# Rocky Flats Environmental Technology Site

## PRE-DEMOLITION SURVEY REPORT (PDSR)

## Building 447 Closure Project

**VERSION 0**

**September 21, 2004**

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

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## Building 447 Closure Project

**VERSION 0**

**September 21, 2004**

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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 complzeteness |
| 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 |
| 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 447. 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, 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. There is no beryllium or hazardous waste in excess of the PDSP unrestricted release limits. However, fixatives were used to immobilize beryllium contamination. 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. Asbestos abatement was conducted in Building 447 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 Non-Friable Category 1 Asbestos Containing Materials (ACM) during building demolition. PCBs (polychlorinated biphenyls) in paint meet the unrestricted release criteria of the RSOP for Facility Disposition (specific to 40CFR 761.62c).

Various surfaces within Building 447 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 structures associated with these surfaces will be removed and managed as low level radiological waste (LLW) during demolition, or in some cases will be left in-place underground. All other surfaces within Building 447 are below the radiological PDSP unrestricted release limits. The surfaces (and associated structures) that will be managed as LLW include all of the structural steel, all ceiling and roofing materials, the west end of Building 447 west of column line $H_A$, all exterior transite walls, and some portions of the main floor concrete slab.

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The contaminated surfaces that will be left in-place include portions of filled-in concrete trenches, pipe stubs and a concrete pit. Additionally, there is a soil contamination area beneath the concrete slab that needs further investigation and remediation after demolition. All of these areas are discussed in more detail within this report.

Based upon this PDSR, Building 447 can be demolished, with those portions of the building that will be three feet below final grade left in place. Appropriate approvals have been obtained for leaving portions of the facility slab in-place underground. To ensure the facility remains free of further contamination and PDS data remain valid, Level 2 Isolation Controls have been established and the areas posted accordingly.

# 1 INTRODUCTION

A Pre-Demolition Survey (PDS) was performed to enable compliant disposition and waste management of Building 447. 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 and ceilings. The Building 447 exterior was characterized in accordance with Pre-Demolition Survey Plan (MAN-127-PDSP) requirements as part of the Building 444 Cluster RLCR, completed September 5, 2002. 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 447. 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.

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 447. 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 447 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 447. 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.

## 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). Refer to section 2.0 of MAN-127-PDSP for these DQOs.

# 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 447 was performed in FY 2002 as part of the Building 444 Cluster RLCR (refer to *Reconnaissance Level Characterization Report for the Building 444 Cluster,* dated September 5, 2002, Revision 0). Based on the RLC results, Building 447 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

## 3.1 In-Process Strip-out, Decontamination, and Special Conditions

Radiological contamination was identified during the RLC, as well as during the in-process stripout and decontamination phases in Building 447. Thus, extensive stripout and decontamination was required prior to the PDS. All potentially contaminated equipment and system piping were removed from the building prior to PDS. Most concrete floor and foundation surfaces were decontaminated, and floor cracks were jack-hammered to remove contamination, as necessary. Some areas had fixative applied to immobilize loose beryllium contamination (but only after the radiological PDS was performed) and loose radiological contamination. After stripout and decontamination was completed, the areas were cleaned, isolated and re-surveyed prior to turnover to the PDS Team.

In some areas, radiological contamination could not be decontaminated below the PDS unrestricted release criteria without compromising the structural integrity of the building or were too difficult to decontaminate. Therefore, these surfaces will be removed and managed as LLW during demolition. The surfaces that will be removed and managed as LLW include:

- all structural steel (including both vertical and horizontal structural steel above slab grade),
- all ceiling, attic space, and roof materials (including both the inner and outer roofs),
- the west end of Building 447 west of column line $H_A$ 447, including the $H_A$ north-south dividing wall, consisting of Rooms 31-35, 501-503, and elevator shaft,
- all exterior transite walls
- localized Room 405 concrete slab locations

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Some additional surfaces that were above the PDSP unrestricted release criteria will remain in place and be buried during demolition. The surfaces that will remain in place and be buried include:

- filled-in concrete trenches (filled with concrete) in Rooms 405B and 406B,
- the floor and lower walls of Pit 405,
- two contaminated Process Waste System piping stubs in the Room 36 Pit

Most of the exterior transite wall paneling has been removed during the PDS process per RFCA Contact Record authorizations. The two contaminated Process Waste System piping stubs that will be left in-place in the Room 36 Pit are embedded into the concrete walls of the pit. These stubs were grouted shut in the early 1980s and had maximum fixed contamination readings of up 55,000 dpm/100cm$^2$ coming off the stub ends. It was determined by *in-situ* gamma spectroscopy measurements, that the most contaminated pipe stub had a worst case scenario of 2,486,966 dpm/100cm$^2$ beta of depleted uranium holdup inside the pipe stub.

Based on in-process core samples of the filled in concrete trenches in Rooms 405B & 406B, it was calculated that the worst case scenario of average contamination inside the inaccessible areas of the trenches is 1.222 pCi/gram of depleted uranium holdup. Based on in-process surveys of Pit 405A, it was calculated that the worst case scenario of average contamination on the inaccessible areas of the pit would be 38.737 pCi/gram of depleted uranium holdup.

Additionally, there is one area of soil contamination area under the concrete slab on the west side of Pit 405A that needs to be investigated and remediated after demolition. A soil sample result at this location showed 1,530 pCi/gram of U-238.

The above contaminated areas have been highlighted either in red (meaning the area will be removed and managed as LLW during demolition) or in orange (meaning the area will remain in place and be buried during demolition) on survey maps contained in Attachment B-2, *Radiological Survey Unit Data Summaries and Survey Maps.*

In-process surveys have been performed on all contaminated and LLW areas for demolition and waste disposal purposes. Prior to these surveys, decontamination was performed and the use of fixatives was applied to reduce the amount of fixed and removable contamination to the maximum extent practical. No removable radiological or beryllium contamination existed above the unrestricted release criteria in these areas after decontamination and fixative application. Appropriate controls will be incorporated into the demolition work packages to control these hazards during demolition.. In-process surveys are located in the RISS Characterization Project files. The following bullets summarize the results of the in-process surveys:

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- All structural steel (including both vertical and horizontal structural steel above slab grade)

  Pre-fixative: <5,000-75,000 dpm/100cm$^2$ fixed, <1,000 dpm/100cm$^2$ loose

  Post-fixative: Same as pre-fixative

- All ceiling, attic space, and roof materials (including both the inner and outer roofs)

  Pre-fixative: <5,000-66,000 dpm/100cm$^2$ fixed, <1,000 dpm/100cm$^2$ loose

  Post-fixative: Same as pre-fixative

- West end of Building 447 west of column line Ha 447, including the Ha north-south dividing wall, consisting of Rooms 31-35, and elevator shaft

  Pre-fixative: <5,000-15,000,000 dpm/100cm$^2$ fixed, <1,000-10,000 dpm/100cm$^2$ loose

  Post-fixative: <5,000-5,300,000 dpm/100cm$^2$ fixed, <1,000 dpm/100cm$^2$ loose

- Exterior transite walls

  Pre-fixative: <5,000-55,000 dpm/100cm$^2$ fixed, <1,000 dpm/100cm$^2$ loose

  Post-fixative: Same as pre-fixative

- Room 405A concrete slab locations (grade level of slab)

  Pre-fixative: 10,000-1,500,000 dpm/100cm$^2$ fixed, <1,000 dpm/100cm$^2$ loose

  Post-fixative: Same as pre-fixative

## 3.2 PDS Planning and Preparation

Building 447 was characterized for radiological hazards per the PDSP. Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces. Measurements were performed to evaluate the contaminants of concern. Based on the RLC data and historical and process knowledge, only depleted uranium activity was a concern inside Building 447. Based upon a review of historical and process knowledge, building walk-downs, and MARSSIM guidance, a Radiological Characterization Plan was developed during the planning phase that describes the minimum survey requirements (refer to the RISS Characterization Project files for the Building 447 Radiological Characterization Plan). Individual radiological survey unit packages are maintained in the RISS Characterization Project files.

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Initially, ten (10) radiological survey unit packages were developed for Buildings 447. However, since the areas within Survey Units 447101, 447102, 447103, 447206 and 447301 were identified as LLW areas during Pre-PDS surveys, these survey unit packages were not surveyed as part of this PDSR. The remaining survey unit packages 447201, 447202, 447203, 447204 and 447205 were developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure*. Justifications for the survey unit MARSSIM Classes are detailed in the *Building 447 PDS Radiological Survey Summary Table* below. Total surface activity (TSA), removable surface activity (RSA), and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures*. Media samples were collected in accordance with RSP 16.03, *Radiological Samples of Building Media.* Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis*. Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control*. Refer to Attachment B-1, *Building 447 Survey Unit Map* for the locations of the survey units. Individual radiological survey unit packages are maintained in the RISS Characterization Project files.

Note: Areas that will be managed as LLW were not included in the PDS survey unit results, but are instead discussed in Section 3.1 above. Some contaminated areas were initially a part of some survey units (i.e., survey units 447201, 447202, 447203, and 447204), and some LLW areas were contained within completely standalone survey units (i.e., survey units 447101, 447102, 447103, 447206 and 447301). Although no PDS data is reported for these contaminated areas, they have been highlighted either in red (meaning the area will be removed and managed as LLW during demolition) or in orange (meaning the area will remain in place and be buried during demolition/site restoration) on survey maps contained in Attachment B-2, *Radiological Survey Unit Data Summaries and Survey Maps,* in order for the reader to more easily determine the extent of all contaminated areas.

### 3.3 Media Sampling

Based on the RLC data and historical and process knowledge, contaminated media (i.e., paint surfaces) had the potential for contamination within or under the paint. Therefore, in-process media (paint) sampling was performed to determine the extent of contamination, if any. Biased and random media samples were collected throughout the building and analyzed for depleted uranium contamination. Based on the media sample results, the painted floors of Building 447 were "shaved" to remove the paint. No removal of paint from wall or ceiling surfaces was required due to paint sample results. Refer to the media samples results in Attachment B-2, *Radiological Survey Unit Data Summaries and Survey Maps*, for the "as left" media sample results and the sample locations.

### 3.4 Building 447 Confirmatory Surveys (Exterior & Interior)

Building 447 exterior was surveyed per PDS requirements as part of the *Reconnaissance Level Characterization Report for the Building 444 Cluster,* dated September 5, 2002, and met PDS unrestricted release levels. Additional random confirmatory swipe surveys of all wall and roof surfaces of the Building 447 exterior were performed during the PDS survey, and all results were less than the PDS unrestricted release levels. Refer to Attachment B-3, *447 Exterior Confirmatory Survey* for the building exterior confirmatory radiological survey.

### 3.5 PDS Survey Results

The table below summarizes the PDS radiological survey data by Survey Unit. Note: Survey results for areas that will be managed as LLW were not included in the below PDS Radiological Survey Summary Table, but instead are discussed in Section 3.1 above.

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# Building 447 PDSR Radiological Survey Summary Table

| Survey Unit | Class | Description | Floor (m2) | Total (m2) | TSAs Collected | RSAs Collected | % Scan Performed | Scan Area Performed (m2) | Media Samples Collected | Class Justification | PDS Results |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 447101 | 1 | Building 447 VIA # 1, Interior Floor and <2 meters on the walls | 309 | 517 | N/A | N/A | N/A | N/A | N/A | Area could not be decontaminated to unrestricted release limits, therefore this area will be managed as LLW. | N/A |
| 447102 | 2 | Building 447 VIA # 1, Interior Ceiling and >2 meters on the walls | 309 | 561 | N/A | N/A | N/A | N/A | N/A | Area could not be decontaminated to unrestricted release limits, therefore this area will be managed as LLW. | N/A |
| 447103 | 3 | Building 447 VIA #1, Room 503 All Surfaces | 125 | 468 | N/A | N/A | N/A | N/A | N/A | Area could not be decontaminated to unrestricted release limits, therefore this area will be managed as LLW. | N/A |
| 447201 | 1 | Building 447 VIA # 2, Interior Floor and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B, and Corridor A | 1,424 | 2,362 | 186 Systematically Gridded, 12 QC | 186 Systematically Gridded | 100% | 2,362 | 93 | Class 1 - Area had, prior to remediation, a potential for radioactive contamination, or known contamination above the $DCGL_W$. | Except for LLW areas, all survey and sample results in this survey unit are less than the PDSP unrestricted release criteria. |
| 447202 | 2 | Building 447 VIA # 2, Interior Walls >2 meters and Ceiling in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B, and Corridor A | 1,424 | 3,034 | 28 Systematically Gridded, 2 QC | 28 Systematically Gridded | 50% | 1,517 | 17 | Class 2 - Area had, prior to remediation, a potential for radioactive contamination, or known contamination, but was not expected to exceed the $DCGL_W$. | Except for LLW areas, all survey and sample results in this survey unit are less than the PDSP unrestricted release criteria. |
| 447203 | 1 | Building 447 VIA #2, Room 415, All Surfaces | 68 | 333 | 15 Systematically Gridded, 2 QC | 15 Systematically Gridded | 100% | 333 | 0 (no paint present) | Class 1 - Area had, prior to remediation, a potential for radioactive contamination, or known contamination above the $DCGL_W$. | Except for LLW areas, all survey results in this survey unit are less than the PDSP unrestricted release criteria. |
| 447204 | 1 | Building 447 VIA # 2, Room 31 elevator, 405 Pit, 405B Pit, & 36, all surfaces | 83 | 335 | 16 Systematically Gridded, 2 QC | 16 Systematically Gridded | 100% | 335 | 0 (no paint present) | Class 1 - Area had, prior to remediation, a potential for radioactive contamination, or known contamination above the $DCGL_W$. | Except for LLW areas, all survey results in this survey unit are less than the PDSP unrestricted release criteria. |
| 447205 | 2 | Building 447 VIA 2, Rooms 100, 101F, Sub Station, & Northwest Dock | 128 | 524 | 16 Systematically Gridded, 4 Biased, 2 QC | 16 Systematically Gridded, 4 Biased | 100% Floor 25% walls and ceiling | 227 | 16 | Class 2 - Area had, prior to remediation, a potential for radioactive contamination, or known contamination, but was not expected to exceed the $DCGL_W$. | All survey and sample results in this survey unit are less than the PDSP unrestricted release criteria. |
| 447206 | 2 | Building 447 VIA 2, Roof | 1,445 | 2,921 | N/A | N/A | N/A | N/A | N/A | Area could not be decontaminated to unrestricted release limits, therefore this area will be managed as LLW. | N/A |
| 447301 | 1 | Building 447 VIA 3, All Surfaces | 131 | 468 | N/A | N/A | N/A | N/A | N/A | Area could not be decontaminated to unrestricted release limits, therefore this area will be managed as LLW. | N/A |

Radiological survey unit data, statistical analysis results, survey locations and radiological scan maps are presented in Attachment B-2 *Radiological Survey Unit Data Summaries and Survey Maps*. To ensure the facility remains free of further contamination and PDS data remain valid, Level 2-Isolation Controls have been established and the areas posted accordingly.

# 4 CHEMICAL CHARACTERIZATION AND HAZARDS

Building 447 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, and RCRA 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*. There are CMU cinderblock walls remaining in the building that will be removed and managed as 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 447 project, all areas containing loose beryllium contamination were either decontaminated to below the unrestricted release limit of 0.2 $\mu g/100cm^2$ or fixatives were applied (after the radiological portion of the PDS was completed) to immobilize the beryllium in order to comply with unrestricted release limits. Levels of beryllium that were immobilized in place ranged from 0.1 to 10.9 $ug/100cm^2$. Since Building 447 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. Five hundred and four (504) random swipes and three hundred and twenty two (322) biased swipes were reported as final "as left" beryllium results.

Random and biased beryllium smear samples were collected in Building 447 in accordance with the PDSP and the *Beryllium Characterization Procedure,* PRO-536-BCPR, Revision 0, September 9, 1999. All final "as left" 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 "as left" beryllium laboratory swipe data and location maps are contained in Attachment C-1, *Beryllium Data Summaries and Sample Maps.*

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

Based on a review of the Historical Site Assessment Report (HSAR), RLCR, interviews, and facility walk-downs, the Building 447 elevator may have been used as a dumping area for solvents and used oils. After the sludge was removed from the pit, a concrete core sample was taken and analyzed for SVOCs, VOCs, and metals. The sample was a concrete core, two inches in diameter and 4 inches deep. All results were less than regulatory limits indicating that, if improper waste management actions did occur, the elevator pit was not contaminated. Sampling results are summarized in Attachment C-2, *Chemical 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, the Building 447 elevator may have contained PCB oils. During decommissioning activities the oil from the elevator was removed and containerized. The oil was then sampled for PCB content, and all results were under the analytical detection limit. Based on the oil analysis, any historical leaks would not have led to PCB contamination in the elevator pit. Sampling results are summarized in Attachment C-2, *Chemical Data Summaries and Sample Maps.*

Based on the age of B447 (constructed prior to 1980), paint used in the facility may contain PCBs, therefore, painted surfaces will be managed as PCB Bulk Product Waste. Painted concrete surfaces can be used as backfill on site in accordance with approval received from EPA in November 2001 (letter from K. Clough, US EPA Region 8, to J. Legare, DOE RFFO, 8EPR-F, Approval of the Risk-Based Approach for Polychlorinated Biphenyls (PCB)-Based Painted Concrete), provided the concrete meets the unrestricted-release criteria outlined in the Concrete Recycling RSOP.

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 447 are those common to standard industrial environments, and include hazards associated with energized systems, utilities, and trips and falls. Building 447 is attached to Buildings 444 and 448 – care shall be taken not to disturb these buildings during demolition. A basement area and large open pits are contained within the building. The concrete slab has numerous trenches and holes that create tripping hazards. 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 447, 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 447 will generate some sanitary waste and LLW; these wastes will be removed and sent to appropriate offsite landfills. Estimated waste volumes are presented below. Appropriate approvals have been obtained for leaving portions of the facility slab in-place underground. 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) |
|---|---|---|---|---|---|---|---|
| 447 | 30,500-sanitary<br>25,000–LLW | 0 | 3,500 - LLW | 500 –LLW | 0 | 4,500 – CMU walls | 0 |

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# 8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, Building 447 is ready for demolition. Various surfaces within Building 447 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, these surfaces will be removed and managed as LLW during demolition, or in some cases will be left in-place underground. All other surfaces within Building 447 are below the radiological PDSP unrestricted release limits. All of these areas are discussed in detail in Section 3.1 above.

Building 447 does not possess beryllium or chemical contamination in excess of the PDSP unrestricted release limits. However, fixatives were used to immobilize beryllium contamination. 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. Friable asbestos abatement was conducted in Building 447 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 CMU cinderblock walls remaining in the building that will be removed and managed as Non-Friable Category 1 ACM during building demolition.

