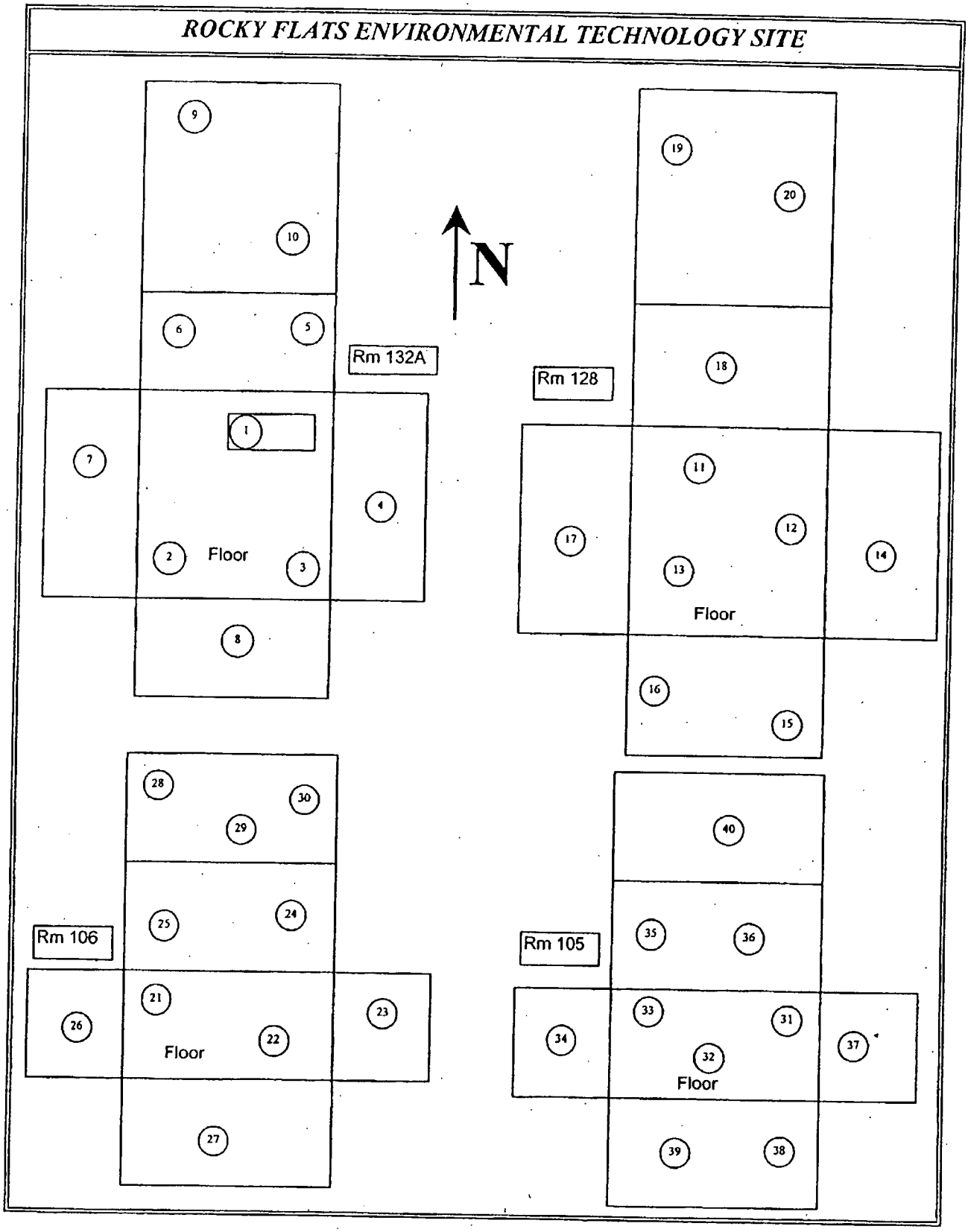
#	LOCATION	ALPHA Swipe	ALPHA Direct	ALPHA Wipe	BETA Swipe	BETA Direct	BETA Wipe
		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
221	Rm 122 wall	<20	<64	N/A	N/A	N/A	N/A
222	Rm 122 wall	<20	<64	N/A	N/A	N/A	N/A
223	Rm 122 wall	<20	<64	N/A	N/A	N/A	N/A
224	Rm 122 wall	<20	<64	<68	N/A	N/A	N/A
225	Rm 122 wall	<20	<64	N/A	N/A	N/A	N/A
226	Rm 122 wall on ledge	<20	**330**	<64	N/A	N/A	N/A
227	Rm 122 ceiling on overhead ducting	<20	**600**	N/A	N/A	N/A	N/A
228	Rm 122 ceiling on overhead ducting	<20	**400**	<64	N/A	N/A	N/A
229	Rm 122 ceiling on overhead ducting	<20	**300**	N/A	N/A	N/A	N/A
230	Rm 122 ceiling on overhead ducting	<20	**930**	N/A	N/A	N/A	N/A
231	Rm 135 floor	<20	<64	N/A	N/A	N/A	N/A
232	Rm 135 floor	<20	<64	<64	N/A	N/A	N/A
233	Rm 135 floor	<20	<64	N/A	N/A	N/A	N/A
234	Rm 135 floor	<20	<64	N/A	N/A	N/A	N/A
235	Rm 135 wall	<20	<64	<64	N/A	N/A	N/A
236	Rm 135 wall	<20	<64	N/A	N/A	N/A	N/A
237	Rm 135 wall	<20	<64	N/A	N/A	N/A	N/A
238	Rm 135 wall	<20	<64	<64	N/A	N/A	N/A
239	Rm 135 wall	<20	<64	N/A	N/A	N/A	N/A
240	Rm 135 wall	<20	<64	N/A	N/A	N/A	N/A
241	Rm 135 ceiling	<20	<64	N/A	N/A	N/A	N/A
242	Rm 135 ceiling	<20	<64	N/A	N/A	N/A	N/A
243	Rm 135 ceiling	<20	<64	<64	N/A	N/A	N/A
244	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
245	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
246	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
247	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
248	Rm 126 floor	<20	<64	<64	N/A	N/A	N/A
249	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
250	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
251	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
252	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
253	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
254	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
255	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
256	Rm 126 floor	<20	<64	<64	N/A	N/A	N/A
257	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
258	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
259	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
260	Rm 126 wall	<20	<64	<64	N/A	N/A	N/A
261	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
262	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
263	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
264	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
265	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
266	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
267	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
268	Rm 126 wall	<20	<64	<64	N/A	N/A	N/A
269	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
270	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A

25

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

	LOCATION	ALPHA			BETA		
		Swipe	Direct	Wipe	Swipe	Direct	Wipe
#		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
271	Rm 126 wall	<20	<64	<64	N/A	N/A	N/A
272	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
273	Rm 126 ceiling	<20	<64	N/A	N/A	N/A	N/A
274	Rm 126 ceiling	<20	<64	<64	N/A	N/A	N/A
275	Rm 126 ceiling	<20	<64	N/A	N/A	N/A	N/A
276	Rm 126 ceiling	<20	<64	N/A	N/A	N/A	N/A
277	Rm 126 ceiling	<20	<64	<64	N/A	N/A	N/A
278	Rm 126 ceiling	<20	<64	N/A	N/A	N/A	N/A
279	Rm 126 ceiling	<20	<64	N/A	N/A	N/A	N/A
280	Rm 126 ceiling	<20	<64	N/A	N/A	N/A	N/A
281	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
282	Rm 126 floor	<20	<64	N/A	N/A	N/A	N/A
283	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
284	Rm 126 wall	<20	<64	<64	N/A	N/A	N/A
285	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
286	Rm 126 wall	<20	<64	N/A	N/A	N/A	N/A
287	Rm 126 ceiling	<20	<64	N/A	N/A	N/A	N/A
288	Rm 126 ceiling	<20	<64	<64	N/A	N/A	N/A
289	Rm 134 floor	<20	<64	N/A	N/A	N/A	N/A
290	Rm 134 floor	<20	<64	N/A	N/A	N/A	N/A
291	Rm 134 floor	<20	150	<64	N/A	N/A	N/A
292	Rm 134 floor	<20	150	N/A	N/A	N/A	N/A
293	Rm 134 wall	<20	<64	N/A	N/A	N/A	N/A
294	Rm 134 wall	<20	<64	N/A	N/A	N/A	N/A
295	Rm 134 wall on tile	<20	<64	N/A	N/A	N/A	N/A
296	Rm 134 wall	<20	<64	<64	N/A	N/A	N/A
297	Rm 134 wall	<20	<64	N/A	N/A	N/A	N/A
298	Rm 134 wall	<20	<64	N/A	N/A	N/A	N/A
299	Rm 134 ceiling	<20	<64	<64	N/A	N/A	N/A
300	Rm 134 ceiling	<20	<64	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A


ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
N
Rm 132A
Floor
Rm 128
Floor
Rm 106
Floor
Rm 105
Floor
1
2
3
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5
6
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10
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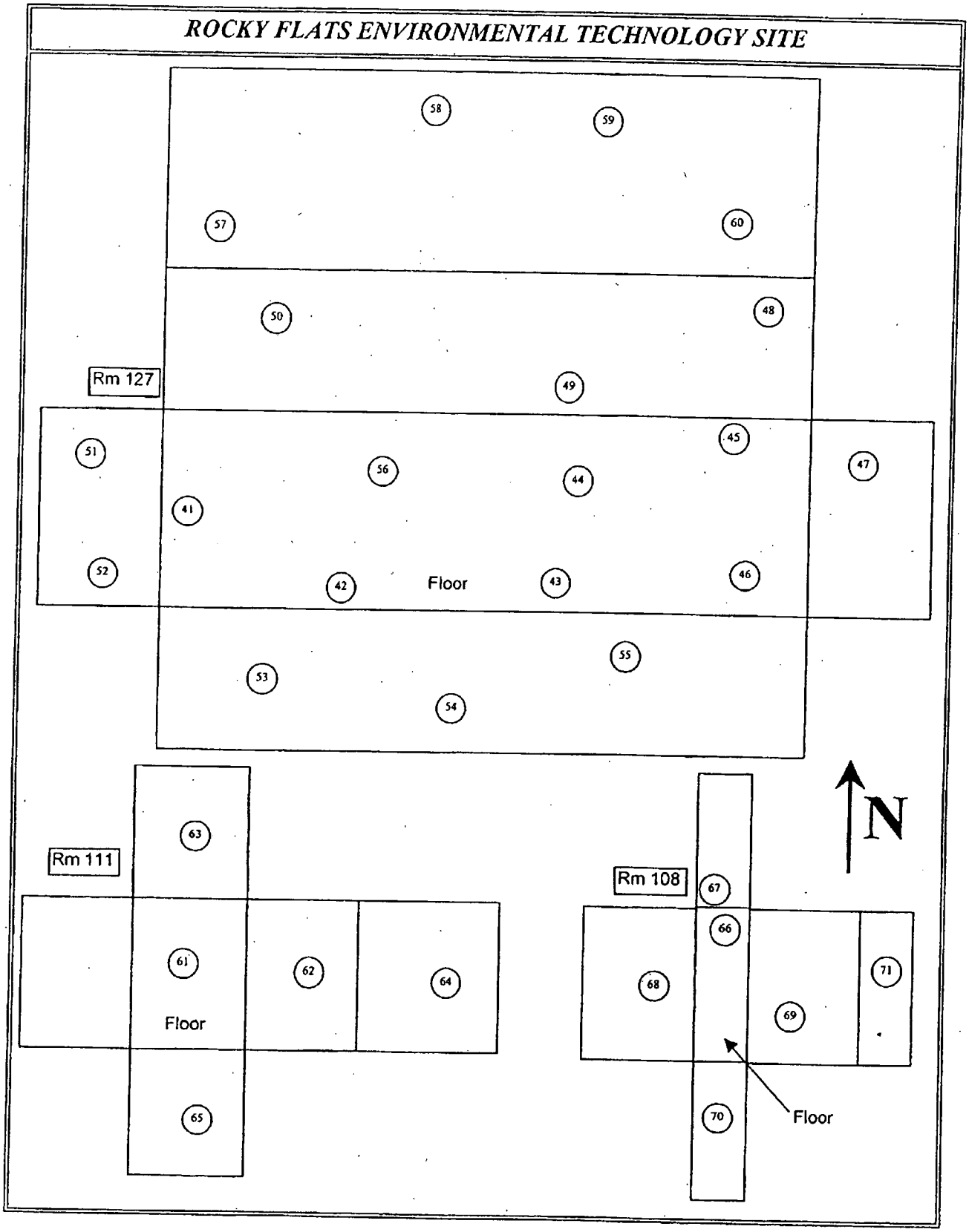
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
Rm 127
Floor
Rm 111
Floor
Rm 108
Floor
N
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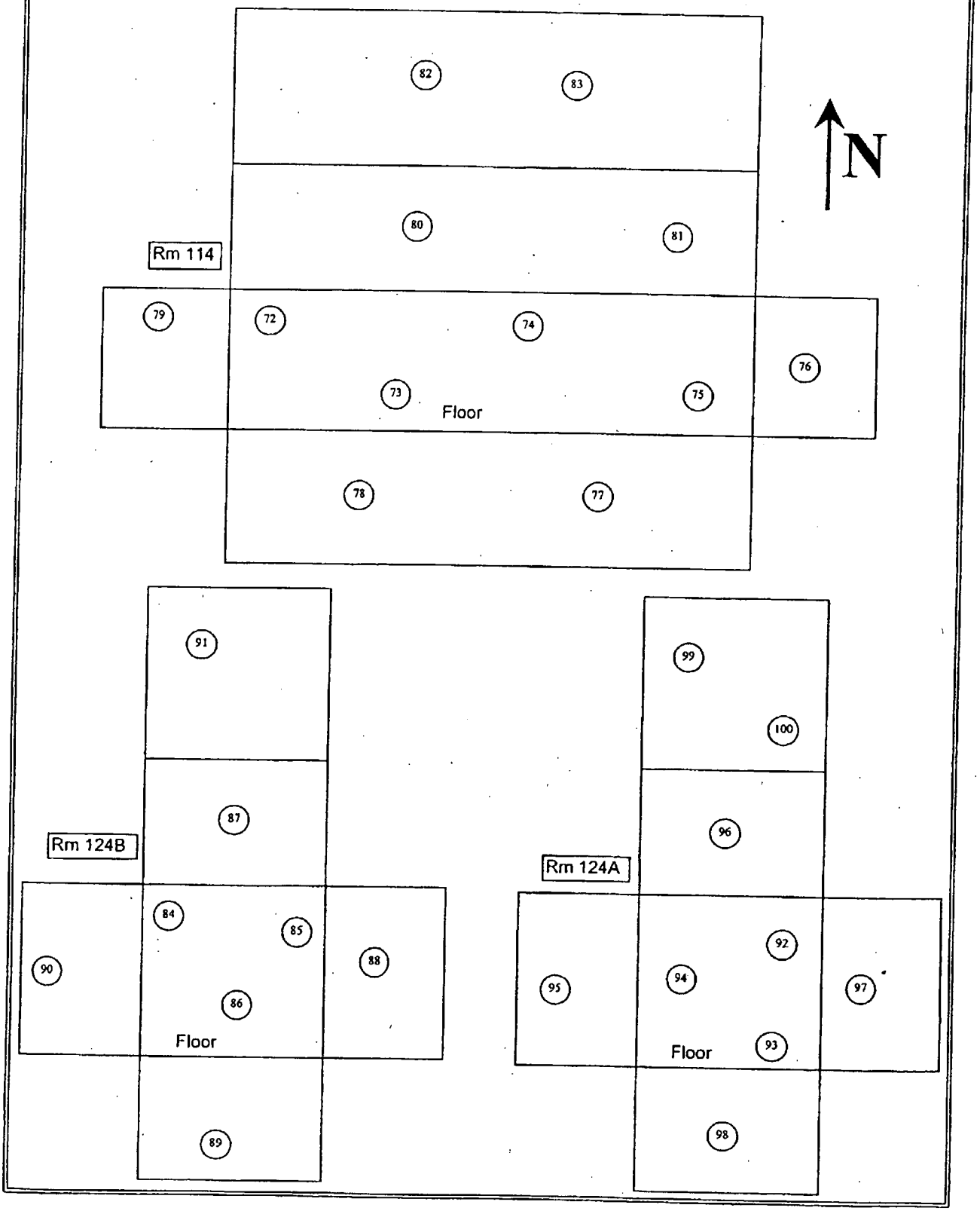
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



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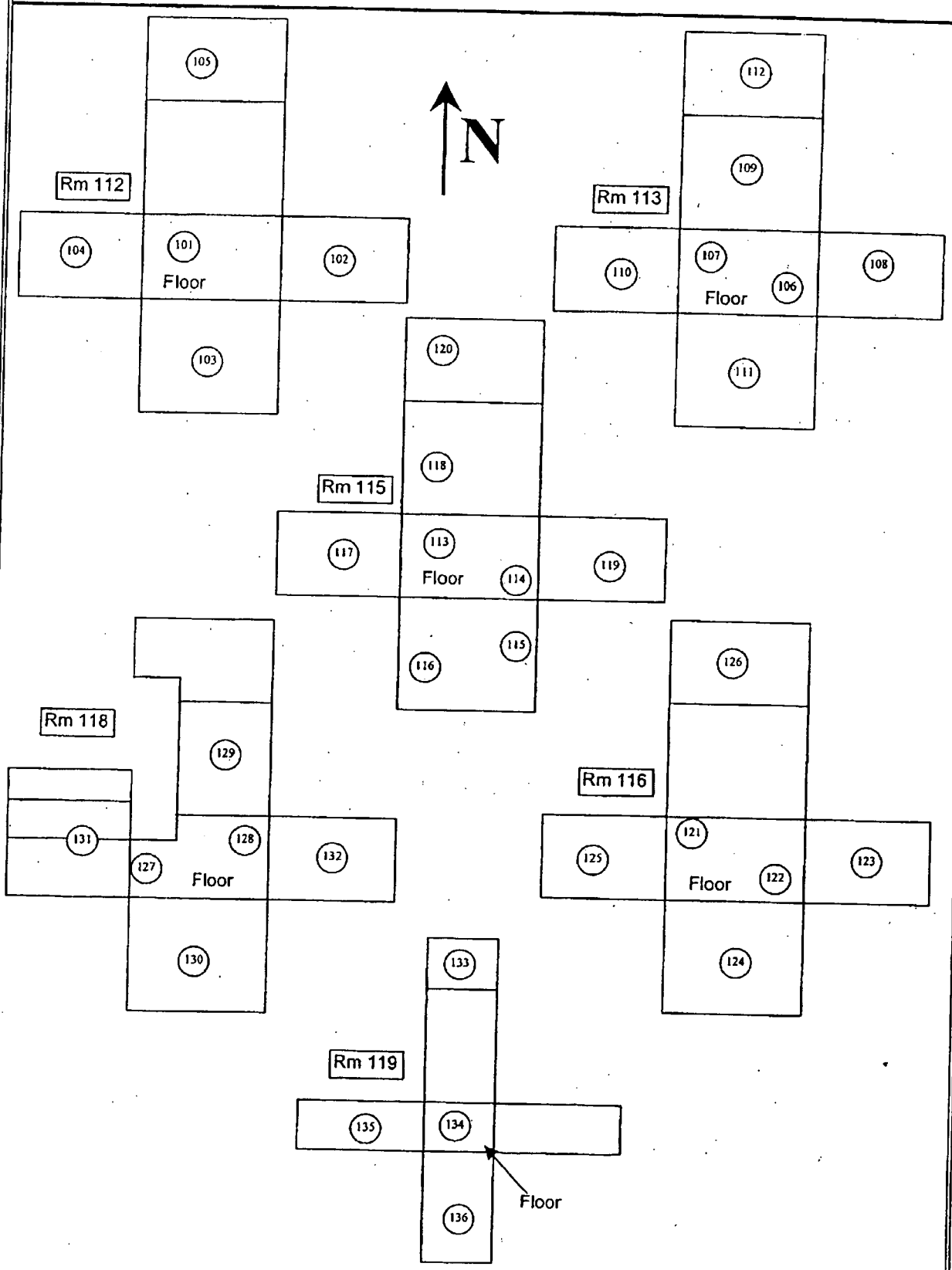

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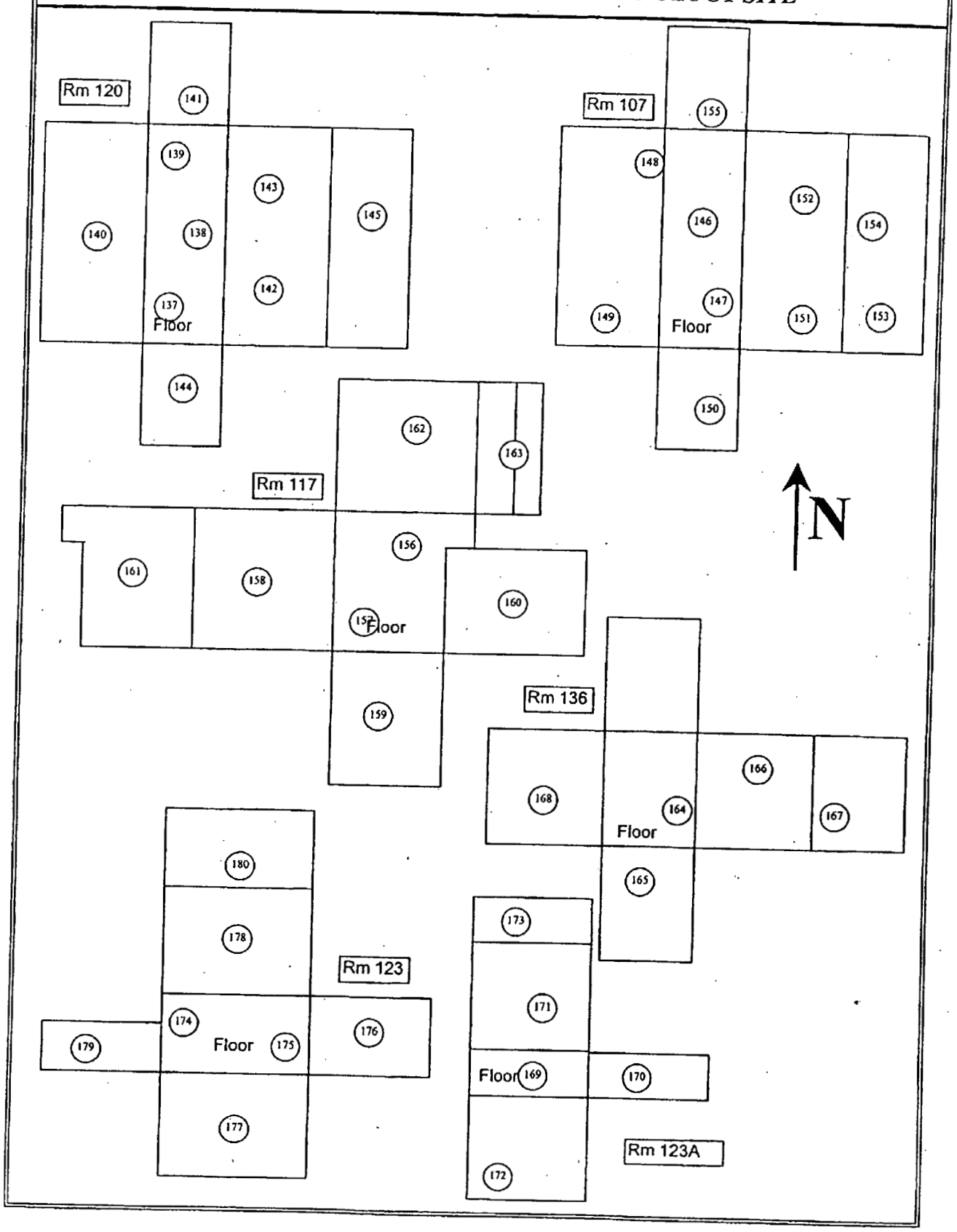

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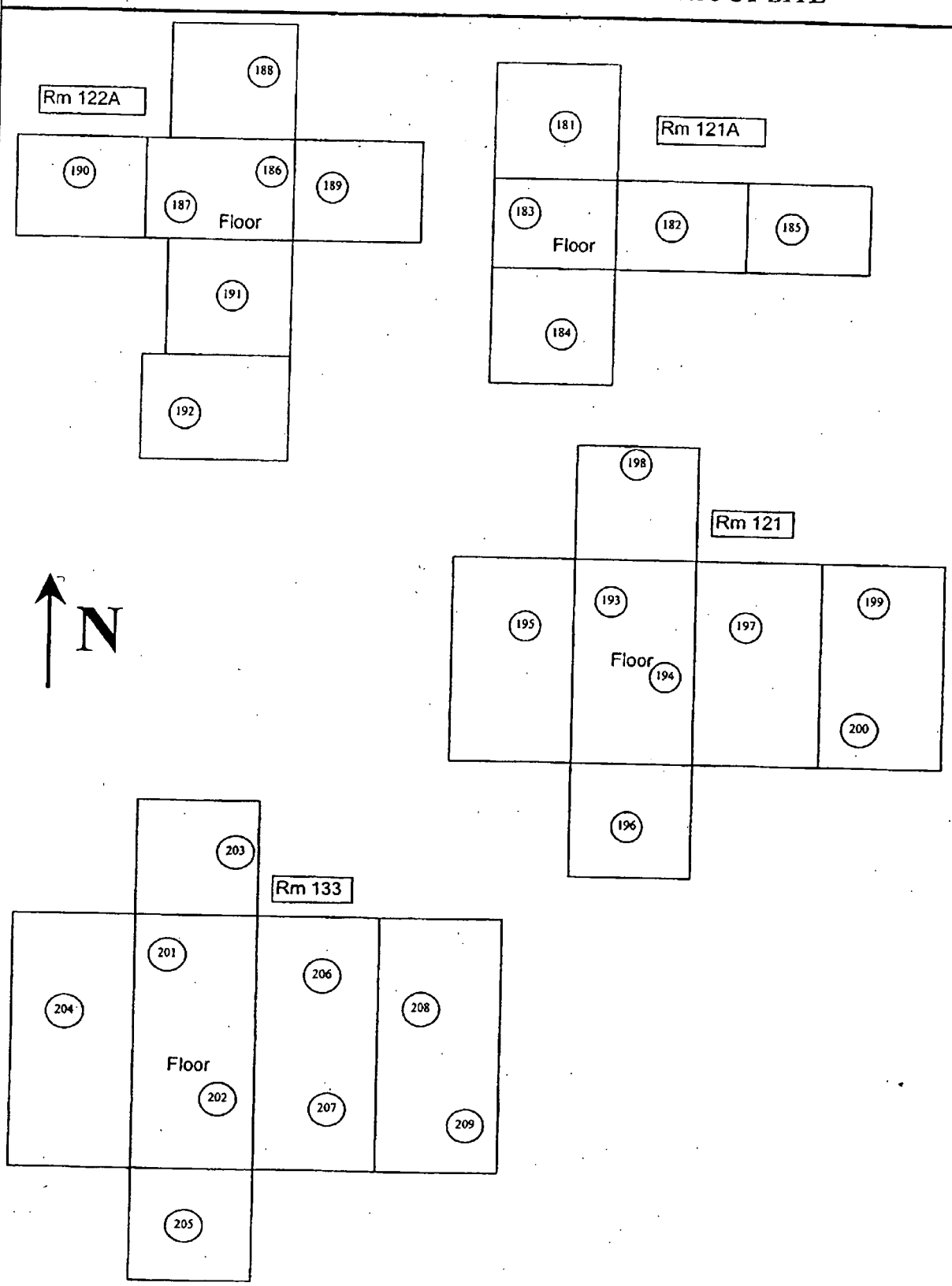
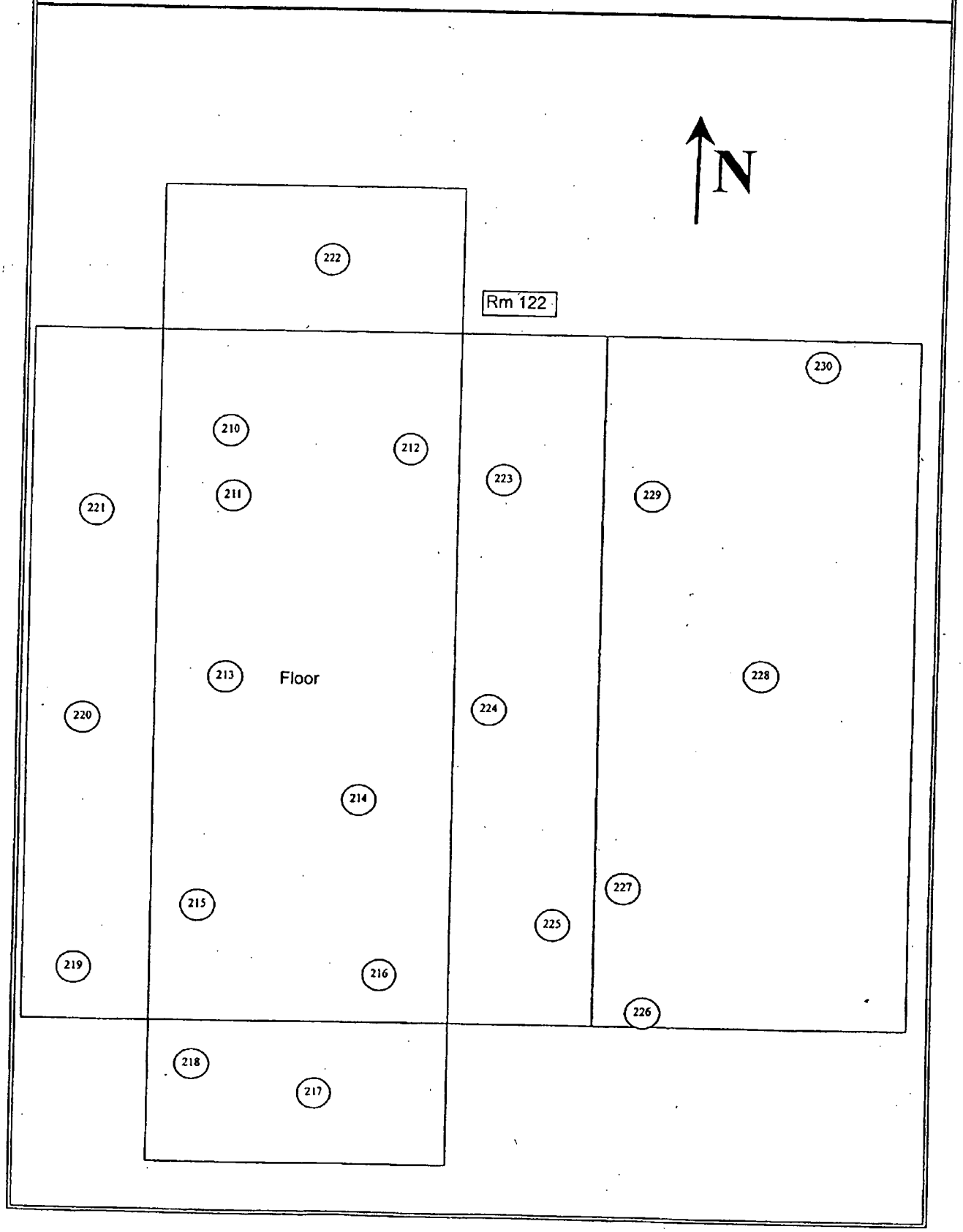
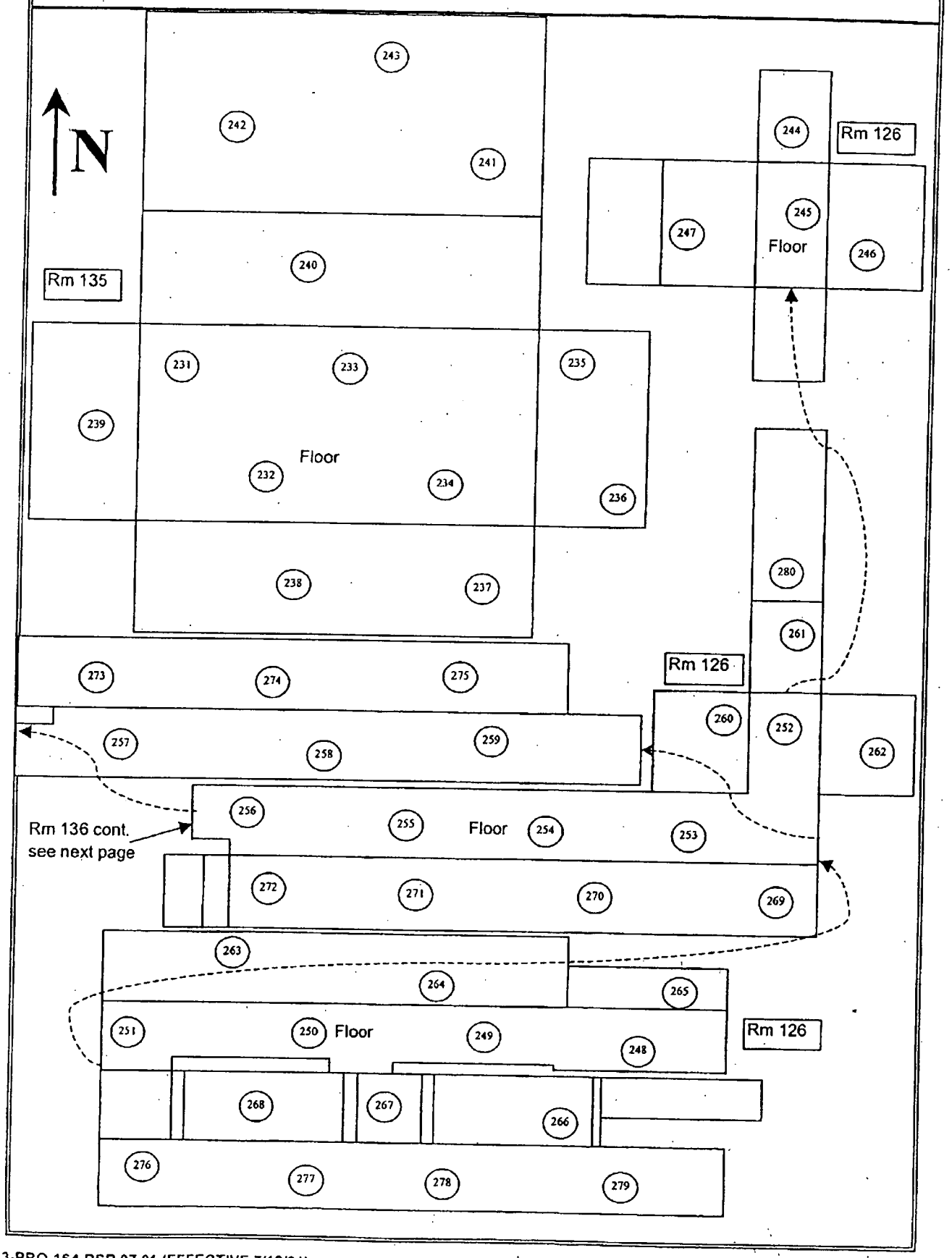
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



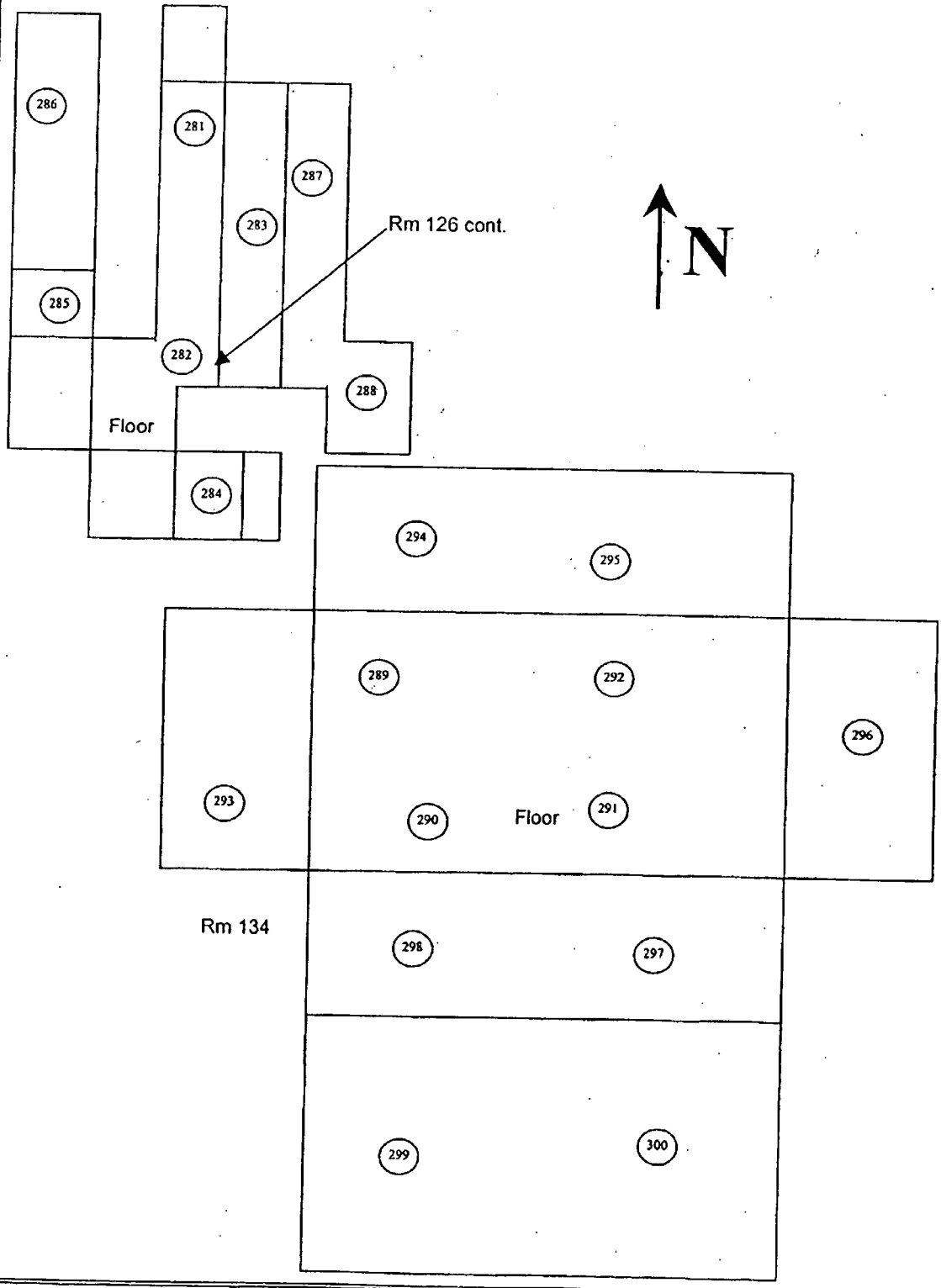
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Ludlum	Mfg.	Eberline	Mfg.	NE Electra
Model	2929	Model	SAC-4	Model	DP-6
Serial #	N/A	Serial #	952	Serial #	3254
Cal Due	N/A	Cal Due	2/12/05	Cal Due	7/4/05
Bkg	N/A cpmα	Bkg	0.2 cpmα	Bkg	0.0 cpmα
Efficiency	N/A %	Efficiency	33.00 %	Efficiency	21.80 %
MDA	18 dpmα	MDA	20 dpmα	MDA	12 dpmα

Mfg.	Ludlum	Mfg.	Eberline	Mfg.	NE Electra
Model	2929	Model	Sac-4	Model	DP-6
Serial #	N/A	Serial #	924	Serial #	3370
Cal Due	N/A	Cal Due	2/4/05	Cal Due	2/16/05
Bkg	N/A cpmβ	Bkg	0.2 cpmβ	Bkg	1.0 cpmα
Efficiency	N/A %	Efficiency	33.00 %	Efficiency	22.00 %
MDA	205 dpmβ	MDA	20 dpmβ	MDA	33 dpmα

Survey Tracking # N/A
Survey Type: Contamination
Building: 559
Location: Rm. 129 overhead
Purpose: Overhead characterization (Pre-fix)

RWP #: 05-559-5-004

Date: 1/8/05 Time: 1900

[redacted]

PRN/REN # : N/A
Comments: Nuclide of concern plutinum Survey performed to doc
overhead. Smears were counted on 1/10/05, therefore [redacted]

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SURVEY RESULTS

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	on roof top of canopy	<20	<33	N/A	N/A	N/A	N/A
2	on roof top of canopy	<20	<33	N/A	N/A	N/A	N/A
3	on top of exhaust duct	**64**	**195**	N/A	N/A	N/A	N/A
4	on top of exhaust duct	**30**	**168**	N/A	N/A	N/A	N/A
5	insulation on pipe	**30**	<33	N/A	N/A	N/A	N/A
6	on duct	<20	**150**	N/A	N/A	N/A	N/A
7	on duct	<20	<33	N/A	N/A	N/A	N/A
8	on duct	<20	<33	N/A	N/A	N/A	N/A
9	cable tray	<20	<33	N/A	N/A	N/A	N/A
10	duct	<20	<33	N/A	N/A	N/A	N/A
11	on pipe in overhead	<20	<33	N/A	N/A	N/A	N/A
12	on conduit	<20	<33	N/A	N/A	N/A	N/A
13	on piping	<20	<33	N/A	N/A	N/A	N/A
14	piping / conduit	<20	<33	N/A	N/A	N/A	N/A
15	on duct	<20	<33	N/A	N/A	N/A	N/A
16	on duct	<20	<33	N/A	N/A	N/A	N/A
17	piping / conduit	<20	<33	N/A	N/A	N/A	N/A
18	piping / conduit	<20	<33	N/A	N/A	N/A	N/A
19	on duct	<20	<33	N/A	N/A	N/A	N/A
20	on duct	<20	<33	N/A	N/A	N/A	N/A

Date Reviewed: 1/10/05 RS Supervisio[redacted]

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

		ALPHA			BETA		
	LOCATION	Swipe	Direct	Wipe	Swipe	Direct	Wipe
#		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
21	on top of cabinets	<20	<33	N/A	N/A	N/A	N/A
22	on top of cabinets	<20	<33	N/A	N/A	N/A	N/A
23	on fire line	<20	<33	N/A	N/A	N/A	N/A
24	on pipe	<20	**250**	N/A	N/A	N/A	N/A
25	on duct	<20	<33	N/A	N/A	N/A	N/A
26	pipes in overhead	<20	<33	N/A	N/A	N/A	N/A
27	on duct	<20	<33	N/A	N/A	N/A	N/A
28	duct	<20	<33	N/A	N/A	N/A	N/A
29	pipe / conduit	<20	<33	N/A	N/A	N/A	N/A
30	on duct on top of plentum	<20	<33	N/A	N/A	N/A	N/A
31	on duct on top of plentum	<20	**132**	N/A	N/A	N/A	N/A
32	on duct on top of plentum	<20	<33	N/A	N/A	N/A	N/A
33	on light fixture	<20	<33	N/A	N/A	N/A	N/A
34	on duct on top of plentum	<20	<33	N/A	N/A	N/A	N/A
35	pipe / conduit	<20	<33	N/A	N/A	N/A	N/A
36	on pipe / conduit	<20	<33	N/A	N/A	N/A	N/A
37	hole inside wall	<20	**173**	N/A	N/A	N/A	N/A
38	on pipe / conduit	<20	<33	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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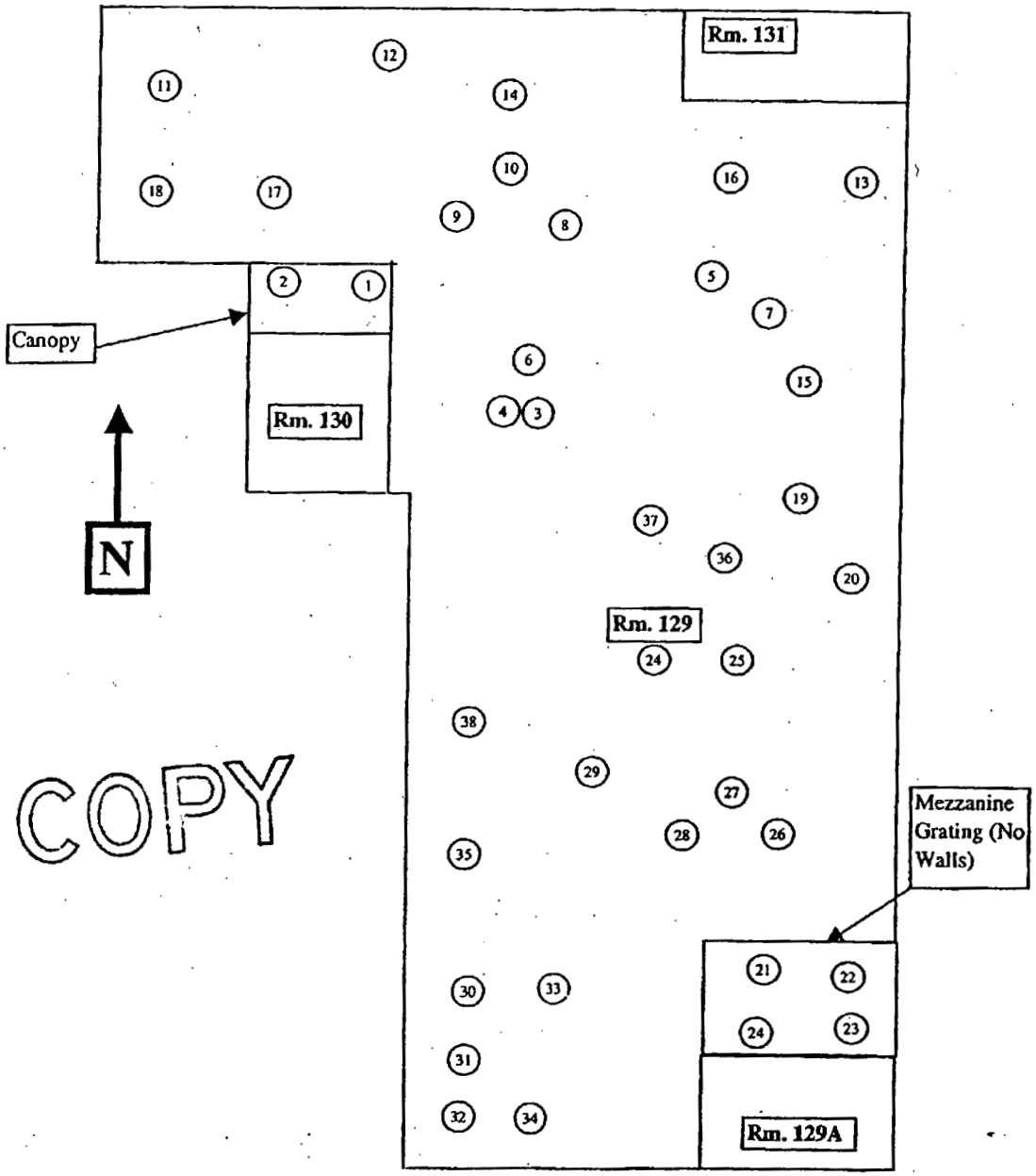
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Ludlum	Mfg.	NE Electra	Mfg.	NE Electra
Model	Sac-4	Model	DP-6	Model	DP-6
Serial #	924	Serial #	662	Serial #	1379
Cal Due	2/4/05	Cal Due	3/30/05	Cal Due	5/9/05
Bkg	0.1 cpmα	Bkg	2.0 cpmα	Bkg	1.0 cpmα
Efficiency	33.00 %	Efficiency	21.80 %	Efficiency	21.90 %
MDA	20 dpmα	MDA	43 dpmα	MDA	34 dpmα

Mfg.	Eberline	Mfg.	NE Electra	Mfg.	NE Electra
Model	BC-4	Model	DP-6	Model	DP-6
Serial #	N/A	Serial #	662	Serial #	1379
Cal Due	N/A	Cal Due	3/30/05	Cal Due	5/9/05
Bkg	N/A cpmβ	Bkg	667.0 cpmβ	Bkg	706.0 cpmβ
Efficiency	14.00 %	Efficiency	22.00 %	Efficiency	22.00 %
MDA	258 dpmβ	MDA	745 dpmβ	MDA	745 dpmβ

Survey Tracking # N/A

Survey Type: Low level waste characterization

Building: 559

Location: Rm. 129

Purpose: Low level waste characterization (Pre-fix)

RWP #: 05-559-0004

Date: 1/15/05 Time: 1500

[redacted]

PRN/REN # : N/A

Comments: Nuclide of concern is Plutonium. Survey performed t[redacted] fixative being applied, Performed direct readings and swipes of floors, walls, and ceiling areas. Rooms surveyed are part of a posted Contamination Area.