The PDS for Building 447 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. Appropriate approvals have been obtained for leaving portions of the facility slab in-place underground. To ensure Building 447 remains free of further contamination and PDS data remain valid, Level 2 Isolation Controls have been established and the facility posted accordingly.

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# 9 REFERENCES

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

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

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.

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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 444 Cluster,* dated September 5, 2002, Revision 0

18

# ATTACHMENT A

# Facility Location Map

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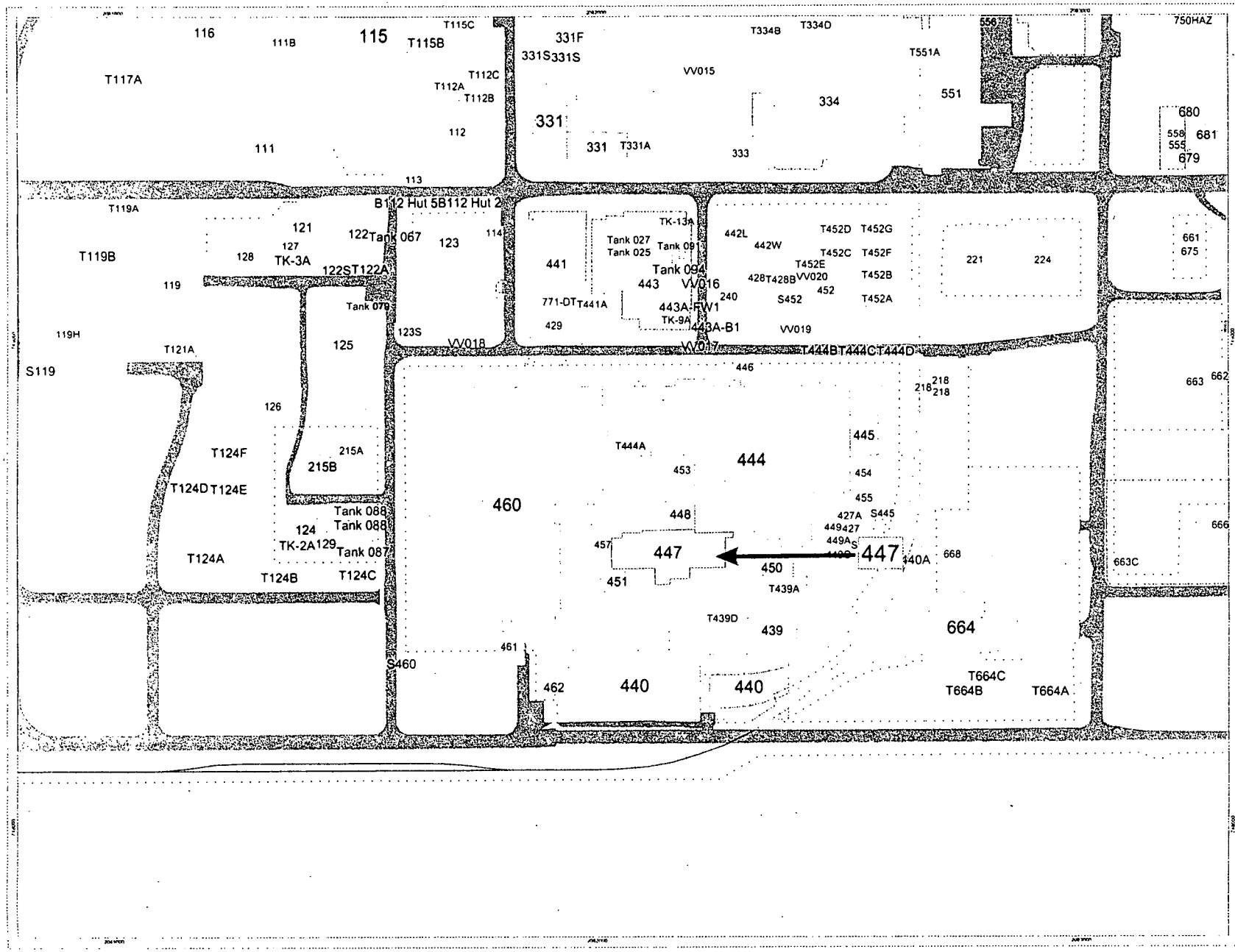


Rocky Flats Environmental Technology Site

# 447 Location Map

## Map Features

- Building Remaining
- 447
- D&D Facility
- Paved Roads
- Dirt Roads
- Lakes
- Railroad Removed
- Railroad Remaining
- Fence Removed
- Fence Remaining
- Streams

N

1:1,034

1 inch equals 86 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

Prepared By: CH2MHILL

Prepared For: KAISER-HILL

W:\Projects\y2004\04-0839\447 location map.mxd

# ATTACHMENT B-1

# 447 Survey Unit Map

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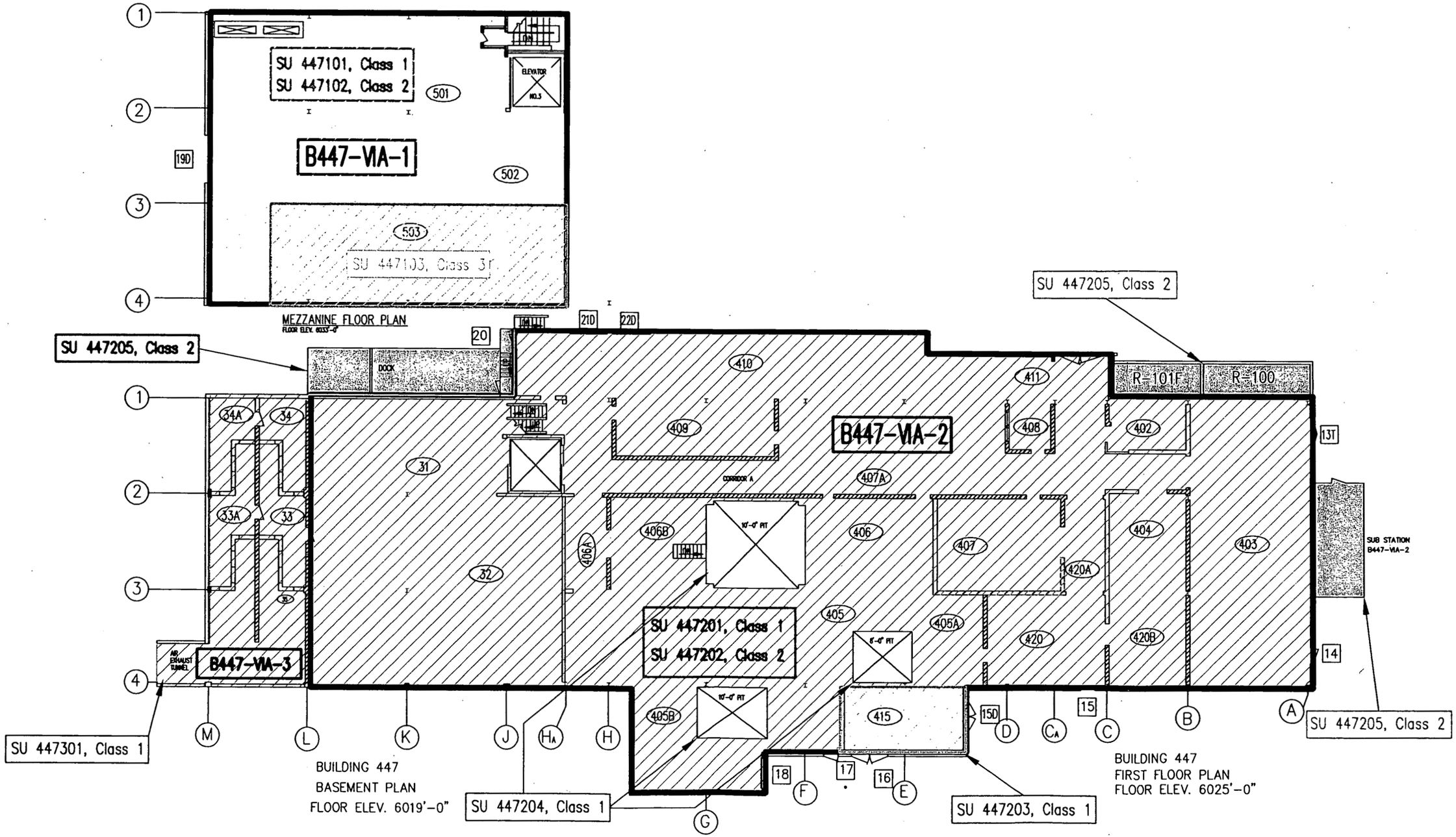


## B447 SURVEY UNIT MAP

BLDG: 447 Survey Area: VIA-1, VIA-2 & VIA-3

Survey Unit: 447201, 447202, 447203, 447204 & 447205

## SURVEY POINT LEGEND

Class-1 / Class-2 — CLASS-1 FLOOR and <2m. WALLS; CLASS-2 CEILING and >2m WALLS

Class-3 — ALL SURFACES.

class-1 — ALL SURFACES.

class-2 — ALL SURFACES.

N

0 FEET 20

0 METERS 6.5

1 inch = 20 feet

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

Prepared by: RFCSS Rocky Flats Closure Site Services, LLC. A Joint Partnership Between Bechtel and Kaiser-Hill

Prepared for: KAISER HILL

File Name: B447 SURVEY UNIT MAP | Sheet 1 of 1 | Rev: 0

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# ATTACHMENT B-2

# Radiological Survey Unit Data Summaries and Survey Maps

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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Rocky Flats Environmental Technology Site
# Final Radiological Survey Summary Results

## Total Surface Activity Measurements

Nbr Random Measurements Required: 169
Nbr Random Measurements Performed: 186

Nbr Biased Measurements Required: 93
Nbr Biased Measurements Performed: 93

Nbr QC Required: 9
Nbr QC Performed: 12

### Beta

| | |
|---|---|
| Maximum: | 4,063.9 dpm/100cm² |
| Minimum: | -1,304.3 dpm/100cm² |
| Mean: | 807.7 dpm/100cm² |
| Standard Deviation: | 890.3 |
| QC Maximum: | 3,585.3 dpm/100cm² |
| QC Minimum: | 1,026.2 dpm/100cm² |
| QC Mean: | 1,785.7 dpm/100cm² |
| Uranium DCGLw: | 5,000.0 dpm/100cm² |
| Uranium DCGLEMC: | 15,000.0 dpm/100cm² |

## Removable Surface Activity Measurements

Nbr Random Measurements Required: 169
Nbr Random Measurements Performed: 186

Nbr Biased Measurements Required: 93
Nbr Biased Measurements Performed: 93

### Beta

| | |
|---|---|
| Maximum: | 214.3 ~~144.4~~ dpm/100cm² |
| Minimum: | rcw 8/21/04 -156.0 dpm/100cm² |
| Mean: | 11.1 dpm/100cm² |
| Standard Deviation: | 51.5 |
| Uranium DCGLw: | 1,000.0 |

## Media Sample Results

Nbr Random Required: 93
Nbr Random Collected: 93

Nbr Biased Required: 0
Nbr Biased Collected: 0

### Uranium

| | |
|---|---|
| Maximum: | 4,071 dpm/100cm² |
| Minimum: | 258.3 376 dpm/100cm² |
| Mean: | 1785.5 1,717 dpm/100cm² |
| Standard Deviation: | 1348 1,093 rcw 8/21/04 |
| Uranium DCGLw: | 5,000 dpm/100cm² |
| Uranium DCGLEMC: | 15,000 dpm/100cm² |

### Transuranic

| | |
|---|---|
| Maximum: | 0 dpm/100cm² |
| Minimum: | 0 dpm/100cm² |
| Mean: | 0 dpm/100cm² |
| Standard Deviation: | 0 |
| Transuranic DCGLw: | 100 dpm/100cm² |
| Transuranic DCGLEMC: | 300 dpm/100cm² |

*Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.*

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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Instrument Data Sheet

| Inst/RCT Number | RCT ID | Analysis Date | Instr Model | Instru S/N | Probe Type | Calibration Due Dt | Instru Efficiency Alpha | Instru Efficiency Beta | A-Priori MDA (dpm/100cm²) Alpha | A-Priori MDA (dpm/100cm²) Beta | Survey Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 511390 | 09/29/03 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 2 | 512590 | 09/29/03 | Electra | 3102 | DP-6 | 01/31/04 | NA | 0.220 | NA | 745.0 | T |
| 3 | 700832 | 10/15/03 | Electra | 3254 | DP-6 | 01/16/04 | NA | 0.220 | NA | 745.0 | T |
| 4 | 516299 | 10/15/03 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 5 | 700832 | 10/16/03 | Electra | 1136 | DP-6 | 12/18/03 | NA | 0.220 | NA | 745.0 | T |
| 6 | 902859 | 10/16/03 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 7 | 700832 | 10/17/03 | Electra | 1279 | DP-6 | 01/31/04 | NA | 0.220 | NA | 745.0 | T |
| 8 | 902859 | 10/17/03 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 9 | 712456 | 02/03/04 | BC-4 | 694 | NA | 10/20/04 | NA | 0.140 | NA | 258.0 | R |
| 10 | 712456 | 02/03/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 11 | 702058 | 02/03/04 | Electra | 1679 | DP-6 | 06/22/04 | NA | 0.220 | NA | 745.0 | T |
| 12 | 712456 | 02/04/04 | BC-4 | 694 | NA | 10/20/04 | NA | 0.140 | NA | 258.0 | R |
| 13 | 712456 | 02/04/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 14 | 712600 | 02/04/04 | Electra | 1279 | DP-6 | 07/12/04 | NA | 0.220 | NA | 745.0 | T |
| 15 | 712456 | 02/05/04 | BC-4 | 694 | NA | 10/20/04 | NA | 0.140 | NA | 258.0 | R |
| 16 | 712456 | 02/05/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 17 | 712600 | 02/05/04 | Electra | 1279 | DP-6 | 07/12/04 | NA | 0.220 | NA | 745.0 | T |
| 18 | 712456 | 02/06/04 | BC-4 | 694 | NA | 10/20/04 | NA | 0.140 | NA | 258.0 | R |
| 19 | 712456 | 02/06/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 20 | 702058 | 02/06/04 | Electra | 1279 | DP-6 | 07/12/04 | NA | 0.220 | NA | 745.0 | T |
| 21 | 701418 | 02/17/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 22 | 701418 | 02/17/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 23 | 702058 | 02/17/04 | Electra | 1679 | DP-6 | 06/22/04 | NA | 0.220 | NA | 745.0 | T |
| 24 | 903346 | 02/18/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 25 | 903346 | 02/18/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 26 | 702058 | 02/18/04 | Electra | 1679 | DP-6 | 06/22/04 | NA | 0.220 | NA | 745.0 | T |
| 27 | 903346 | 02/19/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 28 | 903346 | 02/19/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 29 | 701418 | 02/19/04 | Electra | 1679 | DP-6 | 06/22/04 | NA | 0.220 | NA | 745.0 | T |
| 30 | 701418 | 02/23/04 | Electra | 1679 | DP-6 | 06/22/04 | NA | 0.220 | NA | 745.0 | T |
| 31 | 712456 | 02/23/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 32 | 712456 | 02/23/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 33 | 701418 | 02/24/04 | Electra | 1679 | DP-6 | 06/22/04 | NA | 0.220 | NA | 745.0 | T |
| 34 | 712456 | 02/24/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Instrument Data Sheet

| Inst/RCT Number | RCT ID | Analysis Date | Instr Model | Instru S/N | Probe Type | Calibration Due Dt | Instru Efficiency Alpha | Instru Efficiency Beta | A-Priori MDA (dpm/100cm²) Alpha | A-Priori MDA (dpm/100cm²) Beta | Survey Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | 712456 | 02/24/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 36 | 701418 | 02/25/04 | Electra | 2319 | DP-6 | 07/29/04 | NA | 0.220 | NA | 745.0 | T |
| 37 | 712456 | 02/25/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 38 | 712456 | 02/25/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 39 | 702058 | 03/02/04 | Electra | 2314 | DP-6 | 04/07/04 | NA | 0.220 | NA | 745.0 | T |
| 40 | 712456 | 03/02/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 41 | 712456 | 03/02/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 42 | 712600 | 03/03/04 | Electra | 2314 | DP-6 | 04/07/04 | NA | 0.220 | NA | 745.0 | T |
| 43 | 712456 | 03/03/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 44 | 712456 | 03/03/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 45 | 701418 | 03/04/04 | Electra | 2314 | DP-6 | 04/07/04 | NA | 0.220 | NA | 745.0 | T |
| 46 | 712456 | 03/04/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 47 | 712456 | 03/04/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 48 | 702058 | 03/05/04 | Electra | 2314 | DP-6 | 04/07/04 | NA | 0.220 | NA | 745.0 | T |
| 49 | 712456 | 03/05/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 50 | 712456 | 03/05/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 51 | 712600 | 03/30/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 52 | 712600 | 03/30/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 53 | 712456 | 03/30/04 | Electra | 2314 | DP-6 | 08/06/04 | NA | 0.220 | NA | 745.0 | T |
| 54 | 701418 | 03/30/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 55 | 701418 | 03/30/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 56 | 712456 | 03/30/04 | Electra | 2314 | DP-6 | 08/06/04 | NA | 0.220 | NA | 745.0 | T |
| 57 | 712193 | 07/14/04 | Electra | 668 | DP-8 | 12/15/04 | NA | 0.160 | NA | 745.0 | S |
| 58 | 712193 | 07/14/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |
| 59 | 712193 | 07/14/04 | Electra | 3109 | DP-6 | 12/14/04 | NA | 0.220 | NA | 745.0 | S |
| 60 | 712193 | 07/15/04 | Electra | 668 | DP-8 | 12/15/04 | NA | 0.160 | NA | 745.0 | S |
| 61 | 712193 | 07/15/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |
| 62 | 712193 | 07/15/04 | Electra | 3109 | DP-6 | 12/14/04 | NA | 0.220 | NA | 745.0 | S |
| 63 | 712193 | 07/19/04 | Electra | 668 | DP-8 | 12/15/04 | NA | 0.160 | NA | 745.0 | S |
| 64 | 712193 | 07/19/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |
| 65 | 712193 | 07/19/04 | Electra | 3109 | DP-6 | 12/14/04 | NA | 0.220 | NA | 745.0 | S |
| 66 | 712193 | 07/20/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |
| 67 | 712193 | 07/20/04 | Electra | 3109 | DP-6 | 12/14/04 | NA | 0.220 | NA | 745.0 | S |
| 68 | 712193 | 07/21/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Instrument Data Sheet