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Survey Results

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	Room 129 on wall 10 ft up from floor	57	1240	N/A	N/A	N/A	N/A
2	Room 129 on wall 10 ft up from floor	175	400	N/A	N/A	N/A	N/A
3	Room 129 on floor	<20	115	N/A	N/A	N/A	N/A
4	Room 129 on floor	<20	224	N/A	N/A	N/A	N/A
5	Room 129 on floor	<20	115	N/A	N/A	N/A	N/A
6	Room 129 on floor	<20	900	N/A	N/A	N/A	N/A
7	Room 129 on floor	<20	115	N/A	N/A	N/A	N/A
8	Room 129 on floor	<20	250	N/A	N/A	N/A	N/A
9	Room 129 on floor	<20	150	N/A	N/A	N/A	N/A
10	Room 129 on floor	<20	145	N/A	N/A	N/A	N/A
11	Room 129 on ceiling	<20	<43	N/A	N/A	N/A	N/A
12	Room 129 on ceiling	<20	<43	N/A	N/A	N/A	N/A
13	Room 129 on ceiling	<20	<43	N/A	N/A	N/A	N/A
14	Room 129 on ceiling	<20	<43	N/A	N/A	N/A	N/A
15	Room 129 on ceiling	<20	<43	N/A	N/A	N/A	N/A
16	Room 129 on ceiling	<20	<43	N/A	N/A	N/A	N/A
17	Room 129 on ceiling	<20	<43	N/A	N/A	N/A	N/A
18	Room 129 on ceiling	<20	<43	N/A	N/A	N/A	N/A
19	Room 129 on floor	<20	<43	N/A	N/A	N/A	N/A
20	Room 129 on floor	<20	<43	N/A	N/A	N/A	N/A

Date Reviewed: 1/18/05 RS Supervision: [redacted]

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
21	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
22	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
23	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
24	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
25	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
26	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
27	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
28	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
29	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
30	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
31	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
32	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
33	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
34	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
35	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
36	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
37	Rm 129 Wall	<20	<43	N/A	N/A	N/A	N/A
38	Rm 129 Ceiling	<20	<43	N/A	N/A	N/A	N/A
39	Rm 129 Ceiling	<20	<43	N/A	N/A	N/A	N/A
40	Rm 129 Ceiling	<20	<43	N/A	N/A	N/A	N/A
41	Rm 129 Ceiling	<20	<43	N/A	N/A	N/A	N/A
42	Rm 129 Floor	<20	<43	N/A	N/A	N/A	N/A
43	Rm 129 Floor	<20	<43	N/A	N/A	N/A	N/A
44	Rm 129 Floor	<20	<43	N/A	N/A	N/A	N/A
45	Rm 129 Floor	<20	<43	N/A	N/A	N/A	N/A
46	Rm 129 Floor	<20	<43	N/A	N/A	N/A	N/A
47	Rm 129 Floor	<20	<43	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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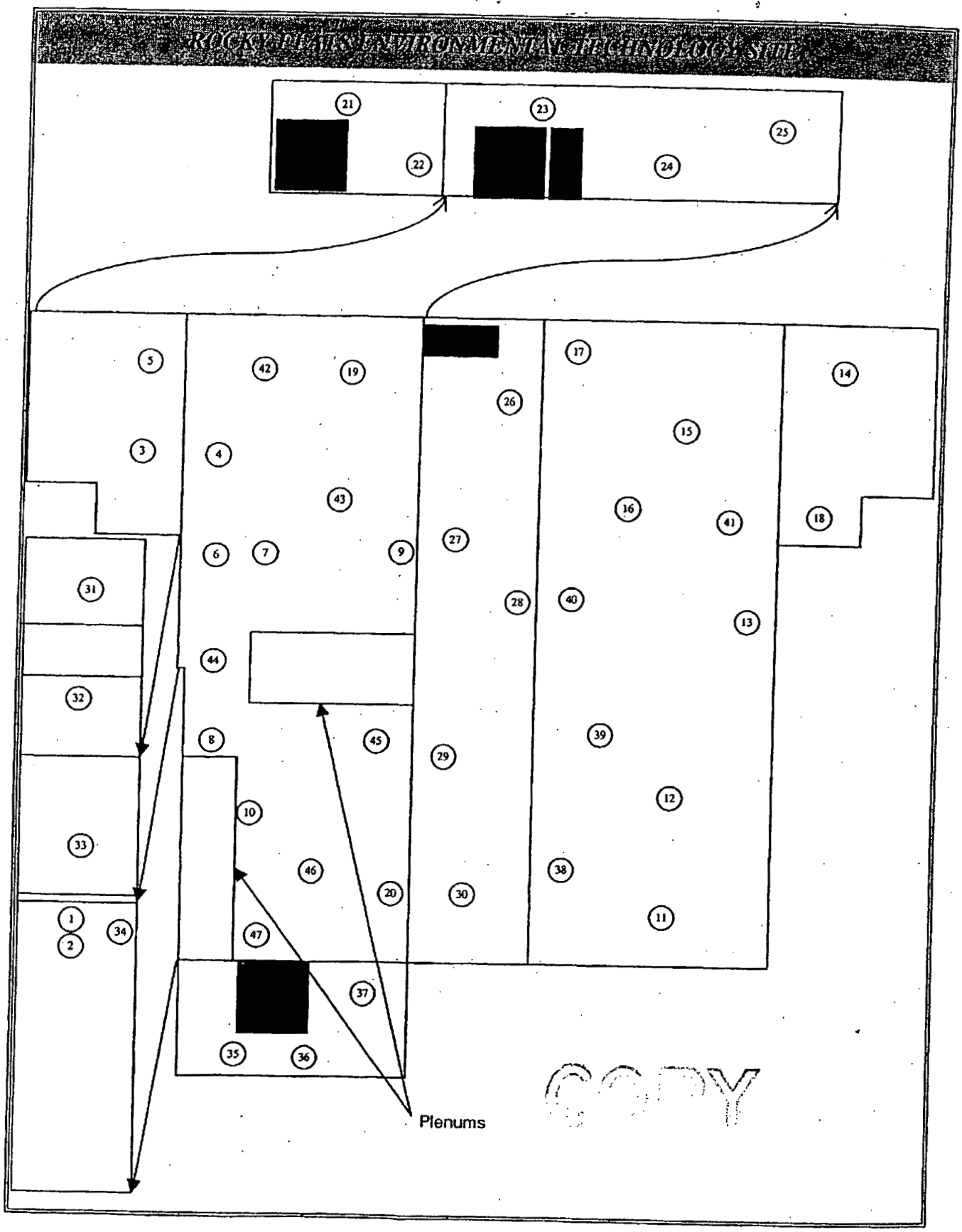

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BLDG. 559 SURVEY LOG # 559-01-05-0175

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

MFG. EBERLINE	MFG. EBERLINE	MFG. N E TECH
MODEL SAC-4	MODEL SAC-4	MODEL ELECTRA
SERIAL # 859	SERIAL # 1274	SERIAL # 165
CAL DUE 5-18-05	CAL DUE 6-7-05	CAL DUE 5-15-05
BKG. 0.2 cpm	BKG. 0.3 cpm	BKG. 1.0 cpm
EFFICIENCY 33%	EFFICIENCY 33%	EFFICIENCY 17%
MDA 20 dpm	MDA 20 dpm	MDA [redacted] 94 dpm
MFG. EBERLINE	MFG. EBERLINE	MFG. N E TECH
MODEL SAC-4	MODEL SAC-4	MODEL ELECTRA
SERIAL # 1130	SERIAL # 1244	SERIAL # N/A
CAL DUE 7-3-05	CAL DUE 5-17-05	CAL DUE ↓
BKG. 0.3	BKG. 0.1	BKG. N/A cpm
EFFICIENCY 33%	EFFICIENCY 33%	EFFICIENCY 17%
MDA 20dpm	MDA 20dpm	MDA [redacted] 94 dpm

Survey Type: ALPHA
Building: 559
Location: Rm 129
Purpose: SOP PW 1 L (1) (Pre-Fix)
RWP # 05-559-5002
Date: 1-19-05 Time: 0900

[redacted]

RCT: N/A / N/A / N/A
Print Name Signature Emp. #

PRN/REN #: N/A
Comments: 1 min PAT taken for direct survey using probe eff @ 21.8%

	ALPHA DPM REMOVEABLE (WIPE)	ALPHA DPM DIRECT	DPM/100CM² REMOVEABLE (SWIPE)		ALPHA DPM REMOVEABLE (WIPE)	ALPHA DPM DIRECT	DPM/100CM² REMOVEABLE (SWIPE)		ALPHA DPM REMOVEABLE (WIPE)	ALPHA DPM DIRECT	DPM/100CM² REMOVEABLE (SWIPE)
1	N/A	23.0	<20	21	N/A	55.2	<20	41	N/A	N/A	<20
2		27.6	<20	22		69.0	<20	42			<20
3		27.6	<20	23		~~32.0~~ 27.4	<20	43			<20
4		23.0	<20	24		96.6	<20	44			<20
5		41.4	<20	25		73.6	<20	45			<20
6		27.6	<20	26		36.8	<20	46			33
7		386.0	<20	27		64.4	<20	47			<20
8		27.6	<20	28		96.6	<20	48			<20
9		41.4	<20	29		41.4	<20	49			<20
10		32.2	<20	30		96.6	<20	50			<20
11		41.4	<20	31		64.4	<20	51			<20
12		32.2	<20	32		55.2	<20	52			<20
13		27.6	<20	33		96.6	<20	53			<20
14		23.0	<20	34		36.8	<20	54			<20
15		55.2	<20	35		N/A	<20	55			<20
16		18.4	<20	36			<20	56			<20
17		27.6	<20	37			<20	57			<20
18		18.4	<20	38			<20	58			<20
19	↓	41.4	<20	39	↓	69 PW	69	59	↓	↓	<20
20	N/A	64.4	~~20.0~~	40	N/A	N/A	<20	60	N/A	N/A	<20

Date Reviewed: 1/20/05 RS Supervision: [redacted]

3-PRO-164-RSP-07.01 (effective 7-12-01)

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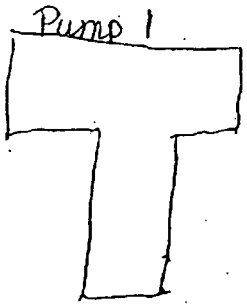
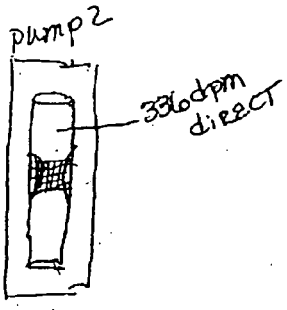
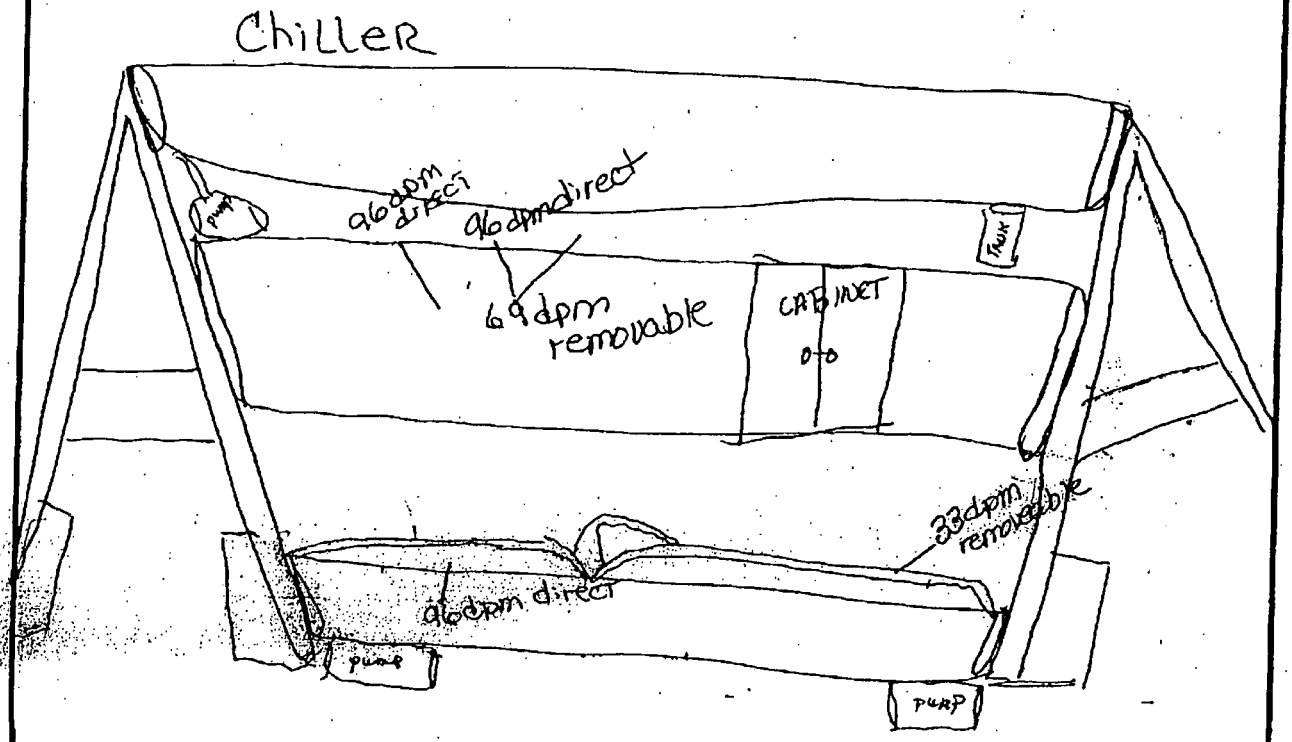
RADIATION PROTECTION
AREA OR EQUIPMENT DRAWING SHOWING SURVEY POINTS







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559 Survey Log # 559-

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	NE	Mfg.	EBERLINE	Mfg.	EBERLINE
Model	ELECTRA	Model	SAC-4	Model	SAC-4
Serial#	2143	Serial#	859	Serial#	1274
Cal Due	7-13-05	Cal Due	5-18-05	Cal Due	6-7-05
Bkg.	< 3.0cl-	Bkg.	0.0cl-	Bkg.	0.2cl-
Efficiency	17%	Efficiency	33%	Efficiency	33%
MDA	94dl-	MDA	20dl	MDA	20dl
Mfg.	NA	Mfg.	NA	Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination
Building: 559
Location: Rm 131
Purpose: Contamination Survey (PRE-Rlx)

RWP #: 05-559-5004

Date 1-24-05 Time 1600

[redacted]

RCT NA / NA / NA
Print name / Signature / Emp. #

PRN/REN #: N/A
Comments:
Survey of Rm 131 Emergency Gen. Final Survey

SURVEY RESULTS

Contamination Results (in dpm/100cm2)

Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable
1	floor	<94	<20	19	walls	<94	<20
2		<94	<20	20		<94	<20
3		<94	<20	21		<94	<20
4		<94	<20	22		<94	<20
5		<94	<20	23		<94	<20
6		<94	<20	24		<94	<20
7		<94	<20	25	walls	<94	<20
8		<94	<20	26	NA	NA	NA
9		<94	<20	27			
10		<94	<20	28			
11		<94	<20	29			
12	Floor	<94	<20	30			
13	walls	<94	<20	31			
14		<94	<20	32			
15		<94	<20	33			
16		<94	<20	34			
17		<94	<20	35			
18	walls	<94	<20	36	NA	NA	NA

Date Reviewed: 1/24/05 RS Supervision: [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Ludlum	Mfg.	Eberline	Mfg.	NE Electra
Model	2929	Model	SAC-4	Model	Electra
Serial #	N/A	Serial #	1130	Serial #	3171
Cal Due	N/A	Cal Due	7-3-05	Cal Due	07-06-05
Bkg	N/A cpmα	Bkg	0.2 cpmα	Bkg	4.0 cpmα
Efficiency	N/A %	Efficiency	33.00 %	Efficiency	21.8 %
MDA	18 dpmα	MDA	20 dpmα	MDA	94 dpmα

Mfg.	Ludlum	Mfg.	Eberline	Mfg.	NE Electra
Model	2929	Model	Sac-4	Model	Electra
Serial #	N/A	Serial #	1274	Serial #	1429
Cal Due	N/A	Cal Due	6-7-05	Cal Due	07-12-05 MEK 1-15-05
Bkg	N/A cpmβ	Bkg	0.4 cpmβ/α	Bkg	1.0 cpmα
Efficiency	N/A %	Efficiency	33.00 %	Efficiency	20 %
MDA	205 dpmβ	MDA	20 dpmβ/α MEK 01-15-05	MDA	94 dpmα

Survey Tracking # N/A
Survey Type: Contamination
Building: 559
Location: 304 Plenum
Purpose: Characterization (Pre-Fix)
RWP #: 05-559-5-004
Date: 1-15-05 Time: 11:20

[redacted]

PRN/REN # : N/A
Comments:

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
	Wall						
1	Wall	<20	<94	N/A	N/A	N/A	N/A
2	Wall	<20	<94				
3	Ceiling	<20	<94				
4	Filter Rack	<20	200				
5	Wall	<20	150				
6	Wall	<20	400				
7	Floor	<20	250				
8	Floor	36	700				
9	Ceiling	<20	<94				
10	Floor	63	2,500				
11	~~Ceiling~~ Floor MEK 01-15-05	45	1,750				
12	Filter Rack	<20	550				
13	Wall	<20	180				
14	Wall	<20	150				
15	Floor	<20	5,000				
16	Floor	<20	<94				
17	Wall	<20	<94				
18	Floor	<20	<94				
19	Wall	<20	<94				
20	Ceiling	<20	<94	N/A	N/A	N/A	N/A

Date Reviewed: 1/15/05 RS Supervision: [redacted]

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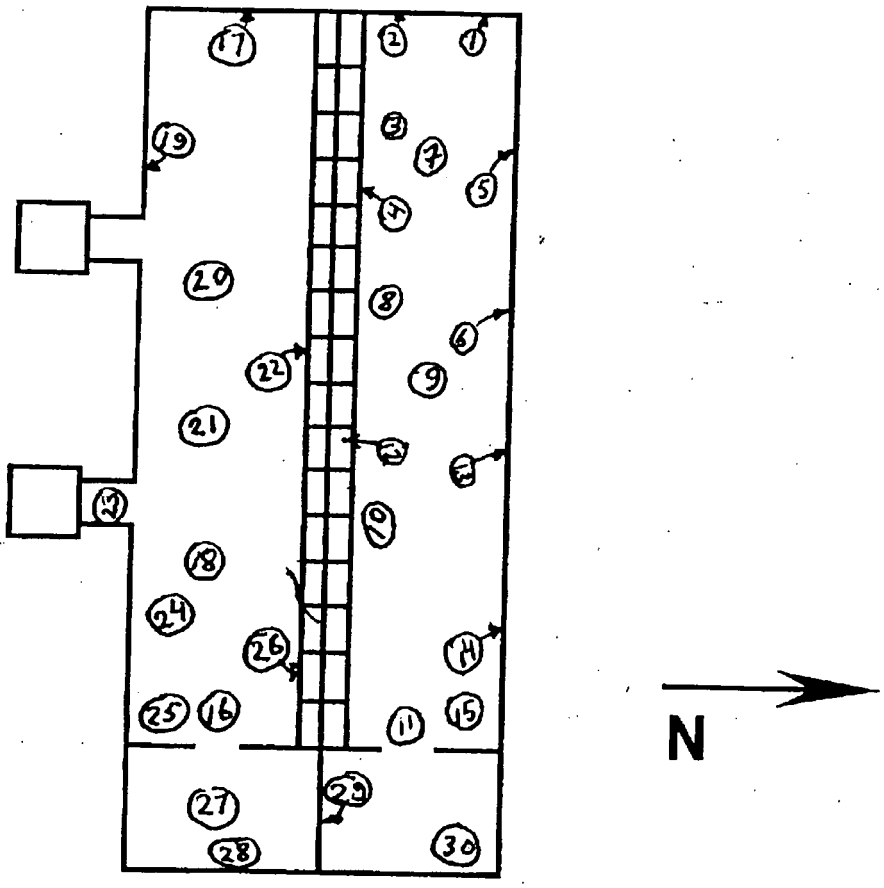
Radiological Operations
Area or Equipment Drawing Showing Survey Points

304 PLENUM SURVEY
BUILDING 559



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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Eberline	Mfg.	NE Electra	Mfg.	NE Electra
Model	Sac-4	Model	DP-6	Model	DP-6
Serial #	924	Serial #	662	Serial #	1379
Cal Due	2/4/05	Cal Due	3/30/05	Cal Due	5/9/05
Bkg	0.2 cpmα	Bkg	2.0 cpmα	Bkg	1.0 cpmα
Efficiency	33.00 %	Efficiency	21.80 %	Efficiency	21.90 %
MDA	20 dpmα	MDA	43 dpmα	MDA	34 dpmα

Mfg.	Eberline	Mfg.	NE Electra	Mfg.	NE Electra
Model	Sac-4	Model	DP-6	Model	DP-6
Serial #	952	Serial #	662	Serial #	1379
Cal Due	2/12/05	Cal Due	3/30/05	Cal Due	5/9/05
Bkg	0.2 cpmα	Bkg	678.0 cpmβ	Bkg	737.0 cpmβ
Efficiency	33.00 %	Efficiency	22.00 %	Efficiency	22.00 %
MDA	20 dpmα	MDA	745 dpmβ	MDA	745 dpmβ

Survey Tracking # N/A

Survey Type: Contamination

Building: 559

Location: Rms 101, 102, 103, 110, and 130

Purpose: Low level waste characterization (Pre-fix)

RWP #: 05-559-0004

[redacted]

Print name Signature Emp. #

PRN/REN # : N/A

Comments: Nuclide of concern is Plutonium. Survey performed to document contamination levels of 559 Rms 101, 102, 103, 110, & 130 prior to fixative being applied. Performed direct readings wipes, and swipes of floors, walls, and ceiling areas. Rooms surveyed are in a posted Contamination Area.

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#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	Room 101 floor	405	198000	N/A	N/A	N/A	N/A
2	Room 101 floor	127	900	N/A	N/A	N/A	N/A
3	Room 101 floor	348	1390	N/A	N/A	N/A	N/A
4	Room 101 floor	60	7074	N/A	N/A	N/A	N/A
5	Room 101 floor	139	390	N/A	N/A	N/A	N/A
6	Room 101 floor	60	1635	N/A	N/A	N/A	N/A
7	Room 101 floor	24	6265	N/A	N/A	N/A	N/A
8	Room 101 floor	21	7800	N/A	N/A	N/A	N/A
9	Room 101 floor	<20	2350	N/A	N/A	N/A	N/A
10	Room 101 floor	<20	1485	N/A	N/A	N/A	N/A
11	Room 101 floor	<20	1575	N/A	N/A	N/A	N/A
12	Room 101 floor	<20	215	N/A	N/A	N/A	N/A
13	Room 101 floor	30	1255	N/A	N/A	N/A	N/A
14	RM 102 floor	<20	4220	N/A	N/A	N/A	N/A
15	RM 102 floor	<20	855	N/A	N/A	N/A	N/A
16	RM 102 floor	105	488	N/A	N/A	N/A	N/A
17	RM 102 floor	<20	415	N/A	N/A	N/A	N/A
18	RM 102 floor	<20	440	N/A	N/A	N/A	N/A
19	RM 102 floor	<20	365	N/A	N/A	N/A	N/A
20	RM 102 floor	<20	275	N/A	N/A	N/A	N/A

Date Reviewed: 1/18/05 RS Supervision: [redacted]

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

COPY

SURVEY RESULTS

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
21	Rm 102 floor	<20	420	N/A	N/A	N/A	N/A
22	Rm 102 floor	<20	2370	N/A	N/A	N/A	N/A
23	Rm 102 floor	<20	690	N/A	N/A	N/A	N/A
24	Rm 102 floor	<20	215	N/A	N/A	N/A	N/A
25	Rm 102 floor	<20	860	N/A	N/A	N/A	N/A
26	Rm 102 floor	60	17375	N/A	N/A	N/A	N/A
27	Rm 102 floor	<20	545	N/A	N/A	N/A	N/A
28	Rm 102 floor	<20	2100	N/A	N/A	N/A	N/A
29	Rm 102 floor	105	2180	N/A	N/A	N/A	N/A
30	Rm 102 floor	45	1740	N/A	N/A	N/A	N/A
31	Rm 102 floor	<20	285	N/A	N/A	N/A	N/A
32	Rm 102 floor	<20	810	N/A	N/A	N/A	N/A
33	Rm 103 Floor	<20	150	N/A	N/A	N/A	N/A
34	Rm 103 Floor	60	3930	N/A	N/A	N/A	N/A
35	Rm 103 Floor	30	11100	N/A	N/A	N/A	N/A
36	Rm 103C Floor	<20	150	N/A	N/A	N/A	N/A
37	Rm 103C Floor	<20	1805	N/A	N/A	N/A	N/A
38	Rm 103C Floor	51	3860	N/A	N/A	N/A	N/A
39	Rm 103C Floor	489	2500	N/A	N/A	N/A	N/A
40	Rm 103 Floor crack	<20	5000	N/A	N/A	N/A	N/A
41	Rm 103 Floor crack	<20	5000	N/A	N/A	N/A	N/A
42	Rm 103 Floor crack	<20	150	N/A	N/A	N/A	N/A
43	Rm 103 Floor	<20	9080	N/A	N/A	N/A	N/A
44	Rm 103 Floor	<20	175	N/A	N/A	N/A	N/A
45	Rm 103 Floor	<20	150	N/A	N/A	N/A	N/A
46	Rm 103 Floor	<20	<43	N/A	N/A	N/A	N/A
47	Rm 103 East Wall	60	10580	N/A	N/A	N/A	N/A
48	Rm 103 East Wall	60	150	N/A	N/A	N/A	N/A
49	Rm 103 East Wall	60	755	N/A	N/A	N/A	N/A
50	Rm 103 East Wall	60	250	N/A	N/A	N/A	N/A
51	Rm 103 East Wall	60	10000	N/A	N/A	N/A	N/A
52	Rm 103 East Wall	60	5000	N/A	N/A	N/A	N/A
53	Rm 103 Floor	<20	<43	N/A	N/A	N/A	N/A
54	Rm 103 Floor	<20	125	N/A	N/A	N/A	N/A
55	Rm 103 Floor	<20	125	N/A	N/A	N/A	N/A
56	on south wall room 102	120	3150	N/A	N/A	N/A	N/A
57	on south wall room 102	91	865	N/A	N/A	N/A	N/A
58	on south wall room 102	78	4870	N/A	N/A	N/A	N/A
59	on south wall room 102	94	1800	N/A	N/A	N/A	N/A
60	on south wall room 101	<20	150	N/A	N/A	N/A	N/A
61	on west wall room 101	<20	130	N/A	N/A	N/A	N/A
62	on west wall room 101	<20	155	N/A	N/A	N/A	N/A
63	on west wall room 101	<20	115	N/A	N/A	N/A	N/A
64	on west wall room 101	<20	455	N/A	N/A	N/A	N/A
65	on west wall room 101	<20	127	N/A	N/A	N/A	N/A
66	on west wall room 101	<20	280	N/A	N/A	N/A	N/A
67	Rm 110 Floor	<20	250	N/A	N/A	N/A	N/A

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
68	Rm 110 Floor	<20	300	N/A	N/A	N/A	N/A
69	Rm 110 Floor	<20	500	N/A	N/A	N/A	N/A
70	Rm 110 Floor	<20	5000	N/A	N/A	N/A	N/A
71	Rm 110 Floor	<20	500	N/A	N/A	N/A	N/A
72	Rm 110 Floor	<20	500	N/A	N/A	N/A	N/A
73	Rm 110 Floor	<20	500	N/A	N/A	N/A	N/A
74	Rm 110 Floor	<20	11700	N/A	N/A	N/A	N/A
75	Rm 110 Floor	<20	250	N/A	N/A	N/A	N/A
76	Rm 110 N Wall	<20	500	N/A	N/A	N/A	N/A
77	Rm 110 N Wall	<20	250	N/A	N/A	N/A	N/A
78	Rm 110 N Wall	<20	1000	N/A	N/A	N/A	N/A
79	Rm 110 N Wall	<20	1900	N/A	N/A	N/A	N/A
80	Rm 110 N Wall	<20	1000	N/A	N/A	N/A	N/A
81	Rm 110 E Wall	<20	250	N/A	N/A	N/A	N/A
82	Rm 110 E Wall	<20	1900	N/A	N/A	N/A	N/A
83	Rm 110 E Wall	<20	1000	N/A	N/A	N/A	N/A
84	Rm 110 S Wall	<20	250	N/A	N/A	N/A	N/A
85	Rm 110 S Wall	<20	250	N/A	N/A	N/A	N/A
86	Rm 110 S Wall	<20	250	N/A	N/A	N/A	N/A
87	Rm 110 S Wall	<20	250	N/A	N/A	N/A	N/A
88	Rm 110 S Wall	<20	250	N/A	N/A	N/A	N/A
89	Rm 110 W Wall	<20	250	N/A	N/A	N/A	N/A
90	Rm 110 W Wall	<20	250	N/A	N/A	N/A	N/A
91	Rm 110 W Wall	<20	1000	N/A	N/A	N/A	N/A
92	Rm 110 W Wall	<20	1000	N/A	N/A	N/A	N/A
93	Rm 110 W Wall	<20	1000	N/A	N/A	N/A	N/A
94	Rm 110 W Wall	<20	1000	N/A	N/A	N/A	N/A
95	Rm 110 W Wall	<20	3900	N/A	N/A	N/A	N/A
96	Rm 110 W Wall	<20	3900	N/A	N/A	N/A	N/A
97	Rm 110 W Wall	<20	3900	N/A	N/A	N/A	N/A
98	Rm 110 W Wall	<20	250	N/A	N/A	N/A	N/A
99	Rm 110 W Wall	<20	250	N/A	N/A	N/A	N/A
100	Room 130 S. Wall	75	8,000	N/A	N/A	N/A	N/A
101	Room 130 S. Wall	75	5,300	N/A	N/A	N/A	N/A
102	Room 130 S. Wall	75	10,300	N/A	N/A	N/A	N/A
103	Room 130 W. Wall	75	500	N/A	N/A	N/A	N/A
104	Room 130 W. Wall	30	400	N/A	N/A	N/A	N/A
105	Room 130 N. Wall	30	700	N/A	N/A	N/A	N/A
106	Room 130 E. Wall	927	70,500	N/A	N/A	N/A	N/A
107	Room 130 E. Wall	180	48,000	N/A	N/A	N/A	N/A
108	Room 130 E. Wall	60	3,235	N/A	N/A	N/A	N/A
109	Room 130 E. Wall	1525	45,460	N/A	N/A	N/A	N/A
110	Room 130 Ceiling	<20	<43	N/A	N/A	N/A	N/A
111	Room 130 Floor	141	10,725	N/A	N/A	N/A	N/A
112	Room 130 Floor	27	600	N/A	N/A	N/A	N/A
113	Room 130 Floor	30	325	N/A	N/A	N/A	N/A
114	Room 130 S. Wall	<20	819	N/A	N/A	N/A	N/A

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

COPY

SURVEY RESULTS

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
115	Rm 103 Wall	<20	<43	N/A	N/A	N/A	N/A
116	Rm 103 Wall	<20	<43	N/A	N/A	N/A	N/A
117	Rm 103 Wall	<20	<43	N/A	N/A	N/A	N/A
118	Rm 103 Wall	<20	<43	N/A	N/A	N/A	N/A
119	Rm 103 Wall	<20	<43	N/A	N/A	N/A	N/A
120	Rm 103 Wall	<20	<43	N/A	N/A	N/A	N/A
121	Rm 103 Wall	<20	<43	N/A	N/A	N/A	N/A
122	Rm 103 Wall	<20	<43	N/A	N/A	N/A	N/A
123	Rm 103 Wall	<20	<43	N/A	N/A	N/A	N/A
124	Rm 103 Floor	<20	<43	N/A	N/A	N/A	N/A
125	Rm 103 Floor	<20	<43	N/A	N/A	N/A	N/A
126	Rm 103 Ceiling	<20	<43	N/A	N/A	N/A	N/A
127	Rm 103 Floor	<20	<43	N/A	N/A	N/A	N/A
128	Rm 103 Floor	<20	<43	N/A	N/A	N/A	N/A
129	Rm 103 Floor	<20	<43	N/A	N/A	N/A	N/A
130	Rm 103 Floor	<20	<43	N/A	N/A	N/A	N/A
131	Rm 102 Ceiling	<20	<43	N/A	N/A	N/A	N/A
132	Rm 102 Ceiling	<20	<43	N/A	N/A	N/A	N/A
133	Rm 102 Ceiling	<20	<43	N/A	N/A	N/A	N/A
134	Rm 102 Ceiling	<20	<43	N/A	N/A	N/A	N/A
135	Rm 102 Ceiling	<20	<43	N/A	N/A	N/A	N/A
136	Rm 102 Wall	<20	<43	N/A	N/A	N/A	N/A
137	Rm 102 Wall	<20	<43	N/A	N/A	N/A	N/A
138	Rm 102 Wall	<20	<43	N/A	N/A	N/A	N/A
139	Rm 102 Wall	<20	<43	N/A	N/A	N/A	N/A
140	Rm 102 Wall	<20	<43	N/A	N/A	N/A	N/A
141	Rm 102 Wall	<20	<43	N/A	N/A	N/A	N/A
142	Rm 101 Ceiling	<20	<43	N/A	N/A	N/A	N/A
143	Rm 101 Ceiling	<20	<43	N/A	N/A	N/A	N/A
144	Rm 101 Ceiling	<20	<43	N/A	N/A	N/A	N/A
145	Rm 101 Ceiling	<20	<43	N/A	N/A	N/A	N/A
146	Rm 101 Ceiling	<20	<43	N/A	N/A	N/A	N/A
147	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
148	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
149	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
150	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
151	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
152	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
153	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
154	Rm 101 Floor	<20	<43	N/A	N/A	N/A	N/A
155	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
156	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
157	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
158	Rm 101 Floor	<20	<43	N/A	N/A	N/A	N/A
159	Rm 102 Floor	<20	<43	N/A	N/A	N/A	N/A
160	Rm 102 Floor	<20	<43	N/A	N/A	N/A	N/A
161	Rm 102 Floor	<20	<43	N/A	N/A	N/A	N/A

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

COPY

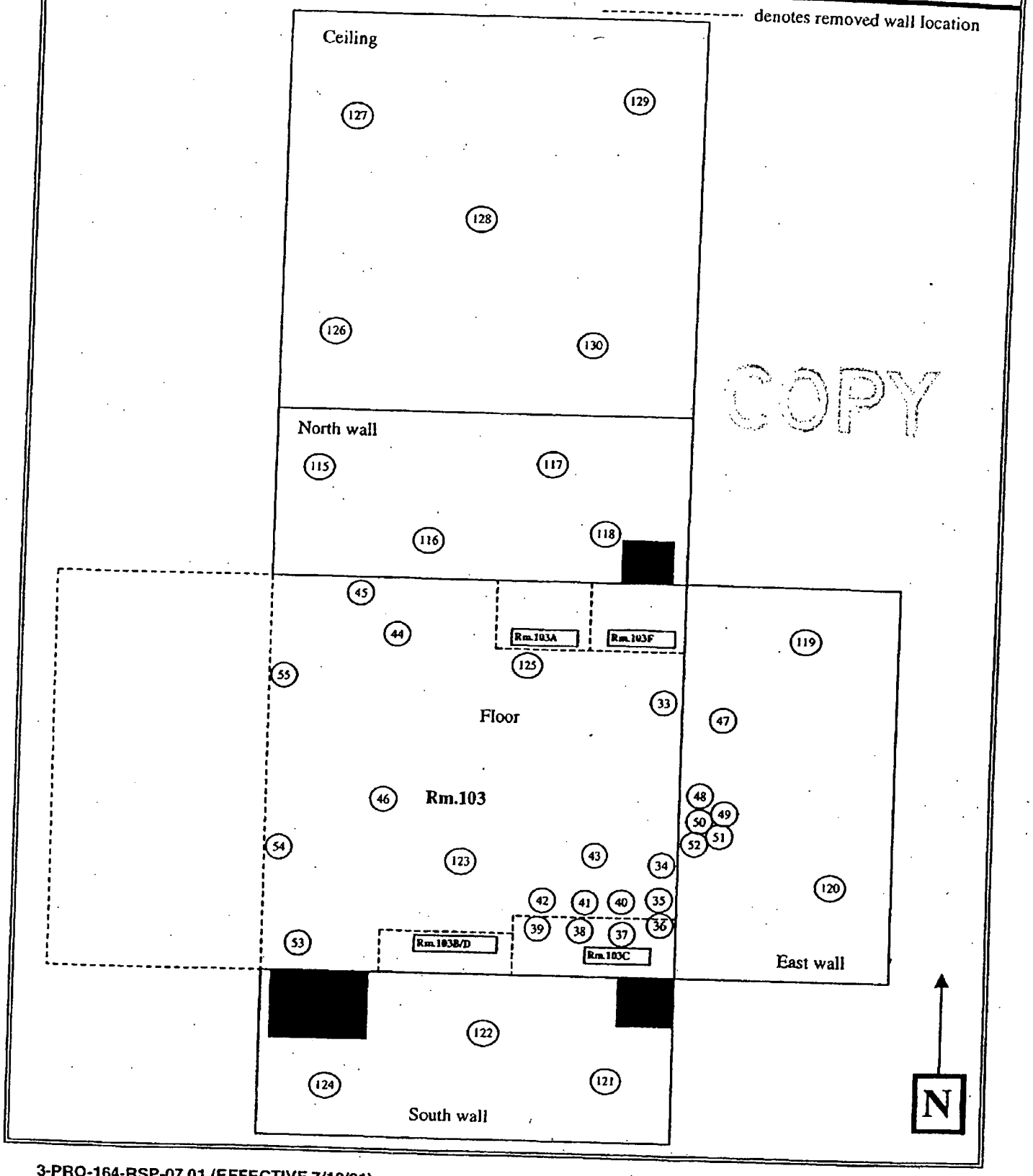
SURVEY RESULTS

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
162	Rm 101 Wall	<20	<43	N/A	N/A	N/A	N/A
163	Rm 110 Ceiling	<20	<43	N/A	N/A	N/A	N/A
164	Rm 110 Ceiling	<20	<43	N/A	N/A	N/A	N/A
165	Rm 110 Ceiling	<20	<43	N/A	N/A	N/A	N/A
166	Rm 110 Ceiling	<20	<43	N/A	N/A	N/A	N/A
167	Rm 130 Wall	<20	<43	N/A	N/A	N/A	N/A
168	Rm 130 Wall	<20	**300**	N/A	N/A	N/A	N/A
169	Rm 130 Ceiling	<20	<43	N/A	N/A	N/A	N/A
170	Rm 130 Ceiling	<20	<43	N/A	N/A	N/A	N/A
171	Rm 130 Floor	<20	<43	N/A	N/A	N/A	N/A
172	Rm 130 Wall	<20	**300**	N/A	N/A	N/A	N/A
173	Rm 130 Floor	**92**	**5000**	N/A	N/A	N/A	N/A
174	Rm 130 Floor	**60**	**2,230**	N/A	N/A	N/A	N/A
175	Rm 130 Wall	<20	**2500**	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