| Inst/RCT Number | RCT ID | Analysis Date | Instr Model | Instru S/N | Probe Type | Calibration Due Dt | Instru Efficiency Alpha | Instru Efficiency Beta | A-Priori MDA (dpm/100cm²) Alpha | A-Priori MDA (dpm/100cm²) Beta | Survey Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 69 | 712193 | 07/21/04 | Electra | 3109 | DP-6 | 12/14/04 | NA | 0.220 | NA | 745.0 | S |
| 70 | 711447 | 07/26/04 | Electra | 668 | DP-8 | 12/15/04 | NA | 0.160 | NA | 745.0 | S |
| 71 | 711447 | 07/26/04 | Electra | 290 | DP-6 | 09/16/04 | NA | 0.220 | NA | 745.0 | S |
| 72 | 711447 | 07/26/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |
| 73 | 702377 | 07/26/04 | Electra | 3109 | DP-6 | 12/14/04 | NA | 0.220 | NA | 745.0 | T/S |
| 74 | 711447 | 07/27/04 | Electra | 668 | DP-8 | 12/15/04 | NA | 0.160 | NA | 745.0 | S |
| 75 | 711447 | 07/27/04 | Electra | 290 | DP-6 | 09/16/04 | NA | 0.220 | NA | 745.0 | T/S |
| 76 | 712467 | 07/27/04 | Electra | 3105 | DP-6 | 11/18/04 | NA | 0.220 | NA | 745.0 | T/S |
| 77 | 711447 | 07/28/04 | Electra | 668 | DP-8 | 12/15/04 | NA | 0.160 | NA | 745.0 | S |
| 78 | 712467 | 07/28/04 | Electra | 672 | DP-8 | 01/12/05 | NA | 0.160 | NA | 745.0 | S |
| 79 | 712467 | 07/28/04 | Electra | 3105 | DP-6 | 11/18/04 | NA | 0.220 | NA | 745.0 | S |
| 80 | 711447 | 07/28/04 | Electra | 2352 | DP-6 | 11/13/04 | NA | 0.220 | NA | 745.0 | S |
| 81 | 711447 | 07/28/04 | Ludlum 292 | 99042 | NA | 10/26/04 | NA | 0.250 | NA | 205.0 | R |
| 82 | 711447 | 08/24/04 | Electra | 290 | DP-6 | 09/16/04 | NA | 0.220 | NA | 745.0 | S |
| 83 | 712193 | 08/24/04 | Electra | 658 | DP-8 | 01/29/05 | NA | 0.160 | NA | 999.0 | S |
| 84 | 712467 | 08/24/04 | Electra | 672 | DP-8 | 01/12/05 | NA | 0.160 | NA | 999.0 | S |
| 85 | 711447 | 08/26/04 | Electra | 290 | DP-6 | 09/16/04 | NA | 0.220 | NA | 745.0 | S |
| 86 | 712193 | 08/26/04 | Electra | 1415 | DP-6 | 10/27/04 | NA | 0.220 | NA | 745.0 | T/S |
| 87 | 511390 | 09/02/04 | Electra | 3102 | DP-6 | 02/19/05 | NA | 0.220 | NA | 745.0 | T/S |
| 88 | 712467 | 09/02/04 | Electra | 665 | DP-6 | 10/26/04 | NA | 0.220 | NA | 745.0 | T/I/S |
| 89 | 711447 | 09/02/04 | Electra | 3370 | DP-6 | 02/16/05 | NA | 0.220 | NA | 745.0 | Q/S |
| 90 | 712193 | 09/02/04 | Ludlum 292 | 99042 | NA | 10/26/04 | NA | 0.250 | NA | 205.0 | R |
| 91 | 712193 | 09/02/04 | Electra | 1261 | DP-8 | 02/26/05 | NA | 0.160 | NA | 745.0 | S |
| 92 | 711447 | 09/03/04 | Electra | 297 | DP-6 | 01/27/05 | NA | 0.220 | NA | 745.0 | T/S |
| 93 | 712193 | 09/03/04 | Electra | 665 | DP-6 | 10/26/04 | NA | 0.220 | NA | 745.0 | Q |
| 94 | 712467 | 09/07/04 | Electra | 1136 | DP-6 | 02/28/05 | NA | 0.220 | NA | 745.0 | T/S |
| 95 | 711447 | 09/07/04 | Electra | 3102 | DP-6 | 02/19/05 | NA | 0.220 | NA | 745.0 | T/S |
| 96 | 712193 | 09/07/04 | Electra | 3370 | DP-6 | 02/16/05 | NA | 0.220 | NA | 745.0 | Q |
| 97 | 511390 | 09/07/04 | Ludlum 292 | 99042 | NA | 10/26/04 | NA | 0.250 | NA | 205.0 | R |

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N374 | 90 | N/A | -36.0 | |
| 447201PRP-N375 | 90 | N/A | -40.0 | |
| 447201PRP-N376 | 90 | N/A | -28.0 | |
| 447201PRP-N377 | 90 | N/A | -24.0 | |
| 447201PRP-N378 | 90 | N/A | -44.0 | |
| 447201PRP-N379 | 90 | N/A | -32.0 | |
| 447201PRP-N380 | 90 | N/A | -36.0 | |
| 447201PRP-N381 | 90 | N/A | -24.0 | |
| 447201PRP-N382 | 90 | N/A | -28.0 | |
| 447201PRP-N383 | 90 | N/A | -52.0 | |
| 447201PRP-N384 | 90 | N/A | -16.0 | |
| 447201PRP-N385 | 90 | N/A | -32.0 | |
| 447201PRP-N386 | 90 | N/A | -44.0 | |
| 447201PRP-N387 | 90 | N/A | -32.0 | |
| 447201PRP-N388 | 90 | N/A | -64.0 | |
| 447201PRP-N389 | 90 | N/A | -44.0 | |
| 447201PRP-N390 | 90 | N/A | -28.0 | |
| 447201PRP-N391 | 81 | N/A | -31.6 | |
| 447201PRP-N392 | 81 | N/A | 72.4 | |
| 447201PRP-N393 | 81 | N/A | -31.6 | |
| 447201PRP-N394 | 81 | N/A | -19.6 | |
| 447201PRP-N395 | 81 | N/A | -31.6 | |
| 447201PRP-N396 | 81 | N/A | 72.4 | |
| 447201PRP-N397 | 81 | N/A | 144.4 | |
| 447201PRP-N398 | 81 | N/A | -31.6 | |
| 447201PRP-N399 | 81 | N/A | 144.4 | |
| 447201PRP-N400 | 81 | N/A | -31.6 | |
| 447201PRP-N401 | 81 | N/A | 44.4 | |
| 447201PRP-N402 | 81 | N/A | 88.4 | |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N403 | 81 | N/A | 72.4 | |
| 447201PRP-N404 | 81 | N/A | 40.4 | |
| 447201PRP-N405 | 81 | N/A | 104.4 | |
| 447201PRP-N406 | 81 | N/A | 72.4 | |
| 447201PRP-N407 | 81 | N/A | 40.4 | |
| 447201PRP-N408 | 81 | N/A | 140.4 | |
| 447201PRP-N409 | 81 | N/A | 36.4 | |
| 447201PRP-N410 | 81 | N/A | 36.4 | |
| 447201PRP-N411 | 81 | N/A | 140.4 | |
| 447201PRP-N412 | 81 | N/A | 36.4 | |
| 447201PRP-N413 | 81 | N/A | 36.4 | |
| 447201PRP-N414 | 81 | N/A | 68.4 | |
| 447201PRP-N415 | 81 | N/A | 68.4 | |
| 447201PRP-N416 | 81 | N/A | -31.6 | |
| 447201PRP-N417 | 81 | N/A | 92.4 | |
| 447201PRP-N418 | 81 | N/A | 28.4 | |
| 447201PRP-N419 | 81 | N/A | 84.4 | |
| 447201PRP-N420 | 81 | N/A | 56.4 | |
| 447201PRP-N421 | 81 | N/A | 28.4 | |
| 447201PRP-N422 | 81 | N/A | 56.4 | |
| 447201PRP-N423 | 81 | N/A | -11.6 | |
| 447201PRP-N424 | 81 | N/A | 92.4 | |
| 447201PRP-N425 | 81 | N/A | 24.4 | |
| 447201PRP-N426 | 81 | N/A | 72.4 | |
| 447201PRP-N427 | 81 | N/A | 60.4 | |
| 447201PRP-N428 | 81 | N/A | 20.4 | |
| 447201PRP-N429 | 81 | N/A | 52.4 | |
| 447201PRP-N430 | 81 | N/A | 80.4 | |
| 447201PRP-N431 | 81 | N/A | -11.6 | |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N432 | 81 | N/A | 12.4 | |
| 447201PRP-N433 | 81 | N/A | 124.4 | |
| 447201PRP-N434 | 81 | N/A | 104.4 | |
| 447201PRP-N435 | 81 | N/A | 116.4 | |
| 447201PRP-N436 | 81 | N/A | 28.4 | |
| 447201PRP-N437 | 81 | N/A | 48.4 | |
| 447201PRP-N438 | 81 | N/A | 72.4 | |
| 447201PRP-N439 | 81 | N/A | 92.4 | |
| 447201PRP-N440 | 81 | N/A | -3.6 | |
| 447201PRP-N441 | 81 | N/A | 56.4 | |
| 447201PRP-N442 | 81 | N/A | 136.4 | |
| 447201PRP-N443 | 81 | N/A | 8.4 | |
| 447201PRP-N444 | 81 | N/A | -19.6 | |
| 447201PRP-N445 | 81 | N/A | 136.4 | |
| 447201PRP-N446 | 81 | N/A | 76.4 | |
| 447201PRP-N447 | 81 | N/A | 40.4 | |
| 447201PRP-N448 | 81 | N/A | 124.4 | |
| 447201PRP-N449 | 81 | N/A | 56.4 | |
| 447201PRP-N450 | 81 | N/A | 88.4 | |
| 447201PRP-N451 | 81 | N/A | 76.4 | |
| 447201PRP-N452 | 90 | N/A | 8.0 | |
| 447201PRP-N453 | 90 | N/A | -28.0 | |
| 447201PRP-N454 | 90 | N/A | 0.0 | |
| 447201PRP-N455 | 90 | N/A | 12.0 | |
| 447201PRP-N456 | 90 | N/A | 56.0 | |
| 447201PRP-N457 | 90 | N/A | -36.0 | |
| 447201PRP-N458 | 90 | N/A | -72.0 | |
| 447201PRP-N459 | 90 | N/A | 48.0 | |
| 447201PRP-N460 | 90 | N/A | 56.0 | |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N461 | 90 | N/A | 44.0 | |
| 447201PRP-N462 | 90 | N/A | -156.0 | |
| 447201PRP-N463 | 90 | N/A | 44.0 | |
| 447201PRP-N464 | 81 | N/A | -23.6 | |
| 447201PRP-N465 | 81 | N/A | -83.6 | |
| 447201PRP-N468 | 90 | N/A | -36.0 | |
| 447201PRP-N469 | 90 | N/A | -24.0 | |
| 447201PRP-N470 | 90 | N/A | -16.0 | |
| 447201PRP-N471 | 90 | N/A | -40.0 | |
| 447201PRP-N472 | 90 | N/A | 16.0 | |
| 447201PRP-N473 | 90 | N/A | -28.0 | |
| 447201PRP-N474 | 90 | N/A | -24.0 | |
| 447201PRP-N475 | 90 | N/A | 4.0 | |
| 447201PRP-N476 | 90 | N/A | 56.0 | |
| 447201PRP-N477 | 90 | N/A | -8.0 | |
| 447201PRP-N478 | 90 | N/A | -72.0 | |
| 447201PRP-N479 | 90 | N/A | -28.0 | |
| 447201PRP-N480 | 90 | N/A | -40.0 | |
| 447201PRP-N481 | 90 | N/A | -52.0 | |
| 447201PRP-N482 | 90 | N/A | 8.0 | |
| 447201PRP-N483 | 90 | N/A | -72.0 | |
| 447201PRP-N484 | 90 | N/A | 20.0 | |
| 447201PRP-N485 | 90 | N/A | -52.0 | |
| 447201PRP-N486 | 90 | N/A | -28.0 | |
| 447201PRP-N487 | 90 | N/A | -24.0 | |
| 447201PRP-N488 | 90 | N/A | -8.0 | |
| 447201PRP-N489 | 90 | N/A | 8.0 | |
| 447201PRP-N490 | 90 | N/A | 40.0 | |
| 447201PRP-N491 | 90 | N/A | -8.0 | |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N492 | 90 | N/A | 56.0 | |
| 447201PRP-N493 | 90 | N/A | 4.0 | |
| 447201PRP-N494 | 97 | N/A | 12.0 | |
| 447201PRP-N495 | 97 | N/A | -24.0 | |
| 447201PRP-N496 | 97 | N/A | 4.0 | |
| 447201PRP-N497 | 97 | N/A | 16.0 | |
| 447201PRP-N498 | 97 | N/A | 60.0 | |
| 447201PRP-N499 | 97 | N/A | -32.0 | |
| 447201PRP-N500 | 97 | N/A | -68.0 | |
| 447201PRP-N501 | 97 | N/A | -12.0 | |
| 447201PRP-N502 | 97 | N/A | -36.0 | |
| 447201PRP-N503 | 97 | N/A | 20.0 | |
| 447201PRP-N504 | 97 | N/A | -24.0 | |
| 447201PRP-N505 | 97 | N/A | -20.0 | |
| 447201PRP-N506 | 90 | N/A | -28.0 | |
| 447201PRP-N507 | 97 | N/A | 8.0 | |
| 447201PRP-N508 | 97 | N/A | 60.0 | |
| 447201PRP-N509 | 97 | N/A | -4.0 | |
| 447201PRP-N510 | 97 | N/A | 44.0 | |
| 447201PRP-N511 | 97 | N/A | 12.0 | |
| 447201PRP-N512 | 97 | N/A | -4.0 | |
| 447201PRP-N513 | 97 | N/A | -20.0 | |
| 447201PRP-N514 | 97 | N/A | -24.0 | |
| 447201PRP-N515 | 97 | N/A | 60.0 | |
| 447201PRP-N516 | 97 | N/A | 44.0 | |
| 447201PRP-N517 | 97 | N/A | -68.0 | |
| 447201PRP-N518 | 97 | N/A | 12.0 | |
| 447201PRP-N519 | 97 | N/A | -4.0 | |
| 447201PRP-N520 | 97 | N/A | 44.0 | |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N521 | 97 | N/A | 12.0 | |
| 447201PRP-N522 | 97 | N/A | -24.0 | |
| 447201PRP-N523 | 97 | N/A | 4.0 | |
| 447201PRP-N524 | 97 | N/A | -4.0 | |
| 447201PRP-N525 | 97 | N/A | 16.0 | |
| 447201PRP-N526 | 97 | N/A | 60.0 | |
| 447201PRP-N527 | 97 | N/A | -32.0 | |
| 447201PRP-N528 | 97 | N/A | -68.0 | |
| 447201PRP-N529 | 97 | N/A | -12.0 | |
| 447201PRP-N530 | 97 | N/A | -36.0 | |
| 447201PRP-N531 | 97 | N/A | 20.0 | |
| 447201PRP-N532 | 97 | N/A | -24.0 | |
| 447201PRP-N533 | 97 | N/A | -20.0 | |
| 447201PRP-N534 | 97 | N/A | 8.0 | |
| 447201PRP-N535 | 97 | N/A | 60.0 | |
| 447201PRP-N536 | 97 | N/A | -20.0 | |
| 447201PRP-N537 | 97 | N/A | -24.0 | |
| 447201PRP-N538 | 97 | N/A | 12.0 | |
| 447201PRP-N539 | 97 | N/A | 60.0 | |
| 447201PRP-N591 | 90 | N/A | 0.0 | |
| 447201PRP-N592 | 90 | N/A | -4.0 | |
| 447201PRP-N593 | 90 | N/A | -12.0 | |
| 447201PRP-N594 | 90 | N/A | -32.0 | |
| 447201PRP-N595 | 90 | N/A | -36.0 | |
| 447201PRP-N596 | 90 | N/A | -4.0 | |
| 447201PRP-N597 | 90 | N/A | 0.0 | |
| 447201PRP-N598 | 90 | N/A | -40.0 | |
| 447201PRP-N599 | 90 | N/A | -16.0 | |
| 447201PRP-N600 | 90 | N/A | -24.0 | |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N601 | 90 | N/A | -48.0 | |
| 447201PRP-N602 | 90 | N/A | -4.0 | |
| 447201PRP-N603 | 90 | N/A | 0.0 | |
| 447201PRP-N604 | 90 | N/A | -44.0 | |
| 447201PRP-N605 | 90 | N/A | -40.0 | |
| 447201PRP-N606 | 90 | N/A | -28.0 | |
| 447201PRP-N607 | 90 | N/A | 0.0 | |
| 447201PRP-N608 | 90 | N/A | -28.0 | |
| 447201PRP-N609 | 90 | N/A | -52.0 | |
| 447201PRP-N610 | 90 | N/A | -44.0 | |
| 447201PRP-N611 | 90 | N/A | -16.0 | |
| 447201PRP-N612 | 90 | N/A | -52.0 | |