51

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

ROOM 103 MAP



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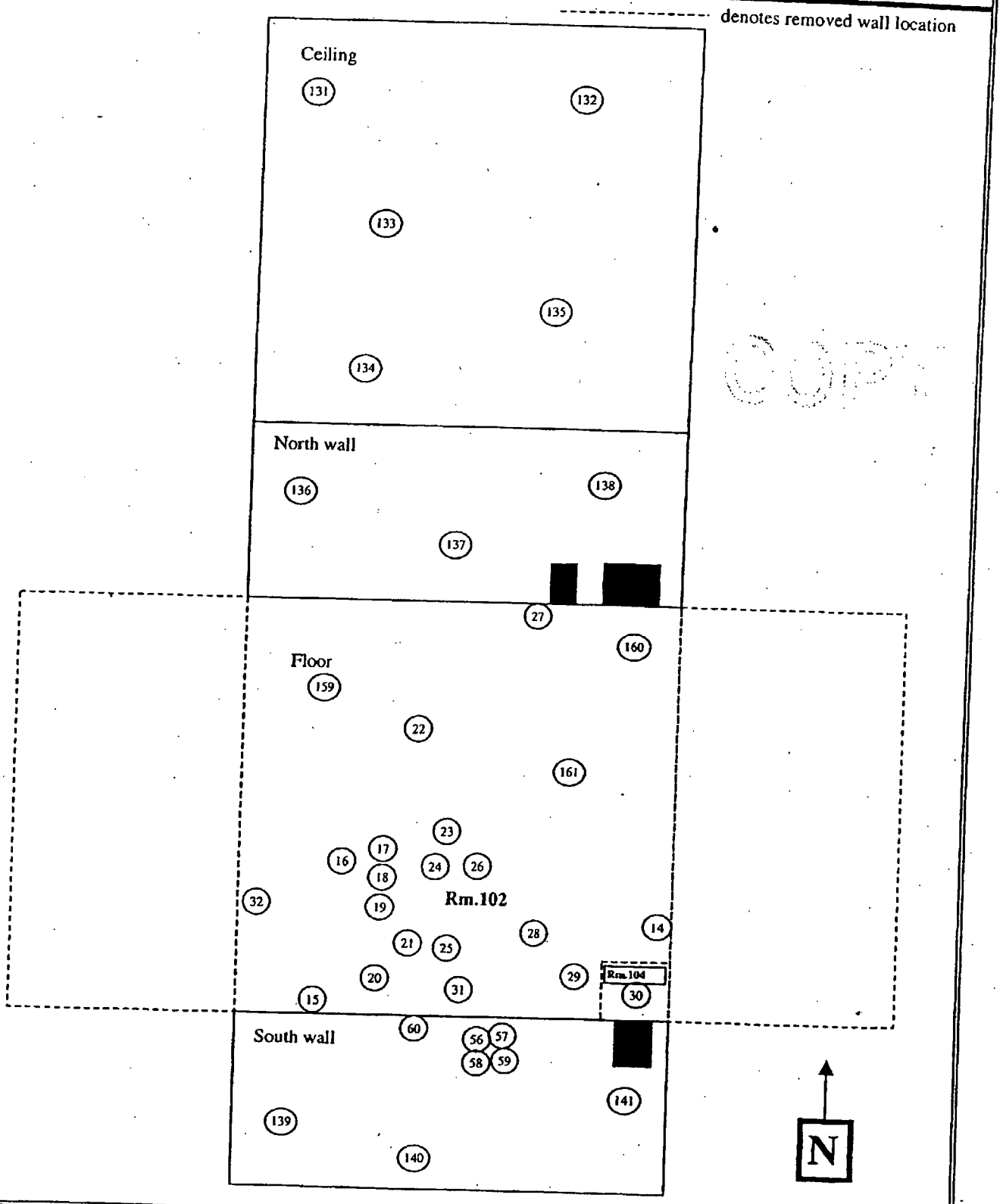
52

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

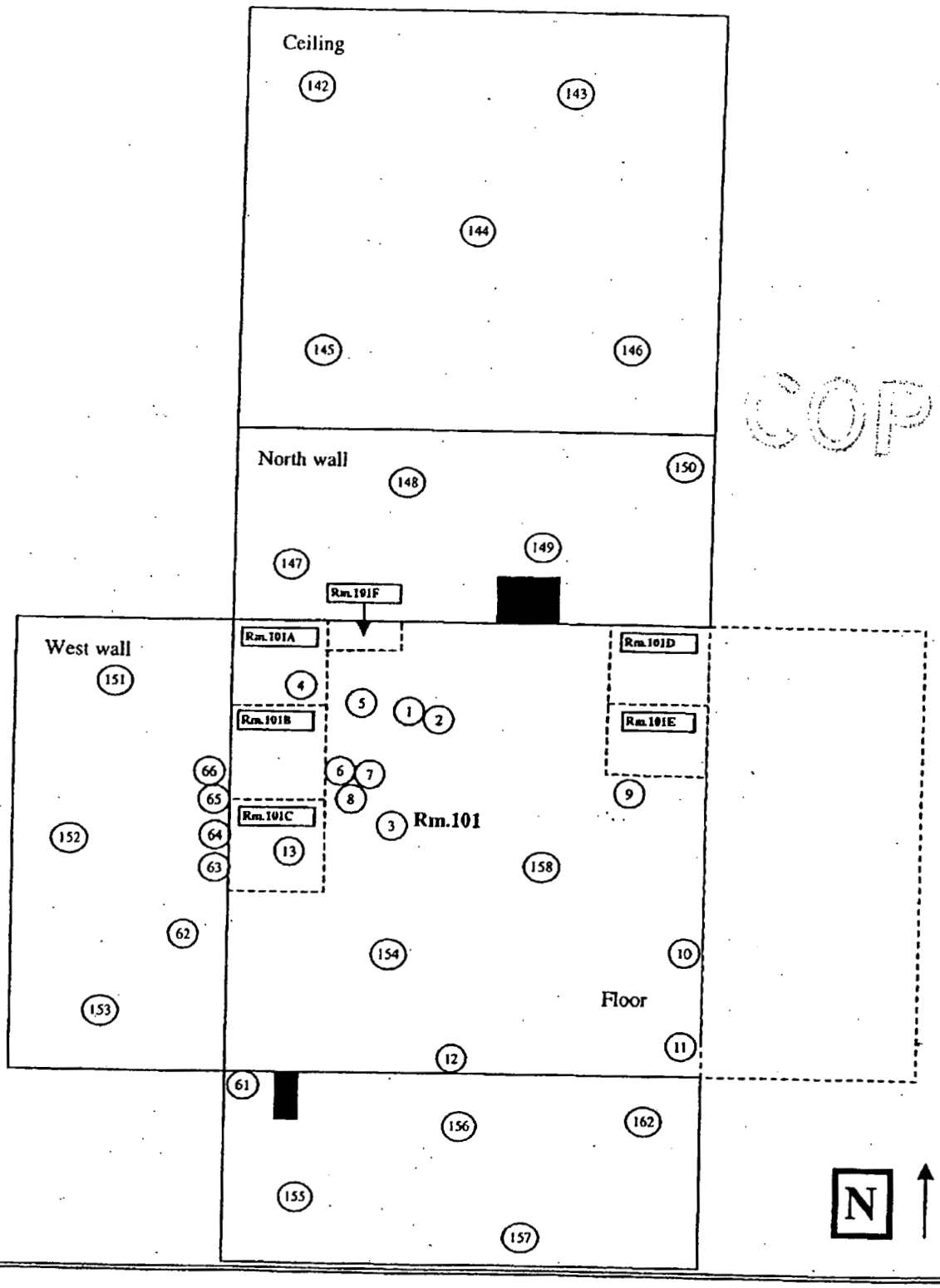
ROOM 102 MAP



53

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

ROOM 101 MAP



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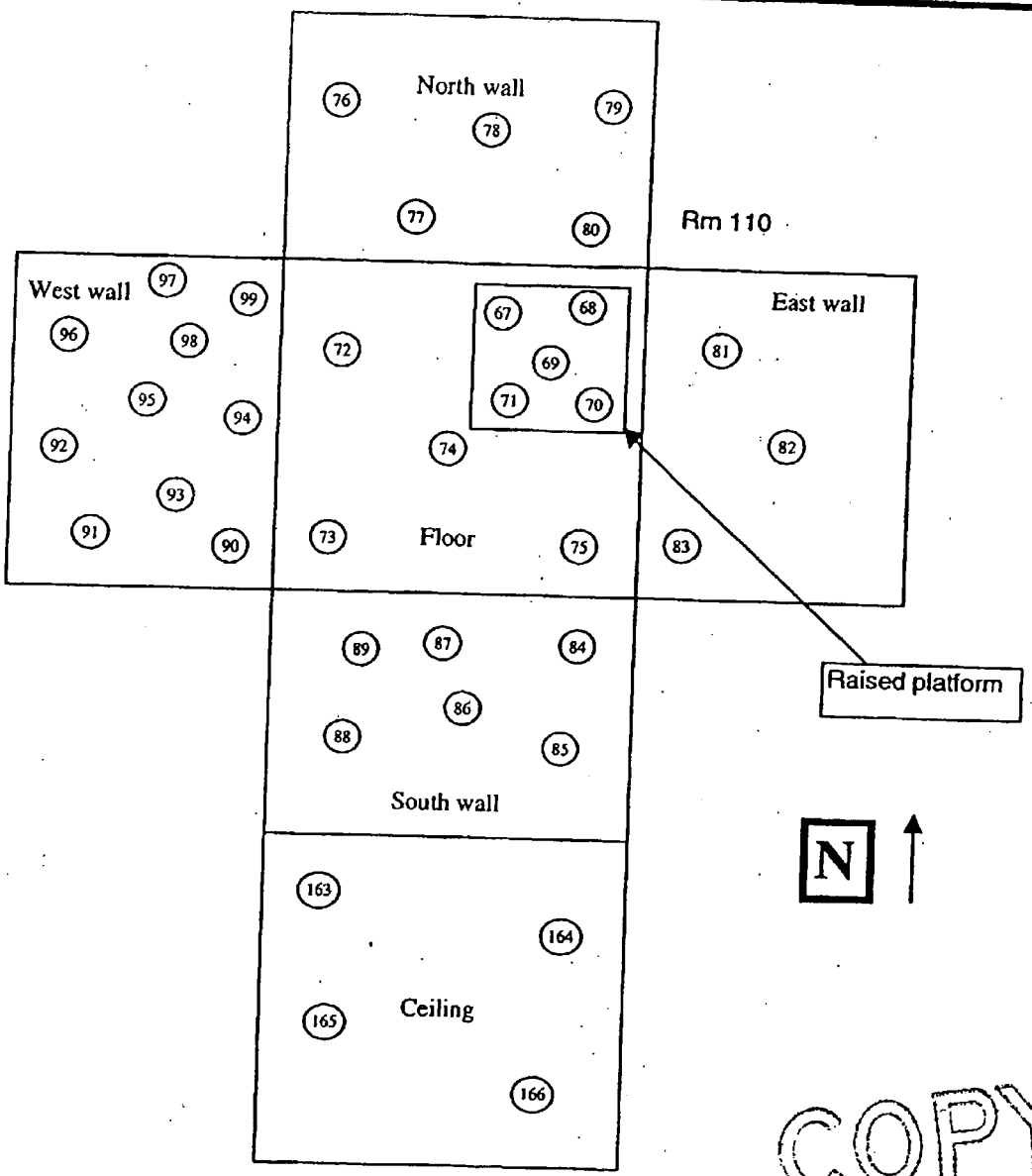
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

ROOM 110 MAP



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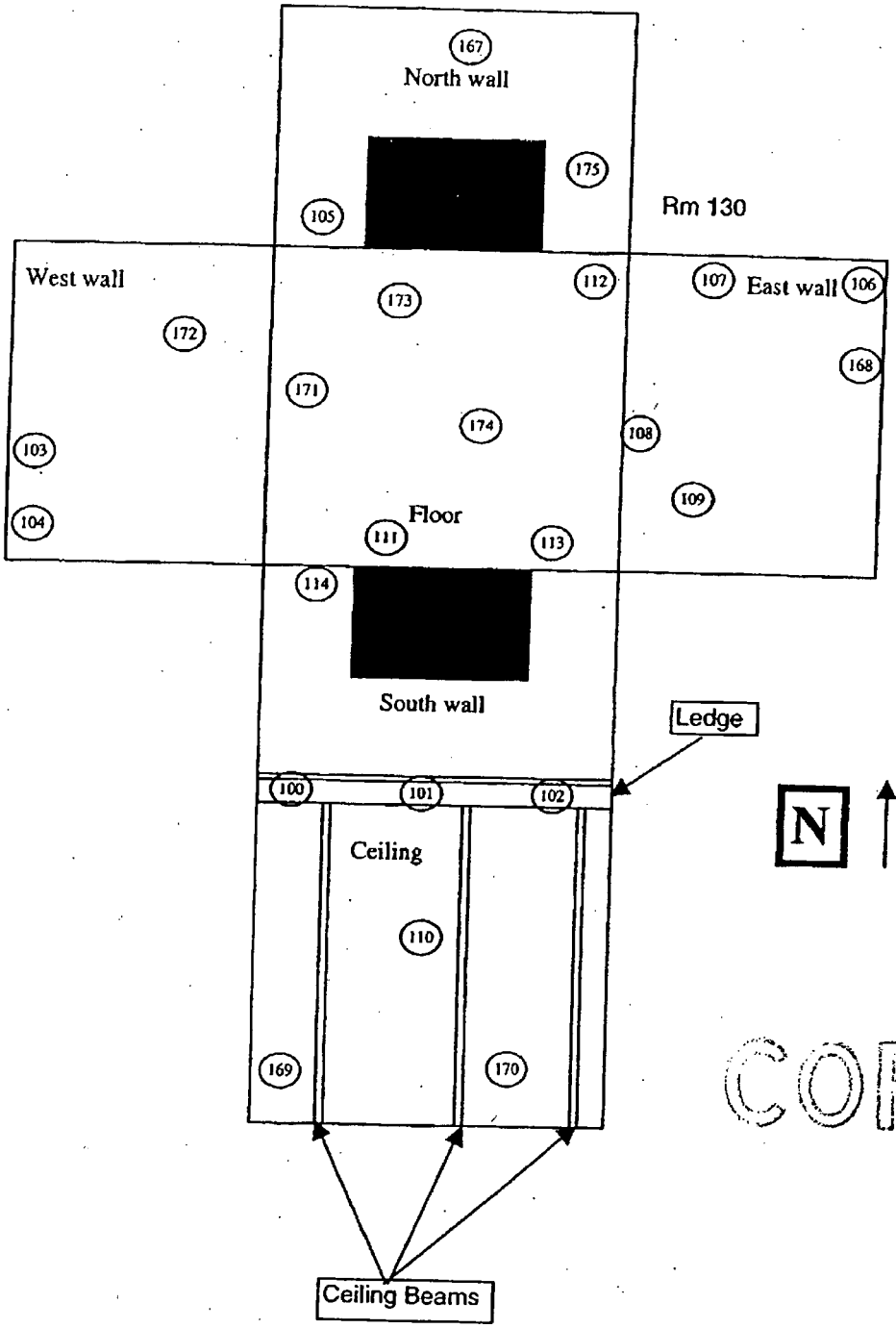
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

ROOM 130 MAP



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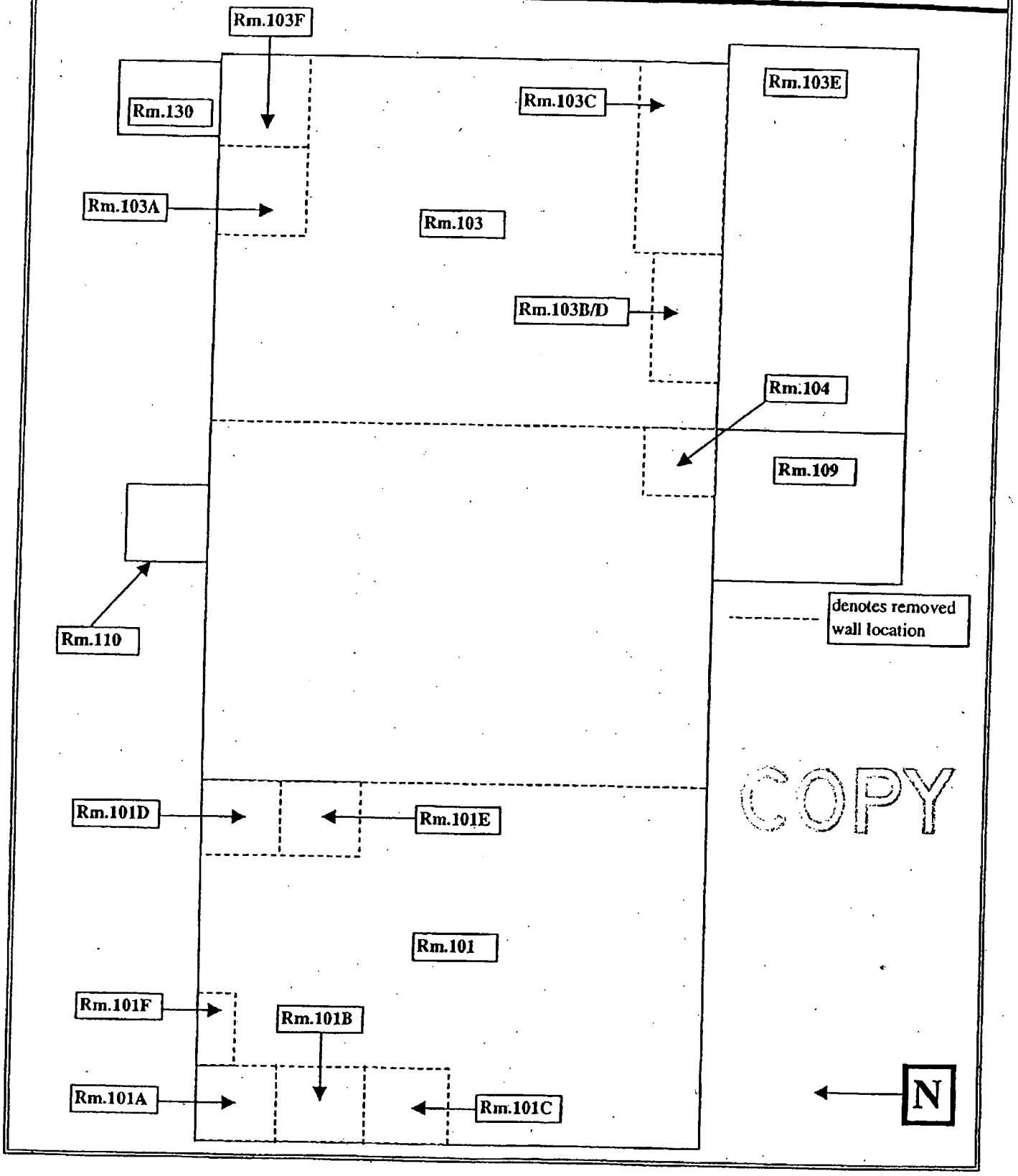
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

OVERVIEW MAP



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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Ludlum	Mfg.	NE Electra	Mfg.	NE Electra
Model	~~Eberline~~	Model	DP-6	Model	DP-6
Serial #	~~SCA-4~~ SAC-4	Serial #	662	Serial #	1379
Cal Due	2/4/05 924	Cal Due	3/30/05 1/7/05	Cal Due	5/9/05
Bkg	0.2 cpmα	Bkg	2.0 cpmα	Bkg	1.0 cpmα
Efficiency	33.00 %	Efficiency	21.80 %	Efficiency	21.90 %
MDA	20 dpmα	MDA	43 dpmα	MDA	34 dpmα
Mfg.	Eberline	Mfg.	NE Electra	Mfg.	NE Electra
Model	BC-4	Model	DP-6	Model	DP-6
Serial #	N/A	Serial #	662	Serial #	1379
Cal Due	N/A	Cal Due	3/30/05	Cal Due	5/9/05
Bkg	N/A cpmβ	Bkg	678.0 cpmβ	Bkg	737.0 cpmβ
Efficiency	14.00 %	Efficiency	22.00 %	Efficiency	22.00 %
MDA	258 dpmβ	MDA	745 dpmβ	MDA	745 dpmβ

Survey Tracking # N/A

Survey Type: Contamination

Building: 559

Location: Rm. 103 E and 109

Purpose: Low level waste characterization (Pre-fix)

RWP #: N/A

Date: 1/7/05 Time: 1100

[redacted]

Print name Signature Emp. #

PRN/REN # : N/A

Comments: Nuclide of concern is Plutonium. Survey performed to document contamination levels of 559 Rms 103 E and 109 prioir to LLW disposal. Performed direct readings wipes, and swipes of floors, walls, and ceiling areas.

COPY

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	Rm 109 floor	<20	**430**	<43	N/A	N/A	N/A
2	Rm 109 floor	<20	<43	N/A	N/A	N/A	N/A
3	Rm 109 floor	<20	<43	<43	N/A	N/A	N/A
4	Rm 109 floor	<20	<43	N/A	N/A	N/A	N/A
5	Rm 109 wall	<20	**800**	N/A	N/A	N/A	N/A
6	Rm 109 wall	<20	<43	<43	N/A	N/A	N/A
7	Rm 109 wall	<20	<43	N/A	N/A	N/A	N/A
8	Rm 109 wall	<20	<43	N/A	N/A	N/A	N/A
9	Rm 109 wall	<20	<43	<43	N/A	N/A	N/A
10	Rm 109 wall	<20	<43	N/A	N/A	N/A	N/A
11	Rm 109 wall	<20	<43	<43	N/A	N/A	N/A
12	Rm 109 wall	<20	<43	N/A	N/A	N/A	N/A
13	Rm 109 ceiling	<20	<43	N/A	N/A	N/A	N/A
14	Rm 109 ceiling	<20	<43	<43	N/A	N/A	N/A
15	Rm 109 ceiling	<20	<43	<43	N/A	N/A	N/A
16	Rm 103 E floor	**102**	**1135**	N/A	N/A	N/A	N/A
17	Rm 103 E floor	<20	**435**	<43	N/A	N/A	N/A
18	Rm 103 E floor	**154**	**1720**	N/A	N/A	N/A	N/A
19	Rm 103 E floor	<20	**785**	<43	N/A	N/A	N/A
20	Rm 103 E floor	<20	**910**	N/A	N/A	N/A	N/A

Date Reviewed: 1/10/05 RS Supervision: [redacted]

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

	LOCATION	ALPHA Swipe	ALPHA Direct	ALPHA Wipe	BETA Swipe	BETA Direct	BETA Wipe
#		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
21	Rm 103 E floor	<20	**520**	<43	N/A	N/A	N/A
22	Rm 103 E floor	**25**	**755**	N/A	N/A	N/A	N/A
23	Rm 103 E floor	**160**	**1360**	<43	N/A	N/A	N/A
24	Rm 103 E floor	**22**	**1165**	N/A	N/A	N/A	N/A
25	Rm 103 E floor	<20	**280**	N/A	N/A	N/A	N/A
26	Rm 103 E floor	<20	<43	<43	N/A	N/A	N/A
27	Rm 103 E floor	<20	<43	N/A	N/A	N/A	N/A
28	Rm 103 E floor	<20	<43	N/A	N/A	N/A	N/A
29	Rm 103 E wall	<20	<43	N/A	N/A	N/A	N/A
30	Rm 103 E wall	<20	<43	<43	N/A	N/A	N/A
31	Rm 103 E wall	<20	<43	N/A	N/A	N/A	N/A
32	Rm 103 E wall	**125**	**9000**	N/A	N/A	N/A	N/A
33	Rm 103 E wall	<20	<43	<43	N/A	N/A	N/A
34	Rm 103 E wall	<20	<43	N/A	N/A	N/A	N/A
35	Rm 103 E wall	<20	<43	<43	N/A	N/A	N/A
36	Rm 103 E wall	<20	<43	N/A	N/A	N/A	N/A
37	Rm 103 E wall	<20	<43	<43	N/A	N/A	N/A
38	Rm 103 E wall	<20	<43	N/A	N/A	N/A	N/A
39	Rm 103 E wall	<20	<43	N/A	N/A	N/A	N/A
40	Rm 103 E wall	<20	<43	N/A	N/A	N/A	N/A
41	Rm 103 E wall	<20	<43	<43	N/A	N/A	N/A
42	Rm 103 E wall	<20	<43	N/A	N/A	N/A	N/A
43	Rm 103 E wall	<20	<43	N/A	N/A	N/A	N/A
44	Rm 103 E ceiling	<20	<43	N/A	N/A	N/A	N/A
45	Rm 103 E ceiling	<20	<43	N/A	N/A	N/A	N/A
46	Rm 103 E ceiling	<20	<43	<43	N/A	N/A	N/A
47	Rm 103 E ceiling	<20	<43	N/A	N/A	N/A	N/A
48	Rm 103 E ceiling	<20	<43	N/A	N/A	N/A	N/A
49	Rm 103 E ceiling	<20	<43	<43	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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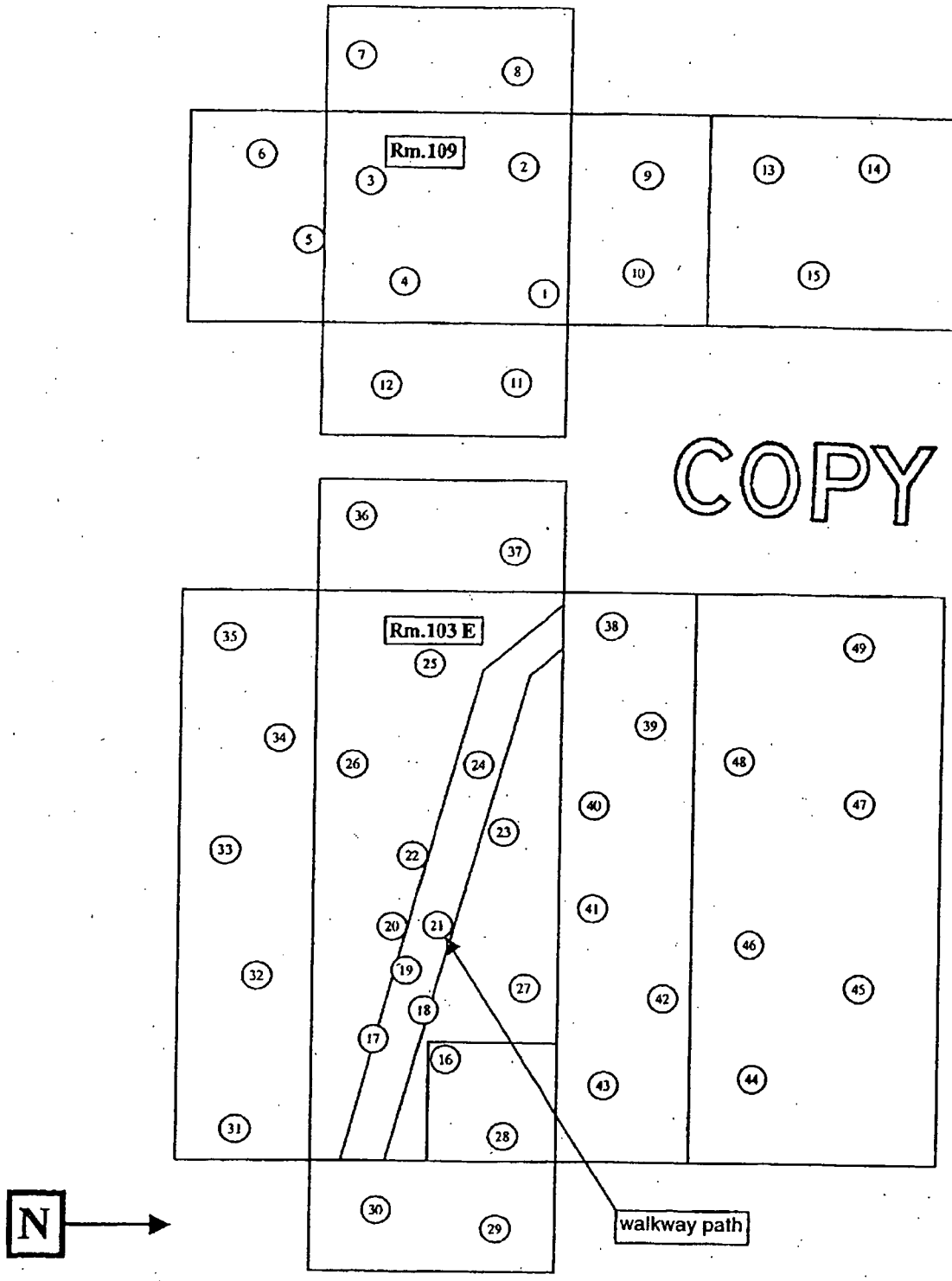
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



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559 Survey Log # 559- 01-05 - 0156

 DMD 2-1-05

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	eberline	Mfg.	eberline	Mfg.	ne tech
Model	sac4	Model	sac4	Model	electra
Serial#	1130	Serial#		Serial#	1391
Cal Due	7-3-05	Cal Due	NA	Cal Due	7-11-05
Bkg.	0.5 cpm	Bkg.	cpm	Bkg.	3 cpm α
Efficiency	33%	Efficiency	33%	Efficiency	17%
MDA	20 dpm	MDA	20 dpm	MDA	94a dpm
	N/A				
Mfg.	ne tech	Mfg.	ebeline	Mfg.	ne tech
Model	electra	Model	SAC4	Model	electra
Serial#		Serial#		Serial#	
Cal Due	NA	Cal Due	NA	Cal Due	NA
Bkg.	cpm	Bkg.	cpm	Bkg.	cpm
Efficiency	17%	Efficiency	33%	Efficiency	17%
MDA	94a dpm	MDA	20 dpm	MDA	94a dpm

Survey Type: Contamination
Building: 559
Location: **304 Plenum**
Purpose: Post-wash (Pre-Fix)

RWP #: 05-559-5002

Date 1-18-05 Time 1300

[redacted]

PRN/REN #: N/A
Comments:

SURVEY RESULTS

Contamination Results (in dpm/100cm2)

Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable
1	SEE MAP	<94	<20	19	SEE MAP	138	<20
2		<94	36	20		1420	30
3		1350	96	21		~~354~~ 120	<20
4		4908	<20	22		354	<20
5		28992	69	23		102	<20
6		558	<20	24		144	<20
7		186	<20	25		<94	<20
8		<94	<20	26		<94	<20
9		<94	<20	27		<94	<20
10		1110	<20	28		<94	<20
11		<94	<20	29		300	<20
12		294	<20	30		<94	<20
13		564	<20	31		<94	<20
14		<94	<20	32		108	<20
15		294	<20	33		252	<20
16		<94	<20	34		<94	<20
17		<94	<20	35		<94	<20
18	SEE MAP	150	<20	36	SEE MAP	<94	<20

Date Reviewed: 1/19/05 **RS Supervision** [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Contamination Results

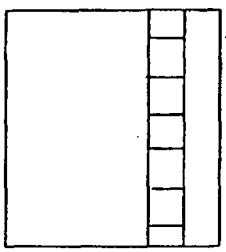
Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Removable	Alpha Direct	Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Removable	Alpha Direct
37	SEE MAP	<20	<94	67	SEE MAP		
38		<20	<94	68			
39		<20	<94	69			
40		<20	96	70			
41				71			
42				72			
43				73			
44				74			
45				75			
46				76		A	
47				77			
48				78			
49		A		79			
50				80			
51				81			
52				82			
53				83			
54	N			84	N		
55				85			
56				86			
57				87			
58				88			
59				89			
60				90			
61				91			
62				92			
63				93			
64				94			
65				95			
66	SEE MAP			96	SEE MAP		

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

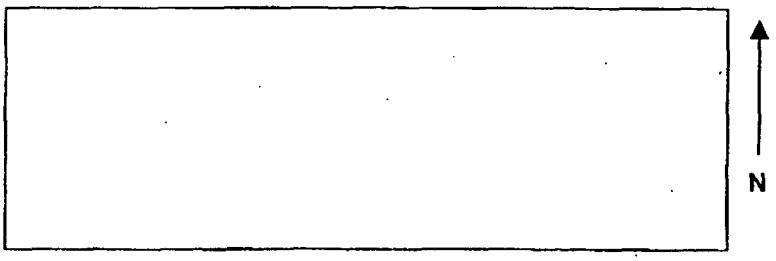
RADIOLOGICAL SAFETY

Drawing Showing Survey Points

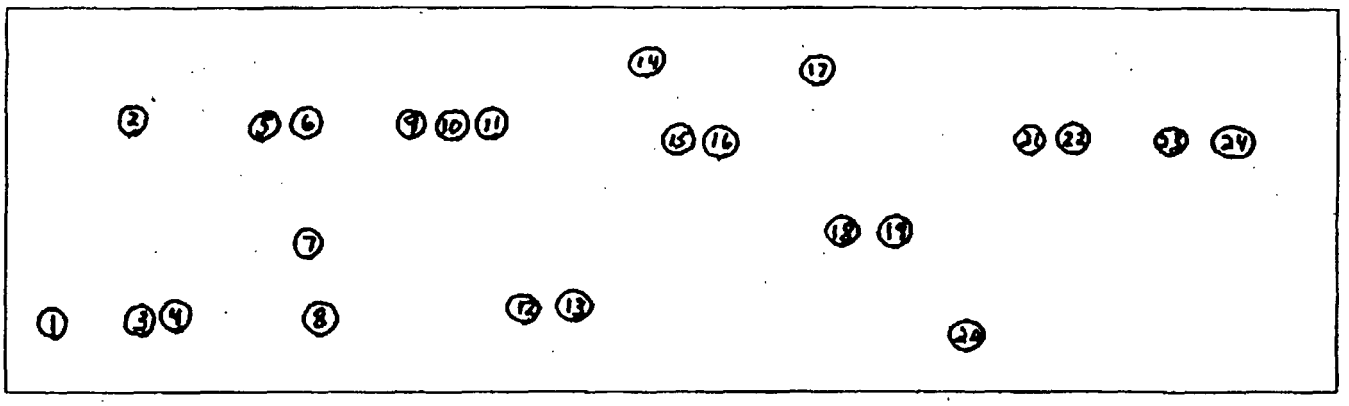
304 TUNNEL BLACK HAT PORTS



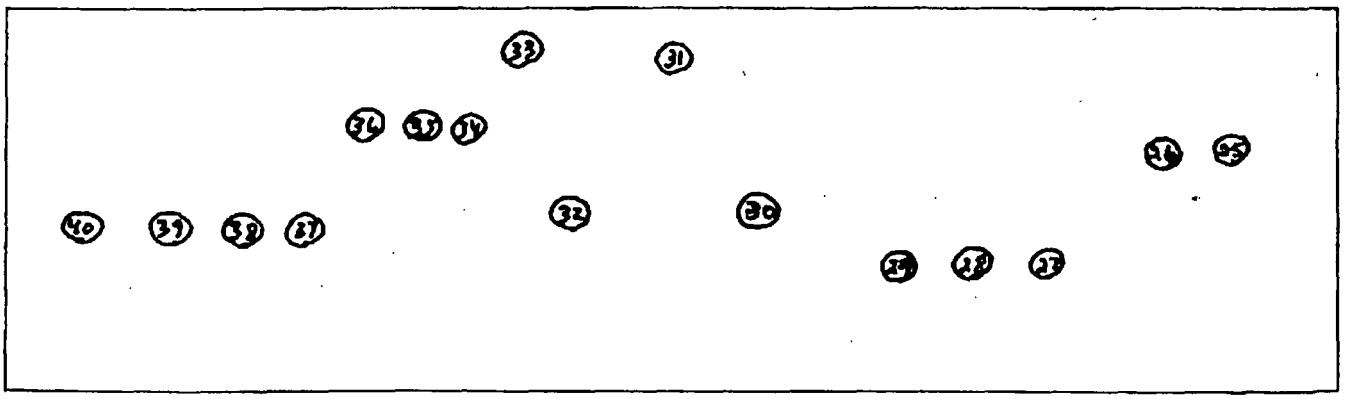
EAST



FLOOR



NORTH WALL



SOUTH WALL

559 Survey Log # 559-_____ **COPY**

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Ne Tech	Mfg.	N/A	Mfg.	Eberline
Model	Electra	Model		Model	SAC-4
Serial#	2143	Serial#		Serial#	1274
Cal Due	7-13-05	Cal Due		Cal Due	6-7-05
Bkg.	4 cpm α	Bkg.		Bkg.	0.3 cpm α
Efficiency	22.31	Efficiency		Efficiency	33%
MDA	94 dpm	MDA	N/A	MDA	20 dpm
Mfg.	N/A	Mfg.	N/A	Mfg.	N/A
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	N/A	MDA	N/A	MDA	N/A

Survey Type: Contamination
Building: 559
Location: Black Hats
Purpose: Post wash (Pre-Fixative)

RWP #: 05-559-5004

Date 1-19-05 Time 0900

[redacted]

RCT N/A / N/A / N/A
Print name / Signature / Emp. #

PRN/REN #: N/A
Comments: All pieces of equipment surveyed on accessible areas only

SURVEY RESULTS

Contamination Results

Swipe #	Location/Description (Results in dpm)	Alpha DIRECT	Alpha SWIPE	Swipe #	Location/Description (Results in dpm)	Alpha DIRECT	Alpha SWIPE
1	See Map	1200	<20	19	See Map	4968	<20
2	See Map	246	<20	20	See Map	<94	<20
3	See Map	6288	<20	21	See Map	768	<20
4	See Map	252	<20	22	See Map	804	<20
5	See Map	<94	<20	23	See Map	336	<20
6	See Map	6600	<20	24	See Map	438	<20
7	See Map	20,568	87	25	See Map	<94	<20
8	See Map	10,092	<20	26	See Map	<94	<20
9	See Map	<94	<20	27	See Map	<94	<20
10	See Map	756	<20	28	See Map	<94	<20
11	See Map	804	<20	29	See Map	144	<20
12	See Map	780	<20	30	See Map	<94	<20
13	See Map	<94	<20	31	See Map	132	<20
14	See Map	<94	<20	32	See Map	186	<20
15	See Map	<94	<20	33	See Map	144	<20
16	See Map	192	<20	34	See Map	138	<20
17	See Map	2568	<20	35	See Map	<94	<20
18	See Map	<94	<20	36	See Map	126	<20

Date Reviewed: 1/19/05 **RS Supervision:** [redacted]

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Contamination Results

Swipe #	Location/Description (Results in dpm)	Alpha DIRECT	Alpha SWIPE	Swipe #	Location/Description (Results in dpm)	Alpha DIRECT	Alpha SWIPE
37	See Map	120	<20	N/A	N/A	N/A	N/A
38	See Map	<94	<20				
39	See Map	132	<20				
40	See Map	<94	<20				
41	See Map	<94	<20				
42	See Map	132	<20				
43	See Map	<94	<20				
44	See Map	<94	<20				
45	See Map	<94	<20				
46	See Map	<94	<20				
47	See Map	198	<20				
48	See Map	<94	<20				
49	See Map	<94	<20				
50	See Map	138	<20				
51	See Map	<94	<20				
52	See Map	<94	<20				
53	See Map	<94	<20				
54	See Map	216	<20				
55	See Map	168	<20				
56	See Map	132	<20				
57	See Map	168,654	4000				
N/A	N/A	N/A	N/A				
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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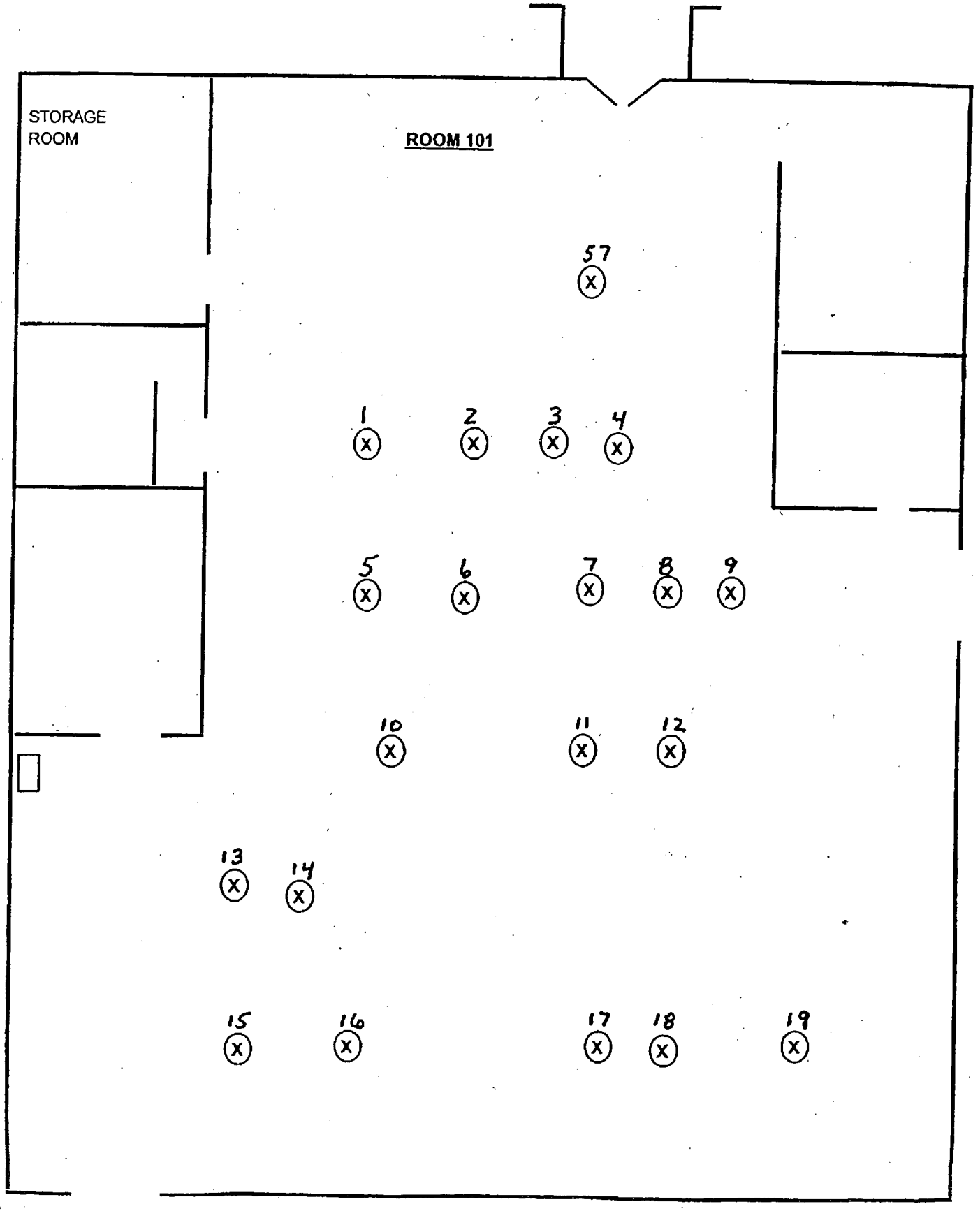
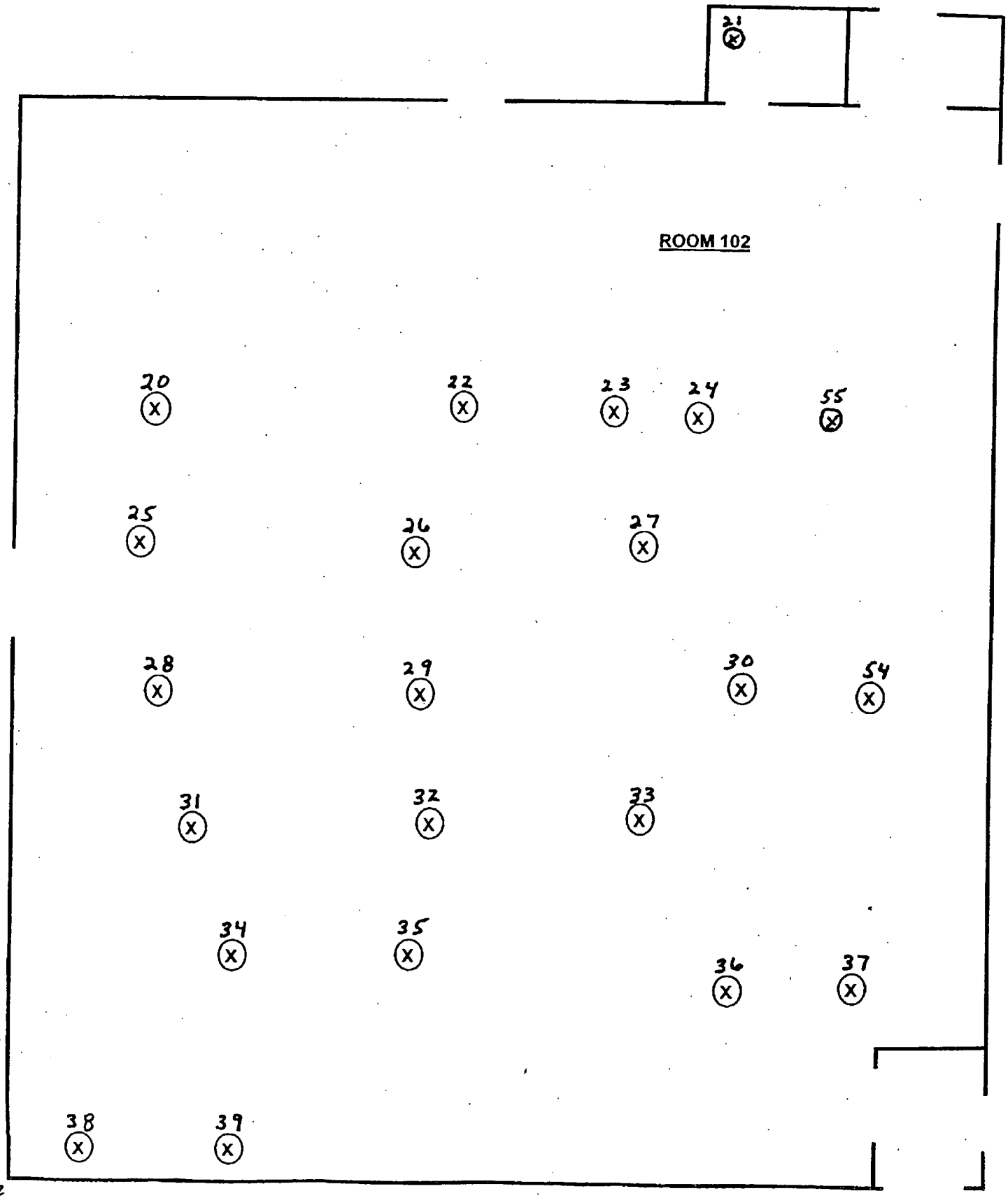
BLDG, 559 ROOM 101