# Biased Removable Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
|---|---|---|---|---|---|---|
| 447201PBP-N001 | 1 | N/A | -12.1 | 1 | N/A | 23.6 |
| 447201PBP-N004 | 1 | N/A | -40.7 | 1 | N/A | 30.7 |
| 447201PBP-N019 | 8 | N/A | -54.2 | 8 | N/A | 74.3 |
| 447201PBP-N021 | 4 | N/A | -52.9 | 4 | N/A | 4.3 |
| 447201PBP-N022 | 4 | N/A | 18.6 | 4 | N/A | -2.9 |
| 447201PBP-N035 | 9 | N/A | -67.1 | 9 | N/A | -2.8 |
| 447201PBP-N036 | 10 | N/A | 48.6 | 10 | N/A | -8.5 |
| 447201PBP-N037 | 9 | N/A | 25.7 | 9 | N/A | -2.8 |
| 447201PBP-N038 | 10 | N/A | -1.4 | 10 | N/A | 34.3 |
| 447201PBP-N039 | 9 | N/A | 97.2 | 9 | N/A | -60.0 |
| 447201PBP-N060 | 12 | N/A | 12.9 | 12 | N/A | -30.0 |
| 447201PBP-N061 | 13 | N/A | 8.5 | 13 | N/A | -34.3 |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Biased Removable Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
|---|---|---|---|---|---|---|
| 447201PBP-N065 | 13 | N/A | -41.5 | 12 | N/A | 27.2 |
| 447201PBP-N066 | 12 | N/A | -22.8 | 13 | N/A | -12.9 |
| 447201PBP-N067 | 13 | N/A | -20.0 | 12 | N/A | -65.7 |
| 447201PBP-N068 | 12 | N/A | 48.6 | 13 | N/A | 51.4 |
| 447201PBP-N069 | 13 | N/A | 44.3 | 12 | N/A | 27.2 |
| 447201PBP-N070 | 12 | N/A | 41.4 | 13 | N/A | -34.3 |
| 447201PBP-N075 | 13 | N/A | -48.6 | 13 | N/A | 94.3 |
| 447201PBP-N076 | 12 | N/A | -8.6 | 12 | N/A | -22.8 |
| 447201PBP-N077 | 13 | N/A | -5.7 | 13 | N/A | 8.5 |
| 447201PBP-N078 | 12 | N/A | -58.6 | 12 | N/A | 5.7 |
| 447201PBP-N079 | 13 | N/A | 37.1 | 13 | N/A | 51.4 |
| 447201PBP-N080 | 12 | N/A | -30.0 | 12 | N/A | -15.7 |
| 447201PBP-N081 | 13 | N/A | 22.8 | 13 | N/A | 80.0 |
| 447201PBP-N082 | 12 | N/A | 70.0 | 12 | N/A | -8.6 |
| 447201PBP-N083 | 13 | N/A | 72.8 | 13 | N/A | 22.8 |
| 447201PBP-N084 | 12 | N/A | -37.1 | 12 | N/A | 20.0 |
| 447201PBP-N135 | 21 | N/A | -28.6 | 21 | N/A | 114.3 |
| 447201PBP-N136 | 22 | N/A | -35.7 | 22 | N/A | -7.1 |
| 447201PBP-N142 | 22 | N/A | -57.1 | 22 | N/A | 14.3 |
| 447201PBP-N143 | 21 | N/A | 7.1 | 21 | N/A | -42.9 |
| 447201PBP-N144 | 22 | N/A | -7.1 | 22 | N/A | -57.1 |
| 447201PBP-N145 | 24 | N/A | 35.7 | 24 | N/A | 21.4 |
| 447201PBP-N146 | 24 | N/A | 71.4 | 24 | N/A | 50.0 |
| 447201PBP-N147 | 24 | N/A | 57.1 | 24 | N/A | 128.5 |
| 447201PBP-N148 | 24 | N/A | 28.5 | 24 | N/A | 71.4 |
| 447201PBP-N149 | 24 | N/A | 71.4 | 24 | N/A | 50.0 |
| 447201PBP-N150 | 24 | N/A | 28.5 | 24 | N/A | 35.7 |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Biased Removable Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
|---|---|---|---|---|---|---|
| 447201PBP-N151 | 24 | N/A | 42.8 | 24 | N/A | 35.7 |
| 447201PBP-N152 | 24 | N/A | 71.4 | 24 | N/A | 28.5 |
| 447201PBP-N153 | 24 | N/A | -21.5 | 24 | N/A | 107.1 |
| 447201PBP-N154 | 24 | N/A | 142.8 | 24 | N/A | 7.1 |
| 447201PBP-N155 | 24 | N/A | 142.8 | 24 | N/A | 50.0 |
| 447201PBP-N160 | 24 | N/A | 121.4 | 24 | N/A | 214.3 |
| 447201PBP-N161 | 24 | N/A | 121.4 | 24 | N/A | -35.7 |
| 447201PBP-N162 | 24 | N/A | 71.4 | 24 | N/A | 50.0 |
| 447201PBP-N165 | 25 | N/A | -28.5 | 25 | N/A | -28.5 |
| 447201PBP-N206 | 31 | N/A | 27.1 | 31 | N/A | -30.0 |
| 447201PBP-N207 | 32 | N/A | 30.7 | 32 | N/A | 30.7 |
| 447201PBP-N208 | 31 | N/A | 12.8 | 31 | N/A | 20.0 |
| 447201PBP-N209 | 32 | N/A | 66.5 | 32 | N/A | -5.0 |
| 447201PBP-N210 | 31 | N/A | 55.7 | 31 | N/A | -30.0 |
| 447201PBP-N211 | 32 | N/A | -26.4 | 32 | N/A | -12.1 |
| 447201PBP-N213 | 32 | N/A | -47.8 | 32 | N/A | -40.7 |
| 447201PBP-N214 | 31 | N/A | -80.0 | 31 | N/A | 5.7 |
| 447201PBP-N262 | 40 | N/A | 7.1 | 40 | N/A | 7.1 |
| 447201PBP-N263 | 41 | N/A | -43.5 | 41 | N/A | 35.0 |
| 447201PBP-N266 | 40 | N/A | 14.3 | 40 | N/A | -7.2 |
| 447201PBP-N300 | 46 | N/A | -47.8 | 46 | N/A | 95.0 |
| 447201PBP-N301 | 47 | N/A | -2.9 | 47 | N/A | -17.2 |
| 447201PBP-N302 | 46 | N/A | 80.8 | 46 | N/A | 45.0 |
| 447201PBP-N303 | 47 | N/A | 54.3 | 47 | N/A | 40.0 |
| 447201PBP-N308 | 46 | N/A | 66.5 | 46 | N/A | -69.2 |
| 447201PBP-N309 | 47 | N/A | -24.3 | 47 | N/A | 4.3 |
| 447201PBP-N311 | 47 | N/A | 11.4 | 47 | N/A | -67.2 |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Biased Removable Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
|---|---|---|---|---|---|---|
| 447201PBP-N318 | 50 | N/A | -4.2 | 50 | N/A | -25.7 |
| 447201PBP-N319 | 49 | N/A | -5.8 | 49 | N/A | 8.5 |
| 447201PBP-N320 | 50 | N/A | 2.9 | 50 | N/A | 10.0 |
| 447201PBP-N321 | 49 | N/A | 44.2 | 49 | N/A | 44.2 |
| 447201PBP-N324 | 50 | N/A | 24.3 | 50 | N/A | -40.0 |
| 447201PBP-N325 | 49 | N/A | 37.1 | 49 | N/A | -20.0 |
| 447201PBP-N353 | 51 | N/A | -14.3 | 51 | N/A | 35.7 |
| 447201PBP-N354 | 51 | N/A | 100.0 | 51 | N/A | 85.7 |
| 447201PBP-N355 | 51 | N/A | 21.4 | 51 | N/A | 71.4 |
| 447201PBP-N356 | 51 | N/A | 64.2 | 51 | N/A | -57.2 |
| 447201PBP-N357 | 51 | N/A | -35.8 | 51 | N/A | 92.8 |
| 447201PBP-N358 | 51 | N/A | 42.8 | 51 | N/A | -57.2 |
| 447201PBP-N359 | 51 | N/A | 7.1 | 51 | N/A | 28.5 |
| 447201PBP-N360 | 54 | N/A | 26.4 | 54 | N/A | 47.8 |
| 447201PBP-N361 | 54 | N/A | -16.5 | 54 | N/A | 90.7 |
| 447201PBP-N362 | 54 | N/A | 26.4 | 54 | N/A | -9.3 |
| 447201PBP-N363 | 54 | N/A | 40.7 | 54 | N/A | 62.1 |
| 447201PBP-N364 | 54 | N/A | -9.3 | 54 | N/A | 26.4 |
| 447201PBP-N365 | 54 | N/A | 76.4 | 54 | N/A | 55.0 |
| 447201PBP-N366 | 54 | N/A | -23.6 | 54 | N/A | 19.3 |
| 447201PBP-N367 | 54 | N/A | -16.5 | 54 | N/A | -2.2 |
| 447201PBP-N368 | 54 | N/A | -80.7 | 54 | N/A | -66.5 |
| 447201PBP-N369 | 54 | N/A | 19.3 | 54 | N/A | -9.3 |
| 447201PBP-N370 | 54 | N/A | -109.3 | 54 | N/A | -9.3 |
| 447201PBP-N371 | 54 | N/A | 47.8 | 54 | N/A | 26.4 |
| 447201PBP-N372 | 54 | N/A | -2.2 | 54 | N/A | 5.0 |
| 447201PBP-N373 | 54 | N/A | 33.5 | 54 | N/A | -66.5 |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

**Comments:** The following Media Sample locations were found to be above the limits during Pre sample surveys and were not taken. Project Management was given locations and areas were scabbled, then areas were surveyed during TSAs and scanning: 3, 6, 17, 18, 26, 28, 42, 51, 64, 71, 86, 87, 89, 90, 92, 93, 98, 100, 102, 105, 106, 107, 109, 115, 127, 128, 129, 173, 174, 176, 177, 178, 179, 180, 183, 194, 195, 196, 197, 198, 199, 200, 201, 215 through 235, 238, 239, 244, 256, 268, 270, 272, 274, 275, 279 through 284, 286, 287, 296 through 299, 304 through 307, 331, 332, 333, and 347.
The paint was removed from 100 % of the floor surfaces. Also, some walls were removed and managed as low level waste. The following media samples were on these surfaces and have been removed from the package: 2, 5, 7, 8 through 16, 20, 23 through 25, 27, 29 through 34, 40, 41, 43 through 50, 52 through 59, 62, 63, 72, 73, 74, 85, 88, 91, 94, 95, 96, 97, 99, 101, 103, 104, 108, 110 through 114, 116 through 126, 130 through 135, 137 through 141, 159, 163, 164, 166 through 172, 175, 181, 182, 184 through 193, 202 through 205, 212, 236, 237, 240 through 243, 245 through 255, 257 through 261, 264, 265, 267, 269, 271, 273, 276 through 278, 285, 288 through 295, 310, 312 through 317, 322, 323, 348 through 352,
RSA and TSA survey points 466 and 467 were removed from this survey package because the area belonged to another Survey Unit. RSA and TSA survey points 540 through 590 from rooms 31 and 32 were removed from this survey package, because the area (386 square meters of floor space) could not be release to unrestricted release limits and was designated as Low-Level waste.
The initial Sample Net Activity for locations 483 and 484 were 8,048.6 and 6748.6 dpm/100cm2 respectively. A square meter average investigation was conducted for each of these locations. The average of the investigation measurements is reported. No further investigation is required.

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N374 | 87 | N/A | -245.2 | |
| 447201PRP-N375 | 88 | N/A | -217.9 | |
| 447201PRP-N376 | 87 | N/A | -408.8 | |
| 447201PRP-N377 | 88 | N/A | -317.9 | |
| 447201PRP-N378 | 87 | N/A | -213.4 | |
| 447201PRP-N379 | 88 | N/A | 327.5 | |
| 447201PRP-N380 | 87 | N/A | 191.2 | |
| 447201PRP-N381 | 88 | N/A | 1,832.1 | |
| 447201PRP-N382 | 87 | N/A | 1,586.6 | |
| 447201PRP-N383 | 88 | N/A | 1,745.7 | |
| 447201PRP-N384 | 87 | N/A | 1,577.5 | |
| 447201PRP-N385 | 88 | N/A | 1,682.1 | |
| 447201PRP-N386 | 87 | N/A | 1,263.9 | |
| 447201QRP-N386 | 89 | N/A | 1,026.2 | |
| 447201PRP-N387 | 88 | N/A | 1,791.2 | |
| 447201QRP-N387 | 89 | N/A | 1,935.3 | |
| 447201PRP-N388 | 88 | N/A | 1,318.4 | |
| 447201PRP-N389 | 87 | N/A | 1,873.0 | |
| 447201PRP-N390 | 88 | N/A | 500.2 | |
| 447201PRP-N391 | 73 | N/A | -127.0 | |
| 447201PRP-N392 | 73 | N/A | -117.9 | |
| 447201PRP-N393 | 73 | N/A | -208.8 | |
| 447201PRP-N394 | 73 | N/A | 1,513.9 | |
| 447201QRP-N394 | 89 | N/A | 1,203.5 | |
| 447201PRP-N395 | 73 | N/A | 1,586.6 | |
| 447201PRP-N396 | 73 | N/A | 1,363.9 | |
| 447201PRP-N397 | 73 | N/A | 1,586.6 | |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N398 | 73 | N/A | 1,573.0 | |
| 447201PRP-N399 | 73 | N/A | 1,723.0 | |
| 447201QRP-N399 | 89 | N/A | 1,335.3 | |
| 447201PRP-N400 | 73 | N/A | -527.0 | |
| 447201PRP-N401 | 73 | N/A | -522.5 | |
| 447201PRP-N402 | 73 | N/A | -431.6 | |
| 447201PRP-N403 | 73 | N/A | -386.1 | |
| 447201PRP-N404 | 73 | N/A | -204.3 | |
| 447201PRP-N405 | 73 | N/A | 2,527.5 | |
| 447201QRP-N405 | 93 | N/A | 2,244.4 | |
| 447201PRP-N406 | 73 | N/A | 1,573.0 | |
| 447201PRP-N407 | 73 | N/A | 1,254.8 | |
| 447201PRP-N408 | 73 | N/A | 1,650.2 | |
| 447201PRP-N409 | 73 | N/A | 1,545.7 | |
| 447201PRP-N410 | 73 | N/A | 1,568.4 | |
| 447201PRP-N411 | 73 | N/A | -499.8 | |
| 447201PRP-N412 | 73 | N/A | -213.4 | |
| 447201PRP-N413 | 73 | N/A | -122.5 | |
| 447201PRP-N414 | 73 | N/A | 1,286.6 | |
| 447201PRP-N415 | 73 | N/A | 2,363.9 | |
| 447201PRP-N416 | 73 | N/A | 2,009.3 | |
| 447201PRP-N417 | 73 | N/A | -363.4 | |
| 447201PRP-N418 | 73 | N/A | -431.6 | |
| 447201PRP-N419 | 73 | N/A | -308.8 | |
| 447201PRP-N420 | 73 | N/A | 95.7 | |
| 447201PRP-N421 | 73 | N/A | 1,432.1 | |
| 447201PRP-N422 | 73 | N/A | 1,204.8 | |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N423 | 73 | N/A | 1,177.5 | |
| 447201PRP-N424 | 73 | N/A | 1,413.9 | |
| 447201PRP-N425 | 75 | N/A | 1,241.2 | |
| 447201QRP-N425 | 93 | N/A | 1,176.2 | |
| 447201PRP-N426 | 75 | N/A | 759.3 | |
| 447201PRP-N427 | 76 | N/A | -1,304.3 | |
| 447201PRP-N428 | 76 | N/A | -749.8 | |
| 447201PRP-N429 | 76 | N/A | -777.0 | |
| 447201PRP-N430 | 75 | N/A | -799.8 | |
| 447201PRP-N431 | 76 | N/A | -531.6 | |
| 447201PRP-N432 | 75 | N/A | -949.8 | |
| 447201PRP-N433 | 76 | N/A | -677.0 | |
| 447201PRP-N434 | 76 | N/A | -995.2 | |
| 447201PRP-N435 | 75 | N/A | -540.7 | |
| 447201PRP-N436 | 76 | N/A | -522.5 | |
| 447201PRP-N437 | 75 | N/A | -645.2 | |
| 447201PRP-N438 | 76 | N/A | -172.5 | |
| 447201PRP-N439 | 75 | N/A | -227.0 | |
| 447201PRP-N440 | 75 | N/A | 773.0 | |
| 447201PRP-N441 | 76 | N/A | 786.6 | |
| 447201PRP-N442 | 75 | N/A | 682.1 | |
| 447201PRP-N443 | 76 | N/A | 595.7 | |
| 447201PRP-N444 | 75 | N/A | 1,432.1 | |
| 447201PRP-N445 | 76 | N/A | 2,823.0 | |
| 447201PRP-N446 | 76 | N/A | 618.4 | |
| 447201PRP-N447 | 76 | N/A | 482.1 | |
| 447201PRP-N448 | 75 | N/A | 713.9 | |

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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N449 | 75 | N/A | 291.2 | |
| 447201PRP-N450 | 76 | N/A | 577.5 | |
| 447201PRP-N451 | 75 | N/A | 323.0 | |
| 447201PRP-N452 | 92 | N/A | 223.0 | |
| 447201PRP-N453 | 92 | N/A | 545.7 | |
| 447201PRP-N454 | 92 | N/A | 1,695.7 | |
| 447201QRP-N454 | 93 | N/A | 1,244.4 | |
| 447201PRP-N455 | 92 | N/A | 4,063.9 | |
| 447201QRP-N455 | 93 | N/A | 3,153.5 | |
| 447201PRP-N456 | 92 | N/A | 195.7 | |
| 447201PRP-N457 | 92 | N/A | 300.2 | |
| 447201PRP-N458 | 92 | N/A | 95.7 | |
| 447201PRP-N459 | 73 | N/A | -227.0 | |
| 447201PRP-N460 | 73 | N/A | -172.5 | |
| 447201PRP-N461 | 73 | N/A | -436.1 | |
| 447201PRP-N462 | 73 | N/A | 1,218.4 | |
| 447201PRP-N463 | 73 | N/A | 1,254.8 | |
| 447201PRP-N464 | 73 | N/A | 1,918.4 | |
| 447201PRP-N465 | 73 | N/A | 1,459.3 | |
| 447201PRP-N468 | 87 | N/A | 1,323.0 | |
| 447201PRP-N469 | 88 | N/A | 1,236.6 | |
| 447201PRP-N470 | 87 | N/A | 1,445.7 | |
| 447201PRP-N471 | 88 | N/A | 1,763.9 | |
| 447201PRP-N472 | 87 | N/A | 1,445.7 | |
| 447201PRP-N473 | 88 | N/A | 1,218.4 | |
| 447201PRP-N474 | 87 | N/A | 150.2 | |
| 447201PRP-N475 | 88 | N/A | 50.2 | |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N476 | 87 | N/A | 245.7 | |
| 447201PRP-N477 | 88 | N/A | 1,482.1 | |
| 447201QRP-N477 | 93 | N/A | 1,380.7 | |
| 447201PRP-N478 | 87 | N/A | 54.8 | |
| 447201PRP-N479 | 87 | N/A | 1,491.2 | |
| 447201PRP-N480 | 88 | N/A | 1,227.5 | |
| 447201PRP-N481 | 87 | N/A | 677.5 | |
| 447201PRP-N482 | 88 | N/A | 1,532.1 | |
| 447201PRP-N483 | 88 | N/A | 1,868.0 | |
| 447201PRP-N484 | 88 | N/A | 2,318.0 | |
| 447201PRP-N485 | 87 | N/A | 1,191.2 | |
| 447201PRP-N486 | 87 | N/A | 1,623.0 | |
| 447201PRP-N487 | 87 | N/A | 1,591.2 | |
| 447201PRP-N488 | 87 | N/A | 1,059.3 | |
| 447201PRP-N489 | 87 | N/A | 1,250.2 | |
| 447201PRP-N490 | 87 | N/A | 1,363.9 | |
| 447201PRP-N491 | 87 | N/A | 2,159.3 | |
| 447201PRP-N492 | 87 | N/A | 1,654.8 | |
| 447201PRP-N493 | 87 | N/A | 2,359.3 | |
| 447201PRP-N494 | 87 | N/A | 2,100.2 | |
| 447201QRP-N494 | 96 | N/A | 2,026.2 | |
| 447201PRP-N495 | 87 | N/A | 2,263.9 | |
| 447201PRP-N496 | 87 | N/A | 2,063.9 | |
| 447201PRP-N497 | 87 | N/A | 1,327.5 | |
| 447201PRP-N498 | 87 | N/A | 1,486.6 | |
| 447201PRP-N499 | 87 | N/A | 1,927.5 | |
| 447201PRP-N500 | 87 | N/A | 1,609.3 | |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N501 | 87 | N/A | 1,954.8 | |
| 447201PRP-N502 | 87 | N/A | 1,718.4 | |
| 447201PRP-N503 | 87 | N/A | 1,882.1 | |
| 447201QRP-N503 | 96 | N/A | 1,117.1 | |
| 447201PRP-N505 | 87 | N/A | 1,632.1 | |
| 447201PRP-N506 | 87 | N/A | 2,295.7 | |
| 447201PRP-N507 | 87 | N/A | 868.4 | |
| 447201PRP-N508 | 87 | N/A | 1,050.2 | |
| 447201PRP-N509 | 87 | N/A | 459.3 | |
| 447201PRP-N510 | 87 | N/A | 441.2 | |
| 447201PRP-N512 | 87 | N/A | 473.0 | |
| 447201PRP-N513 | 87 | N/A | -13.4 | |
| 447201PRP-N514 | 86 | N/A | 595.7 | |
| 447201PRP-N515 | 86 | N/A | 304.8 | |
| 447201PRP-N516 | 86 | N/A | 1,768.4 | |
| 447201PRP-N517 | 86 | N/A | -436.1 | |
| 447201PRP-N518 | 86 | N/A | -286.1 | |
| 447201PRP-N519 | 86 | N/A | 1,700.2 | |
| 447201PRP-N520 | 86 | N/A | 1,473.0 | |
| 447201PRP-N521 | 86 | N/A | 1,504.8 | |
| 447201PRP-N522 | 86 | N/A | 1,482.1 | |
| 447201PRP-N523 | 86 | N/A | 1,223.0 | |
| 447201PRP-N524 | 86 | N/A | 1,259.3 | |
| 447201PRP-N525 | 86 | N/A | 1,368.4 | |
| 447201PRP-N526 | 86 | N/A | 1,191.2 | |
| 447201PRP-N527 | 86 | N/A | 1,009.3 | |
| 447201PRP-N528 | 86 | N/A | 1,086.6 | |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N529 | 86 | N/A | 1,386.6 | |
| 447201PRP-N530 | 86 | N/A | 1,118.4 | |
| 447201PRP-N531 | 86 | N/A | 941.2 | |
| 447201PRP-N532 | 86 | N/A | 1,045.7 | |
| 447201PRP-N533 | 86 | N/A | 1,982.1 | |
| 447201PRP-N534 | 86 | N/A | 1,486.6 | |
| 447201PRP-N535 | 86 | N/A | 795.7 | |
| 447201PRP-N536 | 86 | N/A | 1,227.5 | |
| 447201PRP-N537 | 86 | N/A | 1,263.9 | |
| 447201PRP-N538 | 86 | N/A | 2,273.0 | |
| 447201PRP-N539 | 86 | N/A | 1,873.0 | |
| 447201PRP-N591 | 87 | N/A | 3,150.2 | |
| 447201PRP-N592 | 87 | N/A | 1,477.5 | |
| 447201PRP-N593 | 88 | N/A | 1,763.9 | |
| 447201PRP-N594 | 87 | N/A | 1,836.6 | |
| 447201PRP-N595 | 87 | N/A | 1,436.6 | |
| 447201PRP-N596 | 88 | N/A | 936.6 | |
| 447201PRP-N597 | 88 | N/A | 1,573.0 | |
| 447201PRP-N598 | 88 | N/A | 1,600.2 | |
| 447201PRP-N599 | 87 | N/A | 4,050.2 | |
| 447201QRP-N599 | 96 | N/A | 3,585.3 | |
| 447201PRP-N600 | 88 | N/A | 2,332.1 | |
| 447201PRP-N601 | 87 | N/A | -1,204.3 | |
| 447201PRP-N602 | 88 | N/A | 318.4 | |
| 447201PRP-N603 | 87 | N/A | 1,441.2 | |
| 447201PRP-N604 | 88 | N/A | 1,527.5 | |
| 447201PRP-N605 | 87 | N/A | 2,054.8 | |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447201PRP-N606 | 88 | N/A | 923.0 | |
| 447201PRP-N607 | 87 | N/A | 1,573.0 | |
| 447201PRP-N608 | 88 | N/A | 1,413.9 | |
| 447201PRP-N609 | 87 | N/A | 1,986.6 | |
| 447201PRP-N610 | 88 | N/A | 1,782.1 | |
| 447201PRP-N611 | 87 | N/A | 1,177.5 | |
| 447201PRP-N612 | 87 | N/A | 2,263.9 | |

# Biased Total Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
|---|---|---|---|---|---|---|
| 447201PBP-N001 | 2 | N/A | 549.8 | 2 | N/A | 422.4 |
| 447201PBP-N004 | 2 | N/A | 463.4 | 2 | N/A | 217.8 |
| 447201PBP-N019 | 7 | N/A | 272.5 | 7 | N/A | 813.3 |
| 447201PBP-N021 | 3 | N/A | 218.0 | 3 | N/A | 286.0 |
| 447201PBP-N022 | 3 | N/A | 218.0 | 3 | N/A | 349.7 |
| 447201PBP-N035 | 11 | N/A | -113.9 | 11 | N/A | 236.0 |
| 447201PBP-N036 | 11 | N/A | 72.5 | 11 | N/A | 1,263.3 |
| 447201PBP-N037 | 11 | N/A | 1,481.6 | 11 | N/A | 840.6 |
| 447201PBP-N038 | 11 | N/A | 527.1 | 11 | N/A | 204.2 |
| 447201PBP-N039 | 11 | N/A | 440.7 | 11 | N/A | 236.0 |
| 447201PBP-N060 | 14 | N/A | 340.7 | 14 | N/A | 545.1 |
| 447201PBP-N061 | 14 | N/A | 86.1 | 14 | N/A | 322.4 |
| 447201PBP-N065 | 14 | N/A | 236.1 | 14 | N/A | 713.3 |
| 447201PBP-N066 | 14 | N/A | 408.9 | 14 | N/A | 486.0 |
| 447201PBP-N067 | 14 | N/A | 136.1 | 14 | N/A | 13.3 |
| 447201PBP-N068 | 14 | N/A | 508.9 | 14 | N/A | 340.6 |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Biased Total Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
|---|---|---|---|---|---|---|
| 447201PBP-N069 | 14 | N/A | 972.5 | 14 | N/A | 849.7 |
| 447201PBP-N070 | 14 | N/A | 599.8 | 14 | N/A | 626.9 |
| 447201PBP-N075 | 14 | N/A | 49.8 | 14 | N/A | 1,117.8 |
| 447201PBP-N076 | 14 | N/A | -18.4 | 14 | N/A | 831.5 |
| 447201PBP-N077 | 14 | N/A | 936.1 | 14 | N/A | 2,008.7 |
| 447201PBP-N078 | 14 | N/A | 222.5 | 14 | N/A | 1,713.3 |
| 447201PBP-N079 | 14 | N/A | 290.7 | 14 | N/A | 1,326.9 |
| 447201PBP-N080 | 14 | N/A | 168.0 | 14 | N/A | 45.1 |
| 447201PBP-N081 | 14 | N/A | -182.0 | 14 | N/A | 1,617.8 |
| 447201PBP-N082 | 14 | N/A | 1,327.1 | 14 | N/A | 317.8 |
| 447201PBP-N083 | 14 | N/A | 254.3 | 14 | N/A | 645.1 |
| 447201PBP-N084 | 14 | N/A | 81.6 | 14 | N/A | 899.7 |
| 447201PBP-N135 | 23 | N/A | 322.5 | 23 | N/A | 817.8 |
| 447201PBP-N136 | 23 | N/A | 477.1 | 23 | N/A | 186.0 |
| 447201PBP-N142 | 23 | N/A | 290.7 | 23 | N/A | 849.7 |
| 447201PBP-N143 | 23 | N/A | 545.2 | 26 | N/A | 1,122.4 |
| 447201PBP-N144 | 26 | N/A | 340.7 | 26 | N/A | 645.1 |
| 447201PBP-N145 | 26 | N/A | 608.9 | 26 | N/A | 336.0 |
| 447201PBP-N146 | 26 | N/A | 1,004.3 | 26 | N/A | 490.6 |
| 447201PBP-N147 | 26 | N/A | 768.0 | 26 | N/A | 613.3 |
| 447201PBP-N148 | 26 | N/A | 886.1 | 26 | N/A | 890.6 |
| 447201PBP-N149 | 26 | N/A | 904.3 | 26 | N/A | 372.4 |
| 447201PBP-N150 | 26 | N/A | 781.6 | 26 | N/A | -204.9 |
| 447201PBP-N151 | 26 | N/A | 799.8 | 26 | N/A | 458.7 |
| 447201PBP-N152 | 26 | N/A | 768.0 | 26 | N/A | 840.6 |
| 447201PBP-N153 | 26 | N/A | 1,586.1 | 26 | N/A | 490.6 |
| 447201PBP-N154 | 26 | N/A | 972.5 | 26 | N/A | 840.6 |



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| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Biased Total Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
|---|---|---|---|---|---|---|
| 447201PBP-N155 | 26 | N/A | 836.1 | 26 | N/A | 490.6 |
| 447201PBP-N160 | 26 | N/A | 31.6 | 26 | N/A | -104.9 |
| 447201PBP-N161 | 26 | N/A | 86.1 | 26 | N/A | -259.4 |
| 447201PBP-N162 | 26 | N/A | 99.8 | 26 | N/A | -104.9 |
| 447201PBP-N165 | 26 | N/A | 254.3 | 30 | N/A | 81.5 |
| 447201PBP-N206 | 30 | N/A | 345.2 | 30 | N/A | 136.0 |
| 447201PBP-N207 | 30 | N/A | 1,345.2 | 30 | N/A | 490.6 |
| 447201PBP-N208 | 30 | N/A | 1,054.3 | 30 | N/A | -241.3 |
| 447201PBP-N209 | 30 | N/A | 986.1 | 30 | N/A | 963.3 |
| 447201PBP-N210 | 30 | N/A | 681.6 | 30 | N/A | 599.7 |
| 447201PBP-N211 | 30 | N/A | 1,158.9 | 30 | N/A | 976.9 |
| 447201PBP-N213 | 30 | N/A | 1,258.9 | 30 | N/A | 558.7 |
| 447201PBP-N214 | 30 | N/A | 768.0 | 30 | N/A | 149.7 |
| 447201PBP-N262 | 39 | N/A | 1,381.6 | 39 | N/A | 1,617.8 |
| 447201PBP-N263 | 39 | N/A | 1,413.4 | 39 | N/A | 1,026.9 |
| 447201PBP-N266 | 39 | N/A | 1,277.1 | 39 | N/A | 1,249.7 |
| 447201PBP-N300 | 45 | N/A | 886.1 | 45 | N/A | 1,667.8 |
| 447201PBP-N301 | 45 | N/A | 1,804.3 | 45 | N/A | 1,440.6 |
| 447201PBP-N302 | 45 | N/A | 1,108.9 | 45 | N/A | 1,104.2 |
| 447201PBP-N303 | 45 | N/A | 990.7 | 45 | N/A | 831.5 |
| 447201PBP-N308 | 45 | N/A | 1,327.1 | 45 | N/A | 845.1 |
| 447201PBP-N309 | 45 | N/A | 1,413.4 | 45 | N/A | 754.2 |
| 447201PBP-N311 | 45 | N/A | 468.0 | 45 | N/A | -36.7 |
| 447201PBP-N318 | 48 | N/A | 408.9 | 48 | N/A | 595.1 |
| 447201PBP-N319 | 48 | N/A | 322.5 | 48 | N/A | 681.5 |
| 447201PBP-N320 | 48 | N/A | -459.3 | 48 | N/A | 545.1 |
| 447201PBP-N321 | 48 | N/A | -136.6 | 48 | N/A | 595.1 |

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

# Biased Total Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
|---|---|---|---|---|---|---|
| 447201PBP-N324 | 48 | N/A | 390.7 | 48 | N/A | 626.9 |
| 447201PBP-N325 | 48 | N/A | 408.9 | 48 | N/A | 799.7 |
| 447201PBP-N353 | 53 | N/A | 18.0 | 53 | N/A | 340.6 |
| 447201PBP-N354 | 53 | N/A | 372.5 | 53 | N/A | -123.1 |
| 447201PBP-N355 | 53 | N/A | 458.9 | 53 | N/A | -0.3 |
| 447201PBP-N356 | 53 | N/A | 186.1 | 53 | N/A | 99.7 |
| 447201PBP-N357 | 53 | N/A | 177.1 | 53 | N/A | 167.8 |
| 447201PBP-N358 | 53 | N/A | 499.8 | 53 | N/A | 354.2 |
| 447201PBP-N359 | 53 | N/A | 254.3 | 53 | N/A | 390.6 |
| 447201PBP-N360 | 56 | N/A | 322.5 | 56 | N/A | -395.8 |
| 447201PBP-N361 | 56 | N/A | -254.8 | 56 | N/A | -259.4 |
| 447201PBP-N362 | 56 | N/A | 118.0 | 56 | N/A | -564.0 |
| 447201PBP-N363 | 56 | N/A | -232.0 | 56 | N/A | -273.1 |
| 447201PBP-N364 | 56 | N/A | 86.1 | 56 | N/A | -700.3 |
| 447201PBP-N365 | 56 | N/A | -786.6 | 56 | N/A | -223.1 |
| 447201PBP-N366 | 56 | N/A | -536.6 | 56 | N/A | -291.3 |
| 447201PBP-N367 | 56 | N/A | -477.5 | 56 | N/A | -341.3 |
| 447201PBP-N368 | 56 | N/A | -409.3 | 56 | N/A | -409.4 |
| 447201PBP-N369 | 56 | N/A | 336.1 | 56 | N/A | -154.9 |
| 447201PBP-N370 | 56 | N/A | -582.0 | 56 | N/A | -632.2 |
| 447201PBP-N371 | 56 | N/A | -868.4 | 56 | N/A | -614.0 |
| 447201PBP-N372 | 56 | N/A | -132.0 | 56 | N/A | -614.0 |
| 447201PBP-N373 | 56 | N/A | -50.2 | 56 | N/A | -664.0 |

**Comments:** The following Media Sample locations were found to be above the limits during Pre sample surveys and were not taken. Project Management was given locations and areas were scabbled, then areas were surveyed during TSAs and scanning: 3, 6, 17, 18, 26, 28, 42, 51, 64, 71, 86, 87, 89, 90, 92, 93, 98, 100, 102, 105, 106, 107, 109, 115, 127, 128, 129, 173, 174, 176, 177, 178, 179, 180, 183, 194, 195, 196, 197, 198, 199, 200, 201, 215 through 235, 238, 239, 244, 256, 268, 270, 272, 274, 275, 279 through 284, 286, 287, 296 through 299, 304 through 307, 331, 332, 333, and 347.
The paint was removed from 100 % of the floor surfaces. Also, some walls were removed and managed as low level waste. The following media samples were on these surfaces and have been removed from the package: 2, 5, 7, 8 through 16, 20, 23 through 25, 27, 29 through 34, 40, 41, 43 through 50, 52 through 59, 62, 63, 72, 73, 74, 85, 88, 91, 94, 95, 96, 97, 99, 101, 103, 104, 108,

| Survey Area: VIA 2 | Survey Unit: 447201 | Building: 447 |
|---|---|---|

**Description:** Interior Floors and <2 meters on the walls in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A

110 through 114, 116 through 126, 130 through 135, 137 through 141, 159, 163, 164, 166 through 172, 175, 181, 182, 184 through 193, 202 through 205, 212, 236, 237, 240 through 243, 245 through 255, 257 through 261, 264, 265, 267, 269, 271, 273, 276 through 278, 285, 288 through 295, 310, 312 through 317, 322, 323, 348 through 352,
RSA and TSA survey points 466 and 467 were removed from this survey package because the area belonged to another Survey Unit.
RSA and TSA survey points 540 through 590 from rooms 31 and 32 were removed from this survey package, because the area (386 square meters of floor space) could not be release to unrestricted release limits and was designated as Low-Level waste.
The initial Sample Net Activity for locations 483 and 484 were 8,048.6 and 6748.6 dpm/100cm2 respectively. A square meter average investigation was conducted for each of these locations. The average of the investigation measurements is reported. No further investigation is required.