(X) EXHAUST DUCT



BLDG, 559 ROOM 102

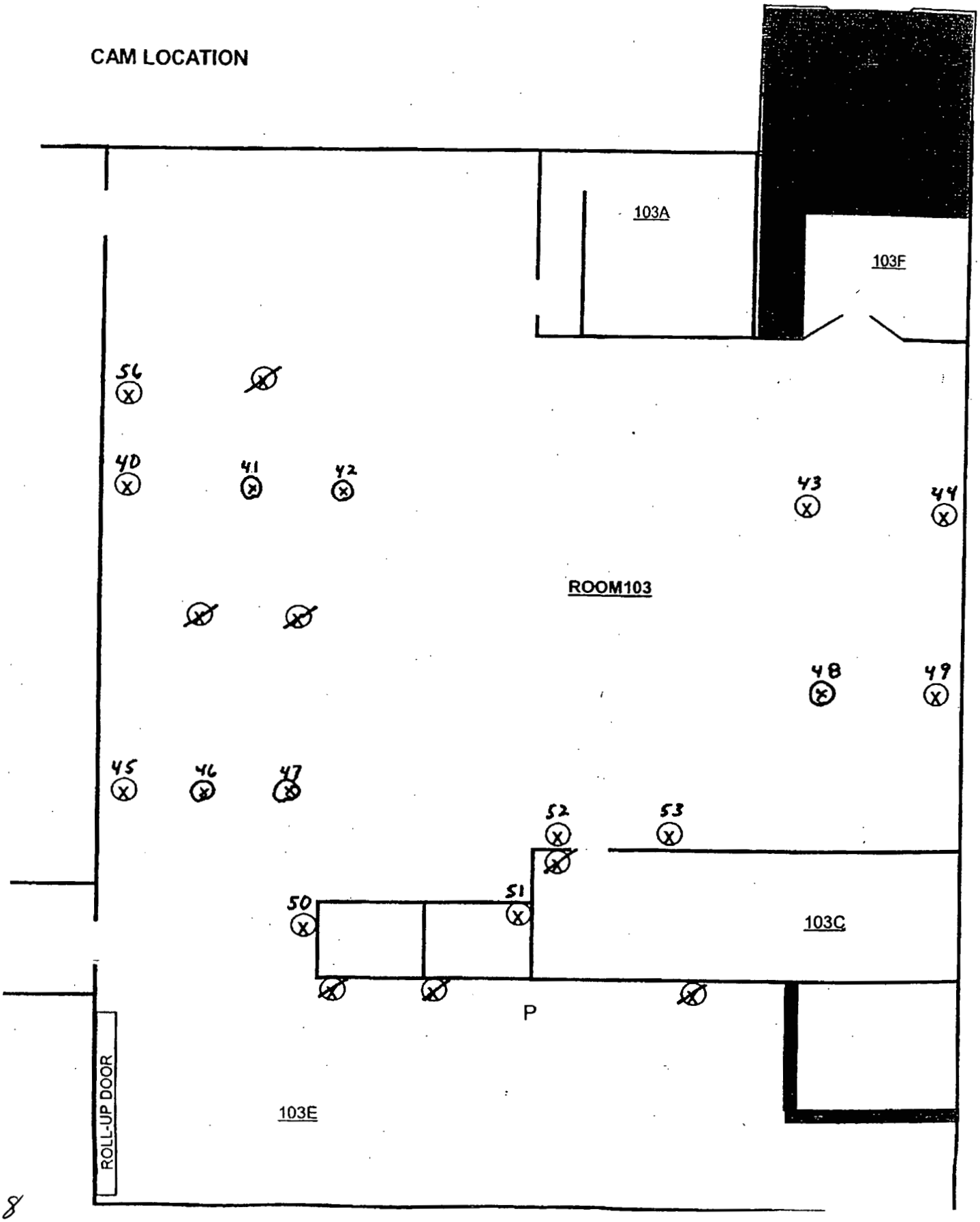
(X) EXHAUST DUCT



BLDG. 559 ROOM 103

(X) EXHAUST DUCT

CAM LOCATION



EBERLINE SERVICES
RFETS
SUMMARY REPORT

Spectroscopy Date(s): 11/11/04, 11/12/04, 11/16/04, 11/19/04, 11/24/04, 11/29/04, 11/30/04, 12/1/04, 12/2/04, 12/3/04, 12/6/04, 12/8/04, 12/6/04, 12/8/04, 12/9/04, 12/10/04, 12/14/04, 12/17/04, 1/14/05.

Location: RFETS B559 Former Rooms 101, 102, 103, and Dock Area

Customer: Al Wolff

Description: B559 2' x 2' Grid-Pattern Floor Surveys

Notes: The purpose of the measurements is to identify and quantify gamma-emitting radionuclides such as Am241, Pu239, and other related isotopes contained within or on concrete floor materials in Building 559 (See attached map). All survey-spectra were visually reviewed and interpreted by an experienced gamma spectroscopist. Final radionuclide peak identifications were performed using the Table of Radioactive Isotopes by Browne and Firestone.

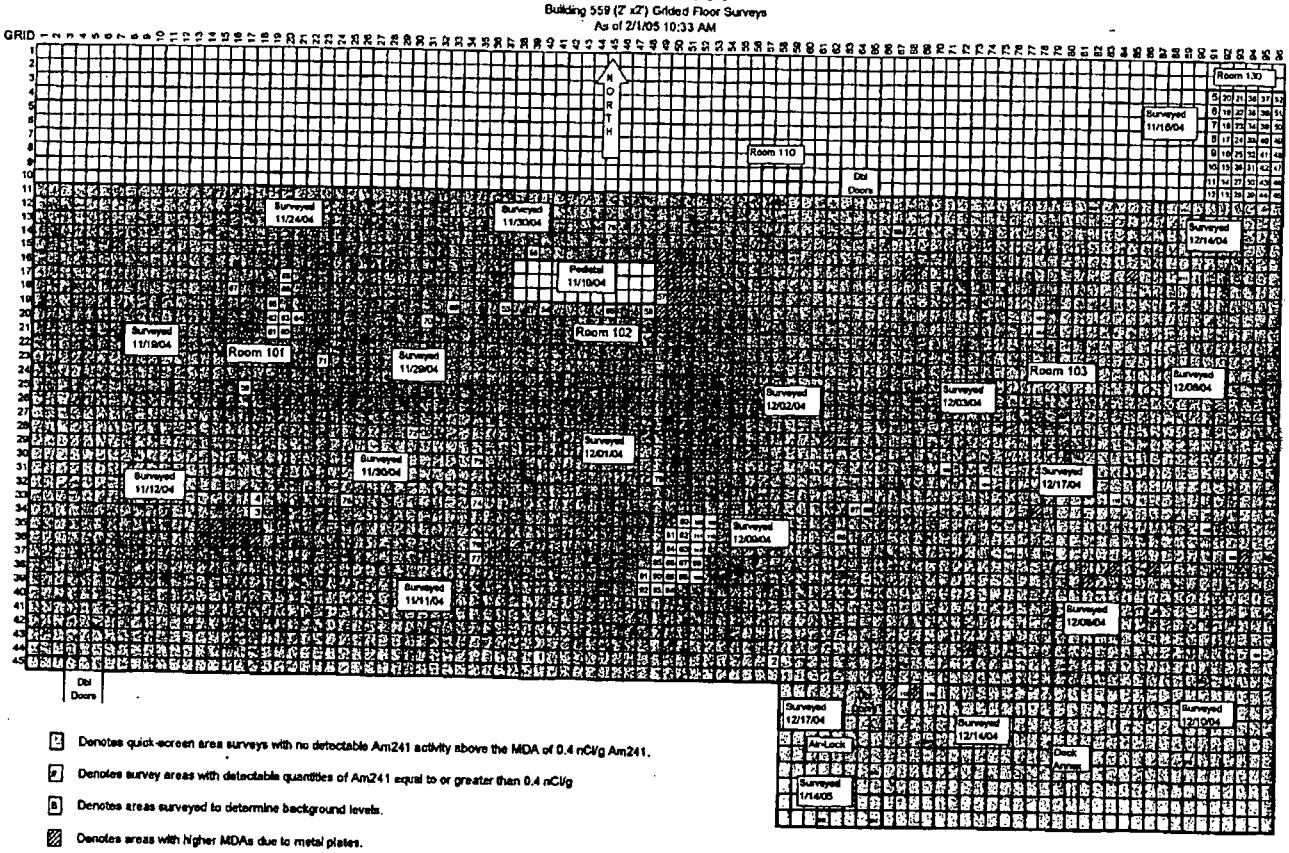
100% of the floor surface-area was surveyed with some overlap. All detectable activity was modeled to be within the top 0.06" of surface material. All peaks that were observed were identified. No mixed fission or activation products were detected in any of the surveys.

Analyst: _____ Date: 1/24/05

Reviewer: J P Conway Date: 1/25/05

Attachments: Survey Map
Final Results

Ebertine Services - RFETS
Building 559 (2' x2') Gridded Floor Surveys
As of 2/1/05 10:33 AM



Denotes quick-screen area surveys with no detectable Am241 activity above the MDA of 0.4 nCi/g Am241.

Denotes survey areas with detectable quantities of Am241 equal to or greater than 0.4 nCi/g

Denotes areas surveyed to determine background levels.

Denotes areas with higher MDAs due to metal plates.

Denotes areas not surveyed.

B559 Floor In-situ Gamma Shots by Eberline Services Converted to dpm/100 cm² (Averaged over the field of view)

Survey Point Number	Survey Point (Note 1)	Room	Area Type	Field of View (cm^2)	Assumed Depth of Contamination (cm)	Volume (cm^3)	Density of Concrete (g/cm^3)	Contamination Over Assumed Depth of Contamination (6 in.)(nCi/g)	Average Surface Contamination Over Field of View (dpm/100cm2)
Various	Scan	101,102,103	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11110401	1	102	Floor	3716	15.24	56632	2.35	1.20E-02	9.54E+04
11110402	2	102	Floor	3716	15.24	56632	2.35	2.50E-02	1.99E+05
11120401	3	101	Floor	3716	15.24	56632	2.35	1.16E-01	9.22E+05
11120402	4	101	Floor	3716	15.24	56632	2.35	7.60E-02	6.04E+05
11160401	5	130	Floor	3716	15.24	56632	2.35	2.00E-02	1.59E+05
11160402	6	130	Floor	3716	15.24	56632	2.35	1.12E+00	8.91E+06
11160403	7	130	Floor	3716	15.24	56632	2.35	1.03E-01	8.19E+05
11160404	8	130	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11160405	9	130	Floor	3716	15.24	56632	2.35	4.00E-02	3.18E+05
11160406	10	130	Floor	3716	15.24	56632	2.35	2.00E-02	1.59E+05
11160407	11	130	Floor	3716	15.24	56632	2.35	2.40E-02	1.91E+05
11160408	12	130	Floor	3716	15.24	56632	2.35	4.22E-01	3.36E+06
11160409	13	130	Floor	3716	15.24	56632	2.35	1.00E+00	7.97E+06
11160410	14	130	Floor	3716	15.24	56632	2.35	4.40E-02	3.50E+05
11160411	15	130	Floor	3716	15.24	56632	2.35	8.20E-02	6.52E+05
11160412	16	130	Floor	3716	15.24	56632	2.35	3.90E-02	3.10E+05
11160413	17	130	Floor	3716	15.24	56632	2.35	1.90E-02	1.51E+05
11160414	18	130	Floor	3716	15.24	56632	2.35	3.74E-01	2.97E+06
11160415	19	130	Floor	3716	15.24	56632	2.35	8.81E+00	7.01E+07
11160415+	20	130	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11160415+	21	130	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11160415+	22	130	Floor	3716	15.24	56632	2.35	4.20E-02	3.34E+05
11160415+	23	130	Floor	3716	15.24	56632	2.35	2.90E-02	2.31E+05
11160415+	24	130	Floor	3716	15.24	56632	2.35	2.90E-02	2.31E+05
11160415+	25	130	Floor	3716	15.24	56632	2.35	1.51E-01	1.20E+06
11160415+	26	130	Floor	3716	15.24	56632	2.35	1.19E-01	9.46E+05
11160415+	27	130	Floor	3716	15.24	56632	2.35	2.90E-02	2.31E+05
11160415+	28	130	Floor	3716	15.24	56632	2.35	1.00E+00	7.95E+06
11160415+	29	130	Floor	3716	15.24	56632	2.35	1.25E+00	9.95E+06
11160415+	30	130	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11160415+	31	130	Floor	3716	15.24	56632	2.35	6.30E-02	5.01E+05
11160415+	32	130	Floor	3716	15.24	56632	2.35	7.06E-01	5.61E+06
11160415+	33	130	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05

B559 Floor In-situ Gamma Shots by Eberline Services Converted to dpm/100 cm^2 (Averaged over the field of view)

Survey Point Number	Survey Point	Room	Area Type	Field of View (cm^2)	Assumed Depth of Contamination (cm)	Volume (cm^3)	Density of Concrete (g/cm^3)	Contamination Over Assumed Depth of Contamination (6 in.)(nCi/g)	Average Surface Contamination Over Field of View (dpm/100cm2)
11160415+	34	130	Floor	3716	15.24	56632	2.35	3.30E-02	2.62E+05
11160415+	35	130	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11160415+	36	130	Floor	3716	15.24	56632	2.35	3.30E-02	2.62E+05
11160415+	37	130	Floor	3716	15.24	56632	2.35	2.05E-01	1.63E+06
11160415+	38	130	Floor	3716	15.24	56632	2.35	8.60E-02	6.84E+05
11160415+	39	130	Floor	3716	15.24	56632	2.35	1.19E-01	9.46E+05
11160415+	40	130	Floor	3716	15.24	56632	2.35	4.36E-01	3.47E+06
11160415+	41	130	Floor	3716	15.24	56632	2.35	2.24E-01	1.78E+06
11160415+	42	130	Floor	3716	15.24	56632	2.35	1.82E-01	1.45E+06
11160415+	43	130	Floor	3716	15.24	56632	2.35	1.19E-01	9.46E+05
11160415+	44	130	Floor	3716	15.24	56632	2.35	1.38E-01	1.10E+06
11160415+	45	130	Floor	3716	15.24	56632	2.35	3.30E-02	2.62E+05
11160415+	46	130	Floor	3716	15.24	56632	2.35	6.20E-02	4.93E+05
11160415+	47	130	Floor	3716	15.24	56632	2.35	1.80E-02	1.43E+05
11160415+	48	130	Floor	3716	15.24	56632	2.35	5.00E-03	3.98E+04
11160415+	49	130	Floor	3716	15.24	56632	2.35	1.30E-02	1.03E+05
11160415+	50	130	Floor	3716	15.24	56632	2.35	9.00E-03	7.16E+04
11160415+	51	130	Floor	3716	15.24	56632	2.35	1.50E-02	1.19E+05
11160415+	52	130	Floor	3716	15.24	56632	2.35	1.20E-02	9.54E+04
11190407+	53	102 Pedestal	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11190407+	54	102 Pedestal	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11190407+	55	102 Pedestal	Floor	3716	15.24	56632	2.35	8.20E-02	6.52E+05
11190407+	56	102 Pedestal	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11190407+	57	102 Pedestal	Floor	3716	15.24	56632	2.35	6.76E-01	5.37E+06
11190407+	58	102 Pedestal	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11190401	B1	102 Pedestal	Floor	3716	15.24	56632	2.35	6.00E-03	4.77E+04
11190402	59	101	Floor	3716	15.24	56632	2.35	2.50E-02	1.99E+05
11190403	60	101	Floor	3716	15.24	56632	2.35	3.90E-02	3.10E+05
11190404	61	101	Floor	3716	15.24	56632	2.35	3.50E-02	2.78E+05
11190405	62	101	Floor	3716	15.24	56632	2.35	3.30E-02	2.62E+05
11190406	63	101	Floor	3716	15.24	56632	2.35	5.60E-02	4.45E+05
11190407	64	101	Floor	3716	15.24	56632	2.35	1.70E-02	1.35E+05
11190407+	Various	101	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11240401	B2	101	Floor	3716	15.24	56632	2.35	8.00E-03	6.36E+04
11240402	65	101	Floor	3716	15.24	56632	2.35	2.10E-02	1.67E+05

B559 Floor In-situ Gamma Shots by Eberline Services Converted to dpm/100 cm^2 (Averaged over the field of view)

Survey Point Number	Survey Point	Room	Area Type	Field of View (cm^2)	Assumed Depth of Contamination (cm)	Volume (cm^3)	Density of Concrete (g/cm^3)	Contamination Over Assumed Depth of Contamination (6 in.)(nCi/g)	Average Surface Contamination Over Field of View (dpm/100cm2)
11240403	66	101	Floor	3716	15.24	56632	2.35	3.70E-02	2.94E+05
11240404	67	101	Floor	3716	15.24	56632	2.35	1.40E-02	1.11E+05
11240405	68	101	Floor	3716	15.24	56632	2.35	2.90E-02	2.31E+05
11240406	69	102	Floor	3716	15.24	56632	2.35	2.50E-02	1.99E+05
11240406+	70	102	Floor	3716	15.24	56632	2.35	3.40E-02	2.70E+05
11240406+	Various	101,102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11290401	B3	101	Floor	3716	15.24	56632	2.35	8.00E-03	6.36E+04
11290402	71	101	Floor	3716	15.24	56632	2.35	5.40E-02	4.29E+05
11290403	72	101	Floor	3716	15.24	56632	2.35	3.60E-02	2.86E+05
11290404	73	102	Floor	3716	15.24	56632	2.35	2.90E-02	2.31E+05
11290404+	Various	101,102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11300401	B4	101	Floor	3716	15.24	56632	2.35	6.00E-03	4.77E+04
11300402	74	102	Floor	3716	15.24	56632	2.35	2.80E-02	2.23E+05
11300403+	75	101	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
11300403	76	102	Floor	3716	15.24	56632	2.35	1.86E-01	1.48E+06
11300403+	77	102	Floor	3716	15.24	56632	2.35	7.10E-02	5.65E+05
11300403+	78	102	Floor	3716	15.24	56632	2.35	3.80E-02	3.02E+05
11300403+	Various	101,102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12010401	76 Recount	102	Floor	3716	15.24	56632	2.35	1.45E-01	1.15E+06
12010402	79	102	Floor	3716	15.24	56632	2.35	7.20E-02	5.72E+05
12010403	80	102	Floor	3716	15.24	56632	2.35	3.80E-02	3.02E+05
12010403+	81	102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12010404	82	102	Floor	3716	15.24	56632	2.35	1.88E-01	1.49E+06
12010404+	83	102	Floor	3716	15.24	56632	2.35	1.73E-01	1.38E+06
12010404+	84	102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12010404+	85	102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12010404+	86	102	Floor	3716	15.24	56632	2.35	3.80E-02	3.02E+05
12010404+	87	102	Floor	3716	15.24	56632	2.35	1.73E-01	1.38E+06
12010404+	88	102	Floor	3716	15.24	56632	2.35	5.60E-02	4.45E+05
12010404+	89	102	Floor	3716	15.24	56632	2.35	4.80E-02	3.82E+05
12010404+	90	102	Floor	3716	15.24	56632	2.35	1.46E-01	1.16E+06
12010404+	91	102	Floor	3716	15.24	56632	2.35	6.90E-02	5.49E+05
12010404+	92	102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12010404+	93	102	Floor	3716	15.24	56632	2.35	6.30E-02	5.01E+05
12010404+	94	102	Floor	3716	15.24	56632	2.35	4.20E-02	3.34E+05

B559 Floor In-situ Gamma Shots by Eberline Services Converted to dpm/100 cm^2 (Averaged over the field of view)

Survey Point Number	Survey Point	Room	Area Type	Field of View (cm^2)	Assumed Depth of Contamination (cm)	Volume (cm^3)	Density of Concrete (g/cm^3)	Contamination Over Assumed Depth of Contamination (6 in.)(nCi/g)	Average Surface Contamination Over Field of View (dpm/100cm2)
12010405	B5	102	Floor	3716	15.24	56632	2.35	7.00E-03	5.57E+04
12010405+	95	102	Floor	3716	15.24	56632	2.35	5.00E-02	3.98E+05
12010405+	Various	102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12020401	96	102	Floor	3716	15.24	56632	2.35	2.10E-02	1.67E+05
12020402	97	102	Floor	3716	15.24	56632	2.35	4.00E-02	3.18E+05
12020402+	98	102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12020403	99	102	Floor	3716	15.24	56632	2.35	5.10E-02	4.05E+05
12020403+	100	102	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12020404	B6	102	Floor	3716	15.24	56632	2.35	6.00E-03	4.77E+04
12020404+	Various	103	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12030401	101	103	Floor	3716	15.24	56632	2.35	7.60E-02	6.04E+05
12030402	102	103	Floor	3716	15.24	56632	2.35	5.10E-02	4.05E+05
12030403	B7	103	Floor	3716	15.24	56632	2.35	7.00E-03	5.57E+04
12030403+	103	103	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12030403+	104	103	Floor	3716	15.24	56632	2.35	4.80E-02	3.82E+05
12030403+	Various	103	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12060401	B8	103	Floor	3716	15.24	56632	2.35	7.00E-03	5.57E+04
12060402	105	103	Floor	3716	15.24	56632	2.35	1.20E-02	9.54E+04
12060402+	Various	103	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12080401	B9	103	Floor	3716	15.24	56632	2.35	6.00E-03	4.77E+04
12080402	106 Plate	103	Floor	3716	15.24	56632	2.35	2.95E-01	2.35E+06
12080403	107	103	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12080403+	Various	103	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12090401	B10	103	Floor	3716	15.24	56632	2.35	6.00E-03	4.77E+04
12090402	108	102	Floor	3716	15.24	56632	2.35	1.60E-02	1.27E+05
12090403	109	102	Floor	3716	15.24	56632	2.35	8.80E-02	7.00E+05
12090404	110	102	Floor	3716	15.24	56632	2.35	3.40E-02	2.70E+05
12090405	111	102	Floor	3716	15.24	56632	2.35	1.20E-02	9.54E+04
12090406	112	102	Floor	3716	15.24	56632	2.35	2.70E-02	2.15E+05
12090406+	Various	101-103	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12100401	B11	Dock	Floor	3716	15.24	56632	2.35	6.00E-03	4.77E+04
12100401+	Various	Dock	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12140401	B12	103	Floor	3716	15.24	56632	2.35	8.00E-03	6.36E+04
12140403	B14	Dock	Floor	3716	15.24	56632	2.35	6.00E-03	4.77E+04
12140404	113 Plate	Dock	Floor	3716	15.24	56632	2.35	2.31E-01	1.84E+06

B559 Floor In-situ Gamma Shots by Eberline Services Converted to dpm/100 cm^2 (Averaged over the field of view)

Survey Point Number	Survey Point	Room	Area Type	Field of View (cm^2)	Assumed Depth of Contamination (cm)	Volume (cm^3)	Density of Concrete (g/cm^3)	Contamination Over Assumed Depth of Contamination (6 in.)(nCi/g)	Average Surface Contamination Over Field of View (dpm/100cm2)
12140405	114	Dock	Floor	3716	15.24	56632	2.35	1.90E-02	1.51E+05
12140405+	Various	Dock	Floor	3716	15.24	56632	2.35	3.20E-02	2.54E+05
12170401	B15	Dock	Floor	3716	15.24	56632	3.35	6.00E-03	6.80E+04
12170402	B16	Dock	Floor	3716	15.24	56632	4.35	6.00E-03	8.83E+04
12170403	115	Dock	Floor	3716	15.24	56632	5.35	1.00E-02	1.81E+05
12170403+	Various	Dock	Floor	3716	15.24	56632	6.35	3.20E-02	6.87E+05
12170403+	Various	Dock	Floor	3716	15.24	56632	7.35	3.20E-02	7.96E+05
							Max	8.81E+00	7.01E+07
							Min	5.00E-03	3.98E+04
							Avg	1.55E-01	1.24E+06
							Median	3.20E-02	2.54E+05
							StdDev	7.48E-01	5.95E+06

Notes:

1- Survey points correspond to shaded numbered points on map

2- Field of view based on a square with sides of 24 inches

3- Depth of contamination assumed to be 0.060 inches

4- Total TRU Alpha based on Am241 converted to WGPu using ratios in TBD-00076

5- Density based on average density of concrete

6-Slab thickness is 6 inches (minimum)

7- Survey point 57 has been subsequently decontaminated

Building 559 Floor Area Surveys

Spectrum File ID	Room(s)	Area	SNAP Am241 Activity Concentration (nCi/g)	SNAP Am241 Activity Concentration MDA (nCi/g)	SNAP Am241 2 Sigma Error (%)	SNAP Pu-239 Activity Concentration (nCi/g)	SNAP Pu-239 Activity Concentration MDA (nCi/g)	Pu-239/240 Activity Concentration (nCi/g)	Total Alpha Concentration (Am-241 + Pu-239/240) (nCi/g)	Assumed Contamination Depth (inches)	Assumed Slab Thickness (inches)	Estimated Average Pu-239/240 Slab Activity Concentration (nCi/g)	Estimated Average Pu-239/240+Am-241 Slab Activity Concentration (nCi/g)	Calc. Case
11110401	102	1	0.15	0.08	116.5	<MDA	511	1.03	1.18	0.060	6.0	0.010	0.012	1
11110402	102	2	0.31	0.08	111.8	<MDA	431	2.18	2.50	0.060	6.0	0.022	0.025	1
11110402+	101, 102	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
11120401	101	3	1.46	0.12	110.2	<MDA	460	10.15	11.61	0.060	6.0	0.101	0.116	1
11120402	101	4	0.95	0.10	110.4	<MDA	421	6.61	7.56	0.060	6.0	0.066	0.076	1
11120402+	101	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
11120402+	101	0.125" plate	< 8.5	8.5	na	<MDA	4090	59.08	67.58	0.060	6.0	0.591	0.676	4
11160401	130	5	0.26	0.08	112.3	<MDA	452	1.79	2.04	0.060	6.0	0.018	0.020	1
11160402	130	6	14.10	0.32	109.9	<MDA	508	98.01	112.11	0.060	6.0	0.980	1.121	1
11160403	130	7	1.30	0.11	110.2	<MDA	478	9.04	10.34	0.060	6.0	0.090	0.103	1
11160404	130	8	0.40	0.09	111.4	<MDA	504	2.78	3.18	0.060	6.0	0.028	0.032	1
11160405	130	9	0.51	0.09	111.0	<MDA	455	3.52	4.03	0.060	6.0	0.035	0.040	1
11160406	130	10	0.26	0.08	112.6	<MDA	529	1.78	2.04	0.060	6.0	0.018	0.020	1
11160407	130	11	0.31	0.09	112.1	<MDA	481	2.13	2.44	0.060	6.0	0.021	0.024	1
11160408	130	12	5.31	0.20	110.0	<MDA	483	36.91	42.22	0.060	6.0	0.369	0.422	1
11160409	130	13	12.60	0.26	110.0	<MDA	519	87.58	100.18	0.060	6.0	0.876	1.002	1
11160410	130	14	0.56	0.10	110.9	<MDA	503	3.87	4.43	0.060	6.0	0.039	0.044	1
11160411	130	15	1.03	0.11	110.3	<MDA	494	7.16	8.19	0.060	6.0	0.072	0.082	1
11160412	130	16	0.49	0.10	111.1	<MDA	503	3.40	3.89	0.060	6.0	0.034	0.039	1
11160413	130	17	0.24	0.09	113.1	<MDA	483	1.63	1.87	0.060	6.0	0.016	0.019	1
11160414	130	18	4.70	0.20	110.0	<MDA	529	32.67	37.37	0.060	6.0	0.327	0.374	1
11160415	130	19	38.80	0.51	109.9	688	483	842.52	881.32	0.060	6.0	8.425	8.813	2
11160415+	130	20	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	21	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	22	0.5	0.4	190.0	<MDA	2240	3.68	4.21	0.060	6.0	0.037	0.042	1
11160415+	130	23	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	24	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	25	1.9	0.4	190.0	<MDA	2240	13.21	15.11	0.060	6.0	0.132	0.151	1
11160415+	130	26	1.5	0.4	190.0	<MDA	2240	10.43	11.93	0.060	6.0	0.104	0.119	1
11160415+	130	27	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	28	12.6	0.4	190.0	<MDA	2240	87.44	100.02	0.060	6.0	0.874	1.000	1
11160415+	130	29	15.7	0.4	190.0	<MDA	2240	109.41	125.15	0.060	6.0	1.094	1.251	1
11160415+	130	30	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	31	0.8	0.4	190.0	<MDA	2240	5.49	6.28	0.060	6.0	0.055	0.063	1
11160415+	130	32	8.9	0.4	190.0	<MDA	2240	61.72	70.60	0.060	6.0	0.617	0.706	1
11160415+	130	33	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	34	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	35	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	36	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11160415+	130	37	2.6	0.4	190.0	<MDA	2240	17.93	20.51	0.060	6.0	0.179	0.205	1
11160415+	130	38	1.1	0.4	190.0	<MDA	2240	7.51	8.59	0.060	6.0	0.075	0.086	1
11160415+	130	39	1.5	0.4	190.0	<MDA	2240	10.43	11.93	0.060	6.0	0.104	0.119	1
11160415+	130	40	5.5	0.4	190.0	<MDA	2240	38.09	43.57	0.060	6.0	0.381	0.436	1
11160415+	130	41	2.8	0.4	190.0	<MDA	2240	19.60	22.42	0.060	6.0	0.196	0.224	1
11160415+	130	42	2.3	0.4	190.0	<MDA	2240	15.92	18.21	0.060	6.0	0.159	0.182	1
11160415+	130	43	1.5	0.4	190.0	<MDA	2240	10.43	11.93	0.060	6.0	0.104	0.119	1

Building 559 Floor Area Surveys

Spectrum File ID	Room(s)	Area	SNAP Am241 Activity Concentration (nCi/g)	SNAP Am241 Activity Concentration MDA (nCi/g)	SNAP Am241 2 Sigma Error (%)	SNAP Pu-239 Activity Concentration (nCi/g)	SNAP Pu-239 Activity Concentration MDA (nCi/g)	Pu-239/240 Activity Concentration (nCi/g)	Total Alpha Concentration (Am-241 + Pu-239/240) (nCi/g)	Assumed Contamination Depth (inches)	Assumed Slab Thickness (inches)	Estimated Average Pu-239/240 Slab Activity Concentration (nCi/g)	Estimated Average Pu-239/240+Am-241 Slab Activity Concentration (nCi/g)	Calc. Case
11160415+	130	44	13.8	0.4	190.0	<MDA	2240	95.85	109.64	0.060	6.0	0.959	1.096	1
11160415+	130	45	3.3	0.4	190.0	<MDA	2240	22.66	25.92	0.060	6.0	0.227	0.259	1
11160415+	130	46	6.2	0.4	190.0	<MDA	2240	42.96	49.14	0.060	6.0	0.430	0.491	1
11160415+	130	47	1.8	0.4	190.0	<MDA	2240	12.37	14.15	0.060	6.0	0.124	0.142	1
11160415+	130	48	0.5	0.4	190.0	<MDA	2240	3.55	4.06	0.060	6.0	0.035	0.041	1
11160415+	130	49	1.3	0.4	190.0	<MDA	2240	8.90	10.18	0.060	6.0	0.089	0.102	1
11160415+	130	50	0.9	0.4	190.0	<MDA	2240	6.39	7.31	0.060	6.0	0.064	0.073	1
11160415+	130	51	1.5	0.4	190.0	<MDA	2240	10.43	11.93	0.060	6.0	0.104	0.119	1
11160415+	130	52	1.2	0.4	190.0	<MDA	2240	8.06	9.22	0.060	6.0	0.081	0.092	1
11190407+	102 pedistal	53	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11190407+	102 pedistal	54	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11190407+	102 pedistal	55	1.0	0.4	190.0	<MDA	2240	7.20	8.24	0.060	6.0	0.072	0.082	1
11190407+	102 pedistal	56	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11190407+	102 pedistal	57 plate	8.5	8.5	252.0	<MDA	4090	59.08	67.58	0.060	6.0	0.591	0.676	1
11190407+	102 pedistal	58	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11190401	102 pedistal	B1	< 0.08	0.08	na	<MDA	444	0.56	0.64	0.060	6.0	0.006	0.006	4
11190402	101	59	0.32	0.09	111.9	<MDA	463	2.19	2.50	0.060	6.0	0.022	0.025	1
11190403	101	60	0.49	0.10	111.2	<MDA	454	3.41	3.90	0.060	6.0	0.034	0.039	1
11190404	101	61	0.44	0.10	111.3	<MDA	471	3.06	3.50	0.060	6.0	0.031	0.035	1
11190405	101	62	0.42	0.10	111.4	<MDA	481	2.92	3.34	0.060	6.0	0.029	0.033	1
11190406	101	63	0.71	0.11	110.7	<MDA	503	4.94	5.65	0.060	6.0	0.049	0.056	1
11190407	101	64	0.22	0.09	113.5	<MDA	436	1.53	1.75	0.060	6.0	0.015	0.017	1
11190407+	101	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
11190407+	101	0.125" plate	< 8.5	8.5	na	<MDA	4090	59.08	67.58	0.060	6.0	0.591	0.676	4
11240401	101	B2	< 0.1	0.10	na	<MDA	471	0.70	0.80	0.060	6.0	0.007	0.008	4
11240402	101	65	0.26	0.11	113.5	<MDA	460	1.81	2.07	0.060	6.0	0.018	0.021	1
11240403	101	66	0.47	0.10	111.2	<MDA	454	3.27	3.74	0.060	6.0	0.033	0.037	1
11240404	101	67	0.18	0.08	114.3	<MDA	455	1.25	1.43	0.060	6.0	0.013	0.014	1
11240405	101	68	0.36	0.09	111.6	<MDA	471	2.50	2.86	0.060	6.0	0.025	0.029	1
11240406	102	69	0.31	0.09	112.1	<MDA	491	2.15	2.46	0.060	6.0	0.022	0.025	1
11240406+	102	70	0.43	0.4	190.0	<MDA	2240	2.99	3.42	0.060	6.0	0.030	0.034	1
11240406+	101, 102	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
11240406+	101, 102	0.125" plate	< 8.5	8.5	na	<MDA	4090	59.08	67.58	0.060	6.0	0.591	0.676	4
11290401	101	B3	< 0.1	0.1	na	<MDA	477	0.70	0.80	0.060	6.0	0.007	0.008	4
11290402	101	71	0.68	0.10	110.7	<MDA	468	4.73	5.41	0.060	6.0	0.047	0.054	1
11290403	101	72	0.45	0.10	111.3	<MDA	474	3.13	3.58	0.060	6.0	0.031	0.036	1
11290404	102	73	0.37	0.10	111.6	<MDA	486	2.57	2.94	0.060	6.0	0.026	0.029	1
11290404+	101, 102	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
11300401	101	B4	< 0.08	0.08	na	<MDA	455	0.56	0.64	0.060	6.0	0.006	0.006	4
11300402	102	74	0.35	0.10	111.9	<MDA	475	2.43	2.78	0.060	6.0	0.024	0.028	1
11300403+	101	75	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
11300403	102	76	2.34	0.13	110.1	<MDA	474	16.27	18.61	0.060	6.0	0.163	0.186	recount
11300403+	102	77	0.69	0.4	190.0	<MDA	2240	6.19	7.08	0.060	6.0	0.062	0.071	1
11300403+	102	78	0.48	0.4	190.0	<MDA	2240	3.34	3.82	0.060	6.0	0.033	0.038	1
11300403+	101, 102	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4

Building 559 Floor Area Surveys

Spectrum File ID	Room(s)	Area	SNAP Am241 Activity Concentration (nCi/g)	SNAP Am241 Activity Concentration MDA (nCi/g)	SNAP Am241 2 Sigma Error (%)	SNAP Pu-239 Activity Concentration (nCi/g)	SNAP Pu-239 Activity Concentration MDA (nCi/g)	Pu-239/240 Activity Concentration (nCi/g)	Total Alpha Concentration (Am-241 + Pu-239/240) (nCi/g)	Assumed Contamination Depth (inches)	Assumed Slab Thickness (inches)	Estimated Average Pu-239/240 Slab Activity Concentration (nCi/g)	Estimated Average Pu-239/240+Am-241 Slab Activity Concentration (nCi/g)	Calc. Case
12010401	102	76rc	1.82	0.05	109.9	<MDA	162	12.65	14.47	0.060	6.0	0.127	0.145	1
12010402	102	78	0.91	0.1	110.4	<MDA	481	6.33	7.24	0.060	6.0	0.063	0.072	1
12010403	102	80	0.48	0.1	111.1	<MDA	493	3.34	3.82	0.060	6.0	0.033	0.038	1
12010403+	102	81	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
12010404	102	82	2.36	0.08	109.9	<MDA	229	16.40	18.76	0.060	6.0	0.164	0.188	1
12010404+	102	83	2.17	0.4	190.0	<MDA	2240	15.08	17.25	0.060	6.0	0.151	0.173	1
12010404+	102	84	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
12010404+	102	85	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
12010404+	102	86	0.48	0.4	190.0	<MDA	2240	3.34	3.82	0.060	6.0	0.033	0.038	1
12010404+	102	87	2.17	0.4	190.0	<MDA	2240	15.08	17.25	0.060	6.0	0.151	0.173	1
12010404+	102	88	0.7	0.4	190.0	<MDA	2240	4.87	5.57	0.060	6.0	0.049	0.056	1
12010404+	102	89	0.6	0.4	190.0	<MDA	2240	4.17	4.77	0.060	6.0	0.042	0.048	1
12010404+	102	90	1.83	0.4	190.0	<MDA	2240	12.72	14.55	0.060	6.0	0.127	0.146	1
12010404+	102	91	0.87	0.4	190.0	<MDA	2240	6.05	6.92	0.060	6.0	0.060	0.069	1
12010404+	102	92	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
12010404+	102	93	0.79	0.4	190.0	<MDA	2240	5.49	6.28	0.060	6.0	0.055	0.063	1
12010404+	102	94	0.53	0.4	190.0	<MDA	2240	3.68	4.21	0.060	6.0	0.037	0.042	1
12010405	102	B5	< 0.09	0.09	na	<MDA	486	0.63	0.72	0.060	6.0	0.006	0.007	4
12010405+	102	95	0.63	0.4	190.0	<MDA	2240	4.38	5.01	0.060	6.0	0.044	0.050	1
12010405+	102	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
12020401	102	96	0.27	0.11	113.3	<MDA	459	1.86	2.15	0.060	6.0	0.019	0.021	1
12020402	102	97	0.5	0.10	111.1	<MDA	501	3.48	3.98	0.060	6.0	0.035	0.040	1
12020402+	102	98	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
12020403	102	99	0.64	0.09	110.7	<MDA	496	4.45	5.09	0.060	6.0	0.044	0.051	1
12020403+	102	100	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
12020404	102	B6	< 0.08	0.08	na	<MDA	469	0.56	0.64	0.060	6.0	0.006	0.006	4
12020404+	102	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
12020404+	102	0.125" plate	< 8.5	8.5	na	<MDA	4090	59.08	67.58	0.060	6.0	0.591	0.676	4
12030401	103	101	0.95	0.13	110.5	<MDA	515	6.60	7.55	0.060	6.0	0.066	0.076	1
12030402	103	102	0.64	0.12	110.9	<MDA	538	4.45	5.09	0.060	6.0	0.044	0.051	1
12030403	103	B7	< 0.09	0.09	na	<MDA	504	0.63	0.72	0.060	6.0	0.006	0.007	4
12030403+	103	103	0.4	0.4	190.0	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	1
12030403+	103	104	0.6	0.4	190.0	<MDA	2240	4.17	4.77	0.060	6.0	0.042	0.048	1
12030403+	103	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
12030403+	103	0.125" plate	< 8.5	8.5	na	<MDA	4090	59.08	67.58	0.060	6.0	0.591	0.676	4
12060401	103	B8	< 0.09	0.09	na	<MDA	478	0.63	0.72	0.060	6.0	0.006	0.007	4
12060402	103	105	0.15	0.09	117.3	<MDA	493	1.04	1.19	0.060	6.0	0.010	0.012	1
12060402+	103	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
12060402+	103	0.125" plate	< 8.5	8.5	na	<MDA	4090	59.08	67.58	0.060	6.0	0.591	0.676	4
12080401	103	B9	< 0.08	0.08	na	<MDA	465	0.56	0.64	0.060	6.0	0.006	0.006	4
12080402	103	106 plate	3.71	1.77	201.8	<MDA	850	25.79	29.50	0.060	6.0	0.258	0.295	1
12080403	103	107	0.4	0.1	111.6	<MDA	490	2.78	3.18	0.060	6.0	0.028	0.032	1
12080403+	103	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
12080403+	103	0.125" plate	< 8.5	8.5	na	<MDA	4090	59.08	67.58	0.060	6.0	0.591	0.676	4
12090401	103	B10	< 0.08	0.08	na	<MDA	487	0.56	0.64	0.060	6.0	0.006	0.006	4
12090402	102	108	0.2	0.08	113.5	<MDA	496	1.39	1.59	0.060	6.0	0.014	0.016	1
12090403	102	109	1.11	0.97	110.3	<MDA	501	7.72	8.83	0.060	6.0	0.077	0.088	1
12090404	102	110	0.43	0.09	111.3	<MDA	471	2.99	3.42	0.060	6.0	0.030	0.034	1
12090405	102	111	0.15	0.09	116.6	<MDA	491	1.04	1.19	0.060	6.0	0.010	0.012	1
12090406	102	112	0.34	0.09	111.7	<MDA	466	2.36	2.70	0.060	6.0	0.024	0.027	1
12090406+	101 - 103	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
12100401	Dock Annex	B11	< 0.08	0.08	na	<MDA	480	0.56	0.64	0.060	6.0	0.006	0.006	4
12100401+	Dock Annex	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4

Building 559 Floor Area Surveys

Spectrum File ID	Room(s)	Area	SNAP Am241 Activity Concentration (nCi/g)	SNAP Am241 Activity Concentration MDA (nCi/g)	SNAP Am241 2 Sigma Error (%)	SNAP Pu-239 Activity Concentration (nCi/g)	SNAP Pu-239 Activity Concentration MDA (nCi/g)	Pu-239/240 Activity Concentration (nCi/g)	Total Alpha Concentration (Am-241 + Pu-239/240) (nCi/g)	Assumed Contamination Depth (inches)	Assumed Slab Thickness (inches)	Estimated Average Pu-239/240 Slab Activity Concentration (nCi/g)	Estimated Average Pu-239/240+Am-241 Slab Activity Concentration (nCi/g)	Calc. Case
12140401	103	B12	< 0.1	0.1	na	<MDA	478	0.70	0.80	0.060	6.0	0.007	0.008	4
12140402	103	B13 plate	< 1.7	1.7	na	<MDA	866	11.82	13.52	0.060	6.0	0.118	0.135	4
12140403	Dock Annex	B14	< 0.08	0.08	na	<MDA	521	0.56	0.64	0.060	6.0	0.006	0.006	4
12140404	Dock Annex	113 plate	2.9	1.8	203.3	<MDA	822	20.16	23.06	0.060	6.0	0.202	0.231	1
12140405	Dock Annex	114	0.24	0.08	113.0	<MDA	463	1.67	1.91	0.060	6.0	0.017	0.019	1
12140405+	Dock Annex	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
12140405+	103	0.125" plate	< 8.5	8.5	na	<MDA	4080	59.08	67.58	0.060	6.0	0.591	0.678	4
12170401	103	B15	< 0.07	0.07	na	<MDA	390	0.49	0.56	0.060	6.0	0.005	0.006	4
12170402	Dock	B16	< 0.07	0.07	na	<MDA	346	0.49	0.56	0.060	6.0	0.005	0.006	4
12170403	103	115	0.12	0.07	117.1	<MDA	381	0.83	0.95	0.060	6.0	0.008	0.010	1
12170403+	Dock	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
12170403+	103	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4
01140501	Dock	B17	< 0.07	0.07	na	<MDA	398	0.49	0.56	0.060	6.0	0.005	0.006	4
01140502	Dock	B18	< 0.07	0.07	na	<MDA	376	0.49	0.56	0.060	6.0	0.005	0.006	4
01140502+	Dock	remainder	< 0.4	0.4	na	<MDA	2240	2.78	3.18	0.060	6.0	0.028	0.032	4

Notes:

1) + sign indicates the survey was performed as a quick screen.
2) < sign indicates number is an MDA for that measurement.
3) Activity per gram values for each isotope taken from TBD-00076, Activities for Isotopes of Concern in Weapons Plutonium as a Function of Time, for 34 year old plutonium.
4) Total activity calculation is based on one of five cases as listed below:
   Case 1 - only Am241 (59 kev peak) was detected. Pu239/Pu240 is estimated based on a 34 year-old RFETS WgPu ratio of: 6.951
   Case 2 - both Am241 (59 kev) and Pu239 (129 kev) peaks detected.
   Case 3 - Am241 (59 and 125 kev peaks) detected. Pu239 results are based on the MDA.
   Case 4 - no Am241 or Pu239 peaks detected. Results are based on the MDAs.
   Case 5 - only Am241 (59 kev peak) detected. Based on other surveys in the area, Pu239 is reported at the MDA.