## Survey Unit 447201
## Media Sample Results Table

| Map Loc | BLDG | VIA | Room | Sample Location Description | Media Type | Suvey Unit Package # | Sample RIN# | Sample Result (dpm/100cm2) |
|---|---|---|---|---|---|---|---|---|
| 1 | 447 | 2 | 401 | Wall 1 ft. up | Paint | 447201 | 04S0076-021.001 | 1922.0 |
| 4 | 447 | 2 | 411 | Wall 3 ft. up | Paint | 447201 | 04S0076-021.001 | 1922.0 |
| 19 | 447 | 2 | 415 | Wall 3 ft. up | Paint | 447201 | 04S0017-037.001 | 2929.0 |
| 21 | 447 | 2 | 420 | Wall 1 ft. up | Paint | 447201 | 04S0076-026.001 | 1683.0 |
| 22 | 447 | 2 | 420 | Wall 1 ft. up | Paint | 447201 | 04S0076-026.001 | 1683.0 |
| 35 | 447 | 2 | 403 | Wall 6 ft. up | Paint | 447201 | 04S0162-027.001 | 3695.0 |
| 36 | 447 | 2 | 403 | Wall 1 ft. up | Paint | 447201 | 04S0162-028.001 | 706.0 |
| 37 | 447 | 2 | 403 | Wall 6 ft. up | Paint | 447201 | 04S0162-027.001 | 3695.0 |
| 38 | 447 | 2 | 403 | Wall 1 ft. up | Paint | 447201 | N/A | 753.3 |
| 39 | 447 | 2 | 403 | Wall 6 ft. up | Paint | 447201 | 04S0162-028.001 | 706.0 |
| 60 | 447 | 2 | 403 | Wall 3 ft. up | Paint | 447201 | N/A | 1317.0 |
| 61 | 447 | 2 | 403 | Wall 6 ft. up | Paint | 447201 | N/A | 513.9 |
| 65 | 447 | 2 | 404 | Wall 6 ft. up | Paint | 447201 | N/A | 258.3 |
| 66 | 447 | 2 | 404 | Wall 1 ft. up | Paint | 447201 | 04S0161-026.001 | 493.0 |
| 67 | 447 | 2 | 404 | Wall 6 ft. up | Paint | 447201 | 04S0161-027.001 | 376.0 |
| 68 | 447 | 2 | 404 | Wall 1 ft. up | Paint | 447201 | 04S0161-026.001 | 493.0 |
| 69 | 447 | 2 | 404 | Wall 6 ft. up | Paint | 447201 | 04S0161-027.001 | 376.0 |
| 70 | 447 | 2 | 404 | Wall 1 ft. up | Paint | 447201 | 04S0161-028.001 | 1165.0 |
| 75 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0161-029.001 | 749.0 |
| 76 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0161-029.001 | 749.0 |
| 77 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0161-032.001 | 1350.0 |
| 78 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0161-028.001 | 1165.0 |
| 79 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0161-030.001 | 1687.0 |
| 80 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0161-030.001 | 1687.0 |
| 81 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0161-031.001 | 1408.0 |
| 82 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0161-031.001 | 1408.0 |
| 83 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0161-033.001 | 718.0 |
| 84 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0161-032.001 | 1350.0 |
| 135 | 447 | 2 | 406 | Wall 6 ft. up | Paint | 447201 | 04S0169-011.001 | 613.0 |
| 136 | 447 | 2 | 406 | Wall 1 ft. up | Paint | 447201 | 04S0169-011.001 | 613.0 |
| 142 | 447 | 2 | 406 | Wall 3 ft. up | Paint | 447201 | 04S0169-011.001 | 613.0 |
| 143 | 447 | 2 | 406 | Wall 1 ft. up | Paint | 447201 | 04S0169-011.001 | 613.0 |
| 144 | 447 | 2 | 406 | Wall 1 ft. up | Paint | 447201 | 04S0169-011.001 | 613.0 |
| 145 | 447 | 2 | 406 | Wall 6 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 146 | 447 | 2 | 406 | Wall 1 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 147 | 447 | 2 | 406 | Wall 6 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 148 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 149 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 150 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 151 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 152 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 153 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 154 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 155 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 160 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 161 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 162 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 165 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | 04S0168-024.001 | 4071.0 |
| 206 | 447 | 2 | 410 | Wall 6 ft. up | Paint | 447201 | N/A | 577.5 |
| 207 | 447 | 2 | 410 | Wall 1 ft. up | Paint | 447201 | N/A | 838.0 |
| 208 | 447 | 2 | 410A | Wall 6 ft. up | Paint | 447201 | N/A | 803.8 |
| 209 | 447 | 2 | 410A | Wall 1 ft. up | Paint | 447201 | N/A | 641.3 |
| 210 | 447 | 2 | 411 | Wall 6 ft. up | Paint | 447201 | N/A | 494.5 |

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## Survey Unit 447201
## Media Sample Results Table

| Map Loc | BLDG | VIA | Room | Sample Location Description | Media Type | Suvey Unit Package # | Sample RIN# | Sample Result (dpm/100cm2) |
|---|---|---|---|---|---|---|---|---|
| 211 | 447 | 2 | 411 | Wall 1 ft. up | Paint | 447201 | N/A | 968.9 |
| 213 | 447 | 2 | Corr. 407A | Wall 6 ft. up | Paint | 447201 | N/A | 831.1 |
| 214 | 447 | 2 | Corr. 407A | Wall 1 ft. up | Paint | 447201 | N/A | 1244.9 |
| 262 | 447 | 2 | 406A | Wall 6 ft. up | Paint | 447201 | 04S0186-012.001 | 1900.0 |
| 263 | 447 | 2 | 406A | Wall 1 ft. up | Paint | 447201 | 04S0186-012.001 | 1900.0 |
| 266 | 447 | 2 | 405B | Wall 6 ft. up | Paint | 447201 | 04S0186-012.001 | 1900.0 |
| 300 | 447 | 2 | 405A | Wall 6 ft. up | Paint | 447201 | 04S0192-015.001 | 3511.0 |
| 301 | 447 | 2 | 405A | Wall 1 ft. up | Paint | 447201 | 04S0192-015.001 | 3511.0 |
| 302 | 447 | 2 | 405A | Wall 6 ft. up | Paint | 447201 | 04S0192-015.001 | 3511.0 |
| 303 | 447 | 2 | 405A | Wall 1 ft. up | Paint | 447201 | 04S0192-015.001 | 3511.0 |
| 308 | 447 | 2 | 405B | Wall 6 ft. up | Paint | 447201 | 04S0192-015.001 | 3511.0 |
| 309 | 447 | 2 | 405B | Wall 1 ft. up | Paint | 447201 | 04S0192-015.001 | 3511.0 |
| 311 | 447 | 2 | 405B | Wall 6 ft. up | Paint | 447201 | 04S0192-015.001 | 3511.0 |
| 318 | 447 | 2 | 407A | Wall 1 ft. up | Paint | 447201 | 04S0191-016.001 | 2316.0 |
| 319 | 447 | 2 | 407A | Wall 1 ft. up | Paint | 447201 | 04S0191-016.001 | 2316.0 |
| 320 | 447 | 2 | 407A | Wall 6 ft. up | Paint | 447201 | 04S0191-016.001 | 2316.0 |
| 321 | 447 | 2 | 407A | Wall 6 ft. up | Paint | 447201 | 04S0191-016.001 | 2316.0 |
| 324 | 447 | 2 | 408 | Wall 6 ft. up | Paint | 447201 | 04S0191-016.001 | 2316.0 |
| 325 | 447 | 2 | 408 | Wall 1 ft. up | Paint | 447201 | 04S0191-016.001 | 2316.0 |
| 353 | 447 | 2 | 407 | Wall 6 ft. up | Paint | 447201 | 04S0225-027.001 | 1385.0 |
| 354 | 447 | 2 | 407 | Wall 1 ft. up | Paint | 447201 | 04S0225-027.001 | 1385.0 |
| 355 | 447 | 2 | 407 | Wall 6 ft. up | Paint | 447201 | 04S0225-027.001 | 1385.0 |
| 356 | 447 | 2 | 407 | Wall 1 ft. up | Paint | 447201 | 04S0225-027.001 | 1385.0 |
| 357 | 447 | 2 | 407 | Wall 1 ft. up | Paint | 447201 | 04S0225-027.001 | 1385.0 |
| 358 | 447 | 2 | 407 | Wall 1 ft. up | Paint | 447201 | 04S0225-027.001 | 1385.0 |
| 359 | 447 | 2 | 407 | Wall 6 ft. up | Paint | 447201 | 04S0225-027.001 | 1385.0 |
| 360 | 447 | 2 | 420A | Wall 6 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 361 | 447 | 2 | 420A | Wall 6 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 362 | 447 | 2 | 420A | Wall 1 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 363 | 447 | 2 | 420 | Wall 6 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 364 | 447 | 2 | 420 | Wall 6 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 365 | 447 | 2 | 420 | Wall 1 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 366 | 447 | 2 | 420 | Wall 6 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 367 | 447 | 2 | 420 | Wall 1 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 368 | 447 | 2 | 420 | Wall 6 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 369 | 447 | 2 | 420A | Wall 1 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 370 | 447 | 2 | 420B | Wall 6 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 371 | 447 | 2 | 420B | Wall 1 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 372 | 447 | 2 | 420B | Wall 1 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| 373 | 447 | 2 | 420B | Wall 6 ft. up | Paint | 447201 | 04S0233-015.001 | 1664.0 |
| | | | | | | | MIN | 258.3 |
| | | | | | | | MAX | 4071.0 |
| | | | | | | | MEAN | 1985.5 |
| | | | | | | | SD | 134.8 |
| | | | | | | | DCGLW = | 5000.0 |

Note ** If N/A is listed for 'Sample RIN#' then the samples were counted on the BC-4 instead of Gamma Spectroscopy.

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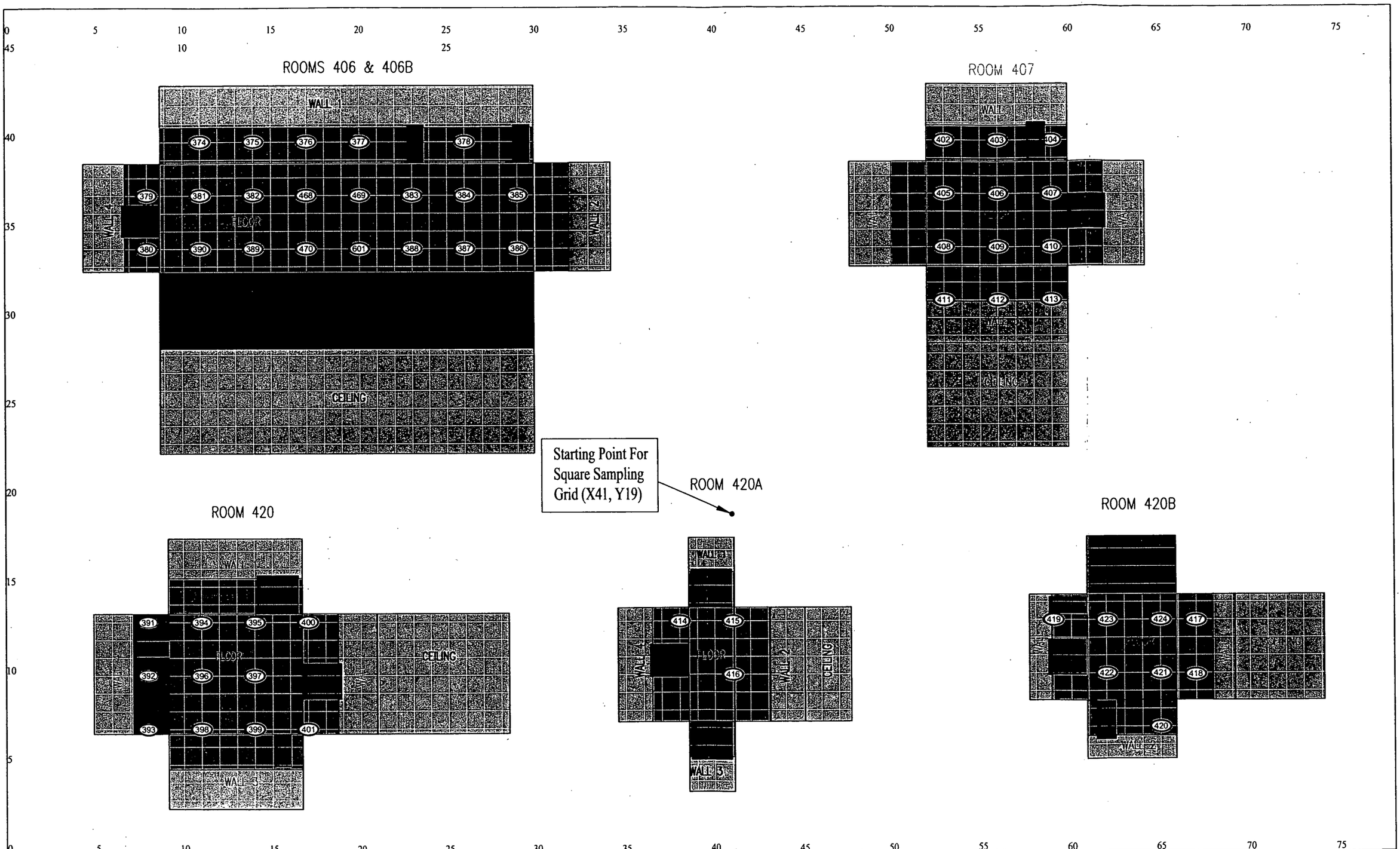


## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447201 Classification: 1

Survey Area/Unit Description: Rooms 406, 406B, 407, 420, 420A & 420B, Walls <2m & Floor

Floor Area: 1,123 sq.m Total Area: 2,362 sq.m Grid Spaceing for Survey Area: 3 m x 3 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 16
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

Prepared by: RFCSS Rocky Flats Closure Site Services, LLC. A Family Partnership Dedicated to Excellence

Prepared for: KAISER HILL

File Name: PDS 447201 SHT 02.DWG | Sheet 1 of 5 | Rev: 0

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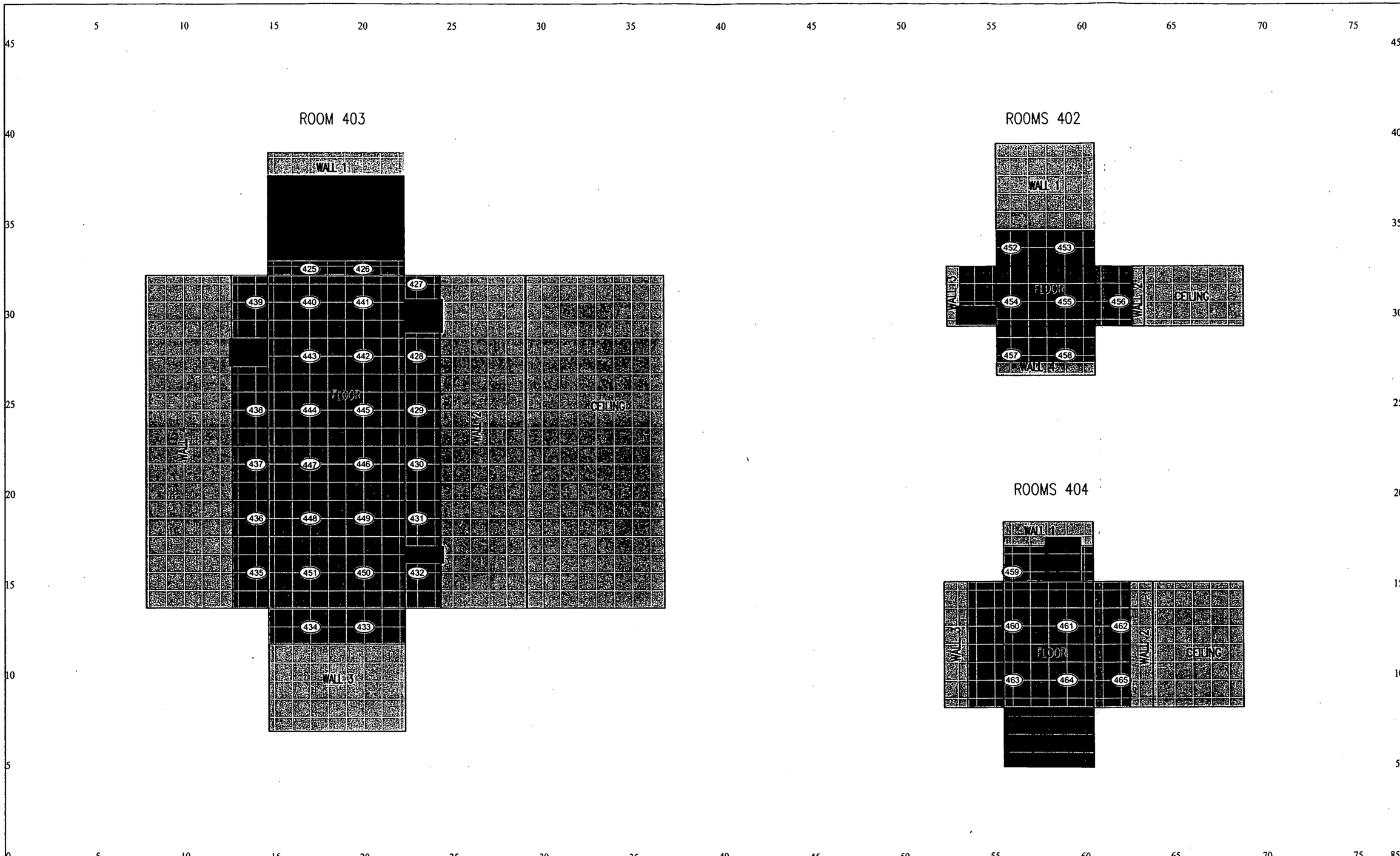


## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447201 Classification: 1

Survey Area/Unit Description: Rooms 402, 403 & 404, Walls <2m & Floor

Floor: 1,123 sq.m Total Area: 2,362 sq.m Grid Spaceing for Survey Area: 3 m x 3 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 16
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

Prepared by: RFDSS Rocky Flats Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: PDS 447201 SHT 03.DWG | Sheet 2 of 5 | Rev: 0

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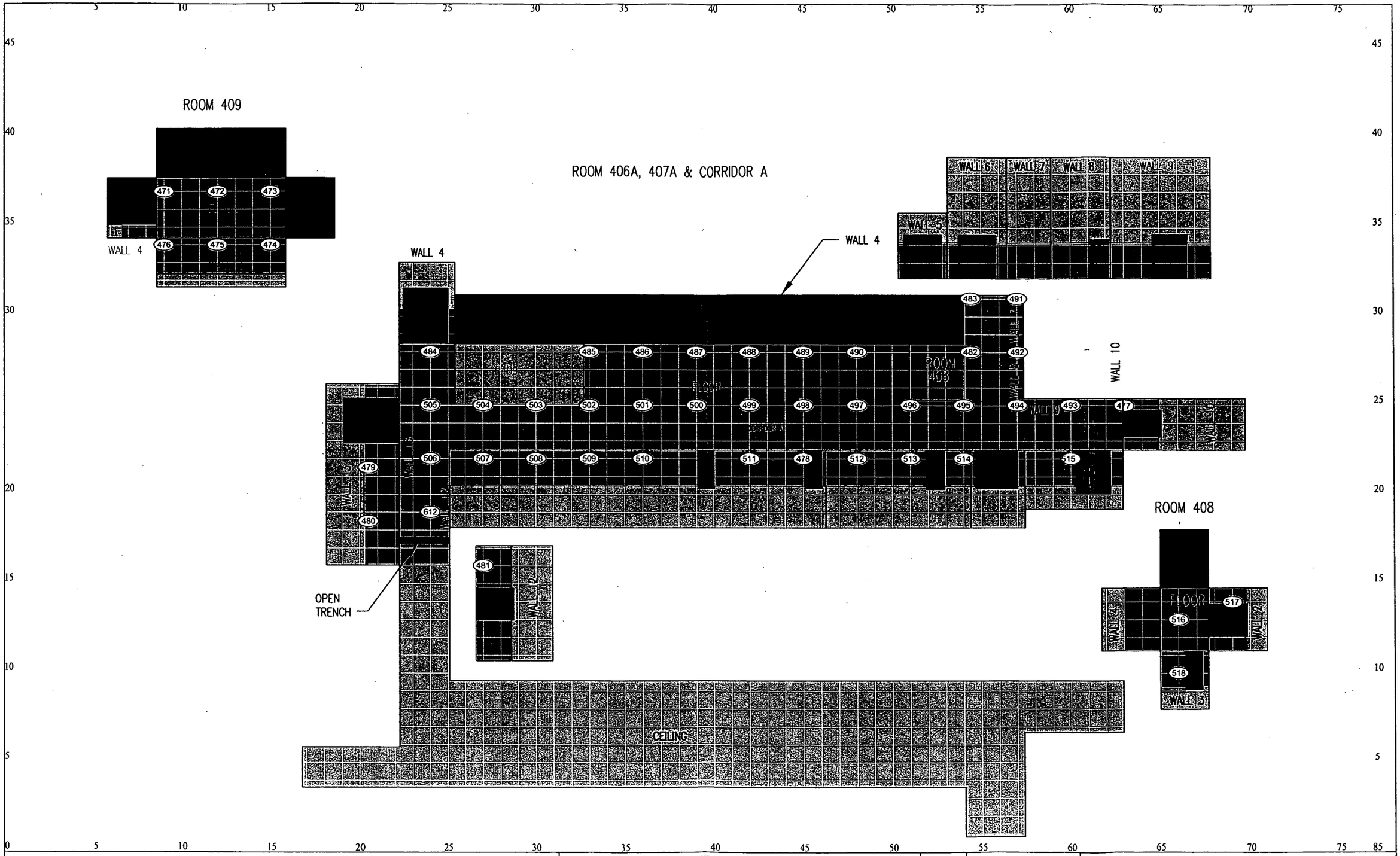


## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447201 Classification: 1

Survey Area/Unit Description: Rooms 406A, 407A, 408, 409 & CORRIDOR A, Walls <2m, & Floor

Floor Area: 1,123 sq.m Total Area: 2,362 sq.m Grid Spaceing for Survey Area: 3 m x 3 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit
- Low Level Waste Area

N

0 FEET 16
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

Prepared by: RF PDS Rocky Flats Closure Site Services, LLC

Prepared for: KAISER HILL

File Name: PDS 447201 SHT 04.DWG | Sheet 3 of 5 | Rev: 0

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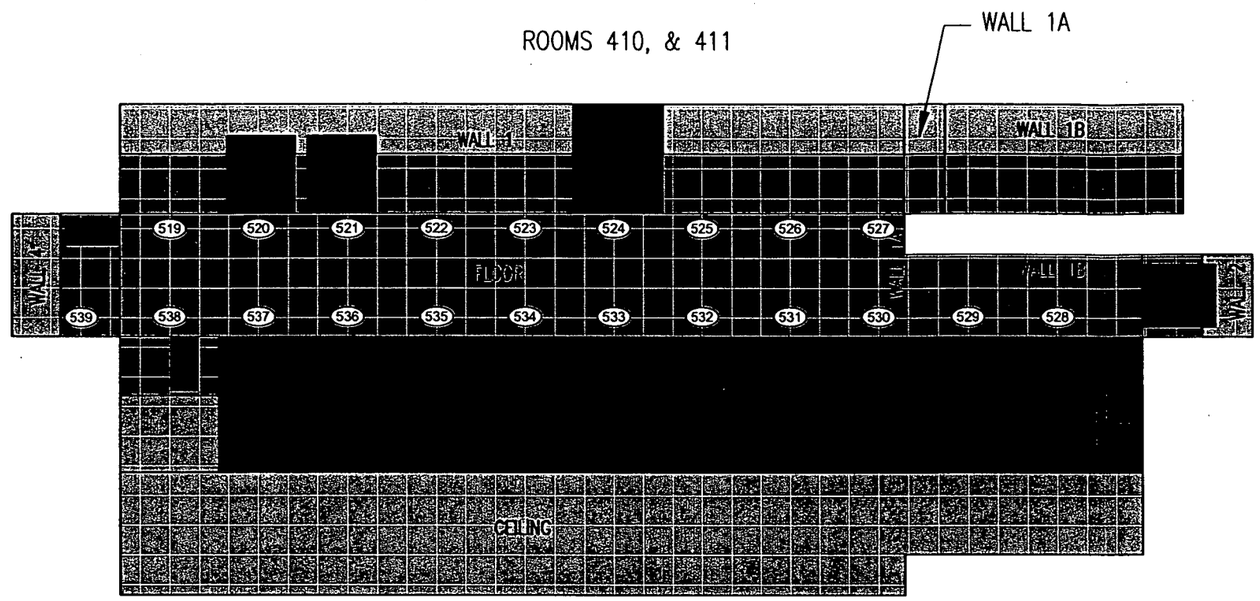


## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447201 Classification: 1

Survey Area/Unit Description: Rooms 410, 410A & 411, Walls <2m & Floor

Floor Area: 1,123 sq.m Total Area: 2,362 sq.m Grid Spaceing for Survey Area: 3 m x 3 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 1

0 METERS 5

1 inch = 16 feet

1 grid sq. = 1 sq. m.

U.S. Department of Energy

Rocky Flats Encironmental Technology Site

Prepared by: RF RFDS Rocky Flats Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: PDS 447201 SHT 05.DWG | Sheet 4 of 5 | Rev: 0

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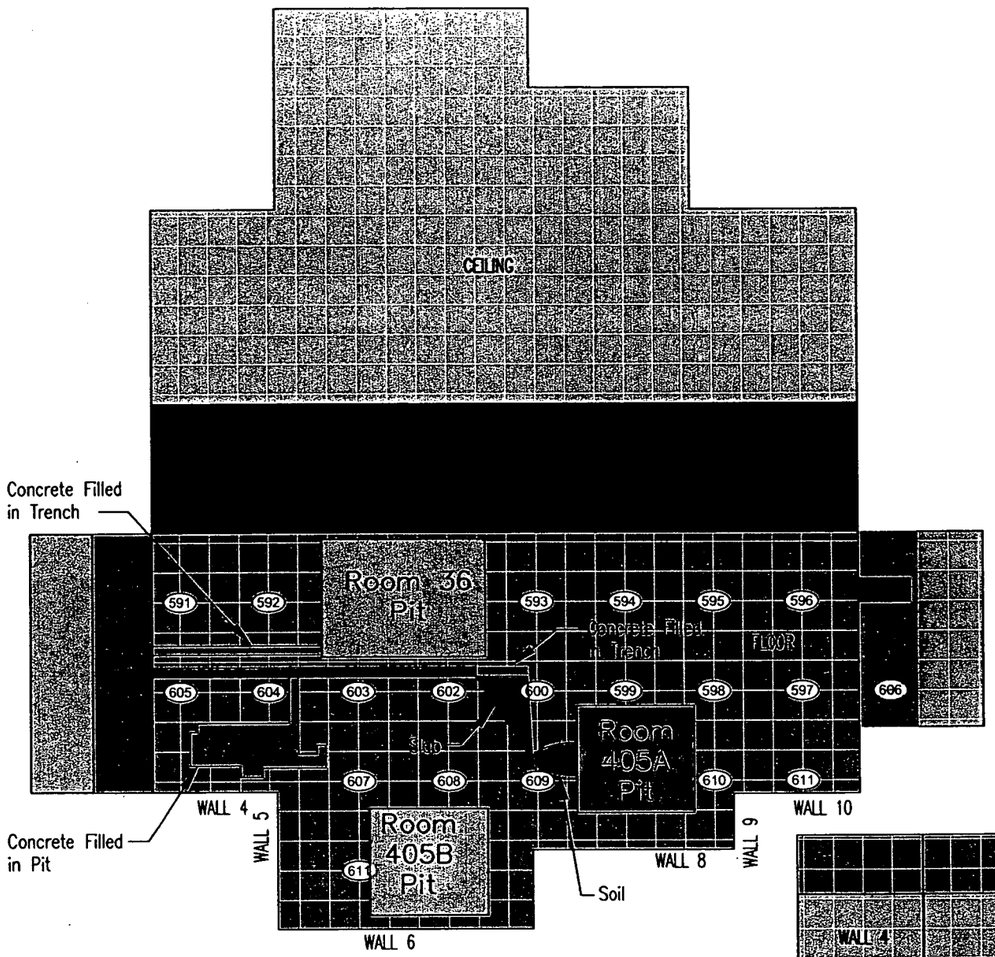
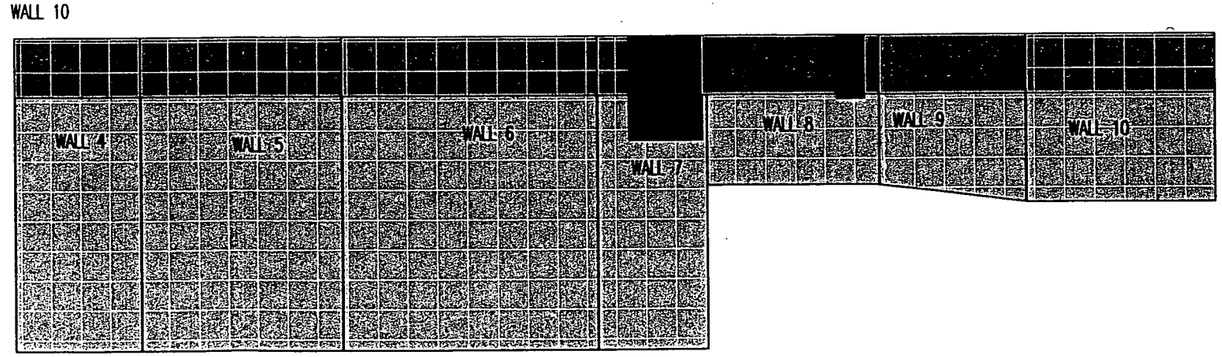
ROOMS 405, 405A & 405B




Low Level Waste Area to be Removed

Contaminated Area to Remain in-place > 3' below final grade

## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447201 Classification: 1

Survey Area/Unit Description: Rooms 405, 405A & 405B Walls <2m & Floor

Floor Area: 1,123 sq.m Total Area: 2,362 sq.m Grid Spaceing for Survey Area: 3 m x 3 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 16

0 METERS 5

1 inch = 16 feet

1 grid sq. = 1 sq. m.

U.S. Department of Energy

Rocky Flats Encironmental Technology Site

Prepared by: RFCSS Rocky Flats Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: PDS 447201 SHT 06.DWG | Sheet: 5 of 5 | Rev: 0

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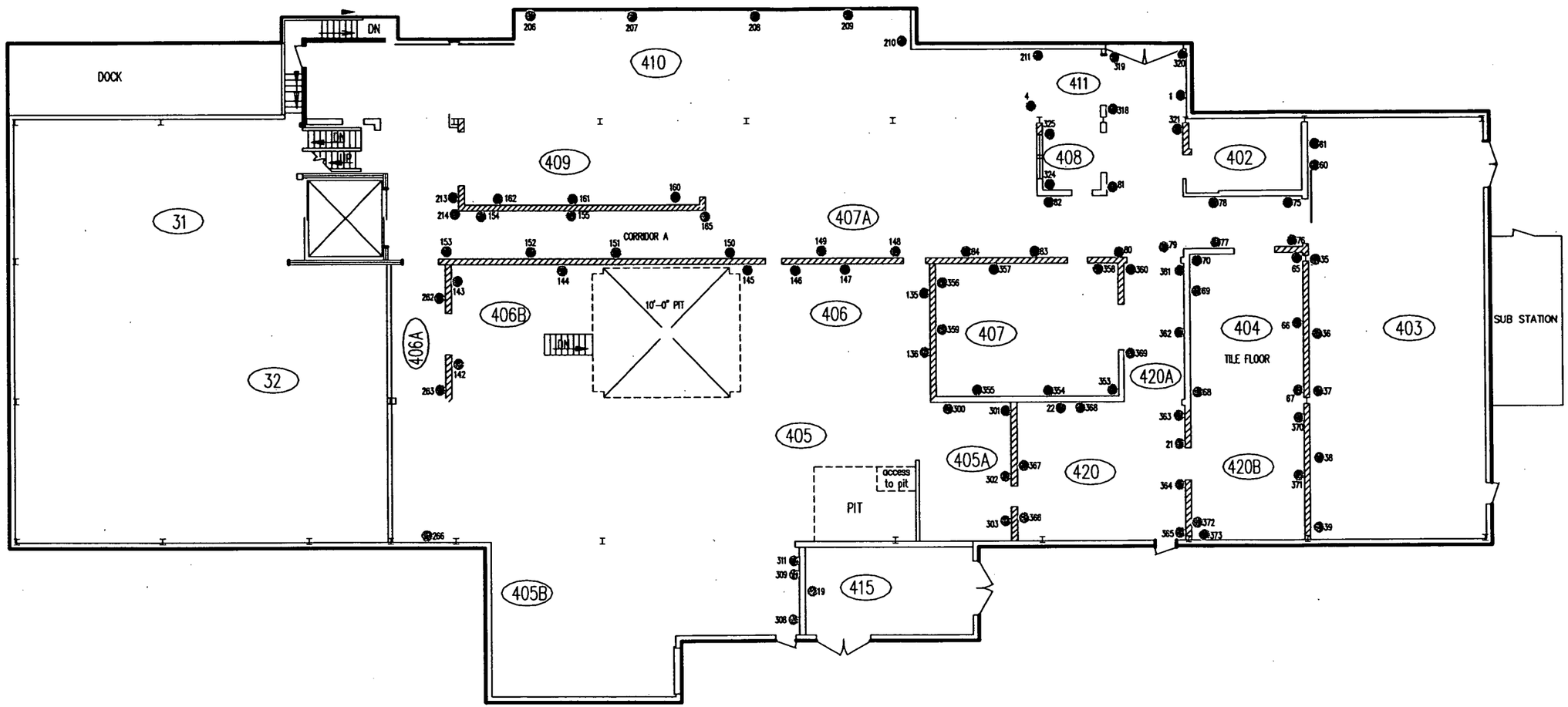


## PRE-DEMOLITION MEDIA SAMPLING MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447201 Classification: 1

Survey Area/Unit Description: Floors and <2m Walls

Floor Area: 1,123 sq.m Total Area: 2,362 sq.m Date: 09/15/2004

## SURVEY POINT LEGEND

- # Wall Sample Location
- # Floor Sample Location
- Ceiling Sample Location

N

0 FEET 16

0 METERS 5

1 inch = 20 feet

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

Prepared by: RFDSS Rocky Flats Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: MEDIA 447201 C-1.DWG | Sheet: 1 of 1 | Rev: 1

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| Survey Area: VIA 2 | Survey Unit: 447202 | Building: 447 |
|---|---|---|

Description: Interior Walls > 2 Meters and ceiling in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B, and Corridor A

# Rocky Flats Environmental Technology Site
# Final Radiological Survey Summary Results

## Total Surface Activity Measurements

Nbr Random Measurements Required: 17
Nbr Random Measurements Performed: 45
Nbr Biased Measurements Required: 0
Nbr Biased Measurements Performed: 0
Nbr QC Required: 2
Nbr QC Performed: 2

### Beta

| | |
|---|---|
| Maximum: | 3,233.9 dpm/100cm² |
| Minimum: | -1,048.0 dpm/100cm² |
| Mean: | 287.8 dpm/100cm² |
| Standard Deviation: | 645.3 |
| QC Maximum: | 979.5 dpm/100cm² |
| QC Minimum: | 929.5 dpm/100cm² |
| QC Mean: | 954.5 dpm/100cm² |
| Uranium DCGLw: | 5,000.0 dpm/100cm² |
| Uranium DCGLEMC: | 15,000.0 dpm/100cm² |

## Removable Surface Activity Measurements

Nbr Random Measurements Required: 17
Nbr Random Measurements Performed: 45
Nbr Biased Measurements Required: 0
Nbr Biased Measurements Performed: 0

### Beta

| | |
|---|---|
| Maximum: | 103.6 dpm/100cm² |
| Minimum: | -103.6 dpm/100cm² |
| Mean: | 2.7 dpm/100cm² |
| Standard Deviation: | 42.8 |
| Uranium DCGLw: | 1,000.0 |

## Media Sample Results

Nbr Random Required: 17
Nbr Random Collected: 17
Nbr Biased Required: 0
Nbr Biased Collected: 0

### Uranium RE 9-16-04

| | |
|---|---|
| Maximum: | 746.0 ~~NA~~ dpm/100cm² |
| Minimum: | -30.4 ~~NA~~ dpm/100cm² |
| Mean: | 127.0 ~~NA~~ dpm/100cm² |
| Standard Deviation: | 190.2 ~~NA~~ |
| Uranium DCGLw: | 5,000 dpm/100cm² |
| Uranium DCGLEMC: | 15,000 dpm/100cm² |

### Transuranic

| | |
|---|---|
| Maximum: | NA dpm/100cm² |
| Minimum: | NA dpm/100cm² |
| Mean: | NA dpm/100cm² |
| Standard Deviation: | NA |
| Transuranic DCGLw: | 100 dpm/100cm² |
| Transuranic DCGLEMC: | 300 dpm/100cm² |

*Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.*

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**Survey Area:** VIA 2 | **Survey Unit:** 447202 | **Building:** 447

**Description:** Interior Walls > 2 Meters and ceiling in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B, and Corridor A

# Instrument Data Sheet

| Inst/RCT Number | RCT ID | Analysis Date | Instr Model | Instru S/N | Probe Type | Calibration Due Dt | Instru Efficiency Alpha | Instru Efficiency Beta | A-Priori MDA (dpm/100cm²) Alpha | A-Priori MDA (dpm/100cm²) Beta | Survey Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 712600 | 04/20/04 | Electra | 1562 | DP-6 | 08/16/04 | NA | 0.220 | NA | 745.0 | T |
| 2 | 712456 | 04/20/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 3 | 712456 | 04/20/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 4 | 712600 | 04/21/04 | Electra | 1562 | DP-6 | 08/16/04 | NA | 0.220 | NA | 745.0 | T |
| 5 | 701418 | 04/21/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 6 | 701418 | 04/21/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 7 | 701418 | 04/22/04 | Electra | 1562 | DP-6 | 08/16/04 | NA | 0.220 | NA | 745.0 | T |
| 8 | 712456 | 04/22/04 | BC-4 | 772 | NA | 06/26/04 | NA | 0.140 | NA | 258.0 | R |
| 9 | 712456 | 04/22/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 258.0 | R |
| 10 | 711447 | 07/28/04 | Electra | 2352 | DP-6 | 11/13/04 | NA | 0.220 | NA | 745.0 | S |
| 11 | 711447 | 07/28/04 | Ludlum 292 | 99042 | NA | 10/26/04 | NA | 0.250 | NA | 205.0 | R |
| 12 | 712193 | 07/20/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |
| 13 | 712193 | 07/20/04 | Electra | 3109 | DP-6 | 12/14/04 | NA | 0.220 | NA | 745.0 | S |
| 14 | 712193 | 07/21/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |
| 15 | 712193 | 07/21/04 | Electra | 3109 | DP-6 | 12/14/04 | NA | 0.220 | NA | 745.0 | S |
| 16 | 712193 | 07/26/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |
| 17 | 711447 | 07/26/04 | Electra | 668 | DP-8 | 12/15/04 | NA | 0.160 | NA | 745.0 | S |
| 18 | 712193 | 07/27/04 | Electra | 3105 | DP-6 | 11/18/04 | NA | 0.220 | NA | 745.0 | T/S |
| 19 | 712467 | 08/25/04 | Electra | 658 | DP-8 | 01/29/05 | NA | 0.160 | NA | 999.0 | S |
| 20 | 712193 | 08/27/04 | Electra | 672 | DP-8 | 01/12/05 | NA | 0.160 | NA | 999.0 | S |
| 21 | 711447 | 08/27/04 | Electra | 1261 | DP-8 | 02/26/05 | NA | 0.160 | NA | 999.0 | S |
| 22 | 711447 | 08/27/04 | Electra | 3113 | DP-6 | 02/23/05 | NA | 0.220 | NA | 745.0 | S |
| 23 | 712193 | 08/29/04 | Electra | 290 | DP-6 | 09/16/04 | NA | 0.220 | NA | 745.0 | T/S |
| 24 | 711447 | 08/29/04 | Electra | 1379 | DP-6 | 02/18/05 | NA | 0.220 | NA | 745.0 | T/S |
| 25 | 701418 | 08/29/04 | Electra | 1261 | DP-8 | 02/26/05 | NA | 0.160 | NA | 999.0 | S |
| 26 | 702058 | 08/29/04 | Electra | 1415 | DP-6 | 10/27/04 | NA | 0.220 | NA | 745.0 | Q/S |
| 27 | 700831 | 08/29/04 | Ludlum 292 | 99042 | NA | 10/26/04 | NA | 0.250 | NA | 205.0 | R |