2/2/05 6:50 AM

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Eberline	Mfg.	Eberline	Mfg.	NE Electra
Model	SAC-4	Model	SAC-4	Model	DP-6
Serial #	924	Serial #	N/A	Serial #	3254
Cal Due	2/4/05	Cal Due	N/A	Cal Due	7/4/05
Bkg	0.2 cpmα	Bkg	N/A cpmα	Bkg	7 cpmα
Efficiency	33.00 %	Efficiency	N/A %	Efficiency	22.80 %
MDA	20 dpmα	MDA	N/A dpmα	MDA	66 dpmα
Mfg.	Eberline	Mfg.	Eberline	Mfg.	NE Electra
Model	BC-4	Model	BC-4	Model	DP-6 [redacted]
Serial #	843	Serial #	N/A	Serial #	325[redacted]
Cal Due	10/4/05	Cal Due	N/A	Cal Due	7/4/05
Bkg	41.6 cpmβ	Bkg	N/A cpmβ	Bkg	704 cpmβ
Efficiency	14.00 %	Efficiency	N/A %	Efficiency	22.00 %
MDA	258 dpmβ	MDA	N/A dpmβ	MDA	745 dpmβ

Survey Type: Contamination
Building: 559
Location: Outside Bldg.
Purpose: Exterior Survey
RWP #: Exterior Survey
Date: 2/1/05 Time: 0800

[redacted]

Signature Emp. #

RCT: na / na / na
Print name Signature Emp. #

PRN/REN # :

Comments: Nuclide of concern is plutonium. Beta efficiencies listed reflect correction for depleted uranium (DU).
Calibrated efficiencies were: Eberline BC-4 # 843 - 25 %, NE Electra DP-6 # 3254 - 31.5 %.

SURVEY RESULTS

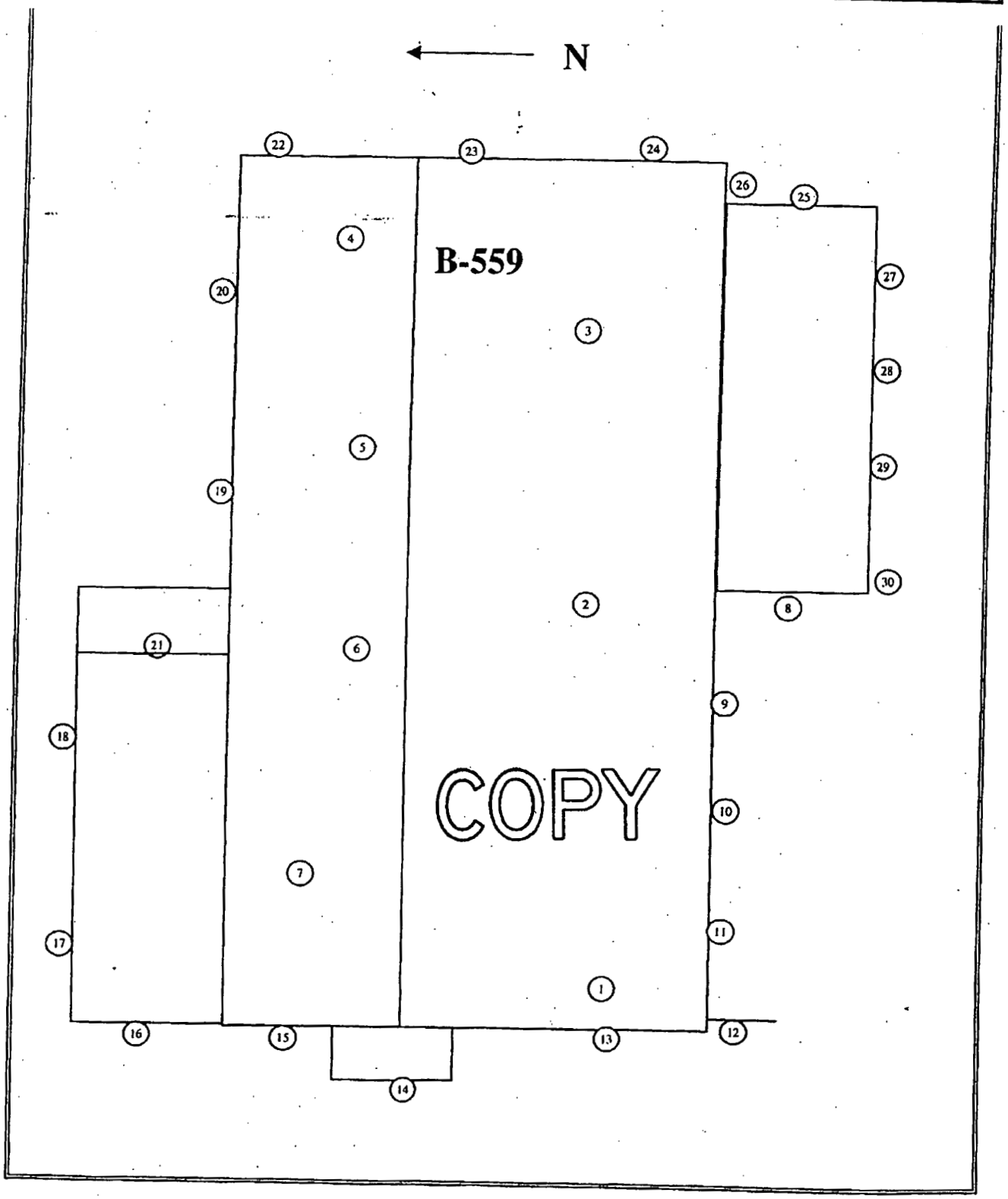
Swipe #	Location / Description Results in DPM/100sq.cm	Removable Alpha	Removable Beta	Total Alpha	Total Beta
1	Roof	<20	<258	<66	<745
2	Roof East Side	<20	<258	<66	<745
3	RoofWest Side	<20	<258	<66	<745
4	Lower Roof	<20	<258	<66	<745
5	Lower Roof	<20	<258	<66	<745
6	Lower Roof	<20	<258	<66	<745
7	Lower Roof	<20	<258	<66	<745
8	S Dock	<20	<258	<66	<745
9	S Wall	<20	<258	<66	<745
10	S Wall	<20	<258	<66	<745
11	S Wall	<20	<258	<66	<745
12	S Wall	<20	<258	<66	<745
13	W Wall	<20	<258	<66	<745
14	W Wall Dock	<20	<258	<66	<745
15	W Wall	<20	<258	<66	<745
16	W Wall	<20	<258	<66	<745
17	N Wall	<20	<258	<66	<745
18	N Wall Roll Up	<20	<258	<66	<745
19	N Wall	<20	<258	<66	<745
20	N Wall	<20	<258	<66	<745
21	N Patio Door	<20	<258	<66	<745
22	E Wall @Rm 131 Door	<20	<258	<66	<745
23	E Wall	<20	<258	<66	<745
24	E Wall	<20	<258	<66	<745
25	E Wall	<20	<258	<6[redacted]	

Swipe	Location/descriptionResults in DPM/100sq.cm	Removable Alpha	Removable Beta	Total Alpha	Total Beta
26	E Wall @ door 5	<20	<258	<66	<745
27	S Wall @Water	<20	<258	<66	<745
28	S Downspout	<20	<258	<66	<745
29	S Fire Water	<20	<258	<66	<745
30	Piping	<20	<258	<66	<745

Date Reviewed: 2-2-05 **RS Supervision:** [redacted]

Print Name Signature Emp. #

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



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ATTACHMENT B-2

Post-Fixative Radiological Survey Forms

COPY

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Eberline	Mfg.	NE Electra	Mfg.	NE Electra
Model	Sac 4	Model	DP-6	Model	DP-6
Serial #	924	Serial #	667	Serial #	1235
Cal Due	2/4/05	Cal Due	5/4/05	Cal Due	3/16/05
Bkg	0.3 cpmα	Bkg	2.0 cpmα	Bkg	3.0 cpmα
Efficiency	33.00 %	Efficiency	21.60 %	Efficiency	21.50 %
MDA	20 dpmα	MDA	43 dpmα	MDA	50 dpmα
Mfg.	N/A	Mfg.	NE Electra	Mfg.	NE Electra
Model	N/A	Model	DP-6	Model	DP-6
Serial #	N/A	Serial #	667	Serial #	1235
Cal Due	N/A	Cal Due	5/4/05	Cal Due	3/16/05
Bkg	N/A cpmβ	Bkg	773.0 cpmβ	Bkg	665.0 cpmβ
Efficiency	N/A %	Efficiency	22.00 %	Efficiency	22.00 %
MDA	N/A dpmβ	MDA	745 dpmβ	MDA	745 dpmβ

Survey Tracking # N/A

Survey Type: Contamination

Building: 559

Location: Office area (partial)

Purpose: LLW Characterization (post fix)

RWP #: N/A

Date: 1/22/05 Time: 1000

[redacted]

PRN/REN # : N/A

Comments: Nuclide of concern is Plutonium. Survey performed to document contamination levels of 559 office area after fixative application. Performed wipes and swipes of floors, walls, and remaining equipment in 559 offices. Beta efficiencies listed reflect correction for Depleted Uranium (DU), calibrated efficiencies for Electra # 667 is 32.2% and for Electra # 1235 is 32.7%.

Survey Results

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	Rm 128 Floor	<20	N/A	<50	N/A	N/A	N/A
2	Rm 128 Floor	<20	N/A	<50	N/A	N/A	N/A
3	Rm 128 Wall on ledge	<20	N/A	<50	N/A	N/A	N/A
4	Rm 128 Wall	<20	N/A	<50	N/A	N/A	N/A
5	Rm 111 Floor	<20	N/A	<50	N/A	N/A	N/A
6	Rm 111 Wall	<20	N/A	<50	N/A	N/A	N/A
7	Rm 111 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
8	Rm 108 Floor	<20	N/A	<50	N/A	N/A	N/A
9	Rm 108 Wall	<20	N/A	<50	N/A	N/A	N/A
10	Rm 108 Wall	<20	N/A	<50	N/A	N/A	N/A
11	Rm 108 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
12	Rm 106 Floor	<20	N/A	<50	N/A	N/A	N/A
13	Rm 106 Wall	<20	N/A	<50	N/A	N/A	N/A
14	Rm 106 Wall	<20	N/A	<50	N/A	N/A	N/A
15	Rm 114 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
16	Rm 114 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
17	Rm 114 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
18	Rm 114 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
19	Rm 114 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
20	Rm 114 Wall	<20	N/A	<50	N/A	N/A	N/A

Date Reviewed: 1/25/05 RS Supervision: [redacted]

COPY

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

COPY

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
21	Rm 114 Floor	<20	N/A	<50	N/A	N/A	N/A
22	Rm 114 Floor	<20	N/A	<50	N/A	N/A	N/A
23	Rm 114 wall	<20	N/A	<50	N/A	N/A	N/A
24	Rm 114 wall	<20	N/A	<50	N/A	N/A	N/A
25	Rm 114 wall	<20	N/A	<50	N/A	N/A	N/A
26	Rm 124B Wall	<20	N/A	<50	N/A	N/A	N/A
27	Rm 124B Wall	<20	N/A	<50	N/A	N/A	N/A
28	Rm 124B Floor	<20	N/A	<50	N/A	N/A	N/A
29	Rm 124B Floor	<20	N/A	<50	N/A	N/A	N/A
30	Rm 124B Wall	<20	N/A	<50	N/A	N/A	N/A
31	Rm 124A Wall	<20	N/A	<50	N/A	N/A	N/A
32	Rm 124A Wall	<20	N/A	<50	N/A	N/A	N/A
33	Rm 124A Wall	<20	N/A	<50	N/A	N/A	N/A
34	Rm 124A Floor	<20	N/A	<50	N/A	N/A	N/A
35	Rm 124A Wall	<20	N/A	<50	N/A	N/A	N/A
36	Rm 124A Floor	<20	N/A	<50	N/A	N/A	N/A
37	Rm 112 Floor	<20	N/A	<50	N/A	N/A	N/A
38	Rm 112 Wall	<20	N/A	<50	N/A	N/A	N/A
39	Rm 112 Wall	<20	N/A	<50	N/A	N/A	N/A
40	Rm 112 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
41	Rm 113 Floor	<20	N/A	<50	N/A	N/A	N/A
42	Rm 113 Wall	<20	N/A	<50	N/A	N/A	N/A
43	Rm 113 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
44	Rm 113 Wall	<20	N/A	<50	N/A	N/A	N/A
45	Rm 113 Wall	<20	N/A	<50	N/A	N/A	N/A
46	Rm 113 Wall	<20	N/A	<50	N/A	N/A	N/A
47	Rm 115 Wall	<20	N/A	<50	N/A	N/A	N/A
48	Rm 115 Wall	<20	N/A	<50	N/A	N/A	N/A
49	Rm 115 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
50	Rm 115 Floor	<20	N/A	<50	N/A	N/A	N/A
51	Rm 118 Floor	<20	N/A	<50	N/A	N/A	N/A
52	Rm 118 Wall	<20	N/A	<50	N/A	N/A	N/A
53	Rm 118 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
54	Rm 118 Wall	<20	N/A	<50	N/A	N/A	N/A
55	Rm 118 Wall	<20	N/A	<50	N/A	N/A	N/A
56	Rm 116 Floor	<20	N/A	<50	N/A	N/A	N/A
57	Rm 127 Wall	<20	N/A	<50	N/A	N/A	N/A
58	Rm 127 Wall	<20	N/A	<50	N/A	N/A	N/A
59	Rm 127 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
60	Rm 127 Wall	<20	N/A	<50	N/A	N/A	N/A
61	Rm 121Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
62	Rm 121Floor	<20	N/A	<50	N/A	N/A	N/A
63	Rm 121Wall	<20	N/A	<50	N/A	N/A	N/A
64	Rm 121Wall	<20	N/A	<50	N/A	N/A	N/A
65	Rm 121Wall	<20	N/A	<50	N/A	N/A	N/A
66	Rm 107 Wall	<20	N/A	<50	N/A	N/A	N/A
67	Rm 107 Wall	<20	N/A	<50	N/A	N/A	N/A
68	Rm 107 Floor	<20	N/A	<50	N/A	N/A	N/A
69	Rm 107 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
70	Rm 107 Wall	<20	N/A	<50	N/A	N/A	N/A

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

COPY

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
71	Rm 123 Floor	<20	N/A	<50	N/A	N/A	N/A
72	Rm 123 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
73	Rm 123 Wall	<20	N/A	<50	N/A	N/A	N/A
74	Rm 123 Wall	<20	N/A	<50	N/A	N/A	N/A
75	Rm 123A Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
76	Rm 123A Wall	<20	N/A	<50	N/A	N/A	N/A
77	Rm 123A Floor	<20	N/A	<50	N/A	N/A	N/A
78	Rm 123A Wall	<20	N/A	<50	N/A	N/A	N/A
79	Rm 122 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
80	Rm 122 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
81	Rm 122 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
82	Rm 122 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
83	Rm 122 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
84	Rm 122 Wall	<20	N/A	<50	N/A	N/A	N/A
85	Rm 122 Wall	<20	N/A	<50	N/A	N/A	N/A
86	Rm 122 Floor	<20	N/A	<50	N/A	N/A	N/A
87	Rm 122 Floor	<20	N/A	<50	N/A	N/A	N/A
88	Rm 122 Wall	<20	N/A	<50	N/A	N/A	N/A
89	Rm 122 Wall	<20	N/A	<50	N/A	N/A	N/A
90	Rm 134 Wall	<20	N/A	<50	N/A	N/A	N/A
91	Rm 134 Floor	<20	N/A	<50	N/A	N/A	N/A
92	Rm 134 Floor	<20	N/A	<50	N/A	N/A	N/A
93	Rm 134 Wall	<20	N/A	<50	N/A	N/A	N/A
94	Rm 134 Wall	<20	N/A	<50	N/A	N/A	N/A
95	Rm 134 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
96	Rm 134 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
97	Rm 105 Wall	<20	N/A	<50	N/A	N/A	N/A
98	Rm 105 Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
99	Rm 105 Floor	<20	N/A	<50	N/A	N/A	N/A
100	Rm 105 Wall	<20	N/A	<50	N/A	N/A	N/A
101	Rm 122A Wall	<20	N/A	<50	N/A	N/A	N/A
102	Rm 122A Wall	<20	N/A	<50	N/A	N/A	N/A
103	Rm 122A Wall	<20	N/A	<50	N/A	N/A	N/A
104	Rm 122A Floor	<20	N/A	<50	N/A	N/A	N/A
105	Rm 122A Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
106	Rm 121A Floor	<20	N/A	<50	N/A	N/A	N/A
107	Rm 121A Ceiling and overhead horizontals	<20	N/A	<50	N/A	N/A	N/A
108	Rm 121A Wall	<20	N/A	<50	N/A	N/A	N/A
109	Rm 121A Wall	<20	N/A	<50	N/A	N/A	N/A
110	Rm 121A Wall	<20	N/A	<50	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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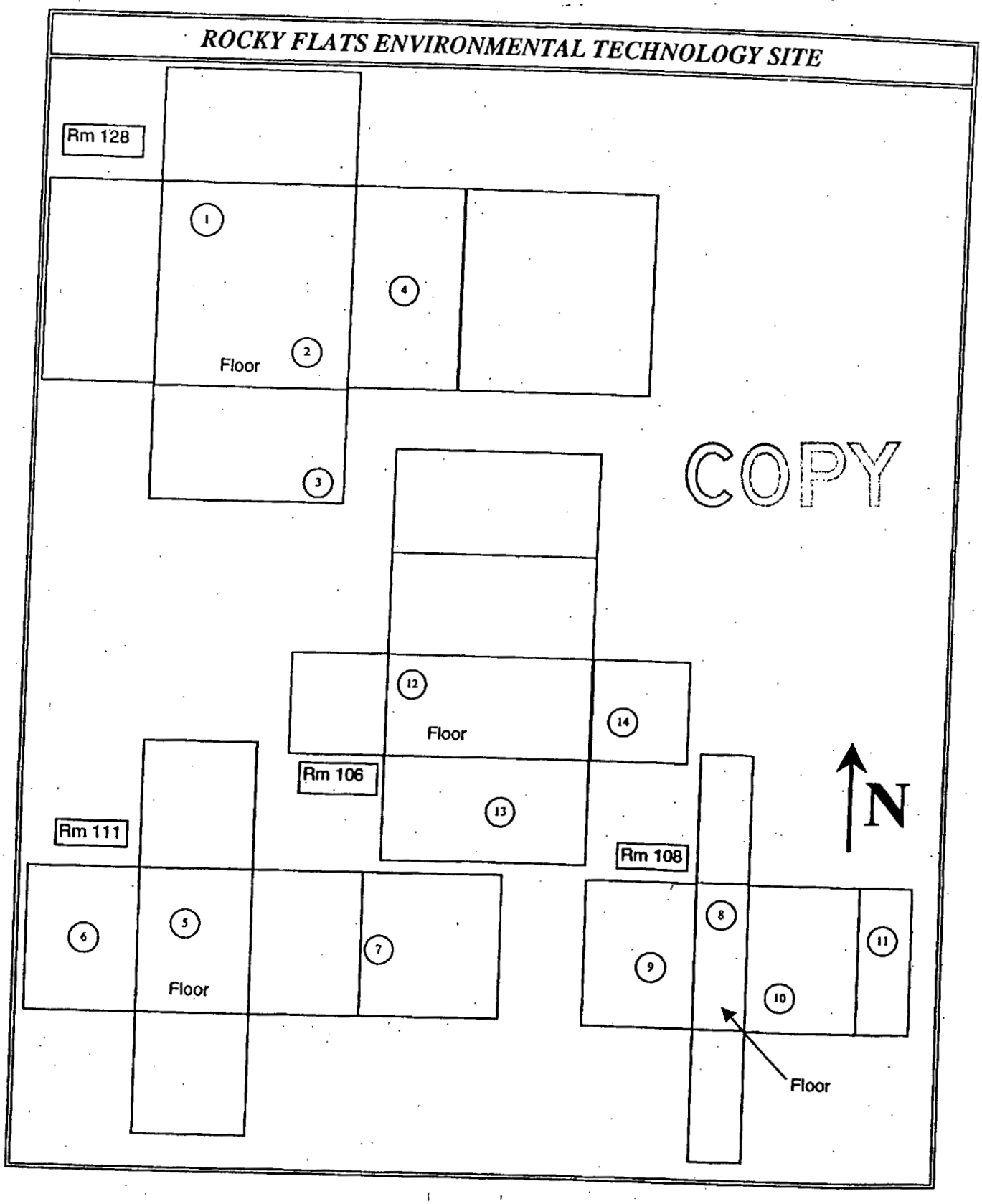
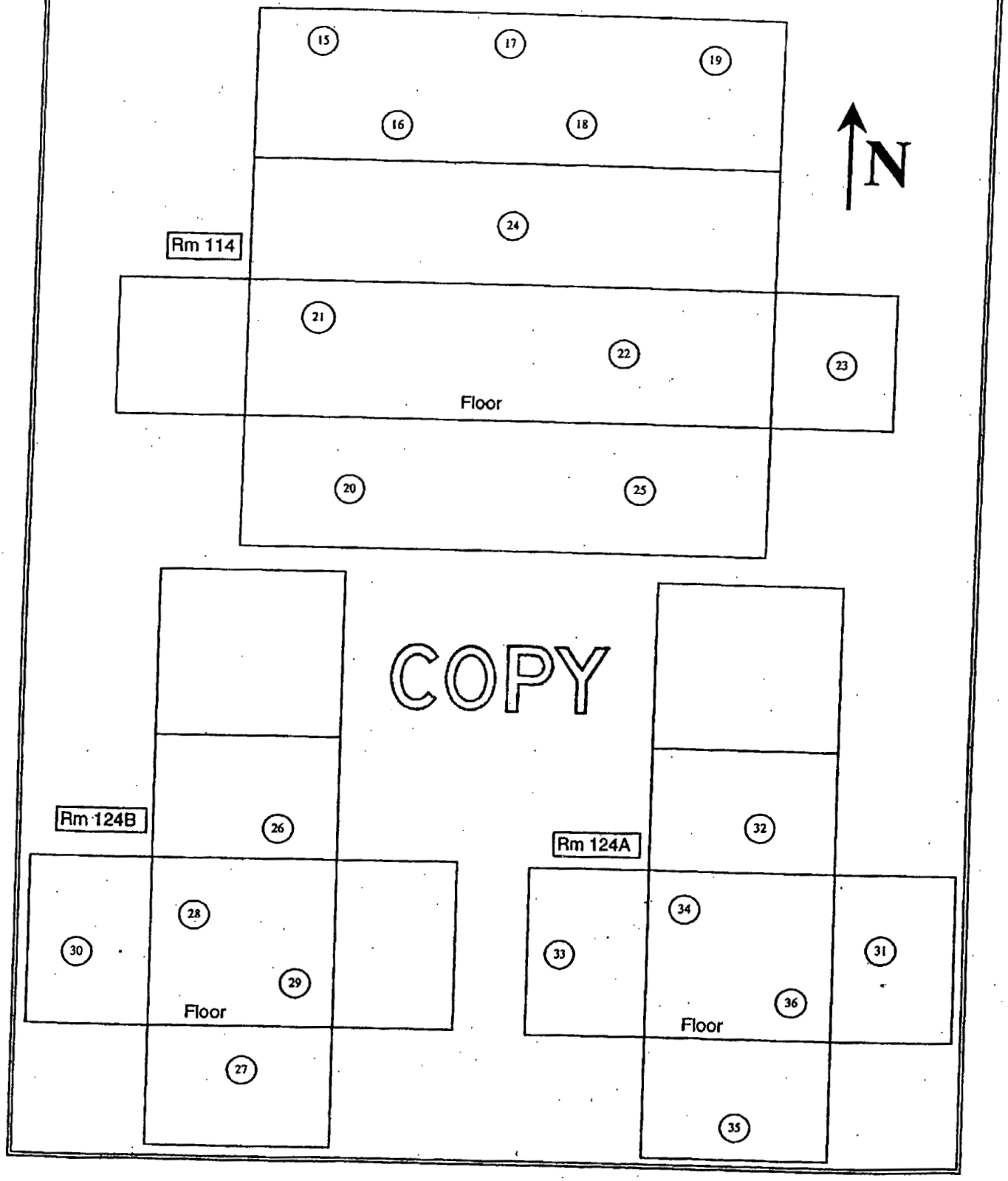

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
Rm 128
1
2
3
4
Floor
COPY
12
13
14
Floor
Rm 106
Rm 111
5
6
7
Floor
Rm 108
8
9
10
11
Floor
N

8-6

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



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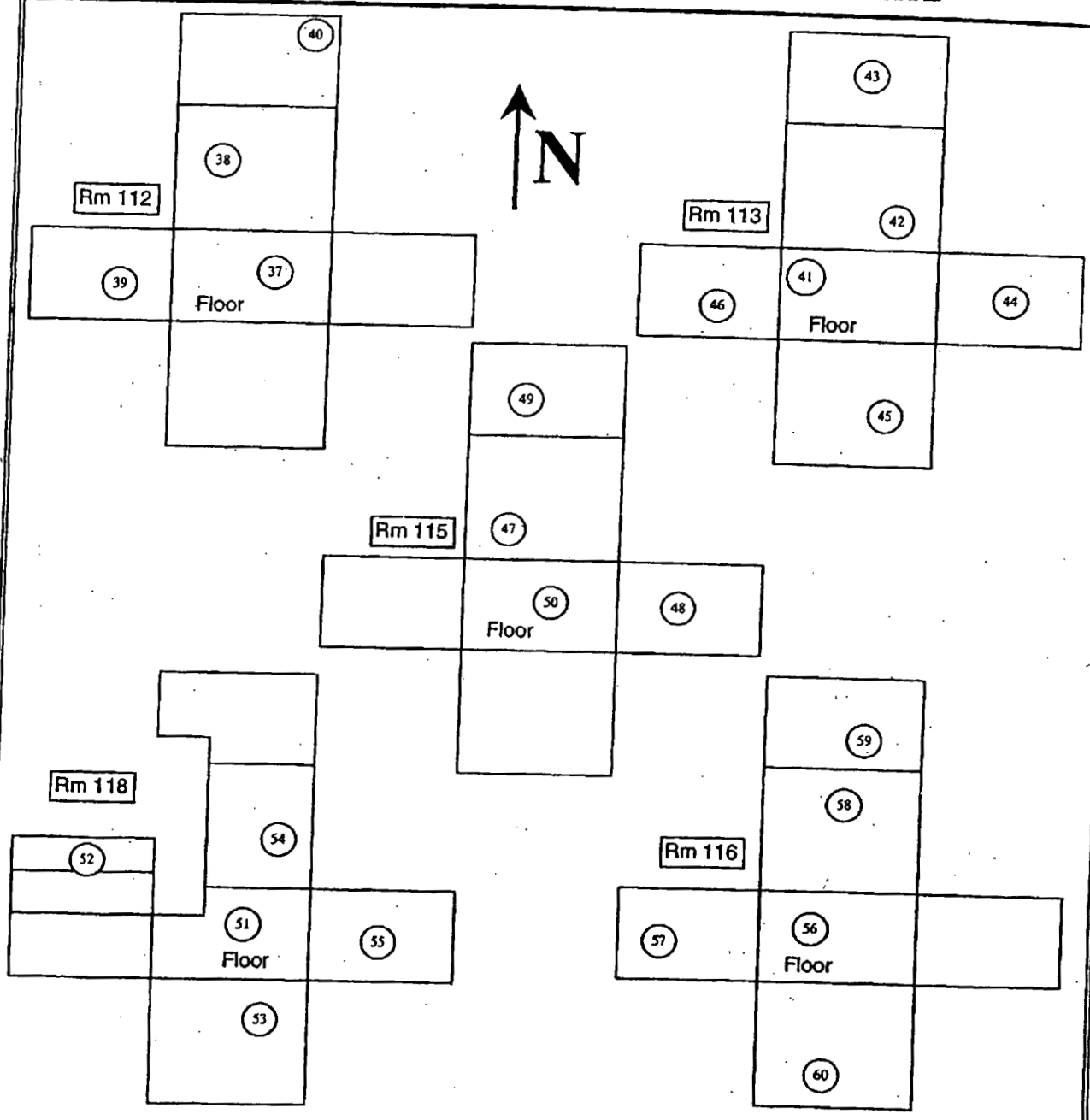
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



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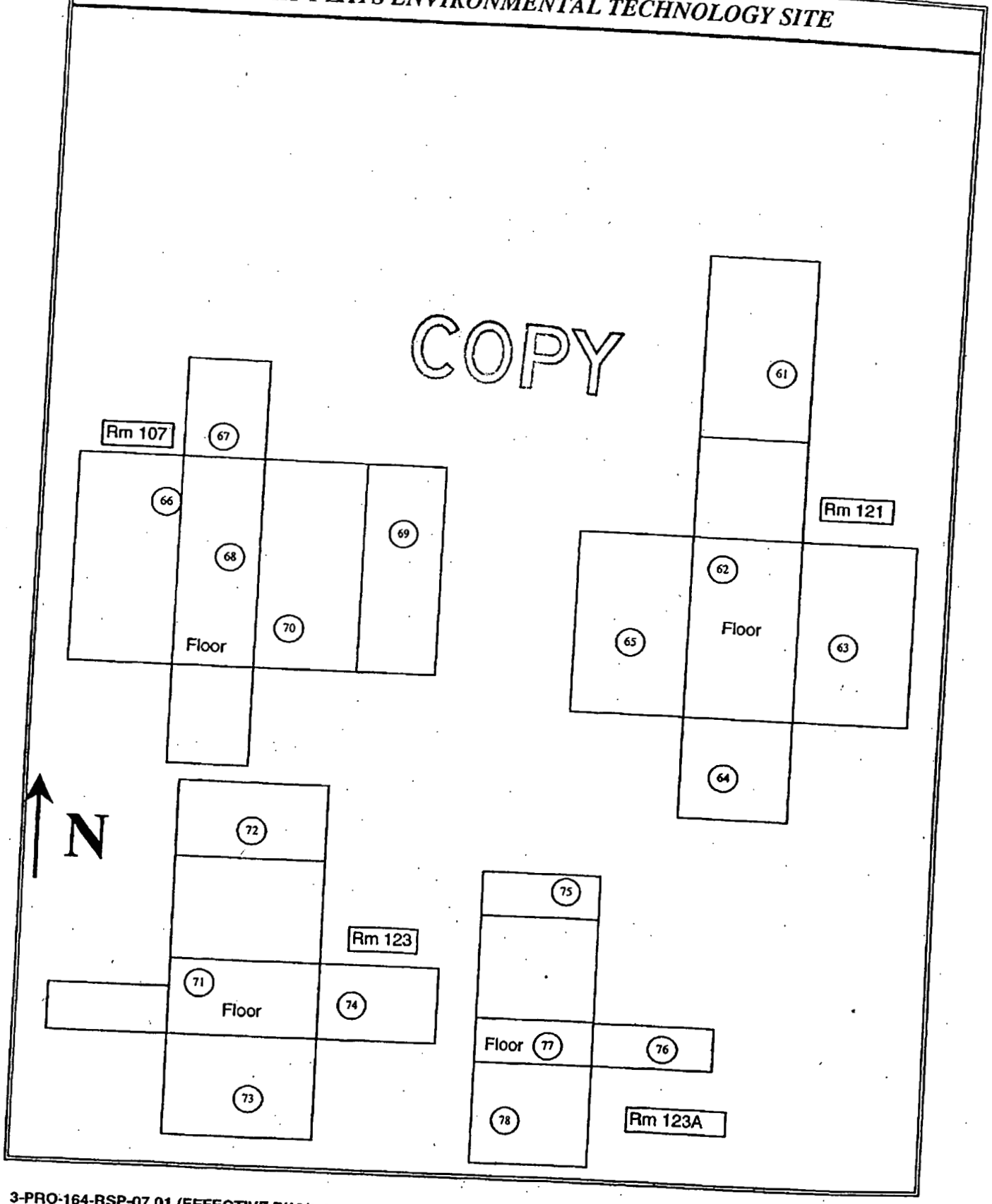
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



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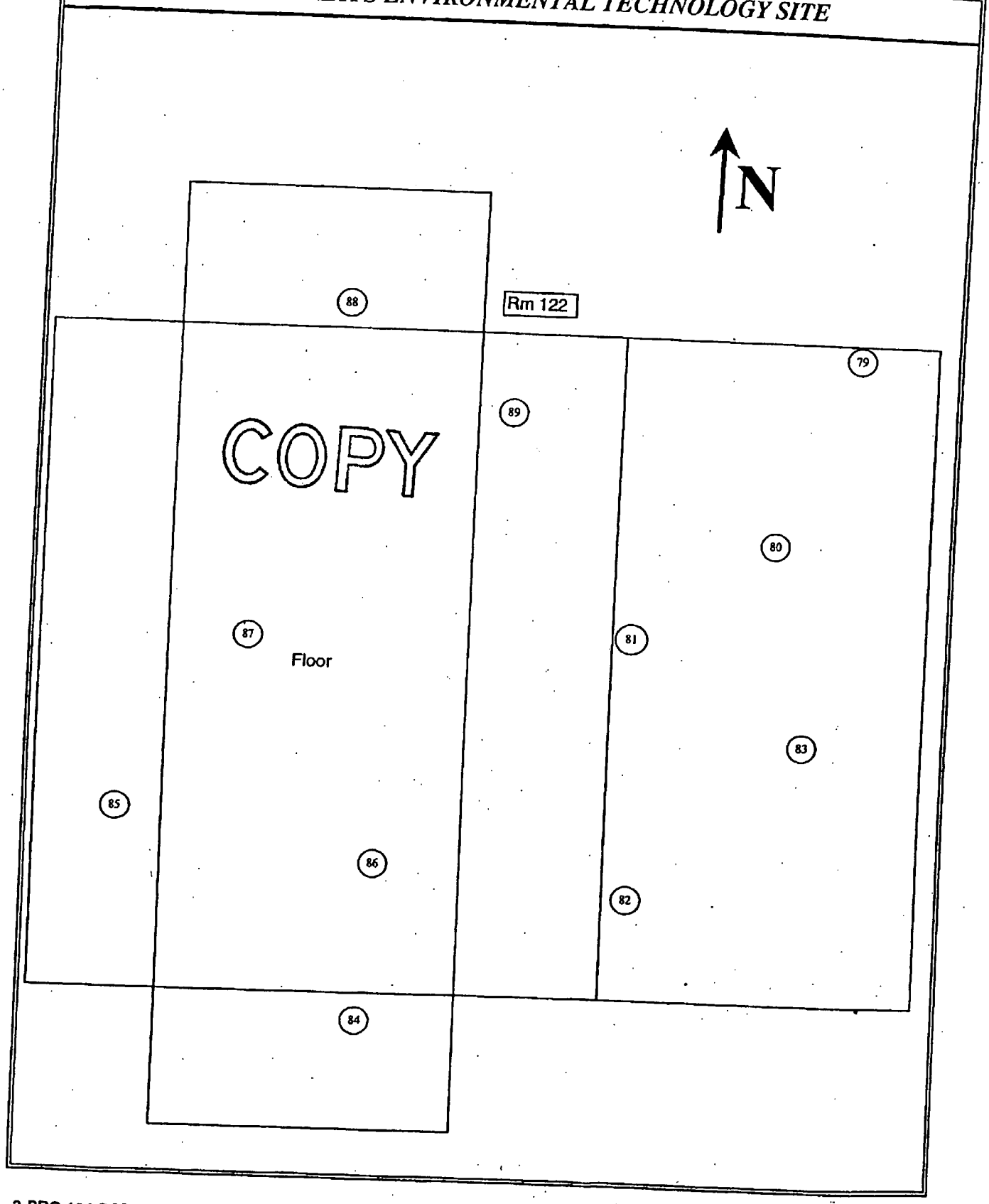
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



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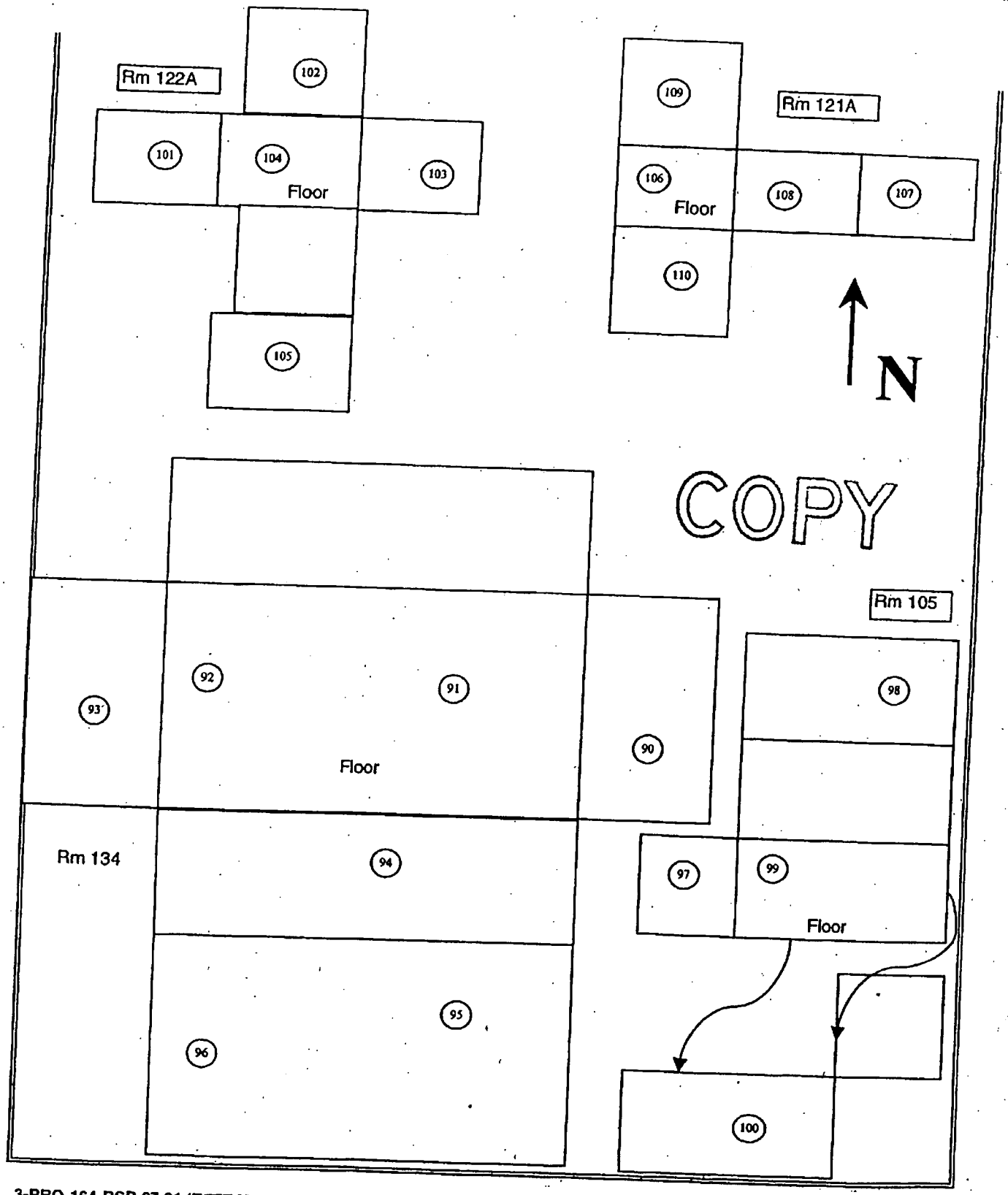
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE



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559 Survey Log # 559-_____-_____-_____

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	EBERLINE	Mfg.	EBERLINE
Model	SAC4	Model	1274	Model	SAC4
Serial#	859	Serial#	6-7-05	Serial#	1274
Cal Due	5-18-05	Cal Due	PMD	Cal Due	6-7-05
Bkg.	0.5	Bkg.	1-26-05	Bkg.	0.1
Efficiency	33%	Efficiency		Efficiency	33%
MDA	20	MDA		MDA	20
Mfg.	NA	Mfg.	NA	Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination

Building: 559

Location: 129

Purpose: POST PAINT (Post-Fix)

RWP #: 05-559-5004

Date 1-26-05 Time 1100

[redacted]

PRN/REN #: NA

Comments: SURVEY TAKEN AFTER PAINTING ROOM 129

SURVEY RESULTS

Contamination Results

Swipe #	Location/Description (Results in dpm)	Alpha DIRECT	Alpha SWIPE	Swipe #	Location/Description (Results in dpm)	Alpha DIRECT	Alpha SWIPE
1	SURVEY POINT # 1	NA	< 20	19	NA	NA	NA
2	SURVEY POINT # 2		< 20	20			
3	SURVEY POINT # 3		< 20	21			
4	SURVEY POINT # 4		< 20	22			
5	SURVEY POINT # 5		< 20	23			
6	SURVEY POINT # 39		< 20	24			
7	NA		NA	25			
8				26			
9				27			
10				28			
11				29			
12				30			
13				31			
14				32			
15				33			
16				34			
17				35			
18	NA	NA	NA	36	NA	NA	NA

Date Reviewed: 1/26/05 **RS Supervision:** [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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559 Survey Log # 559-_____-_____-_____

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	NE	Mfg.	EBERLINE	Mfg.	EBERLINE
Model	ELECTRA	Model	SAC-4	Model	SAC-4
Serial#	2143	Serial#	859	Serial#	1274
Cal Due	7-13-05	Cal Due	5-18-05	Cal Due	6-7-05
Bkg.	< 3.0 cl-	Bkg.	0.0 cl-	Bkg.	0 cl-
Efficiency	17%	Efficiency	33%	Efficiency	33%
MDA	94 dl-	MDA	20 dl-	MDA	20 dl-
Mfg.	NA	Mfg.	NA	Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination

Building: 559

Location: Rm 131

Purpose: Contamination Survey (Post-Fix)

RWP #: 05-559-5004

Date 1-24-05 Time 1600

[redacted]

RCT NA / NA / NA

Print name / Signature / Emp. #

PRN/REN #: N/A

Comments:

Survey of Rm 131 Emergency Gen. Final Survey

SURVEY RESULTS

Contamination Results (in dpm/100cm2)

Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable
1	Floor	<94	<20	19	walls	<94	<20
2		<94	<20	20		<94	<20
3		<94	<20	21		<94	<20
4		<94	<20	22		<94	<20
5		<94	<20	23		<94	<20
6		<94	<20	24		<94	<20
7		<94	<20	25	walls	<94	<20
8		<94	<20	26	NA	NA	NA
9		<94	<20	27			
10		<94	<20	28			
11		<94	<20	29			
12	Floor	<94	<20	30			
13	walls	<94	<20	31			
14		<94	<20	32			
15		<94	<20	33			
16		<94	<20	34			
17		<94	<20	35			
18	walls	<94	<20	36	NA	NA	NA

Date Reviewed: 1/24/05 **RS Supervision:** [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Ludlum	Mfg.	Eberline	Mfg.	NE Electra
Model	2929	Model	SAC-4	Model	Electra
Serial #	N/A	Serial #	859	Serial #	1391
Cal Due	N/A	Cal Due	5-18-05	Cal Due	07-11-05
Bkg	N/A cpmα	Bkg	0.1 cpmα	Bkg	0.0 cpmα
Efficiency	N/A %	Efficiency	33.00 %	Efficiency	20.1 %
MDA	18 dpmα	MDA	20 dpmα	MDA	94 dpmα

Mfg.	Ludlum	Mfg.	Eberline	Mfg.	NE Electra
Model	2929	Model	Sac-4	Model	N/A
Serial #	N/A	Serial #	1274	Serial #	
Cal Due	N/A	Cal Due	06-07-05	Cal Due	
Bkg	N/A cpmβ	Bkg	0.4 cpmβ	Bkg	cpmα
Efficiency	N/A %	Efficiency	33.00 %	Efficiency	%
MDA	205 dpmβ	MDA	20 dpmβ	MDA	N/A dpmα

Survey Tracking # N/A
Survey Type: Contamination
Building: 559 (Post-Fix)
Location: Multi Zone Plenum
Purpose: Characterization Survey
RWP #: 05-559-5-004
Date: 01-15-05 Time: 0800

[redacted]

PRN/REN # : N/A
Comments:

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
	STAGE 1 EAST WALL						
1	STAGE 1 EAST WALL	<20	<94	N/A	N/A	N/A	N/A
2	STAGE 1 EAST WALL	<20	<94				
3	STAGE 1 EAST WALL	<20	<94				
4	STAGE 1 WEST WALL	<20	94				
5	STAGE 1 WEST WALL	<20	94				
6	STAGE 1 WEST WALL	<20	94				
7	STAGE 1 WEST WALL	<20	94				
8	STAGE 1 WEST WALL	<20	94				
9	STAGE 1 FLOOR	<20	94				
10	STAGE 1 FLOOR	<20	94				
11	STAGE 1 FLOOR	<20	94				
12	STAGE 2 EAST WALL	<20	94				
13	STAGE 2 EAST WALL	<20	94				
14	STAGE 2 EAST WALL	<20	94				
15	STAGE 2 EAST WALL	<20	94				
16	STAGE 2 WEST WALL	<20	94				
17	STAGE 2 WEST WALL	<20	94				
18	STAGE 2 WEST WALL	<20	94				
19	STAGE 2 WEST WALL	<20	94				
20	STAGE 2 FLOOR	<20	94	N/A	N/A	N/A	N/A

Date Reviewed: 1/15/05 RS Supervision: [redacted]

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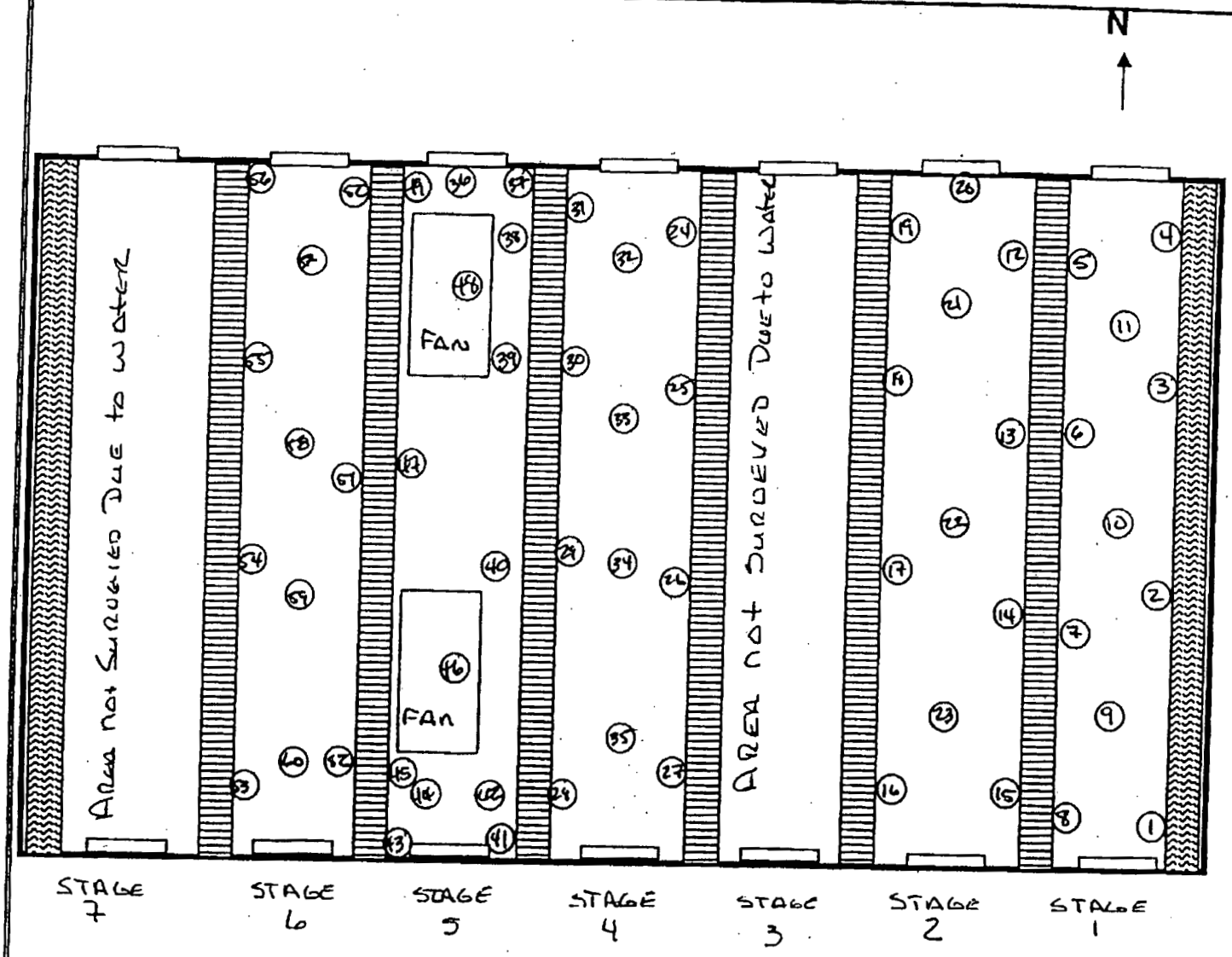
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Drawing Showing Survey Points



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BLDG. 559 SURVEY LOG # 559-____-____-_____

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

MFG. EBERLINE	MFG. EBERLINE	MFG. N E TECH
MODEL SAC-4	MODEL SAC-4	MODEL ELECTRA
SERIAL # 804	SERIAL # N/A	SERIAL # 2312
CAL DUE 3-7-05	CAL DUE	CAL DUE 6-16-05
BKG. 0.6 cpm	BKG. cpm	BKG. 3 cpm
EFFICIENCY 33%	EFFICIENCY 33%	EFFICIENCY 17%
MDA 20 dpm	MDA 20 dpm	MDA [redacted] 94 dpm
MFG. EBERLINE	MFG. EBERLINE	MFG. N E TECH
MODEL SAC-4	MODEL SAC-4	MODEL ELECTRA
SERIAL # N/A	SERIAL # N/A	SERIAL #
CAL DUE	CAL DUE	CAL DUE N/A
BKG.	BKG.	BKG. cpm
EFFICIENCY 33%	EFFICIENCY 33%	EFFICIENCY 17%
MDA 20dpm	MDA 20dpm	MDA [redacted] 94 dpm

Survey Type: ALPHA

Building: 559

Location: multizone (Post-Fix)

Purpose: contamination survey

RWP # 05-559-5004

Date: 1-22-05 Time: 0900

[redacted]

RCT: N/A 1. N/A . 1 N/A

Print Name Signature Emp. #

PRN/REN # : N/A

Comments: smears 1-6, 13-18 taken on floor, smears 10-12, 19-21 taken on coils, smears 7-9 taken on insulation, smears 22-24 taken on filter. 1 minute PAT taken at each survey location.

	ALPHA DPM REMOVEABLE (WIPE)	ALPHA DPM DIRECT	ALPHA DPM/100CM 2 REMOVEABLE (SWIPE)		ALPHA DPM REMOVEABLE (WIPE)	ALPHA DPM DIRECT	ALPHA DPM/100CM 2 REMOVEABLE (SWIPE)		ALPHA DPM REMOVEABLE (WIPE)	ALPHA DPM DIRECT	ALPHA DPM/100CM 2 REMOVEABLE (SWIPE)
1	N/A	<94	<20	21	N/A	<94	<20	41			
2		<94	<20	22		<94	<20	42			
3		<94	<20	23		<94	<20	43			
4		<94	<20	24		<94	<20	44			
5		<94	<20	25				45			
6		<94	<20	26				46			
7		<94	<20	27				47			
8		<94	<20	28				48		A	
9		<94	<20	29				49			
10		<94	<20	30				50			
11		<94	<20	31		A		51		N	
12		<94	<20	32				52			
13		<94	<20	33	N			53			
14		<94	<20	34				54			
15		<94	<20	35				55			
16		<94	<20	36				56			
17		<94	<20	37				57			
18		<94	<20	38				58			
19		<94	<20	39				59			
20	N/A	<94	<20	40				60			

Date Reviewed: 1/24/05 RS Supervision: [redacted]

3-PRO-164-RSP-07.01 (effective 7-12-01)

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	EBERLINE	Mfg.	NA
Model	SAC-4	Model	SAC-4	Model	
Serial#	859	Serial#	1274	Serial#	
Cal Due	5-18-05	Cal Due	6-7-05	Cal Due	
Bkg.	0.0 cl	Bkg.	0.2 cl	Bkg.	
Efficiency	33%	Efficiency	33%	Efficiency	
MDA	20 dl	MDA	20 dl	MDA	NA
	NA		NA		
Mfg.		Mfg.		Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination
Building: 559
Location: **304 Plenum**
Purpose: Post Painting (Post-Fix)

RWP #: 05-559-5004

Date 1-24-05 Time 1600

[redacted]

Print name Signature Emp. #

PRN/REN #: N/A

Comments:
Post Painting Survey

SURVEY RESULTS

Contamination Results (in dpm/100cm2)

Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable
1	Floor	NA	<20	19	Floor	NA	<20
2			<20	20			<20
3			<20	21			<20
4			<20	22	Floor		<20
5			<20	23	NA		NA
6			<20	24			
7			<20	25			
8			<20	26			
9			<20	27			
10			<20	28			
11			<20	29			
12			<20	30			
13			<20	31			
14			<20	32			
15			<20	33			
16			<20	34			
17			<20	35			
18	Floor	NA	<20	36	NA	NA	NA

Date Reviewed: 1/24/05 **RS Supervision:** [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	EBERLINE	Mfg.	NA
Model	SAC-4	Model	SAC-4	Model	
Serial#	859	Serial#	1274	Serial#	
Cal Due	5-18-05	Cal Due	6-7-05	Cal Due	
Bkg.	0.0ch	Bkg.	0.2ch	Bkg.	
Efficiency	33%	Efficiency	33%	Efficiency	
MDA	20dl-	MDA	20dl-	MDA	NA
	NA		NA		
Mfg.		Mfg.		Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination
Building: 559
Location: 304 Plenum
Purpose: Post Paint (Post-Fix)

RWP #: 05-559-5504

Date 1-24-05 Time 1600

[redacted]

PRN/REN #: N/A

Comments: Re survey of Hot spots

SURVEY RESULTS

Contamination Results (in dpm/100cm2)

Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable
1	FLOOR	NA	<20	19	NA	NA	NA
2	FLOOR		<20	20			
3	FLOOR		<20	21			
4	NA		NA	22			
5				23			
6				24			
7				25			
8				26			
9				27			
10				28			
11				29			
12				30			
13				31			
14				32			
15				33			
16				34			
17				35			
18	NA	NA	NA	36	NA	NA	NA

Date Reviewed: 1/24/05 **RS Supervision:** [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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559 Survey Log # 559-

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	NE TECH	Mfg.	NA
Model	SAC4	Model	ELECTRA	Model	
Serial#	804	Serial#	8-1250	Serial#	
Cal Due	3-7-05	Cal Due	5-10-05	Cal Due	
Bkg.	0.1	Bkg.	2.0 α	Bkg.	
Efficiency	33%	Efficiency	17%	Efficiency	
MDA	20	MDA	94	MDA	NA
Mfg.	NA	Mfg.	NA	Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination
Building: 559
Location: 129
Purpose: POST PAINT (Post-Fix)

RWP #: 05-559-5004

Date 1-27-05 Time [redacted]

RCT NA / NA / NA
Print name / Signature / Emp. #

PRN/REN #: N

Comments: SURVEY POINT #4 PRIOR TO PAINTING
RESULTS 36K DIRECT 2K REMOVABLE

SURVEY RESULTS

Contamination Results

Swipe #	Location/Description (Results in dpm)	Alpha DIRECT	Alpha SWIPE	Swipe #	Location/Description (Results in dpm)	Alpha DIRECT	Alpha SWIPE
1	304 PLENUM TOP	<94	<20	19	NA	NA	NA
2		<94	<20	20			
3		<94	<20	21			
4		1K	<20	22			
5	304 PLENUM TOP	<94	<20	23			
6	304 PLENUM TOP WALL	<94	<20	24			
7	304 PLENUM WALL	<94	<20	25			
8	304 PLENUM WALL	<94	<20	26			
9	304 PLENUM WALL	<94	<20	27			
10	NA	NA	NA	28			
11				29			
12				30			
13				31			
14				32			
15				33			
16				34			
17				35			
18	NA	NA	NA	36	NA	NA	NA

COPY

Date Reviewed: Y31/05 RS Supervision: [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Eberline	Mfg.	Eberline	Mfg.	NE Electra
Model	Sac-4	Model	Sac-4	Model	DP-6
Serial #	1130	Serial #	859	Serial #	3101
Cal Due	7/3/05	Cal Due	5/18/05	Cal Due	6/16/05
Bkg	0.2 cpmα	Bkg	0.3 cpmα	Bkg	8.0 cpmα
Efficiency	33.00 %	Efficiency	33.00 %	Efficiency	22.00 %
MDA	20 dpmα	MDA	20 dpmα	MDA	72 dpmα

Mfg.	Eberline	Mfg.	Eberline	Mfg.	NE Electra
Model	Sac-4	Model	Sac-4	Model	DP-6
Serial #	1044	Serial #	1274	Serial #	3101
Cal Due	5/17/05	Cal Due	6/7/05	Cal Due	6/16/05
Bkg	0.5 cpmα	Bkg	0.1 cpmα	Bkg	720.0 cpmβ
Efficiency	33.00 %	Efficiency	33.00 %	Efficiency	32.70 %
MDA	20 dpmα	MDA	20 dpmα	MDA	745 dpmβ

Survey Tracking # N/A
Survey Type: Contamination
Building: 559
Location: Rms 101, 102, 103 & 110
Purpose: Post fixative contamination survey

RWP #: 05-559-0004

Date: 1/20/05 **Time:** 1100

[redacted]

Print name Signature Emp. #

RCT: N/A / N/A / N/A
Print name Signature Emp. #

PRN/REN # : N/A

Comments: Nuclide of concern is Plutonium. Survey performed to document contamination levels of 559 Rms 101, 102, 103 & 110, post fixative appliction. Performed wipes, and swipes of floors, walls, and ceiling areas. Rooms surveyed are in a posted Contamination Area.

COPY

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
1	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
2	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
3	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
4	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
5	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
6	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
7	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
8	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
9	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
10	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
11	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
12	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
13	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
14	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
15	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
16	Room 102 floor	<20	N/A	<72	N/A	N/A	N/A
17	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
18	Room 102 floor	<20	N/A	<72	N/A	N/A	N/A
19	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A
20	Room 101 floor	<20	N/A	<72	N/A	N/A	N/A

Date Reviewed: 1/21/05 **RS Supervision** [redacted]

Print Name Signature Emp. #

100

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
21	Rm 101 floor	<20	N/A	<72	N/A	N/A	N/A
22	Rm 101 floor	<20	N/A	<72	N/A	N/A	N/A
23	Rm 101 on wall	<20	N/A	<72	N/A	N/A	N/A
24	Rm 101 on wall	<20	N/A	<72	N/A	N/A	N/A
25	Rm 101 on wall	<20	N/A	<72	N/A	N/A	N/A
26	Rm 102 floor	<20	N/A	<72	N/A	N/A	N/A
27	Rm 101 wall	<20	N/A	<72	N/A	N/A	N/A
28	Rm 101 wall	<20	N/A	<72	N/A	N/A	N/A
29	Rm 102 floor	<20	N/A	<72	N/A	N/A	N/A
30	Rm 102 floor	<20	N/A	<72	N/A	N/A	N/A
31	Rm 101 wall	<20	N/A	<72	N/A	N/A	N/A
32	Rm 101 wall	<20	N/A	<72	N/A	N/A	N/A
33	Rm 101 wall	<20	N/A	<72	N/A	N/A	N/A
34	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
35	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
36	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
37	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
38	Rm 103C Floor	<20	N/A	<72	N/A	N/A	N/A
39	Rm 103C Floor	<20	N/A	<72	N/A	N/A	N/A
40	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
41	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
42	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
43	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
44	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
45	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
46	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
47	Rm 103 East Wall	<20	N/A	<72	N/A	N/A	N/A
48	Rm 103 East Wall	<20	N/A	<72	N/A	N/A	N/A
49	Rm 103 East Wall	<20	N/A	<72	N/A	N/A	N/A
50	Rm 103 East Wall	<20	N/A	<72	N/A	N/A	N/A
51	Rm 103 East Wall	<20	N/A	<72	N/A	N/A	N/A
52	Rm 103 East Wall	<20	N/A	<72	N/A	N/A	N/A
53	Rm 102 wall	<20	N/A	<72	N/A	N/A	N/A
54	Rm 102 wall	<20	N/A	<72	N/A	N/A	N/A
55	Rm 102 Floor	<20	N/A	<72	N/A	N/A	N/A
56	on south wall room 102	<20	N/A	<72	N/A	N/A	N/A
57	on south wall room 102	<20	N/A	<72	N/A	N/A	N/A
58	on south wall room 102	<20	N/A	<72	N/A	N/A	N/A
59	on south wall room 102	<20	N/A	<72	N/A	N/A	N/A
60	on 102 floor	<20	N/A	<72	N/A	N/A	N/A
61	on 102 floor	<20	N/A	<72	N/A	N/A	N/A
62	on 102 floor	<20	N/A	<72	N/A	N/A	N/A
63	on room 102 wall	<20	N/A	<72	N/A	N/A	N/A
64	on room 102 wall	<20	N/A	<72	N/A	N/A	N/A
65	on floor room 102	<20	N/A	<72	N/A	N/A	N/A
66	on floor room 102	<20	N/A	<72	N/A	N/A	N/A
67	on wall room 102	<20	N/A	<72	N/A	N/A	N/A

101

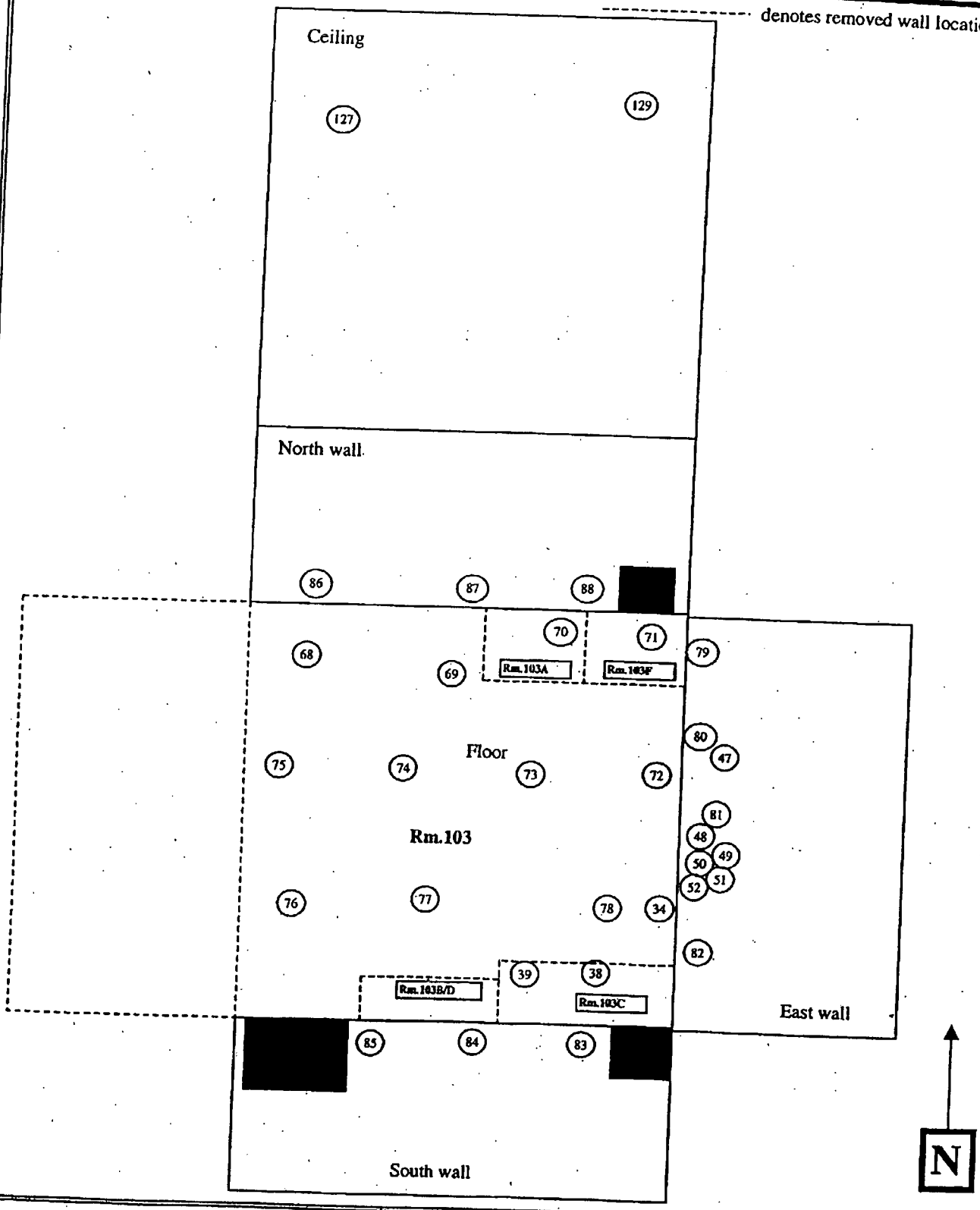
RICKY HAYS ENVIRONMENTAL TECHNOLOGY SITE

SURVEY RESULTS

#	LOCATION	ALPHA Swipe dpm/100cm2	ALPHA Direct dpm/100cm2	ALPHA Wipe dpm/wipe	BETA Swipe dpm/100cm2	BETA Direct dpm/100cm2	BETA Wipe dpm/wipe
68	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
69	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
70	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
71	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
72	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
73	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
74	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
75	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
76	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
77	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
78	Rm 103 Floor	<20	N/A	<72	N/A	N/A	N/A
79	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
80	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
81	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
82	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
83	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
84	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
85	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
86	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
87	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
88	Rm 103 Wall	<20	N/A	<72	N/A	N/A	N/A
89	Rm 110 Floor	<20	N/A	<72	N/A	N/A	N/A
90	Rm 110 Floor	<20	N/A	<72	N/A	N/A	N/A
91	Rm 110 Wall	<20	N/A	<72	N/A	N/A	N/A
92	Rm 110 Wall	<20	N/A	<72	N/A	N/A	N/A
93	Rm 110 Wall	<20	N/A	<72	N/A	N/A	N/A
94	Rm 110 Wall	<20	N/A	<72	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

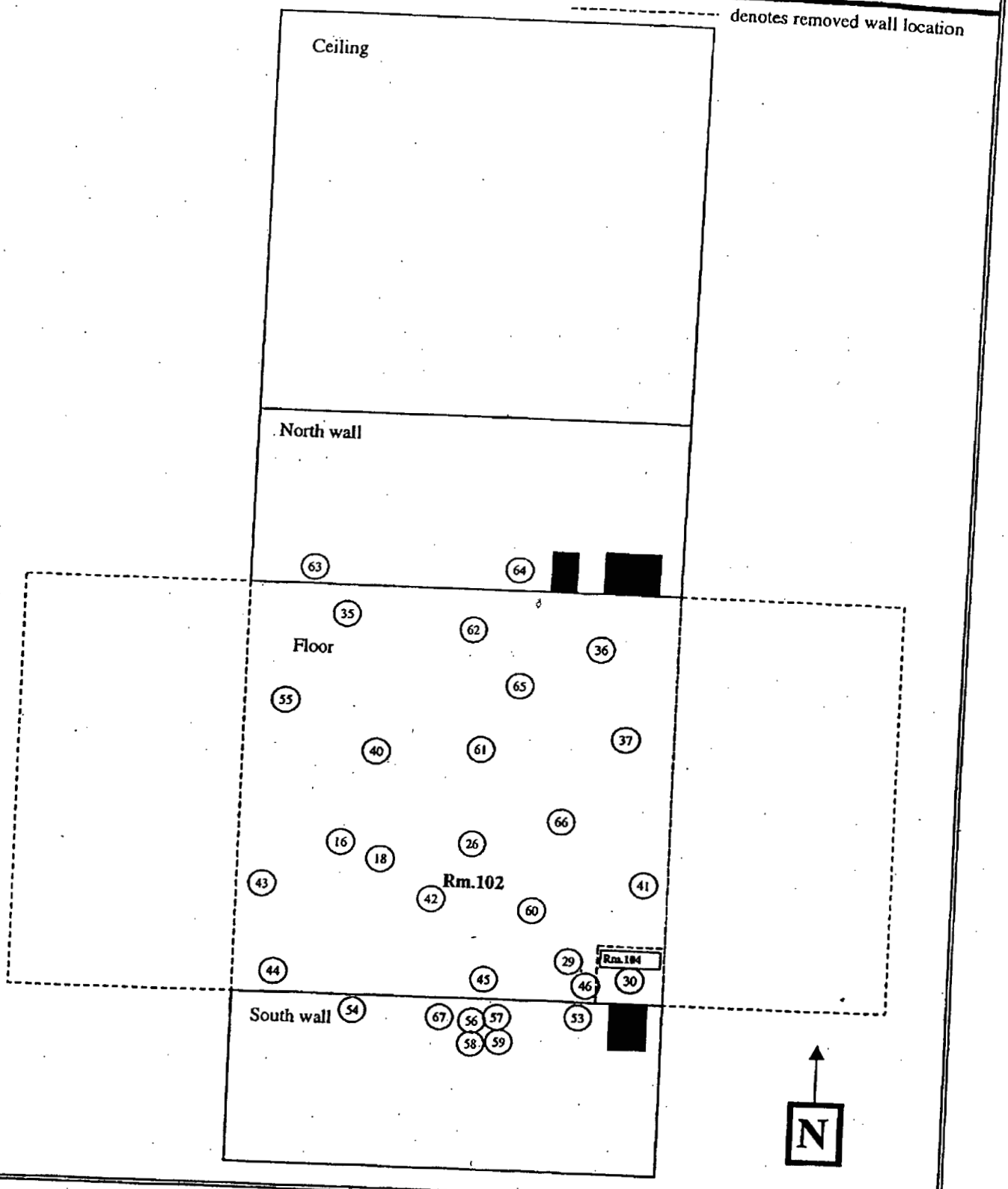
ROOM 103 MAP



103

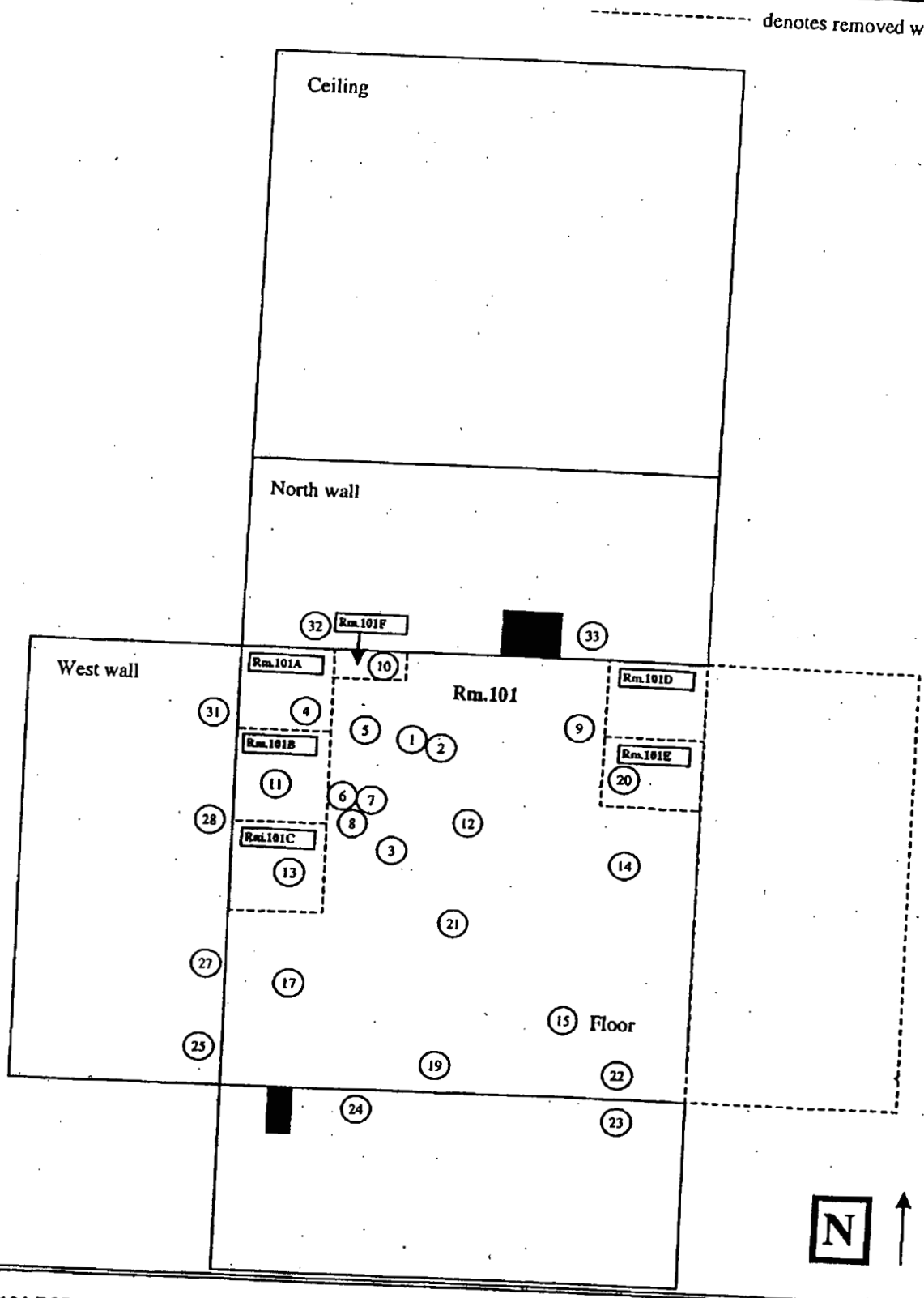
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

ROOM 102 MAP



ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

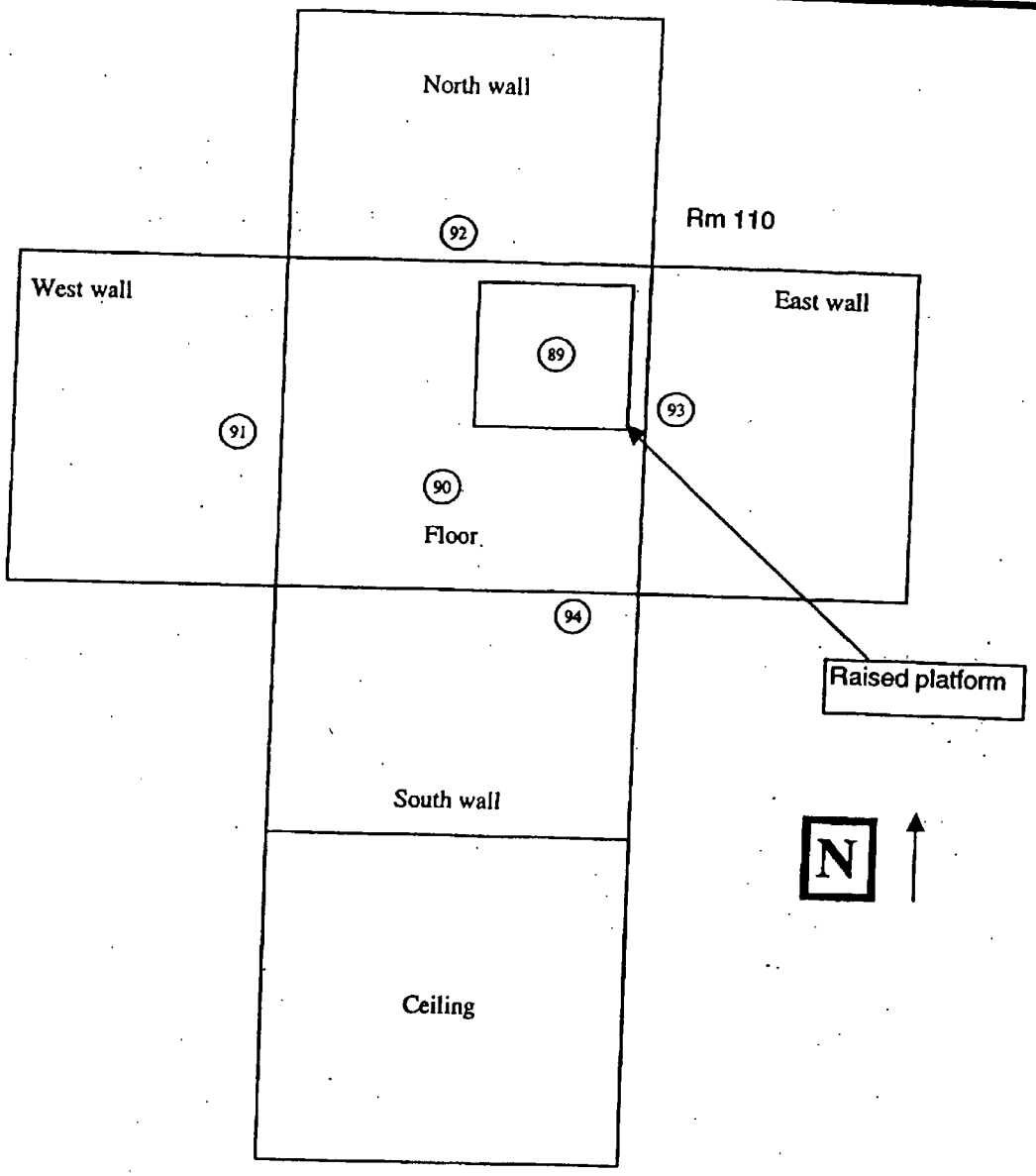
ROOM 101 MAP



105

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

ROOM 110 MAP



559 Survey Log # 559-

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Eberline	Mfg.	Eberline	Mfg.	N/A
Model	Sac-4	Model	Sac-4	Model	
Serial#	804	Serial#	1130	Serial#	
Cal Due	3-7-05	Cal Due	2-3-05	Cal Due	
Bkg.	0.4	Bkg.	0.4	Bkg.	
Efficiency	33%	Efficiency	33%	Efficiency	
MDA	20 dpm	MDA	20 dpm	MDA	
Mfg.	N/A	Mfg.	N/A	Mfg.	N/A
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA		MDA		MDA	

Survey Type: Contamination

Building: 559

Location: Rm 130

Purpose: Post paint survey

RWP #: 05-559-5004

Date 1-25-05 Time 0900

[redacted]

RCT N/A / N/A / N/A

Print name / Signature / Emp. #

PRN/REN #: N/A

Comments: see map for survey locations (pg. 2)

SURVEY RESULTS

Contamination Results

Swipe #	Location/Description (Results in dpm)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm)	Alpha Direct	Alpha Removable
1	Floor	N/A	<20	19	wall	N/A	<20
2	Floor		<20	20	wall		<20
3	Floor		<20	21	wall		<20
4	Floor		<20	22	wall		<20
5	Floor		<20	23	wall		<20
6	Floor		<20	24	ledge		<20
7	wall		<20	25	ledge		<20
8	wall		<20	26	ledge		<20
9	wall		<20	27	ceiling		<20
10	wall		<20	28	ceiling		<20
11	wall		<20	29	ceiling		<20
12	wall		<20	30	ceiling		<20
13	wall		<20	31	ceiling		<20
14	wall		<20	32	ceiling		<20
15	wall		<20	33	N/A		N/A
16	wall		<20	34			
17	wall		<20	35			
18	wall		<20	36			

Date Reviewed: 1/25/05 **RS Supervision:** [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

559 Survey Log # 559-_____-_____-_____

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	Eberline	Mfg.	Eberline	Mfg.	N/A
Model	SAC-4	Model	SAC-4	Model	
Serial#	1130	Serial#	804	Serial#	
Cal Due	7-3-05	Cal Due	3-7-05	Cal Due	
Bkg.	0.3	Bkg.	0.0	Bkg.	
Efficiency	.33	Efficiency	.33	Efficiency	
MDA	20 dpm	MDA	20 dpm	MDA	
Mfg.	N/A	Mfg.	N/A	Mfg.	N/A
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA		MDA		MDA	

Survey Type: Contamination

Building: 559

Location: Rm 103E

Purpose: Post paint survey

RWP #: 05-559-5004

Date 1-26-05 Time 0900

RCT [redacted]

RCT N/A / N/A / N/A

Print name / Signature / Emp. #

PRN/REN #: N/A

Comments: N/A

SURVEY RESULTS

Contamination Results

Swipe #	Location/Description (Results in dpm)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm)	Alpha Direct	Alpha Removable
1	wall	N/A	<20	19	wall	N/A	<20
2	wall		<20	20			<20
3	floor		<20	21			<20
4			<20	22			<20
5			<20	23			<20
6			<20	24			<20
7			<20	25			<20
8			<20	26			<20
9			<20	27			<20
10			<20	28			<20
11			<20	29			<20
12			<20	30			<20
13			<20	31			<20
14			<20	32	wall		<20
15			<20	33	N/A		N/A
16			<20	34			
17	floor		<20	35			
18	wall		<20	36			

Date Reviewed: 1/26/05 RS Supervision: [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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559 Survey Log # 559-

COPY

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	EBERLINE	Mfg.	NA
Model	SAC-4	Model	SAC-4	Model	
Serial#	859	Serial#	1274	Serial#	
Cal Due	5-18-05	Cal Due	6-7-04	Cal Due	
Bkg.	0.0cl-	Bkg.	0.2 cl-	Bkg.	
Efficiency	33%	Efficiency	33%	Efficiency	
MDA	20dl-	MDA	20dl-	MDA	NA
	NA		NA		
Mfg.		Mfg.		Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination
Building: 559
Location: 304 Plenum
Purpose: Post Painting

RWP #: 05-559-5004

[redacted]

PRN/REN #: N/A
Comments:
Post Job After Painting

SURVEY RESULTS

Contamination Results (in dpm/100cm2)

Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable
1	floor	NA	<20	19	North wall	NA	<20
2			<20	20	North wall		<20
3			<20	21	South wall		<20
4			<20	22			<20
5			<20	23			<20
6			<20	24			<20
7			<20	25	South wall		<20
8			<20	26	Ceiling		<20
9			<20	27			<20
10			<20	28			<20
11			<20	29			<20
12			<20	30	Ceiling		<20
13			<20	31	EAST wall		<20
14			<20	32	EAST wall		<20
15	Floor		<20	33	West wall		<20
16	North wall		<20	34	West wall		<20
17			<20	35	NA		NA
18	North wall	NA	<20	36	NA	NA	NA

Date Reviewed: Y24/05 RS Supervision: [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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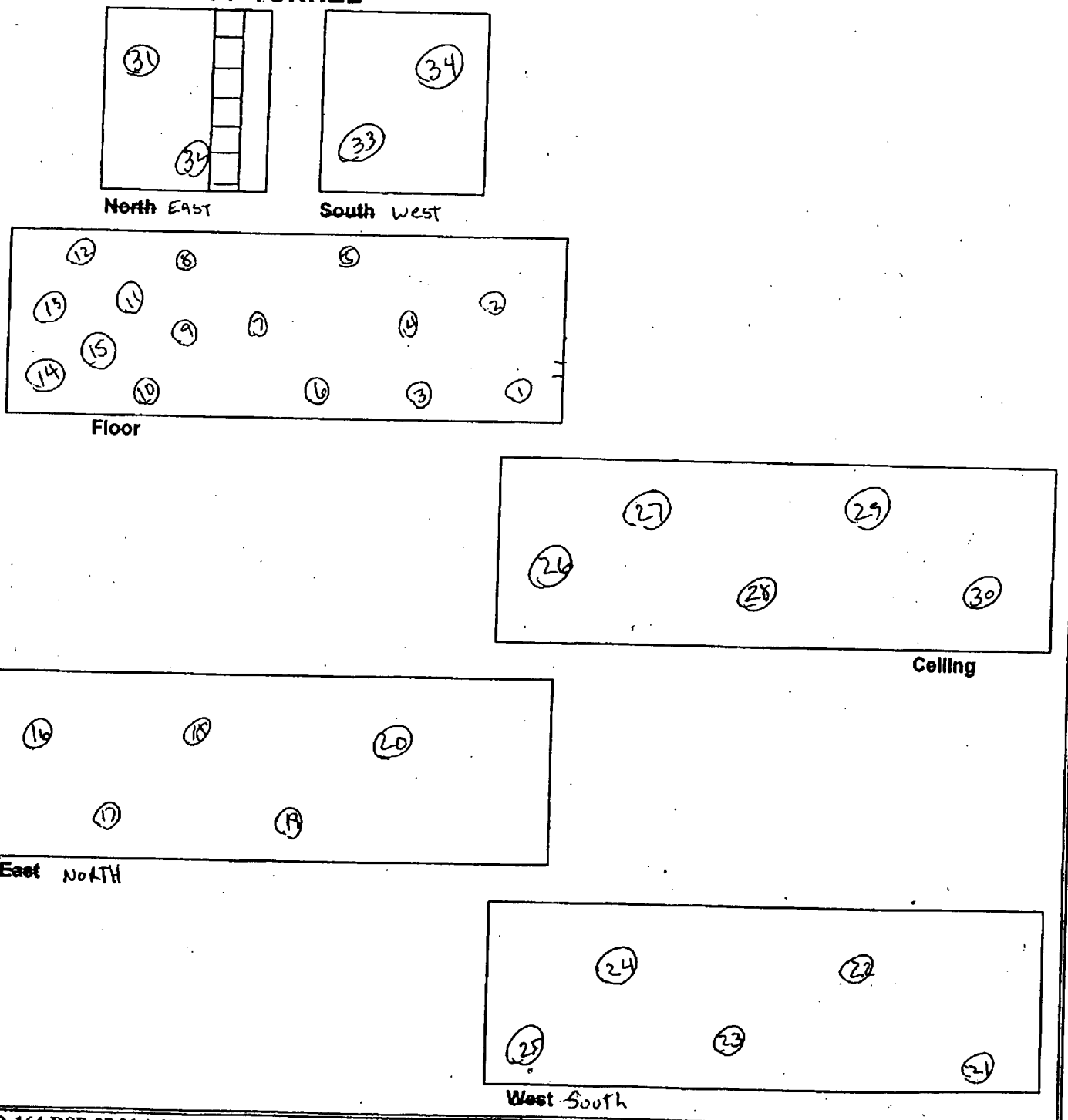
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

RADIOLOGICAL SAFETY

Drawing Showing Survey Points

304 TUNNEL



559 Survey Log # 559-_____ COPY Page of

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	EBERLINE	Mfg.	NA
Model	SAC-4	Model	SAC-4	Model	
Serial#	859	Serial#	1274	Serial#	
Cal Due	5-18-05	Cal Due	6-7-04	Cal Due	
Bkg.	0.0 cl-	Bkg.	0.2 cl-	Bkg.	
Efficiency	33%	Efficiency	33%	Efficiency	
MDA	20 dl-	MDA	20 dl-	MDA	NA
	NA		NA		
Mfg.		Mfg.		Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination
Building: 559
Location: **304 Plenum**
Purpose: Post Painting Hot Spots

RWP #: 05-559-5004

Date [redacted]

PRN/REN #: N/A
Comments:
Resurvey of Hot Spots

SURVEY RESULTS

Contamination Results (in dpm/100cm2)

Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm/100cm2)	Alpha Direct	Alpha Removable
1	North wall	NA	<20	19	NA	NA	NA
2			<20	20			
3			<20	21			
4	North wall		<20	22			
5	NA		NA	23			
6				24			
7				25			
8				26			
9				27			
10				28			
11				29			
12				30			
13				31			
14				32			
15				33			
16				34			
17				35			
18	NA	NA	NA	36	NA	NA	NA

Date Reviewed: 1/24/05 **RS Supervision:** [redacted]

3-PRO-164-RSP-07.01 (effective 7/12/01)

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559 Survey Log # 559-_____ **COPY**

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	NE TECH	Mfg.	NA
Model	SAC4	Model	ELECTRA	Model	
Serial#	1130	Serial#	1377	Serial#	
Cal Due	7-3-05	Cal Due	7-05-05	Cal Due	
Bkg.	0.5	Bkg.	1.0	Bkg.	
Efficiency	33%	Efficiency	17%	Efficiency	
MDA	20	MDA	94	MDA	NA
Mfg.	NA	Mfg.	NA	Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination

Building: 559

Location: RM 101

Purpose: POST PAINT

RWP #: 05-559-5004

Date 1-21-05 Time [redacted]

RCT NA / NA / NA

Print name / Signature / Emp. #

PRN/REN #: N/A

Comments: SURVEY TAKEN AFTER THE PAINTING OF TOP HAT PENETRATIONS SURVEY POINTS # 7, 57

SURVEY RESULTS

Contamination Results

Swipe #	Location/Description (Results in dpm)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm)	Alpha Direct	Alpha Removable
1	# 7 TOPHAT	2.4 K	<20	19	NA	NA	NA
2	# 57 TOPHAT	9 K	54	20			
3	NA	NA	NA	21			
4				22			
5				23			
6				24			
7				25			
8				26			
9				27			
10				28			
11				29			
12				30			
13				31			
14				32			
15				33			
16				34			
17				35			
18	NA	NA	NA	36	NA	NA	NA

Date Reviewed: 1/24/05 **RS Supervision:** [redacted]

Signature Emp. #

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

INSTRUMENT DATA

Mfg.	EBERLINE	Mfg.	NA	Mfg.	NA
Model	SAC4	Model		Model	
Serial#	859	Serial#		Serial#	
Cal Due	5-18-05	Cal Due		Cal Due	
Bkg.	0.0	Bkg.		Bkg.	
Efficiency	33%	Efficiency		Efficiency	
MDA	20	MDA	NA	MDA	NA
Mfg.	NA	Mfg.	NA	Mfg.	NA
Model		Model		Model	
Serial#		Serial#		Serial#	
Cal Due		Cal Due		Cal Due	
Bkg.		Bkg.		Bkg.	
Efficiency		Efficiency		Efficiency	
MDA	NA	MDA	NA	MDA	NA

Survey Type: Contamination
Building: 559
Location: ROOM 101
Purpose: POST PAINT

RWP #: 05-559-5004

Date 1-24-05 Time 1600

[redacted]

PRN/REN #: N/A

Comments: SURVEY TAKEN AFTER PAINTING TOPHAT PENETRATION #57 SURVEY POINT

SURVEY RESULTS

Contamination Results

Swipe #	Location/Description (Results in dpm)	Alpha Direct	Alpha Removable	Swipe #	Location/Description (Results in dpm)	Alpha Direct	Alpha Removable
1	#57	NA	<20	19	NA	NA	NA
2	NA	NA	NA	20			
3				21			
4				22			
5				23			
6				24			
7				25			
8				26			
9				27			
10				28			
11				29			
12				30			
13				31			
14				32			
15				33			
16				34			
17				35			
18	NA	NA	NA	36	NA	NA	NA

Date Reviewed: 1/24/05 **RS Supervision** [redacted]

ATTACHMENT C-1

Beryllium Data Summary and Sample Maps

Building 559 (Including Recirculation Tunnel)
Beryllium Sample Results Table

Sample Map Location #	Floor	Room	RIN	Sample Number	Sample Location	Result (ug/100 cm2)
1	1st	102	05D0469	559-12172004-214-001	Pre-Fixative, West Floor, Random	<0.1
2	1st	122	05D0469	559-12172004-214-002	Pre-Fixative, East Floor, Random	<0.1
3	1st	126 Corridor	05D0469	559-12172004-214-003	Pre-Fixative, East Floor, Random	<0.1
4	1st	101A	05D0469	559-12172004-214-004	Pre-Fixative, South Floor, Random	<0.1
5	1st	126 Corridor	05D0469	559-12172004-214-005	Pre-Fixative, Center Floor, Random	<0.1
6	1st	129	05D0469	559-12172004-214-006	Pre-Fixative, South Floor, Random	<0.1
7	1st	104	05D0469	559-12172004-214-007	Pre-Fixative, South Floor, Random	<0.1
8	1st	103	05D0469	559-12172004-214-008	Pre-Fixative, Center Floor, Random	<0.1
9	1st	129	05D0469	559-12172004-214-009	Pre-Fixative, South Floor, Random	<0.1
10	1st	129	05D0469	559-12172004-214-010	Pre-Fixative, Top of 304 Plenum, Random	<0.1
11	1st	130	05D0469	559-12172004-214-011	Pre-Fixative, Center Floor, Random	<0.1
12	Tunnel	Tunnel	05D0469	559-12172004-214-012	Pre-Fixative, Center Floor, Random	<0.1
13	1st	102	05D0469	559-12172004-214-013	Pre-Fixative, West Floor, Random	<0.1
14	Tunnel	Tunnel	05D0469	559-12172004-214-014	Pre-Fixative, South Floor, Random	<0.1
15	1st	103	05D0469	559-12172004-214-015	Pre-Fixative, East Floor, Random	<0.1
16	1st	128	05D0469	559-12172004-214-016	Pre-Fixative, East Floor, Random	<0.1
17	1st	114	05D0469	559-12172004-214-017	Pre-Fixative, East Floor, Random	<0.1
18	1st	103F	05D0469	559-12172004-214-018	Pre-Fixative, East Wall, Random	<0.1
19	1st	103B	05D0469	559-12172004-214-019	Pre-Fixative, North Floor, Random	<0.1
20	1st	122	05D0469	559-12172004-214-020	Pre-Fixative, Top of Ventilation Duct, Random	<0.1
21	1st	102	05D0469	559-12172004-214-021	Pre-Fixative, South West Floor, Random	<0.1
22	1st	101	05D0469	559-12172004-214-022	Pre-Fixative, West Floor, Random	<0.1
23	1st	103	05D0469	559-12172004-214-023	Pre-Fixative, South Floor, Random	<0.1
24	1st	101	05D0469	559-12172004-214-024	Pre-Fixative, North Floor, Random	<0.1
25	1st	103E	05D0469	559-12172004-214-025	Pre-Fixative, North Floor, Random	<0.1
26	1st	127	05D0469	559-12172004-214-026	Pre-Fixative, Top of Air Handler, Random	<0.1
27	Tunnel	Tunnel	05D0469	559-12172004-214-027	Pre-Fixative, Center Floor, Random	<0.1
28	1st	124B	05D0469	559-12172004-214-028	Pre-Fixative, South East Floor, Random	<0.1
29	1st	129A	05D0469	559-12172004-214-029	Pre-Fixative, Top of Shelf, Random	<0.1
30	1st	Airlock	05D0469	559-12172004-214-030	Pre-Fixative, West Wall, Random	<0.1
31	1st	122	05D0469	559-12172004-214-031	Pre-Fixative, South East Floor, Random	<0.1
32	1st	121	05D0469	559-12172004-214-032	Pre-Fixative, North Wall, Random	<0.1
33	1st	101	05D0469	559-12172004-214-033	Pre-Fixative, North Floor, Random	<0.1
34	1st	101	05D0469	559-12172004-214-034	Pre-Fixative, South Floor, Random	<0.1
35	Mezz	129 Mezz	05D0469	559-12172004-214-035	Pre-Fixative, North Floor, Random	<0.1
36	1st	129	05D0469	559-12172004-214-036	Pre-Fixative, East Wall, Random	<0.1
37	1st	134	05D0469	559-12172004-214-037	Pre-Fixative, North Floor, Random	<0.1
38	1st	106	05D0469	559-12172004-214-038	Pre-Fixative, Center Floor, Random	<0.1
39	1st	129	05D0469	559-12172004-214-039	Pre-Fixative, West Floor, Random	<0.1
40	1st	103E	05D0469	559-12172004-214-040	Pre-Fixative, West Floor, Random	<0.1
41	1st	114	05D0469	559-12172004-214-041	Pre-Fixative, North East Floor, Random	<0.1
42	1st	101	05D0469	559-12172004-214-042	Pre-Fixative, East Floor, Random	<0.1
43	1st	102	05D0469	559-12172004-214-043	Pre-Fixative, Center Floor, Random	<0.1
44	1st	103	05D0469	559-12172004-214-044	Pre-Fixative, Center Floor, Random	<0.1
45	1st	103	05D0469	559-12172004-214-045	Pre-Fixative, Center Floor, Random	<0.1
46	1st	129	05D0469	559-12172004-214-046	Pre-Fixative, East Floor, Random	<0.1
47	1st	103E	05D0469	559-12172004-214-047	Pre-Fixative, East Floor, Random	<0.1
48	1st	101	05D0469	559-12172004-214-048	Pre-Fixative, Center Floor, Random	<0.1
49	1st	103A	05D0469	559-12172004-214-049	Pre-Fixative, Center Floor, Random	<0.1
50	1st	129B	05D0469	559-12172004-214-050	Pre-Fixative, Center Floor, Random	<0.1
51	1st	107	05D0469	559-12172004-214-051	Pre-Fixative, South Floor, Random	<0.1
52	1st	134	05D0469	559-12172004-214-052	Pre-Fixative, South Floor, Random	<0.1
53	1st	110	05D0469	559-12172004-214-053	Pre-Fixative, Center Floor, Random	<0.1
54	1st	122	05D0469	559-12172004-214-054	Pre-Fixative, West Floor, Random	<0.1
55	1st	101	05D0469	559-12172004-214-055	Pre-Fixative, North Floor, Random	<0.1
56	1st	101C	05D0469	559-12172004-214-056	Pre-Fixative, East Floor, Random	<0.1
57	1st	109	05D0469	559-12172004-214-057	Pre-Fixative, North Floor, Random	<0.1
58	1st	101	05D0469	559-12172004-214-058	Pre-Fixative, South Floor, Random	<0.1
59	1st	103	05D0469	559-12172004-214-059	Pre-Fixative, Center Floor, Random	<0.1

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Building 559 (Including Recirculation Tunnel)
Beryllium Sample Results Table

60	1st	129	05D0469	559-12172004-214-060	Pre-Fixative, East Wall, Random	<0.1
61	1st	111	05D0469	559-12172004-214-061	Pre-Fixative, East Floor, Random	<0.1
62	1st	135	05D0469	559-12172004-214-062	Pre-Fixative, Center Ceiling, Biased	<0.1
63	1st	123	05D0469	559-12172004-214-063	Pre-Fixative, West Ceiling, Biased	<0.1
64	1st	118	05D0469	559-12172004-214-064	Pre-Fixative, Center Ceiling, Biased	<0.1
65	1st	103	05D0469	559-12172004-214-065	Pre-Fixative, Recirculation Tunnel Duct, Biased	<0.1
66	1st	102	05D0469	559-12172004-214-066	Pre-Fixative, Recirculation Tunnel Duct, Biased	<0.1
67	Tunnel	Recir Tunnel	05D0469	559-12172004-214-067	Pre-Fixative, Recirculation Tunnel Sump, Biased	<0.1
68	1st	129	05D0469	559-12172004-214-068	Pre-Fixative, Top of Chiller, Biased	<0.1
69	1st	129	05D0469	559-12172004-214-069	Pre-Fixative, Floor, Biased	<0.1
70	1st	129	05D0469	559-12172004-214-070	Pre-Fixative, Floor, Biased	<0.1
71	1st	129	05D0469	559-12172004-214-071	Top of 300 Exhaust, Biased	<0.1
72	1st	129	05D0469	559-12172004-214-072	Pre-Fixative, 304 Plenum Filter Rack, Biased	<0.1
73	1st	129	05D0469	559-12172004-214-073	Pre-Fixative, 304 Plenum, North Floor, Biased	<0.1
74	1st	129	05D0469	559-12172004-214-074	Pre-Fixative, Top of TWR Piping, Biased	<0.1
75	1st	129	05D0469	559-12172004-214-075	Pre-Fixative, Top of Hot Water Piping, Biased	<0.1
76	1st	129	05Z0854	561-01192005-214-036	Pre-Fixative, Inside 300 Ductwork, above Mutli-Zone, Biased	<0.1
77	1st	129	05Z0854	561-01192005-214-037	Pre-Fixative, Inside 300 Ductwork, NW Side of 129, Biased	<0.1

Footnotes:

(1) Sample Map Locations # 76 & 77 have a Building 561 prefix (RIN05Z0854); however, these samples were taken inside the 300 ductwork inside Building 559.

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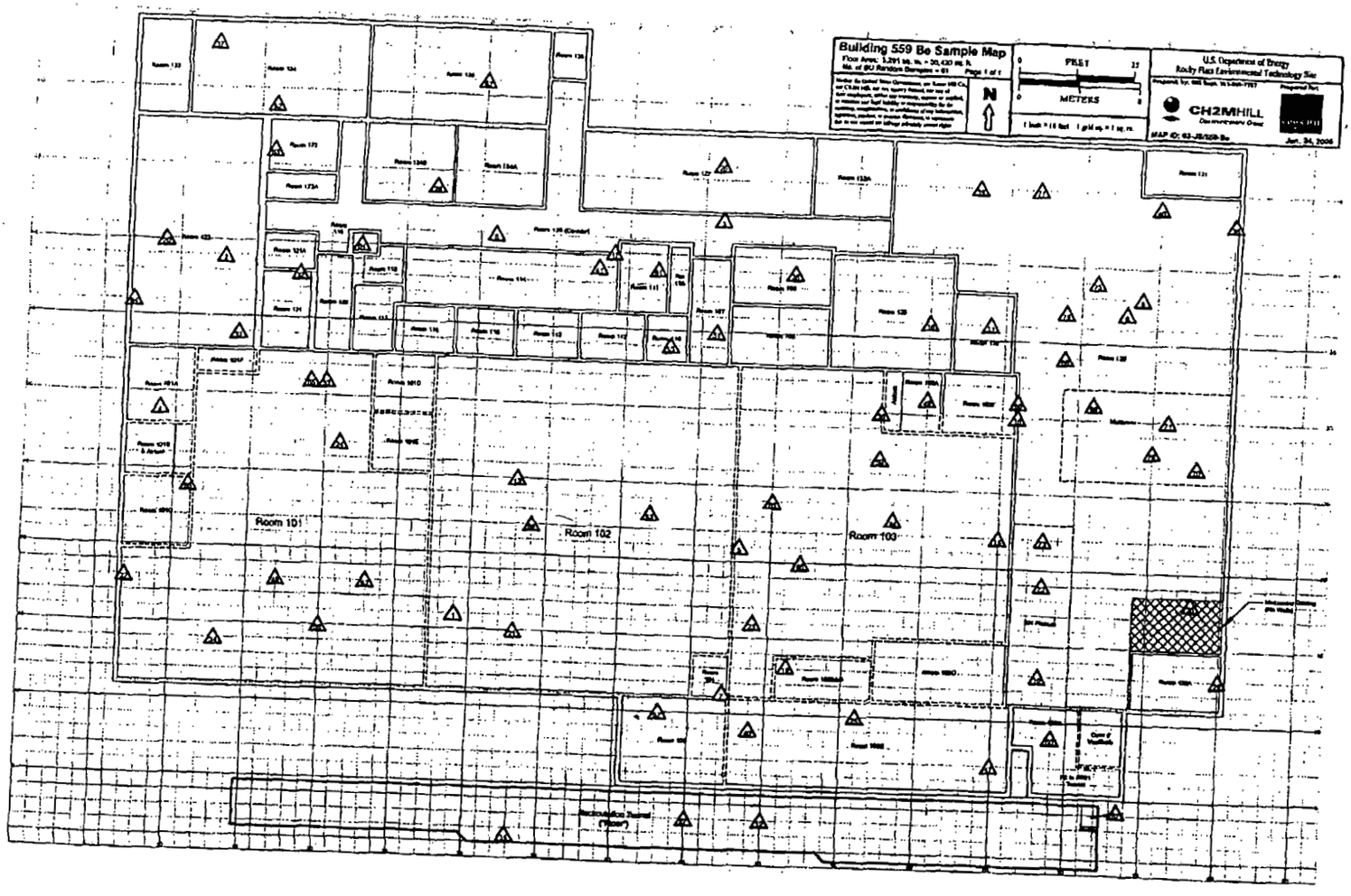
Building 559 Be Sample Map
N
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U.S. Department of Energy
Rocky Flats Environmental Technology Site
CH2MHILL
Jun. 24, 2006
Room 101
Room 102
Room 103

ATTACHMENT C-2

Chemical (RCRA/CERCLA/PCB) Data Summaries and Sample Maps

RCRA/CERCLA Constituents Data Summary – Building 559
(RIN05Z0589)

Sample Location / Media/Sample Number	Sample Map Number	Analysis	Result (mg/L)
Bldg. 559 Re-circulation Tunnel/Sample Numbers: 05Z0589-001.001, 05Z0589-002.001, 05Z0589-003.001	1, 2, and 3	RCRA Metals, SVOC, and VOC	RCRA Toxicity Characteristic substances less than regulatory limits, RCRA Listed substances not applicable

RCRA Toxicity Characteristic Limits

Analyte	Regulatory limit (mg/L)
Arsenic (D004)	5.0
Barium (D005)	100.0
Benzene (D018)	0.5
Cadmium (D006)	1.0
Carbon tetrachloride (D019)	0.5
Chlordane (D020)	0.03
Chlorobenzene (D021)	100.0
Chloroform (D022)	6.0
Chromium (D007)	5.0
o-Cresol (D023)	200.0 (a)
m-Cresol (D024)	200.0 (a)
p-Cresol (D025)	200.0 (a)
Cresol (D026)	200.0 (a)
2,4 –D (D016)	10.0
1,4 Dichlorobenzene (D027)	7.5
1,2 Dichloroethane (D028)	0.5
1,1 Dichlorethylene (D029)	0.7
2,4 Dinitrotoluene (D030)	0.13 (b)
Endrin (D012)	0.02
Heptachlor – and its epoxide (D031)	0.008
Hexachlorobenzene (D032)	0.13 (b)
Hexachlorobutadiene (D033)	0.5
Hexachloroethane (D034)	3.0
Lead (D008)	5.0
Lindane (D013)	0.4
Mercury (D009)	0.2
Methoxychlor (D014)	10.0
MEK (D035)	200.0
Nitrobenzene (D036)	2.0
Pentachlorophenol (D037)	100.0
Pyridine (DD038)	5.0 (b)
Selenium (D010)	1.0
Silver (D011)	5.0
Tetrachloroethylene (D039)	0.7
Toxaphene (D015)	0.5
Trichloroethylene (D040)	0.5
2,4,5-Trichlorophenol (D041)	400.0
2,4,6-Trichlorophenol (D042)	2.0
2,4,5-TP (Silvex) (D017)	1.0
Vinyl Chloride (D043)	0.2

(a) Quantitation Limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

(b) If o-, m-, and p-Cresol concentrations cannot be differentiated, the total Cresol (D026) concentration (200mg/l) is used.

PCB Data Summary – Building 559
(RIN05Z0589)

Sample Number	Sample Map Number	Analysis	Results (ppm)
Bldg. 559 Re-circulation Tunnel/Sample Numbers: 05Z0589-001.001, 05Z0589-002.001, 05Z0589-003.001	1, 2 and 3	PCB	Less than regulatory limits

Regulatory Limit for PCB's: 50 ppm

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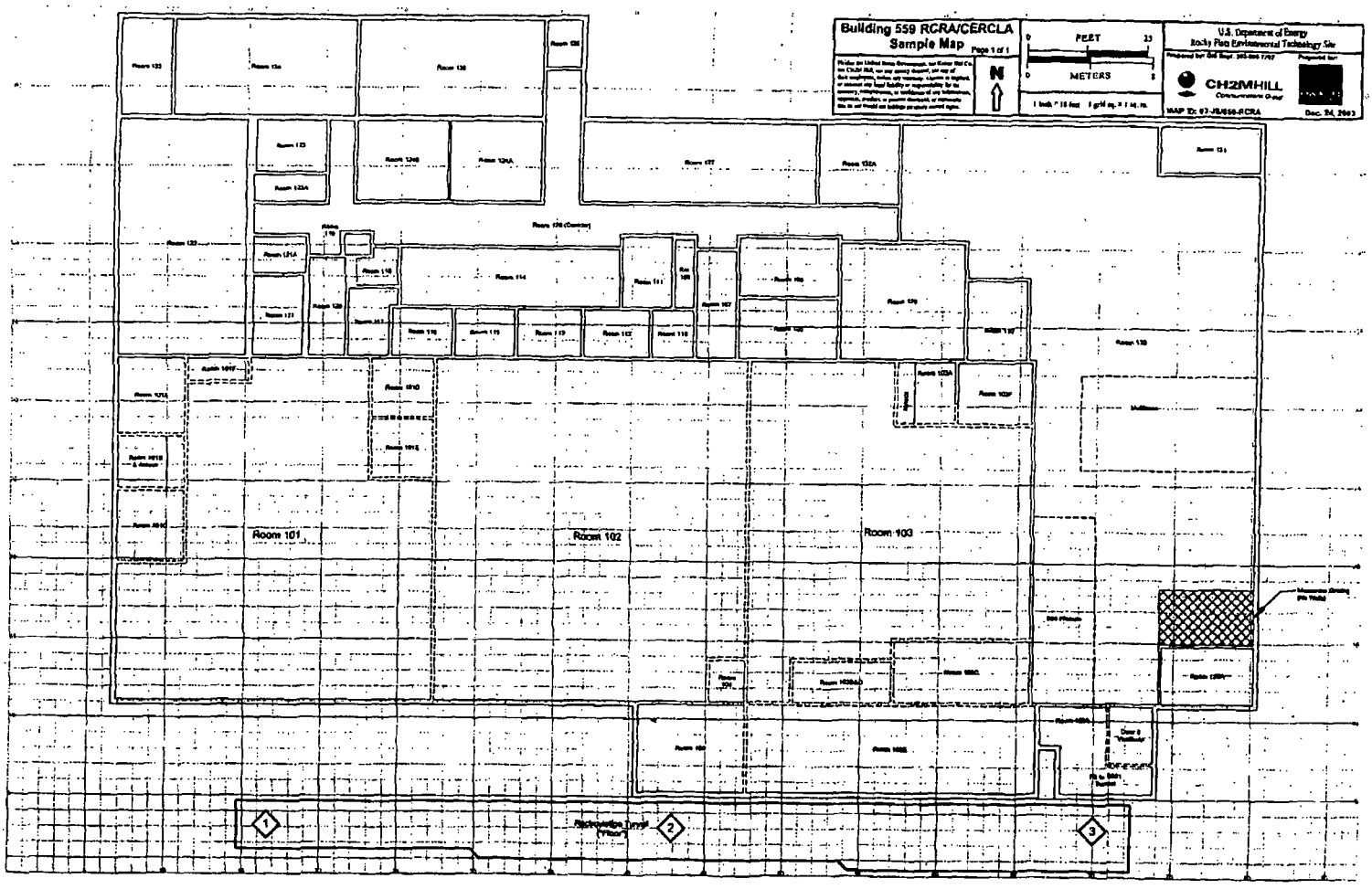
Building 559 RCRA/CERCLA
Sample Map
Page 1 of 1
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U.S. Department of Energy
Rocky Flats Environmental Technology Site
CH2MHILL
Room 101
Room 102
Room 103
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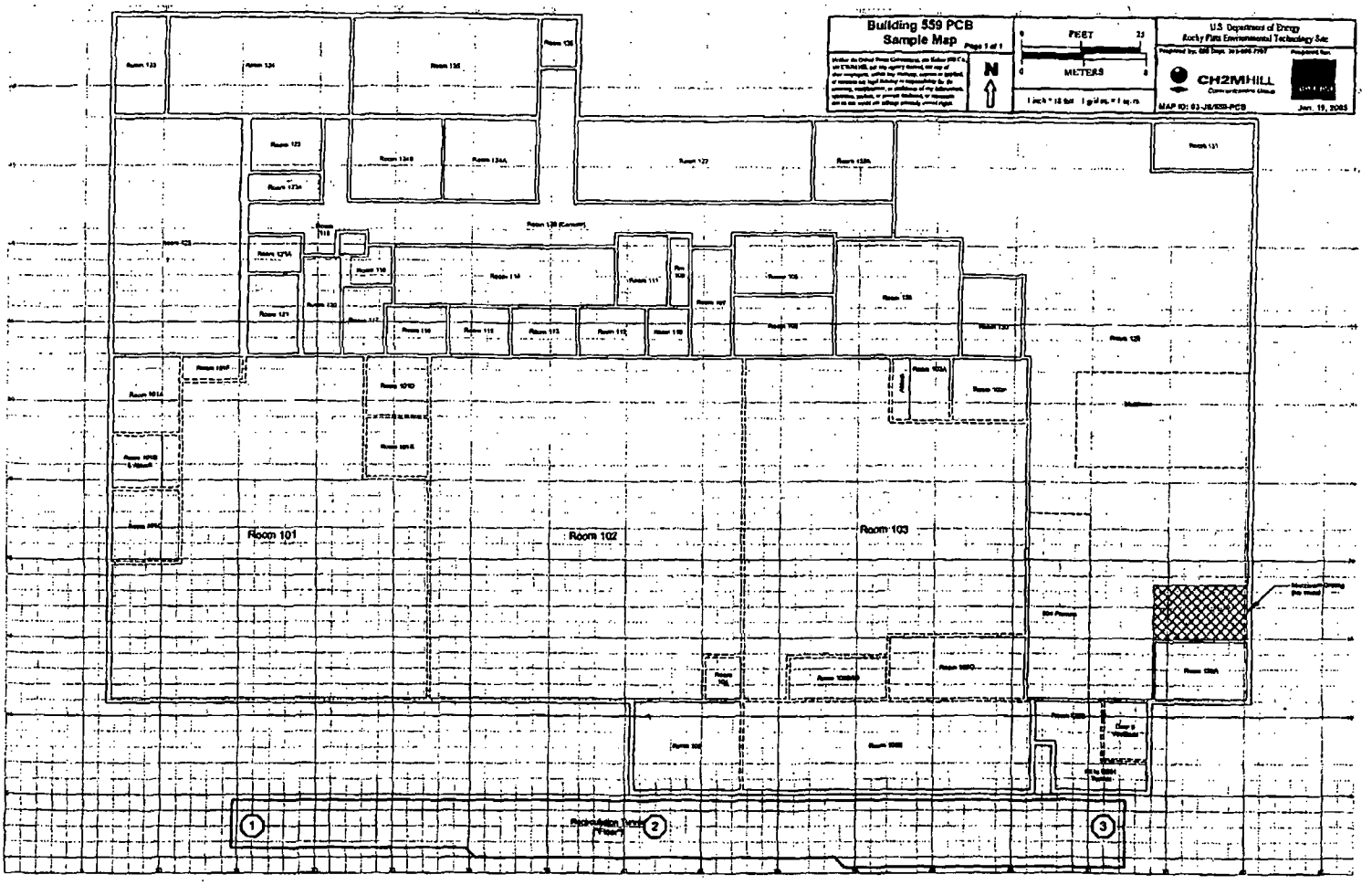
Building 559 PCB
Sample Map
Page 1 of 1
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METERS
U.S. Department of Energy
Rocky Flats Environmental Technology Site
CH2MHILL
Jan. 19, 2005
Room 101
Room 102
Room 103
1
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STL Denver

STOLLER RFETS	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	COC: 05Z0589#001 ¶05Z0589#001IA	Page 1 of 2

Sampler(s) (time/date) POWELL, SUE	Contact/Requestor PODOLSKY, STEWART / MYERS, KIM	Telephone No. 7624 / 7106
RIN 05Z0589	Sampling Origin B559	Purchase Order/Charge Code EHE559PD
Project Title 559 DRAIN TRENCH	Logbook No. 99 STEP VAN	Ice Chest No. Temp. N/A
To (Lab) Severn-Trent Denver	Method of Shipment HAND DELIVER	Bill of Lading/Air Bill No. N/A
Protocol	Related COC (if any)	PRE 041122-ASD-001

POSSIBLE SAMPLE HAZARDS/REMARKS

Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES NO
Are other known hazardous substances present? YES NO
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time

Bottle No.	Customer Number	Matrix	Date/Time	Location	Container (size/type)	Sample Analysis [Field-Filtered] LIC (Method Title) (TAT)(Parameter List)	Preservative; Packing
05Z0589 -001.001		SOLID	12/08/04 09:50	B559	1-SAMPLE	GPC-A-003 (GROSS ALPHA/BETA) [14dF] (GROSS ALPHA; GROSS BETA)	None; None
						MET-A-021 (METALS 6010/6010B) [14dF] (See Item 1)	None; None
						SVO-A-007 (SEMI-VOLATILE ORGANICS 8270B) [14dF] (See Item 2)	None; None
						VOA-A-011 (VOLATILE ORGANICS 8260) [14dF] (See Item 3)	None; None
05Z0589 -002.001		SOLID	12/08/04 10:15	B559	1-SAMPLE	GPC-A-003 (GROSS ALPHA/BETA) [14dF] (GROSS ALPHA; GROSS BETA)	None; None
						MET-A-021 (METALS 6010/6010B) [14dF] (See Item 1)	None; None
						SVO-A-007 (SEMI-VOLATILE ORGANICS 8270B) [14dF] (See Item 2)	None; None
						VOA-A-011 (VOLATILE ORGANICS 8260) [14dF] (See Item 3)	None; None

Relinquished By: Date/Time	Received By: Date/Time	Relinquished By: Date/Time	Received By: Date/Time
	Jonny Davia 12/14/04		
Relinquished By: Date/Time	Received By: Date/Time	Relinquished By: Date/Time	Received By: Date/Time
Relinquished By: Date/Time	Received By: Date/Time	Relinquished By: Date/Time	Received By: Date/Time

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)	Disposed By	Date/Time COC printed: 12/14/04 07:38 (Version:coc_r22.rpt)

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STL Denver

STOLLER RFETS	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	COC: 05Z0589#001 ¶05Z0589#001IA	Page 2 of 2

RIN	Contact/Requester	Telephone No.
05Z0589	PODOLSKY, STEWART / MYERS, KIM	7624 / 7106

Bottle No.	Customer Number	Matrix	Date/Time	Location	Container (size/type)	Sample Analysis [Field-Filtered] LIC (Method Title) [TAT]/(Parameter List)	Preservative; Packing
05Z0589 -003.001		SOLID	12/08/04 09:40	B559	1-SAMPLE	GPC-A-003 (GROSS ALPHA/BETA) [14dF] (GROSS ALPHA; GROSS BETA)	None; None
						MET-A-021 (METALS 6010/6010B) [14dF] (See Item 1)	None; None
						SVO-A-007 (SEMI-VOLATILE ORGANICS 8270B) [14dF] (See Item 2)	None; None
						VOA-A-011 (VOLATILE ORGANICS 8260) [14dF] (See Item 3)	None; None

Item 1 MET-A-021: ALUMINUM; ANTIMONY; ARSENIC; BARIUM; BERYLLIUM; BORON; CADMIUM; CALCIUM; CHROMIUM; COBALT; COPPER; IRON; LEAD; LITHIUM; MAGNESIUM; MANGANESE; MERCURY; MOLYBDENUM; NICKEL; POTASSIUM; SELENIUM; SILICA; SILVER; SODIUM; STRONTIUM; THALLIUM; TIN; TITANIUM; URANIUM; VANADIUM; ZINC

Item 2 SVO-A-007: 1,2,4-TRICHLOROBENZENE; 2,4,5-TRICHLOROPHENOL; 2,4,6-TRICHLOROPHENOL; 2,4-DICHLOROPHENOL; 2,4-DIMETHYLPHENOL; 2,4-DINITROPHENOL; 2,4-DINITROTOLUENE; 2,6-DINITROTOLUENE; 2-CHLORONAPHTHALENE; 2-CHLOROPHENOL; 2-METHYLNAPHTHALENE; 2-METHYLPHENOL; 2-NITROANILINE; 3,3'-DICHLOROBENZIDINE; 3-NITROANILINE; 4,6-DINITRO-O-CRESOL; 4-BROMOPHENYL PHENYL ETHER; 4-CHLORO-3-METHYLPHENOL; 4-CHLOROANILINE; 4-CHLOROPHENYL-PHENYL ETHER; 4-METHYLPHENOL; ACENAPHTHENE; ACENAPHTHYLENE; ANTHRACENE; BENZO(A)ANTHRACENE; BENZO(A)PYRENE; BENZO(B)FLUORANTHENE; BENZO(K)FLUORANTHENE; BENZOIC ACID; BENZO(GHI)PERYLENE; BENZYL ALCOHOL; BIS(2-CHLOROETHOXY) METHANE; BIS(2-CHLOROISOPROPYL) ETHER; BIS(2-ETHYLHEXYL)PHTHALATE; BUTYLBENZYLPHTHALATE; CHRYSENE; DI-N-BUTYL PHTHALATE; DI-N-OCTYL PHTHALATE; DIBENZ(A,H)ANTHRACENE; DIBENZOFURAN; DICHLORODIETHYLETHER; DIETHYL PHTHALATE; DIMETHYL PHTHALATE; FLUORANTHENE; FLUORENE; HEXACHLOROBENZENE; HEXACHLOROBUTADIENE; HEXACHLOROCYCLOPENTADIENE; HEXACHLOROETHANE; INDENO(1,2,3-CD)PYRENE; ISOPHORONE; M-DICHLOROBENZENE; N-NITROSO-DI-N-PROPYLAMINE; N-NITROSODIPHENYLAMINE; NAPHTHALENE; NITROBENZENE; O-DICHLOROBENZENE; O-NITROPHENOL; P-DICHLOROBENZENE; P-NITROANILINE; P-NITROPHENOL; PENTACHLOROPHENOL; PHENANTHRENE; PHENOL; PYRENE; TRIBUTYL PHOSPHATE

Item 3 VOA-A-011: 1,1,1,2-TETRACHLOROETHANE; 1,1,1-TRICHLOROETHANE; 1,1,2,2-TETRACHLOROETHANE; 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE; 1,1,2-TRICHLOROETHANE; 1,1-DICHLOROETHANE; 1,1-DICHLOROETHENE; 1,1-DICHLOROPROPENE; 1,2,3-TRICHLOROBENZENE; 1,2,3-TRICHLOROPROPANE; 1,2,4-TRICHLOROBENZENE; 1,2,4-TRIMETHYLBENZENE; 1,2-DIBROMO-3-CHLOROPROPANE; 1,2-DIBROMOETHANE; 1,2-DICHLOROETHANE; 1,2-DICHLOROPROPANE; 1,3,5-TRIMETHYLBENZENE; 1,3-DICHLOROPROPANE; 2,2-DICHLOROPROPANE; 2-BUTANONE; 2-CHLOROTOLUENE; 2-HEXANONE; 4-CHLOROTOLUENE; 4-ISOPROPYLTOLUENE; ACETONE; BENZENE; BROMOBENZENE; BROMOCHLOROMETHANE; BROMODICHLOROMETHANE; BROMOFORM; BROMOMETHANE; CARBON DISULFIDE; CARBON TETRACHLORIDE; CHLOROBENZENE; CHLOROETHANE; CHLOROFORM; CHLOROMETHANE; CIS-1,2-DICHLOROETHENE; CIS-1,3-DICHLOROPROPENE; CUMENE; DIBROMOCHLOROMETHANE; DIBROMOMETHANE; DICHLORODIFLUOROMETHANE; ETHYLBENZENE; HEXACHLOROBUTADIENE; M-DICHLOROBENZENE; METHYL-ISOBUTYL KETONE (MIBK); METHYLENE CHLORIDE; N-BUTYLBENZENE; N-PROPYLBENZENE; NAPHTHALENE; O-DICHLOROBENZENE; P-DICHLOROBENZENE; SEC-BUTYLBENZENE; STYRENE; TERT-BUTYLBENZENE; TETRACHLOROETHENE; TOLUENE; TRANS-1,2-DICHLOROETHENE; TRANS-1,3-DICHLOROPROPENE; TRICHLOROETHYLENE; TRICHLOROFLUOROMETHANE; VINYL CHLORIDE; XYLENES (TOTAL)

Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
		10/14/04 10am					
Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
Relinquished By:	Date/Time	Received By:	Date/Time	Relinquished By:	Date/Time	Received By	Date/Time

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process)	Disposed By	Date/Time COC printed: 12/14/04 07:38 (Version:coc_r22.rpt)

SEVERN TRENT SERVICES

KAISER-HILL LLC

Total Metals Analysis Data Sheet

Lab Name:	STL DENVER	Client Sample ID:	05Z0589-001.001
Lot/SDG Number:	05Z0589	Lab WorkOrder:	G0000
Matrix:	SOLID	Lab Sample ID:	D4L100265-001
% Moisture:		Date/Time Collected:	12/08/04 9:50
Units:	MG/KG	Date/Time Received:	12/10/04 9:15

CAS No.	Analyte	Conc.	Q	RL	Dilution Factor	QC Batch ID	Method	Instrument ID	Analysis Date	Analysis Time
7429-90-5	Aluminum	7400		40	1	4345527	6010B	002	12/14/2004	20:29
7440-36-0	Antimony	0.26	U	1.0	1	4345527	6010B	016	12/15/2004	17:18
7440-38-2	Arsenic	3.2		1.0	1	4345527	6010B	016	12/15/2004	17:18
7440-39-3	Barium	87		1.0	1	4345527	6010B	016	12/15/2004	17:18
7440-41-7	Beryllium	0.59		0.20	1	4345527	6010B	002	12/14/2004	20:29
7440-42-8	Boron	8.9		1.5	1	4345527	6010B	002	12/14/2004	20:29
7440-43-9	Cadmium	0.18	B	0.50	1	4345527	6010B	016	12/15/2004	17:18
7440-70-2	Calcium	81000		1000	1	4345527	6010B	002	12/14/2004	20:29
7440-47-3	Chromium	14		0.40	1	4345527	6010B	016	12/15/2004	17:18
7440-48-4	Cobalt	3.2		1.0	1	4345527	6010B	016	12/15/2004	17:18
7440-50-8	Copper	14		2.0	1	4345527	6010B	016	12/15/2004	17:18
7439-89-6	Iron	9400		20	1	4345527	6010B	002	12/14/2004	20:29
7439-92-1	Lead	4.9		0.60	1	4345527	6010B	016	12/15/2004	17:18
7439-93-2	Lithium	6.7	B	20	1	4345527	6010B	002	12/14/2004	20:29
7439-95-4	Magnesium	1800		1000	1	4345527	6010B	002	12/14/2004	20:29
7439-96-5	Manganese	82		1.0	1	4345527	6010B	016	12/15/2004	17:18
7439-98-7	Molybdenum	3.1		2.0	1	4345527	6010B	016	12/15/2004	17:18
7440-02-0	Nickel	11		4.0	1	4345527	6010B	016	12/15/2004	17:18
7440-09-7	Potassium	1400		1000	1	4345527	6010B	002	12/14/2004	20:29
7782-49-2	Selenium	0.45	U	1.0	1	4345527	6010B	016	12/15/2004	17:18
7631-86-9	Silica as SiO2, Dissolve	430		5.0	1	4345527	6010B	002	12/14/2004	20:29
7440-22-4	Silver	0.063	U	1.0	1	4345527	6010B	016	12/15/2004	17:18
7440-23-5	Sodium	190	B	1000	1	4345527	6010B	002	12/14/2004	20:29
7440-24-6	Strontium	150		1.0	1	4345527	6010B	016	12/15/2004	17:18
7440-28-0	Thallium	0.61	B	1.2	1	4345527	6010B	016	12/15/2004	17:18
7440-31-5	Tin	1.8	B	10	1	4345527	6010B	016	12/15/2004	17:18
7440-32-6	Titanium	350		0.20	1	4345527	6010B	002	12/14/2004	20:29
11-09-6	Uranium	0.91	U	2.0	1	4345527	6010B	016	12/15/2004	17:18
7440-62-2	Vanadium	60		2.0	1	4345527	6010B	016	12/15/2004	17:18

Form 1 Analysis Data Sheet Equivalent

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SEVERN TRENT SERVICES

KAISER-HILL LLC

Total Metals Analysis Data Sheet

Lab Name:	STL DENVER	Client Sample ID:	05Z0589-001.001
Lot/SDG Number:	05Z0589	Lab WorkOrder:	G0O0Q
Matrix:	SOLID	Lab Sample ID:	D4L100265-001
% Moisture:		Date/Time Collected:	12/08/04 9:50
Units:	MG/KG	Date/Time Received:	12/10/04 9:15

CAS No.	Analyte	Conc.	Q	RL	Dilution Factor	QC Batch ID	Method	Instrument ID	Analysis Date	Analysis Time
7440-66-6	Zinc	34		2.0	1	4345527	6010B	016	12/15/2004	17:18

U Result is less than the instrument detection limit (IDL).

B Estimated result. Result is less than RL and greater than or equal to the IDL.

Form 1 Analysis Data Sheet Equivalent

SEVERN TRENT SERVICES

KAISER-HILL LLC

Total Metals Analysis Data Sheet

Lab Name:	STL DENVER	Client Sample ID:	05Z0589-001.001
Lot/SDG Number:	05Z0589	Lab WorkOrder:	G000Q
Matrix:	SOLID	Lab Sample ID:	D4L100265-001
% Moisture:		Date/Time Collected:	12/08/04 9:50
Units:	MG/KG	Date/Time Received:	12/10/04 9:15

CAS No.	Analyte	Conc.	Q	RL	Dilution Factor	QC Batch ID	Method	Instrument ID	Analysis Date	Analysis Time
7439-97-6	Mercury	0.014	B	0.20	1	4348517	7471A	019	12/16/2004	15:16

U Result is less than the instrument detection limit (IDL).

B Estimated result. Result is less than RL and greater than or equal to the IDL.

Form I Analysis Data Sheet Equivalent

SEVERN TRENT SERVICES

KAISER-HILL LLC

Total Metals Analysis Data Sheet

Lab Name:	STL DENVER	Client Sample ID:	05Z0589-002.001
Lot/SDG Number:	05Z0589	Lab WorkOrder:	G0002
Matrix:	SOLID	Lab Sample ID:	D4L100265-002
% Moisture:		Date/Time Collected:	12/08/04 10:15
Units:	MG/KG	Date/Time Received:	12/10/04 9:15

CAS No.	Analyte	Conc.	Q	RL	Dilution Factor	QC Batch ID	Method	Instrument ID	Analysis Date	Analysis Time
7429-90-5	Aluminum	7500		40	1	4345527	6010B	002	12/14/2004	21:18
7440-36-0	Antimony	0.26	U	12	1	4345527	6010B	016	12/15/2004	17:52
7440-38-2	Arsenic	2.0		2.0	1	4345527	6010B	016	12/15/2004	17:52
7440-39-3	Barium	88		20	1	4345527	6010B	016	12/15/2004	17:52
7440-41-7	Beryllium	0.37		0.20	1	4345527	6010B	002	12/14/2004	21:18
7440-42-8	Boron	14		1.5	1	4345527	6010B	002	12/14/2004	21:18
7440-43-9	Cadmium	0.22	B	1.0	1	4345527	6010B	016	12/15/2004	17:52
7440-70-2	Calcium	91000		1000	1	4345527	6010B	002	12/14/2004	21:18
7440-47-3	Chromium	9.0		0.40	1	4345527	6010B	016	12/15/2004	17:52
7440-48-4	Cobalt	3.3	B	10	1	4345527	6010B	016	12/15/2004	17:52
7440-50-8	Copper	15		5.0	1	4345527	6010B	016	12/15/2004	17:52
7439-89-6	Iron	7100		20	1	4345527	6010B	002	12/14/2004	21:18
7439-92-1	Lead	8.7		0.60	1	4345527	6010B	016	12/15/2004	17:52
7439-93-2	Lithium	6.3	B	20	1	4345527	6010B	002	12/14/2004	21:18
7439-95-4	Magnesium	2000		1000	1	4345527	6010B	002	12/14/2004	21:18
7439-96-5	Manganese	310		3.0	1	4345527	6010B	002	12/14/2004	21:18
7439-98-7	Molybdenum	0.91	B	6.0	1	4345527	6010B	016	12/15/2004	17:52
7440-02-0	Nickel	8.7		8.0	1	4345527	6010B	016	12/15/2004	17:52
7440-09-7	Potassium	3800		1000	1	4345527	6010B	002	12/14/2004	21:18
7782-49-2	Selenium	0.45	U	1.0	1	4345527	6010B	016	12/15/2004	17:52
7631-86-9	Silica as SiO2, Dissolve	3800		5.0	1	4345527	6010B	002	12/14/2004	21:18
7440-22-4	Silver	0.34	B	1.0	1	4345527	6010B	016	12/15/2004	17:52
7440-23-5	Sodium	1100		1000	1	4345527	6010B	002	12/14/2004	21:18
7440-24-6	Strontium	290		40	1	4345527	6010B	016	12/15/2004	17:52
7440-28-0	Thallium	0.62	B	2.0	1	4345527	6010B	016	12/15/2004	17:52
7440-31-5	Tin	1.5	B	40	1	4345527	6010B	016	12/15/2004	17:52
7440-32-6	Titanium	340		0.20	1	4345527	6010B	002	12/14/2004	21:18
11-09-6	Uranium	0.91	U	40	1	4345527	6010B	016	12/15/2004	17:52
7440-62-2	Vanadium	20		8.0	1	4345527	6010B	016	12/15/2004	17:52

Form 1 Analysis Data Sheet Equivalent

SEVERN TRENT SERVICES

KAISER-HILL LLC

Total Metals Analysis Data Sheet

Lab Name:	STL DENVER	**Client Sample ID:**	05Z0589-002.001
Lot/SDG Number:	05Z0589	**Lab WorkOrder:**	G0Q02
Matrix:	SOLID	**Lab Sample ID:**	D4L100265-002
% Moisture:		**Date/Time Collected:**	12/08/04 10:15
Units:	MG/KG	**Date/Time Received:**	12/10/04 9:15

CAS No.	Analyte	Conc.	Q	RL	Dilution Factor	QC Batch ID	Method	Instrument ID	Analysis Date	Analysis Time
7440-66-6	Zinc	33		4.0	1	4345527	6010B	002	12/14/2004	21:18

U Result is less than the instrument detection limit (IDL).

B Estimated result. Result is less than RL and greater than or equal to the IDL.

Form 1 Analysis Data Sheet Equivalent

SEVERN TRENT SERVICES

KAISER-HILL LLC

Total Metals Analysis Data Sheet

Lab Name:	STL DENVER	Client Sample ID:	05Z0589-002.001
Lot/SDG Number:	05Z0589	Lab WorkOrder:	G0002
Matrix:	SOLID	Lab Sample ID:	D4L100265-002
% Moisture:		Date/Time Collected:	12/08/04 10:15
Units:	MG/KG	Date/Time Received:	12/10/04 9:15

CAS No.	Analyte	Conc.	Q	RL	Dilution Factor	QC Batch ID	Method	Instrument ID	Analysis Date	Analysis Time
7439-97-6	Mercury	0.090	B	0.20	1	4348517	7471A	019	12/16/2004	15:26

U Result is less than the instrument detection limit (IDL).

B Estimated result. Result is less than RL and greater than or equal to the IDL.

Form 1 Analysis Data Sheet Equivalent

KAISER-HILL LLC

Total Metals Analysis Data Sheet

Lab Name:	STL DENVER	Client Sample ID:	05Z0589-003.001
Lot/SDG Number:	05Z0589	Lab WorkOrder:	G0Q1J
Matrix:	SOLID	Lab Sample ID:	D4L100265-003
% Moisture:		Date/Time Collected:	12/08/04 9:40
Units:	MG/KG	Date/Time Received:	12/10/04 9:15

CAS No.	Analyte	Conc.	Q	RL	Dilution Factor	QC Batch ID	Method	Instrument ID	Analysis Date	Analysis Time
7429-90-5	Aluminum	9600		40	1	4345527	6010B	002	12/14/2004	21:22
7440-36-0	Antimony	0.26	U	12	1	4345527	6010B	016	12/15/2004	17:57
7440-38-2	Arsenic	2.0		2.0	1	4345527	6010B	016	12/15/2004	17:57
7440-39-3	Barium	100		20	1	4345527	6010B	016	12/15/2004	17:57
7440-41-7	Beryllium	0.43		0.20	1	4345527	6010B	002	12/14/2004	21:22
7440-42-8	Boron	13		1.5	1	4345527	6010B	002	12/14/2004	21:22
7440-43-9	Cadmium	0.22	B	1.0	1	4345527	6010B	016	12/15/2004	17:57
7440-70-2	Calcium	110000		1000	1	4345527	6010B	002	12/14/2004	21:22
7440-47-3	Chromium	10		0.40	1	4345527	6010B	016	12/15/2004	17:57
7440-48-4	Cobalt	4.0	B	10	1	4345527	6010B	016	12/15/2004	17:57
7440-50-8	Copper	12		5.0	1	4345527	6010B	016	12/15/2004	17:57
7439-89-6	Iron	8100		20	1	4345527	6010B	002	12/14/2004	21:22
7439-92-1	Lead	7.6		0.60	1	4345527	6010B	016	12/15/2004	17:57
7439-93-2	Lithium	6.1	B	20	1	4345527	6010B	002	12/14/2004	21:22
7439-95-4	Magnesium	2400		1000	1	4345527	6010B	002	12/14/2004	21:22
7439-96-5	Manganese	380		3.0	1	4345527	6010B	002	12/14/2004	21:22
7439-98-7	Molybdenum	1.5	B	6.0	1	4345527	6010B	016	12/15/2004	17:57
7440-02-0	Nickel	10		8.0	1	4345527	6010B	016	12/15/2004	17:57
7440-09-7	Potassium	1800		1000	1	4345527	6010B	002	12/14/2004	21:22
7782-49-2	Selenium	0.45	U	1.0	1	4345527	6010B	016	12/15/2004	17:57
7631-86-9	Silica as SiO2, Dissolve	480		5.0	1	4345527	6010B	002	12/14/2004	21:22
7440-22-4	Silver	1.9		1.0	1	4345527	6010B	016	12/15/2004	17:57
7440-23-5	Sodium	830	B	1000	1	4345527	6010B	002	12/14/2004	21:22
7440-24-6	Strontium	270		40	1	4345527	6010B	016	12/15/2004	17:57
7440-28-0	Thallium	0.86	B	2.0	1	4345527	6010B	016	12/15/2004	17:57
7440-31-5	Tin	1.9	B	40	1	4345527	6010B	016	12/15/2004	17:57
7440-32-6	Titanium	410		0.20	1	4345527	6010B	002	12/14/2004	21:22
11-09-6	Uranium	0.91	U	40	1	4345527	6010B	016	12/15/2004	17:57
7440-62-2	Vanadium	24		8.0	1	4345527	6010B	016	12/15/2004	17:57

Form 1 Analysis Data Sheet Equivalent

STAFFRN TRENT SERVICES

KAISER-HILL LLC

Total Metals Analysis Data Sheet

Lab Name:	STL DENVER	**Client Sample ID:**	05Z0589-003.001
Lot/SDG Number:	05Z0589	**Lab WorkOrder:**	G0Q1J
Matrix:	SOLID	**Lab Sample ID:**	D4L100265-003
% Moisture:		**Date/Time Collected:**	12/08/04 9:40
Units:	MG/KG	**Date/Time Received:**	12/10/04 9:15

CAS No.	Analyte	Conc.	Q	RL	Dilution Factor	QC Batch ID	Method	Instrument ID	Analysis Date	Analysis Time
7440-66-6	Zinc	29		4.0	1	4345527	6010B	002	12/14/2004	21:22

U Result is less than the instrument detection limit (IDL).

B Estimated result. Result is less than RL and greater than or equal to the IDL.

Form I Analysis Data Sheet Equivalent

KAISER-HILL LLC

Total Metals Analysis Data Sheet

Lab Name:	STL DENVER	Client Sample ID:	05Z0589-003.001
Lot/SDG Number:	05Z0589	Lab WorkOrder:	G0Q1J
Matrix:	SOLID	Lab Sample ID:	D4L100265-003
% Moisture:		Date/Time Collected:	12/08/04 9:40
Units:	MG/KG	Date/Time Received:	12/10/04 9:15

CAS No.	Analyte	Conc.	Q	RL	Dilution Factor	QC Batch ID	Method	Instrument ID	Analysis Date	Analysis Time
7439-97-6	Mercury	0.016	B	0.20	1	4348517	7471A	019	12/16/2004	15:28

U Result is less than the instrument detection limit (IDL).

B Estimated result. Result is less than RL and greater than or equal to the IDL.

Form I Analysis Data Sheet Equivalent

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 29.6 / g
Work Order: G0Q0Q1AC
Dilution factor: 1
Moisture %:

Date Received: 12/10/04
Date Extracted:12/13/04
Date Analyzed: 12/17/04

QC Batch: 4348436

Client Sample Id: 05Z0589-001.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	330	U
208-96-8	Acenaphthylene	330	U
120-12-7	Anthracene	330	U
56-55-3	Benzo(a)anthracene	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
65-85-0	Benzoic acid	1600	U
191-24-2	Benzo(ghi)perylene	330	U
50-32-8	Benzo(a)pyrene	330	U
100-51-6	Benzyl alcohol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
111-44-4	bis(2-Chloroethyl) ether	330	U
108-60-1	bis(2-Chloroisopropyl) ether	330	U
117-81-7	bis(2-Ethylhexyl) phthalate	330	U
101-55-3	4-Bromophenyl phenyl ether	330	U
85-68-7	Butyl benzyl phthalate	330	U
106-47-8	4-Chloroaniline	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-58-7	2-Chloronaphthalene	330	U
95-57-8	2-Chlorophenol	330	U
7005-72-3	4-Chlorophenyl phenyl ether	330	U
218-01-9	Chrysene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
132-64-9	Dibenzofuran	330	U
84-74-2	Di-n-butyl phthalate	330	U
95-50-1	1,2-Dichlorobenzene	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 29.6 / g Date Received: 12/10/04
Work Order: G0Q0Q1AC Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/17/04
Moisture %:

QC Batch: 4348436

Client Sample Id: 05Z0589-001.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-94-1	3,3'-Dichlorobenzidine	1300	U
120-83-2	2,4-Dichlorophenol	330	U
84-66-2	Diethyl phthalate	660	U
105-67-9	2,4-Dimethylphenol	330	U
131-11-3	Dimethyl phthalate	330	U
117-84-0	Di-n-octyl phthalate	330	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
51-28-5	2,4-Dinitrophenol	1600	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
206-44-0	Fluoranthene	330	U
86-73-7	Fluorene	330	U
118-74-1	Hexachlorobenzene	330	U
87-68-3	Hexachlorobutadiene	330	U
77-47-4	Hexachlorocyclopentadiene	660	U
67-72-1	Hexachloroethane	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
78-59-1	Isophorone	330	U
91-57-6	2-Methylnaphthalene	330	U
95-48-7	2-Methylphenol	330	U
106-44-5	4-Methylphenol	330	U
91-20-3	Naphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
99-09-2	3-Nitroaniline	1600	U
100-01-6	4-Nitroaniline	1600	U
98-95-3	Nitrobenzene	330	U
88-75-5	2-Nitrophenol	330	U
100-02-7	4-Nitrophenol	1600	U

KAISER-HILL LLC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: 05Z0589

Matrix: (soil/water) SI Lab Sample ID: D4L100265 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 29.6 / g
Work Order: G0Q0Q1AC
Dilution factor: 1
Moisture %:

Date Received: 12/10/04
Date Extracted: 12/13/04
Date Analyzed: 12/17/04

QC Batch: 4348436

Client Sample Id: 05Z0589-001.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
621-64-7	N-Nitrosodi-n-propylamine	330	U
86-30-6	N-Nitrosodiphenylamine	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
108-95-2	Phenol	330	U
129-00-0	Pyrene	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
88-06-2	2,4,6-Trichlorophenol	330	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	56	(38 - 86)
Phenol-d5	62	(38 - 90)
Nitrobenzene-d5	67	(40 - 89)
2-Fluorobiphenyl	55	(38 - 86)
2,4,6-Tribromophenol	29	(20 - 109)
Terphenyl-d14	69	(33 - 98)

KAISER-HILL LLC
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 29.6 / g
Work Order: G0Q0Q1AC
Dilution factor: 1
Moisture %:

Date Received: 12/10/04
Date Extracted:12/13/04
Date Analyzed: 12/17/04

QC Batch: 4348436

Client Sample Id: 05Z0589-001.001

(ug/L or ug/kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	Unknown	3.1532	390	J
141-79-7	3-Penten-2-one, 4-methyl-	3.5345	2100	J
	Unknown	3.9642	120000	J
107-70-0	2-Pentanone, 4-methoxy-4-met	4.4046	490	J
104-76-7	1-Hexanol, 2-ethyl-	5.2318	910	J
	Unknown	6.0481	300	J
	Unknown	6.3597	440	J
2605-67-6	Acetic acid, (triphenylphosp	11.945	250	J
	Unknown	13.621	250	J

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 29.9 / g
Work Order: G0Q021AN
Dilution factor: 1
Moisture %:

Date Received: 12/10/04
Date Extracted:12/13/04
Date Analyzed: 12/17/04

QC Batch: 4348436

Client Sample Id: 05Z0589-002.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	330	U
208-96-8	Acenaphthylene	330	U
120-12-7	Anthracene	330	U
56-55-3	Benzo(a)anthracene	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
65-85-0	Benzoic acid	1600	U
191-24-2	Benzo(ghi)perylene	330	U
50-32-8	Benzo(a)pyrene	330	U
100-51-6	Benzyl alcohol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
111-44-4	bis(2-Chloroethyl) ether	330	U
108-60-1	bis(2-Chloroisopropyl) ether	330	U
117-81-7	bis(2-Ethylhexyl) phthalate	330	U
101-55-3	4-Bromophenyl phenyl ether	330	U
85-68-7	Butyl benzyl phthalate	330	U
106-47-8	4-Chloroaniline	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-58-7	2-Chloronaphthalene	330	U
95-57-8	2-Chlorophenol	330	U
7005-72-3	4-Chlorophenyl phenyl ether	330	U
218-01-9	Chrysene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
132-64-9	Dibenzofuran	330	U
84-74-2	Di-n-butyl phthalate	330	U
95-50-1	1,2-Dichlorobenzene	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U

KAISER-HILL LLC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: 05Z0589

Matrix: (soil/water) SI Lab Sample ID: D4L100265 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 29.9 / g Date Received: 12/10/04
Work Order: G0Q021AN Date Extracted: 12/13/04
Dilution factor: 1 Date Analyzed: 12/17/04
Moisture %:

QC Batch: 4348436

Client Sample Id: 05Z0589-002-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-94-1	3,3'-Dichlorobenzidine	1300	U
120-83-2	2,4-Dichlorophenol	330	U
84-66-2	Diethyl phthalate	660	U
105-67-9	2,4-Dimethylphenol	330	U
131-11-3	Dimethyl phthalate	330	U
117-84-0	Di-n-octyl phthalate	330	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
51-28-5	2,4-Dinitrophenol	1600	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
206-44-0	Fluoranthene	330	U
86-73-7	Fluorene	330	U
118-74-1	Hexachlorobenzene	330	U
87-68-3	Hexachlorobutadiene	330	U
77-47-4	Hexachlorocyclopentadiene	660	U
67-72-1	Hexachloroethane	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
78-59-1	Isophorone	330	U
91-57-6	2-Methylnaphthalene	330	U
95-48-7	2-Methylphenol	330	U
106-44-5	4-Methylphenol	330	U
91-20-3	Naphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
99-09-2	3-Nitroaniline	1600	U
100-01-6	4-Nitroaniline	1600	U
98-95-3	Nitrobenzene	330	U
88-75-5	2-Nitrophenol	330	U
100-02-7	4-Nitrophenol	1600	U

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 29.9 / g Date Received: 12/10/04
Work Order: G0Q021AN Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/17/04
Moisture %:

QC Batch: 4348436

Client Sample Id: 05Z0589-002.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
621-64-7	N-Nitrosodi-n-propylamine	330	U
86-30-6	N-Nitrosodiphenylamine	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
108-95-2	Phenol	330	U
129-00-0	Pyrene	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
88-06-2	2,4,6-Trichlorophenol	330	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	50	(38 - 86)
Phenol-d5	64	(38 - 90)
Nitrobenzene-d5	72	(40 - 89)
2-Fluorobiphenyl	59	(38 - 86)
2,4,6-Tribromophenol	26	(20 - 109)
Terphenyl-d14	73	(33 - 98)

KAISER-HILL LLC
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Lab Sample ID:D4L100265 002

Sample WT/Vol: 29.9 / g
Work Order: G0Q021AN
Dilution factor: 1
Moisture %:

Date Received: 12/10/04
Date Extracted:12/13/04
Date Analyzed: 12/17/04

QC Batch: 4348436

Client Sample Id: 05Z0589-002.001

(ug/L or ug/kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	Unknown	3.2985	1000	J
141-79-7	3-Penten-2-one, 4-methyl-	3.5401	9900	J
	Unknown	4.0343	270000	J
107-70-0	2-Pentanone, 4-methoxy-4-met	4.4156	560	J
	Unknown	4.8238	150	J
104-76-7	1-Hexanol, 2-ethyl-	5.2374	1600	J
	Unknown	6.0484	1100	J
	Unknown	6.3653	1600	J
791-28-6	Phosphine oxide, triphenyl-	11.94	280	J
	Unknown	13.578	150	J
	Unknown	16.935	400	J

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.6 / g Date Received: 12/10/04
Work Order: G0Q1J1AN Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/17/04
Moisture %:

QC Batch: 4348436

Client Sample Id: 05Z0589-003.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	330	U
208-96-8	Acenaphthylene	330	U
120-12-7	Anthracene	330	U
56-55-3	Benzo(a)anthracene	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
65-85-0	Benzoic acid	1600	U
191-24-2	Benzo(ghi)perylene	330	U
50-32-8	Benzo(a)pyrene	330	U
100-51-6	Benzyl alcohol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
111-44-4	bis(2-Chloroethyl) ether	330	U
108-60-1	bis(2-Chloroisopropyl) ether	330	U
117-81-7	bis(2-Ethylhexyl) phthalate	330	U
101-55-3	4-Bromophenyl phenyl ether	330	U
85-68-7	Butyl benzyl phthalate	330	U
106-47-8	4-Chloroaniline	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-58-7	2-Chloronaphthalene	330	U
95-57-8	2-Chlorophenol	330	U
7005-72-3	4-Chlorophenyl phenyl ether	330	U
218-01-9	Chrysene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
132-64-9	Dibenzofuran	330	U
84-74-2	Di-n-butyl phthalate	330	U
95-50-1	1,2-Dichlorobenzene	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U

KAISER-HILL LLC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: 05Z0589

Matrix: (soil/water) SI Lab Sample ID: D4L100265 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.6 / g Date Received: 12/10/04
Work Order: G0Q1J1AN Date Extracted: 12/13/04
Dilution factor: 1 Date Analyzed: 12/17/04
Moisture %:

QC Batch: 4348436

Client Sample Id: 05Z0589-003.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-94-1	3,3'-Dichlorobenzidine	1300	U
120-83-2	2,4-Dichlorophenol	330	U
84-66-2	Diethyl phthalate	660	U
105-67-9	2,4-Dimethylphenol	330	U
131-11-3	Dimethyl phthalate	330	U
117-84-0	Di-n-octyl phthalate	330	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
51-28-5	2,4-Dinitrophenol	1600	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
206-44-0	Fluoranthene	330	U
86-73-7	Fluorene	330	U
118-74-1	Hexachlorobenzene	330	U
87-68-3	Hexachlorobutadiene	330	U
77-47-4	Hexachlorocyclopentadiene	660	U
67-72-1	Hexachloroethane	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
78-59-1	Isophorone	330	U
91-57-6	2-Methylnaphthalene	330	U
95-48-7	2-Methylphenol	330	U
106-44-5	4-Methylphenol	330	U
91-20-3	Naphthalene	330	U
88-74-4	2-Nitroaniline	1600	U
99-09-2	3-Nitroaniline	1600	U
100-01-6	4-Nitroaniline	1600	U
98-95-3	Nitrobenzene	330	U
88-75-5	2-Nitrophenol	330	U
100-02-7	4-Nitrophenol	1600	U

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.6 / g Date Received: 12/10/04
Work Order: G0Q1J1AN Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/17/04
Moisture %:

QC Batch: 4348436

Client Sample Id: 05Z0589-003.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
621-64-7	N-Nitrosodi-n-propylamine	330	U
86-30-6	N-Nitrosodiphenylamine	330	U
87-86-5	Pentachlorophenol	1600	U
85-01-8	Phenanthrene	330	U
108-95-2	Phenol	330	U
129-00-0	Pyrene	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
88-06-2	2,4,6-Trichlorophenol	330	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2-Fluorophenol	34	(38 - 86)
Phenol-d5	49	(38 - 90)
Nitrobenzene-d5	63	(40 - 89)
2-Fluorobiphenyl	52	(38 - 86)
2,4,6-Tribromophenol	23	(20 - 109)
Terphenyl-d14	62	(33 - 98)

KAISER-HILL LLC
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.6 / g Date Received: 12/10/04
Work Order: G0Q1J1AN Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/17/04
Moisture %:

QC Batch: 4348436

Client Sample Id: Q5Z0589-003.001

(ug/L or ug/kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
141-79-7	3-Penten-2-one, 4-methyl-	3.5438	11000	J
	Unknown	4.0433	260000	J
107-70-0	2-Pentanone, 4-methoxy-4-met	4.4192	460	J
	Unknown	4.4676	230	J
	Unknown	6.052	1100	J
	Unknown	6.3635	1300	J
5717-37-3	(Carbethoxyethylidine)triphe	11.933	190	J
	Unknown	12.948	130	J

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KAISER-HILL LLC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: 05Z0589

Matrix: (soil/water) SI
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Lab Sample ID: D4L100265 001

Sample WT/Vol: 5 / g
Work Order: G0Q0Q1AA
Dilution factor: 1
Moisture %:

Date Received: 12/10/04
Date Extracted: 12/13/04
Date Analyzed: 12/13/04

QC Batch: 4349568

Client Sample Id: 05Z0589-001.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
67-64-1	Acetone	3.5	J
71-43-2	Benzene	5.0	U
108-86-1	Bromobenzene	5.0	U
74-97-5	Bromochloromethane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	5.0	U
78-93-3	2-Butanone (MEK)	20	U
104-51-8	n-Butylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
75-00-3	Chloroethane	5.0	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	5.0	U
95-49-8	2-Chlorotoluene	5.0	U
106-43-4	4-Chlorotoluene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	5.0	U
74-95-3	Dibromomethane	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
75-71-8	Dichlorodifluoromethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U

FORM I

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g
Work Order: G0Q0Q1AA
Dilution factor: 1
Moisture %:

Date Received: 12/10/04
Date Extracted:12/13/04
Date Analyzed: 12/13/04

QC Batch: 4349568

Client Sample Id: 05Z0589-001.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
107-06-2	1,2-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
75-35-4	1,1-Dichloroethene	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
142-28-9	1,3-Dichloropropane	5.0	U
594-20-7	2,2-Dichloropropane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
563-58-6	1,1-Dichloropropene	5.0	U
100-41-4	Ethylbenzene	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
591-78-6	2-Hexanone	20	U
98-82-8	Isopropylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
75-09-2	Methylene chloride	2.1	J B
108-10-1	4-Methyl-2-pentanone	20	U
91-20-3	Naphthalene	1.5	J B
103-65-1	n-Propylbenzene	5.0	U
100-42-5	Styrene	5.0	U
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	0.70	J B
120-82-1	1,2,4-Trichlorobenzene	0.62	J B
71-55-6	1,1,1-Trichloroethane	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U

FORM I

KAISER-HILL LLC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: 05Z0589

Matrix: (soil/water) SI Lab Sample ID: D4L100265 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q0Q1AA Date Extracted: 12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-001.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
79-01-6	Trichloroethene	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
75-01-4	Vinyl chloride	5.0	U
1330-20-7	Xylenes (total)	5.0	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibromofluoromethane	77	(68 - 130)
1,2-Dichloroethane-d4	82	(61 - 129)
4-Bromofluorobenzene	118	(64 - 126)
Toluene-d8	103	(70 - 128)

FORM I

KAISER-HILL LLC
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q0Q1AA Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-001.001

(ug/L or ug/kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	Unknown	8.9374	9.1	J
106-35-4	3-Heptanone	10.958	35	J
	Unknown	12.889	6.3	J
104-76-7	1-Hexanol, 2-ethyl-	13.394	250	J
	Unknown	14.17	49	J
72218-58-7	3-Methylheptyl acetate	14.711	280	J
	Unknown	15.036	6.5	J
	Unknown	16.263	39	J

FORM I - TIC

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q021AM Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-002.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
67-64-1	Acetone	5.7	J
71-43-2	Benzene	5.0	U
108-86-1	Bromobenzene	5.0	U
74-97-5	Bromochloromethane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	5.0	U
78-93-3	2-Butanone (MEK)	20	U
104-51-8	n-Butylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
75-00-3	Chloroethane	5.0	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	5.0	U
95-49-8	2-Chlorotoluene	5.0	U
106-43-4	4-Chlorotoluene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	5.0	U
74-95-3	Dibromomethane	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
75-71-8	Dichlorodifluoromethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U

FORM I

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KAISER-HILL LLC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: 05Z0589

Matrix: (soil/water) SI Lab Sample ID: D4L100265 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q021AM Date Extracted: 12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-002.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
107-06-2	1,2-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
75-35-4	1,1-Dichloroethene	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
142-28-9	1,3-Dichloropropane	5.0	U
594-20-7	2,2-Dichloropropane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
563-58-6	1,1-Dichloropropane	5.0	U
100-41-4	Ethylbenzene	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
591-78-6	2-Hexanone	20	U
98-82-8	Isopropylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
75-09-2	Methylene chloride	1.8	J B
108-10-1	4-Methyl-2-pentanone	20	U
91-20-3	Naphthalene	5.0	U
103-65-1	n-Propylbenzene	5.0	U
100-42-5	Styrene	5.0	U
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	0.26	J B
120-82-1	1,2,4-Trichlorobenzene	0.22	J B
71-55-6	1,1,1-Trichloroethane	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U

FORM I

KAISER-HILL LLC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: 05Z0589

Matrix: (soil/water) SI Lab Sample ID: D4L100265 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q021AM Date Extracted: 12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-002.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
79-01-6	Trichloroethene	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
75-01-4	Vinyl chloride	5.0	U
1330-20-7	Xylenes (total)	5.0	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibromofluoromethane	66	(68 - 130)
1,2-Dichloroethane-d4	76	(61 - 129)
4-Bromofluorobenzene	110	(64 - 126)
Toluene-d8	96	(70 - 128)

FORM I

KAISER-HILL LLC
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q021AM Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-002.001

(ug/L or ug/kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	Unknown	8.9385	9.9	J
106-35-4	3-Heptanone	10.941	8.4	J
556-67-2	Cyclotetrasiloxane, octameth	11.843	5.8	J
26952-21-6	Isooctanol	12.89	10	J
104-76-7	1-Hexanol, 2-ethyl-	13.395	410	J
111-87-5	1-Octanol	13.955	5.1	J
	Unknown	14.171	31	J
124-19-6	Nonanal	14.37	5.3	J
72218-58-7	3-Methylheptyl acetate	14.712	210	J
	Unknown	15.037	5.8	J
	Unknown	15.759	99	J

FORM I - TIC

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q1J1AM Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-003.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
67-64-1	Acetone	13	J
71-43-2	Benzene	5.0	U
108-86-1	Bromobenzene	5.0	U
74-97-5	Bromochloromethane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	5.0	U
78-93-3	2-Butanone (MEK)	4.8	J
104-51-8	n-Butylbenzene	5.0	U
135-98-8	sec-Butylbenzene	5.0	U
98-06-6	tert-Butylbenzene	5.0	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
75-00-3	Chloroethane	5.0	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	5.0	U
95-49-8	2-Chlorotoluene	5.0	U
106-43-4	4-Chlorotoluene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	5.0	U
74-95-3	Dibromomethane	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
75-71-8	Dichlorodifluoromethane	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U

FORM I

KAISER-HILL LLC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: 05Z0589

Matrix: (soil/water) SI Lab Sample ID: D4L100265 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q1J1AM Date Extracted: 12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-003.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
107-06-2	1,2-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
75-35-4	1,1-Dichloroethene	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
142-28-9	1,3-Dichloropropane	5.0	U
594-20-7	2,2-Dichloropropane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
563-58-6	1,1-Dichloropropene	5.0	U
100-41-4	Ethylbenzene	5.0	U
87-68-3	Hexachlorobutadiene	5.0	U
591-78-6	2-Hexanone	20	U
98-82-8	Isopropylbenzene	5.0	U
99-87-6	4-Isopropyltoluene	5.0	U
75-09-2	Methylene chloride	1.7	J B
108-10-1	4-Methyl-2-pentanone	20	U
91-20-3	Naphthalene	0.73	J B
103-65-1	n-Propylbenzene	5.0	U
100-42-5	Styrene	5.0	U
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U

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KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:05Z0589

Matrix: (soil/water) SI Lab Sample ID:D4L100265 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q1J1AM Date Extracted:12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-003.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
79-01-6	Trichloroethene	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-triflu	5.0	U
95-63-6	1,2,4-Trimethylbenzene	5.0	U
108-67-8	1,3,5-Trimethylbenzene	5.0	U
75-01-4	Vinyl chloride	5.0	U
1330-20-7	Xylenes (total)	5.0	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibromofluoromethane	45	(68 - 130)
1,2-Dichloroethane-d4	83	(61 - 129)
4-Bromofluorobenzene	117	(64 - 126)
Toluene-d8	101	(70 - 128)

FORM I

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KAISER-HILL LLC
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number: 05Z0589

Matrix: (soil/water) SI Lab Sample ID: D4L100265 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 12/10/04
Work Order: G0Q1J1AM Date Extracted: 12/13/04
Dilution factor: 1 Date Analyzed: 12/13/04
Moisture %:

QC Batch: 4349568

Client Sample Id: 05Z0589-003.001

(ug/L or ug/kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	Unknown	8.9375	8.6	J
	Unknown	11.842	5.4	J
1653-40-3	1-Heptanol, 6-methyl-	12.889	5.6	J
104-76-7	1-Hexanol, 2-ethyl-	13.394	160	J
	Unknown	14.17	29	J
103-09-3	Acetic acid, 2-ethylhexyl es	14.711	57	J
	Unknown	16.245	15	J

FORM I - TIC

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ATTACHMENT D

Data Quality Assessment (DQA) Detail

DATA QUALITY ASSESSMENT (DQA)

VERIFICATION & VALIDATION (V&V) 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 beryllium, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals and PCBs].

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 D-1, beryllium in Table D-2, VOCs in D-3, SVOCs in Table D-4, metals in Table D-5 and PCBs in Table D-6. A data completeness summary for all results is given in Table D-7.

All relevant Quality records supporting this report are maintained in the RISS Characterization Project File. The 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 LLW RSP 07.02 Survey Forms. Chemical data are organized by RIN (Report Identification Number) and are traceable to the sample number and corresponding sample location.

Beta/gamma survey designs were not implemented for Building 559 based on the conservatism of the transuranic limits used as DCGLs in the unrestricted release decision process. Since the building could not be decontaminated below the PDSP unrestricted release DCGLs, no formal PDS survey designs and sampling was performed per MARSSIM. Instead, in-process waste disposal and LLW demolition planning surveys were performed. As a result, the in-process waste disposal and LLW demolition planning surveys suffice as the PDS surveys for this building, and are contained in Attachments B-1, *Pre-Fixative LLW Radiological Survey Forms* and B-2, *Post-Fixative LLW Radiological Survey Forms.* Additionally, the requirements of EPA's G-4 DQO process regarding radiological survey design and number of surveys required is not applicable as all surveys are in-process.

DQA SUMMARY

In summary, the data presented in this report have been verified and validated relative to the quality requirements and project decisions as stated in the original DQOs. All data are useable based on qualifications stated herein and are considered satisfactory without qualification. All media surveyed and sampled yielded results less than their associated action levels and with acceptable certainties except for the radiological surveys as summarized in Section 3. On this basis, Building 559 will be managed and disposed of as transuranic LLW during demolition. Appropriate controls will be incorporated into the demolition work packages to control these hazards during demolition.

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Although no radiological survey packages were used for this PDSR, the in-process surveys were reviewed as part of the DQA process and verified that the original project DQO objectives were met. The original project radiological survey Data Quality Objectives (DQOs) were satisfied by following Radiological Safety Practice procedures 3-PRO-165-07.02, *Contamination Monitoring Requirements*, and PRO-267-RSP-09.05, *Radiological Characterization for Surface Contaminated Objects*. No removable radiological or beryllium contamination existed above the unrestricted release criteria in these areas after decontamination and fixative application. Except as noted above, all remaining facility non-radiological contamination levels were below applicable PDSP unrestricted release levels. Minimum survey requirements were met, sampling/survey protocol was performed in accordance with applicable procedures, and instrument performance and calibrations were within acceptable limits.

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. Based upon this PDSR, Building 559 can be demolished and the waste managed as LLW. None of the concrete will be used for on-site backfill. Under-slab utilities and piping systems shall be managed as LLW during demolition.

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Table D-1 V&V of Radiological Results - Buildings 559

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: All Surveys Were In-Process Surveys per RSP 07.02 Survey Forms – No PDS Surveys Performed	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 D-7 for details.
SENSITIVITY	Detection limits	(Transuranic) TSA: ≤50 dpm/100cm^2 RSA: ≤10 dpm/100cm^2	all measures	PDS MDAs ≤ 50% $DCGL_w$

Table D-2 V&V of Beryllium Results - Building 559

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
BERYLLIUM	Prep: NMAM 7300 METHOD: OSHA ID-125G	LAB --->	Johns Manville Littleton, Colorado	
		RIN ---->	RIN05D0469 RIN05Z0854	
QUALITY	REQUIREMENTS	Measure	Frequency	COMMENTS
ACCURACY	Calibrations Initial	Linear calibration	≥1	All PDS results were below unrestricted release levels.
	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/100cm²	NA	
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	>95% >95%	NA	
SENSITIVITY	Detection limits	MDL of 0.00084 ug/swipe	all measures	

Table E-3 V&V of Volatile Organic Compounds (VOCs) - Building 559

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
VOCs	METHOD: SW8260	LAB --->	Severn Trent Services Denver, Colorado	
		RIN --->	RIN05Z0589	
QUALITY REQUIREMENTS		Measure	Frequency	COMMENTS
ACCURACY	Calibrations: Initial	± 40%D in Response Factor	≥1/batch	All results were below regulatory limits.
	Continuing	80%<%R<120%	≥1/batch	
	LCS	80%<%R<120%	≥1/batch	
	MS	75%<%R<125%	≥1 batch	
	Blanks - lab	ug/kg	≥1/batch	
	Internal standards	retention times and area factors	≥1/batch	
	Surrogate	%R (variable)	≥1/batch	
PRECISION	MSD	RPD<30%	≥1/batch	
	Field duplicate	all results < RL	≥1/batch	
REPRESENTATIVENESS	COC	Qualitative	NA	
	Hold times/preservation	≤ 14 days	NA	
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	
COMPARABILITY	Measurement units	ug/kg	NA	
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	>95% >95%	NA	
SENSITIVITY	Detection limits	Various	all analytes	

Table E-4 V&V of Semi-Volatile Organic Compounds (SVOCs) - Building 559

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
SVOCs	METHOD: SW8270	LAB --->	Severn Trent Services Denver, Colorado	
		RIN ---->	RIN05Z0589	
				COMMENTS
QUALITY REQUIREMENTS		Measure	Frequency	All results were below regulatory limits.
ACCURACY	Calibrations: Initial	± 40%D in Response Factor	≥1/batch	
	Continuing	80%<%R<120%	≥1/batch	
	LCS	80%<%R<120%	≥1/batch	
	MS	75%<%R<125%	≥1 batch	
	Blanks - Lab	ug/kg	≥1/batch	
	Internal standards	retention times and area factors	≥1/batch	
	Surrogate	%R (variable)	≥1/batch	
PRECISION	MSD	RPD<30%	≥1/batch	
	Field duplicate	all results < RL	≥1/batch	
REPRESENTATIVENESS	COC	Qualitative	NA	
	Hold times/preservation	≤ 14 days	NA	
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	
COMPARABILITY	Measurement units	ug/kg	NA	
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	>95% >95%	NA	
SENSITIVITY	Detection limits	Various	all analytes	

Table E-5 V&V of Metals -Building 559

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
Metals (total)	METHOD: SW6010/6020	LAB --->	Severn Trent Services Denver, Colorado	[redacted]
[redacted]		RIN ---->	RIN05Z0589	
				COMMENTS
QUALITY REQUIREMENTS		Measure	Frequency	TCLP results below associated action levels and regulatory limits.
ACCURACY	Calibrations: Initial	linear calibration	≥1/batch	
	Continuing	80%<%R<120%	≥1/batch	
	LCS	80%<%R<120%	≥1/batch	
	MS	75%<%R<125%	≥1/batch	
	Blanks - lab	mg/kg	≥1/batch	
	Serial dilutions	%D<10%	≥1/batch	
	Interference check std (ICP)	80%<%R<120%	bracket batch	
PRECISION	MSD	RPD<30%	≥1/batch	
	Field duplicate	all results < RL	≥1/batch	
REPRESENTATIVENESS	COC	Qualitative	NA	
	Hold times/preservation	≤180 days	NA	
	Controlling Documents (Plans, Procedures, Maps, etc.)	Qualitative	NA	
COMPARABILITY	Measurement units	mg/kg	NA	
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	>95% >95%	NA	
SENSITIVITY	Detection limits	Various	all analytes	

Table E-6 V&V of PCBs - Building 559

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
PCBs	METHOD: SW8082	LAB --->	Severn Trent Services Denver, Colorado	
		RIN ---->	RIN05Z0589	
QUALITY REQUIREMENTS		Measure	Frequency	COMMENTS
ACCURACY	Calibrations: Initial	r^2 >0.99	≥1/batch	All results were less than regulatory limits.
	Continuing	80%<%R<120%	≥1/batch	
	LCS	80%<%R<120%	≥1/batch	
	MS	75%<%R<125%	≥1/batch	
	Blanks - Labs	<MDL	≥1/batch	
PRECISION	MSD	75%<%R<125%	≥1/batch	
	Field duplicate	all results < RL	≥1/batch	
REPRESENTATIVENESS	COC	Qualitative	NA	
	Hold times/preservation	≤30 days extract ≤45 days analysis	NA	
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	
COMPARABILITY	Measurement units	ug/kg	NA	
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	>95% >95%	NA	
SENSITIVITY	Detection limits	Various	all analytes	

Table D-7 Data Completeness Summary – Building 559

ANALYTE	Building/Area/Unit	Sample Number Planned (Real & QC)[A]	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Beryllium	Building 559 and Re-circulation Tunnel (interior)	71 samples (61 random/10 biased)	77 samples (61 random/16 biased)	No Be contamination found at any location, all results were below associated action levels	10CFR850; OSHA ID-125G RIN05Z0854: sample locations #76 and #77 RIN05D0469: sample locations #1-#75 All Beryllium results were less than the associated action levels (0.2 ug/100cm^2) and investigative levels (0.1 ug/100cm^2).
VOCs	Building 559 (interior)	3 samples (solid – concrete core sample)	3 samples (solid – concrete core sample)	No VOC contamination identified, all results were below regulatory limits	6CCR 1007-3; SW846 1311/Method 8260 RIN05Z0589
SVOCs	Building 559 (interior)	3 samples (solid – concrete core sample	3 samples (solid – concrete core sample)	No SVOC contamination identified, all results were below regulatory limits	6CCR 1007-3; SW846 1311/Method 8270/8270C RIN05Z0589
Metals (total and TCLP)	Building 559 (interior)	3 samples (solid – concrete core sample	3 samples (solid – concrete core sample)	No Metal contamination identified, all results were below regulatory limits	SW846 1311; SW846 6010/6010B RIN05Z0589
PCBs	Building 559 (interior)	3 samples (solid – concrete core sample	3 samples (solid – concrete core sample)	No PCB contamination identified, all results were below regulatory limits	40CFR761; SW846/Method 8082 RIN05Z0589