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation



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**Survey Area:** VIA 2 | **Survey Unit:** 447202 | **Building:** 447

**Description:** Interior Walls > 2 Meters and ceiling in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B, and Corridor A

# Random Removable Surface Activity Data Sheet

| | Pre Media Sample Data | | | Post Media Sample Data | | |
|---|---|---|---|---|---|---|
| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
| 447202PRP-N001 | 2 | N/A | -32.1 | 3 | N/A | 40.8 |
| 447202PRP-N002 | 2 | N/A | -103.6 | 3 | N/A | 0.8 |
| 447202PRP-N003 | 2 | N/A | 32.1 | 3 | N/A | -3.2 |
| 447202PRP-N004 | 2 | N/A | 103.6 | 3 | N/A | -27.2 |
| 447202PRP-N005 | 2 | N/A | -3.6 | 3 | N/A | 36.8 |
| 447202PRP-N006 | 2 | N/A | 25.0 | 3 | N/A | 0.8 |
| 447202PRP-N007 | 2 | N/A | 75.0 | 3 | N/A | -23.2 |
| 447202PRP-N008 | 2 | N/A | -3.6 | 3 | N/A | 0.8 |
| 447202PRP-N009 | 2 | N/A | -25.0 | 3 | N/A | -11.2 |
| 447202PRP-N010 | 5 | N/A | 22.8 | 6 | N/A | 43.6 |
| 447202PRP-N011 | 5 | N/A | 30.0 | 6 | N/A | 19.6 |
| 447202PRP-N012 | 5 | N/A | 37.1 | 6 | N/A | -4.4 |
| 447202PRP-N013 | 5 | N/A | -41.5 | 6 | N/A | 19.6 |
| 447202PRP-N015 | 5 | N/A | 37.1 | 6 | N/A | -0.4 |
| 447202PRP-N022 | 8 | N/A | -17.8 | 9 | N/A | -52.8 |
| 447202PRP-N023 | 8 | N/A | 46.5 | 9 | N/A | -44.8 |
| 447202PRP-N024 | 8 | N/A | 32.2 | 9 | N/A | 55.2 |
| 447202PRP-N025 | 27 | N/A | -28.4 | | N/A | N/A |
| 447202PRP-N026 | 27 | N/A | -48.4 | | N/A | N/A |
| 447202PRP-N027 | 27 | N/A | -4.4 | | N/A | N/A |
| 447202PRP-N028 | 27 | N/A | -60.4 | | N/A | N/A |
| 447202PRP-N029 | 27 | N/A | 7.6 | | N/A | N/A |
| 447202PRP-N030 | 27 | N/A | -8.4 | | N/A | N/A |
| 447202PRP-N031 | 27 | N/A | 11.6 | | N/A | N/A |
| 447202PRP-N032 | 27 | N/A | -32.4 | | N/A | N/A |
| 447202PRP-N033 | 27 | N/A | 11.6 | | N/A | N/A |
| 447202PRP-N034 | 27 | N/A | -36.4 | | N/A | N/A |
| 447202PRP-N035 | 27 | N/A | -4.4 | | N/A | N/A |
| 447202PRP-N036 | 27 | N/A | 7.6 | | N/A | N/A |



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**Survey Area:** VIA 2 **Survey Unit:** 447202 **Building:** 447

**Description:** Interior Walls > 2 Meters and ceiling in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B, and Corridor A

# Random Removable Surface Activity Data Sheet

| | Pre Media Sample Data | | | Post Media Sample Data | | |
|---|---|---|---|---|---|---|
| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
| 447202PRP-N037 | 27 | N/A | -12.4 | | N/A | N/A |
| 447202PRP-N038 | 27 | N/A | 7.6 | | N/A | N/A |
| 447202PRP-N039 | 27 | N/A | -8.4 | | N/A | N/A |
| 447202PRP-N040 | 27 | N/A | 23.6 | | N/A | N/A |
| 447202PRP-N041 | 27 | N/A | -24.4 | | N/A | N/A |
| 447202PRP-N042 | 27 | N/A | -36.4 | | N/A | N/A |
| 447202PRP-N043 | 27 | N/A | 15.6 | | N/A | N/A |
| 447202PRP-N044 | 27 | N/A | -40.4 | | N/A | N/A |
| 447202PRP-N045 | 27 | N/A | -40.4 | | N/A | N/A |
| 447202PRP-N046 | 27 | N/A | 7.6 | | N/A | N/A |
| 447202PRP-N047 | 27 | N/A | 63.6 | | N/A | N/A |
| 447202PRP-N048 | 27 | N/A | -68.4 | | N/A | N/A |
| 447202PRP-N049 | 11 | N/A | -11.6 | | N/A | N/A |
| 447202PRP-N050 | 11 | N/A | 84.4 | | N/A | N/A |
| 447202PRP-N051 | 11 | N/A | 52.4 | | N/A | N/A |
| 447202PRP-N052 | 11 | N/A | 80.4 | | N/A | N/A |

**Comments:** The Media Samples location # 14, 16, 17, 18, 19, 20, and 21 were removed from this survey unit because the area could not be deconned to unrestricted release limits and was designated as Low-level waste.



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**Survey Area:** VIA 2 **Survey Unit:** 447202 **Building:** 447

**Description:** Interior Walls > 2 Meters and ceiling in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B, and Corridor A

# Random/QC Total Surface Activity Data Sheet

| | Pre Media Sample Data | | | Post Media Sample Data | | |
|---|---|---|---|---|---|---|
| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
| 447202PRP-N001 | 1 | N/A | 533.9 | 1 | N/A | 756.5 |
| 447202PRP-N002 | 1 | N/A | 265.7 | 1 | N/A | 310.5 |
| 447202PRP-N003 | 1 | N/A | -343.4 | 1 | N/A | 101.5 |
| 447202PRP-N004 | 1 | N/A | 365.7 | 1 | N/A | 418.6 |
| 447202PRP-N005 | 1 | N/A | 938.4 | 1 | N/A | 516.1 |
| 447202PRP-N006 | 1 | N/A | 142.9 | 1 | N/A | 63.2 |
| 447202PRP-N007 | 1 | N/A | -129.8 | 1 | N/A | 422.0 |
| 447202PRP-N008 | 1 | N/A | -411.6 | 1 | N/A | 101.5 |
| 447202PRP-N009 | 1 | N/A | 192.9 | 1 | N/A | 390.7 |
| 447202PRP-N010 | 4 | N/A | -61.6 | 4 | N/A | 481.3 |
| 447202PRP-N011 | 4 | N/A | -202.5 | 4 | N/A | 143.3 |
| 447202PRP-N012 | 4 | N/A | 738.4 | 4 | N/A | 220.0 |
| 447202PRP-N013 | 4 | N/A | -175.2 | 4 | N/A | 247.8 |
| 447202PRP-N015 | 4 | N/A | -229.8 | 4 | N/A | 247.8 |
| 447202PRP-N022 | 7 | N/A | -143.4 | 7 | N/A | 512.6 |
| 447202PRP-N023 | 7 | N/A | 3,233.9 | 7 | N/A | 1,160.7 |
| 447202PRP-N024 | 7 | N/A | -225.2 | 7 | N/A | -13.5 |
| 447202PRP-N025 | 23 | N/A | 211.1 | | N/A | N/A |
| 447202PRP-N026 | 24 | N/A | 370.2 | | N/A | N/A |
| 447202PRP-N027 | 23 | N/A | 261.1 | | N/A | N/A |
| 447202PRP-N028 | 24 | N/A | 324.8 | | N/A | N/A |
| 447202PRP-N029 | 23 | N/A | 829.3 | | N/A | N/A |
| 447202PRP-N030 | 24 | N/A | -184.3 | | N/A | N/A |
| 447202QRP-N030 | 26 | N/A | 929.5 | | N/A | N/A |
| 447202PRP-N031 | 23 | N/A | -161.6 | | N/A | N/A |
| 447202PRP-N032 | 24 | N/A | 370.2 | | N/A | N/A |
| 447202PRP-N033 | 23 | N/A | 1,033.9 | | N/A | N/A |



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**Survey Area:** VIA 2 | **Survey Unit:** 447202 | **Building:** 447

**Description:** Interior Walls >2 Meters and ceiling in Rooms 31, 32, 402, 403, 404, 405, 405A, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B, and Corridor A

# Random/QC Total Surface Activity Data Sheet

| | Pre Media Sample Data | | | Post Media Sample Data | | |
|---|---|---|---|---|---|---|
| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) |
| 447202PRP-N034 | 24 | N/A | 111.1 | | N/A | N/A |
| 447202PRP-N035 | 23 | N/A | -111.6 | | N/A | N/A |
| 447202PRP-N036 | 24 | N/A | 547.5 | | N/A | N/A |
| 447202PRP-N037 | 23 | N/A | 238.4 | | N/A | N/A |
| 447202PRP-N038 | 24 | N/A | -143.4 | | N/A | N/A |
| 447202PRP-N039 | 23 | N/A | -1,048.0 | | N/A | N/A |
| 447202PRP-N040 | 24 | N/A | -620.7 | | N/A | N/A |
| 447202PRP-N041 | 23 | N/A | 692.9 | | N/A | N/A |
| 447202PRP-N042 | 24 | N/A | 806.6 | | N/A | N/A |
| 447202PRP-N043 | 23 | N/A | 1,111.1 | | N/A | N/A |
| 447202QRP-N043 | 26 | N/A | 979.5 | | N/A | N/A |
| 447202PRP-N044 | 24 | N/A | 824.8 | | N/A | N/A |
| 447202PRP-N045 | 23 | N/A | 488.4 | | N/A | N/A |
| 447202PRP-N046 | 24 | N/A | 170.2 | | N/A | N/A |
| 447202PRP-N047 | 23 | N/A | 865.7 | | N/A | N/A |
| 447202PRP-N048 | 24 | N/A | 506.6 | | N/A | N/A |
| 447202PRP-N049 | 18 | N/A | 411.1 | | N/A | N/A |
| 447202PRP-N050 | 18 | N/A | 629.3 | | N/A | N/A |
| 447202PRP-N051 | 10 | N/A | 88.4 | | N/A | N/A |
| 447202PRP-N052 | 10 | N/A | -161.6 | | N/A | N/A |

**Comments:** The Media Samples location # 14, 16, 17, 18, 19, 20, and 21 were removed from this survey unit because the area could not be deconned to unrestricted release limits and was designated as Low-level waste.



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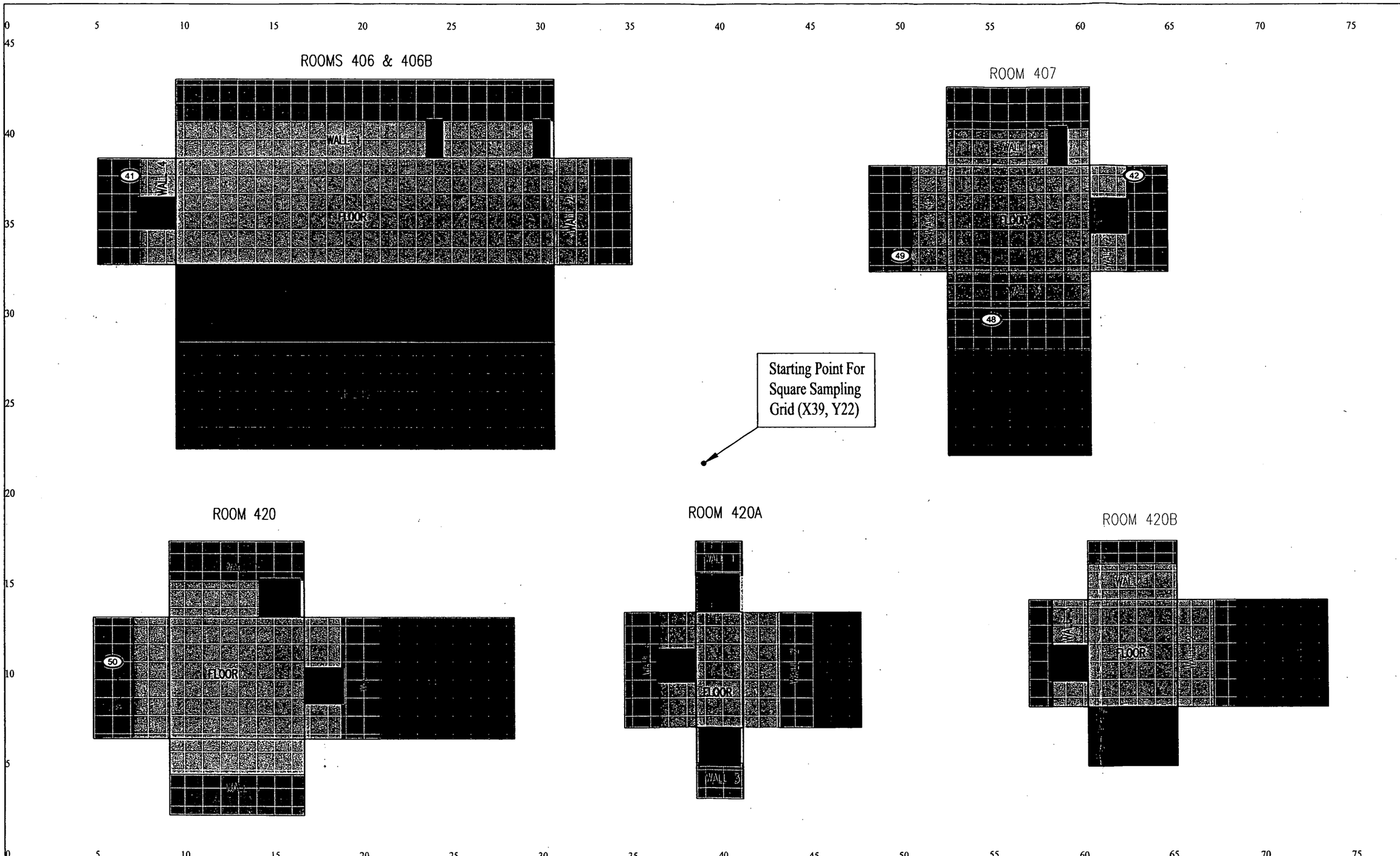
# Media Samples Data Sheet

| Map Location | BLDG | VIA | Room | Sample Location Description | Media Type | Random or Biased | Suvey Unit Package # | Sample RIN# | Sample Result (dpm/100cm$^2$) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 447 | 2 | 410 | wall 12 ft high | Paint Chips | Random | 447202 | N/A | -3.7 |
| 2 | 447 | 2 | 410 | wall 12 ft high | Paint Chips | Random | 447202 | N/A | 178.9 |
| 3 | 447 | 2 | 407A | wall 10 ft high | Paint Chips | Random | 447202 | N/A | 107.2 |
| 4 | 447 | 2 | 408 | wall 10 ft high | Paint Chips | Random | 447202 | N/A | 37.5 |
| 5 | 447 | 2 | 407A | wall 15 ft high | Paint Chips | Random | 447202 | N/A | 746.0 |
| 6 | 447 | 2 | 407A | wall 15 ft high | Paint Chips | Random | 447202 | N/A | 300.6 |
| 7 | 447 | 2 | 403 | wall 15 ft high | Paint Chips | Random | 447202 | N/A | 315.1 |
| 8 | 447 | 2 | 403 | wall 14 ft high | Paint Chips | Random | 447202 | N/A | -30.4 |
| 9 | 447 | 2 | 404 | wall 15 ft high | Paint Chips | Random | 447202 | N/A | 182.5 |
| 10 | 447 | 2 | 420A | wall 14 ft high | Paint Chips | Random | 447202 | N/A | 49.6 |
| 11 | 447 | 2 | 407 | wall 15 ft high | Paint Chips | Random | 447202 | N/A | 58.1 |
| 12 | 447 | 2 | 420B | wall 14 ft high | Paint Chips | Random | 447202 | N/A | 13.6 |
| 13 | 447 | 2 | 420 | wall 12 ft high | Paint Chips | Random | 447202 | N/A | -14.5 |
| 15 | 447 | 2 | 406 | wall 14 ft high | Paint Chips | Random | 447202 | N/A | 97.7 |
| 22 | 447 | 2 | 409 | wall 15 ft high | Paint Chips | Random | 447202 | N/A | -4.1 |
| 23 | 447 | 2 | 407A | wall 12 ft high | Paint Chips | Random | 447202 | N/A | 108.1 |
| 24 | 447 | 2 | 407A | wall 12 ft high | Paint Chips | Random | 447202 | N/A | 17.2 |
| | | | | | | | | MIN | -30.4 |
| | | | | | | | | MAX | 746.0 |
| | | | | | | | | MEAN | 127.0 |
| | | | | | | | | SD | 190.2 |
| | | | | | | | | DCGLW = | 5000.0 |

Note ** If N/A is listed for 'Sample RIN#' then the samples were counted on the BC-4 instead of Gamma Spectroscopy.



65




## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447202 Classification: 2

Survey Area/Unit Description: Romms 406, 406B, 407, 420, 420A & 420B, Walls >2m & Ceilings

Floor Area: 1,123 sq.m Total Area: 1,158 sq.m Grid Spaceing for Survey Area: 8 m x 8 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit
- Low Level Waste Area

N

0 FEET 16

0 METERS 5

1 inch = 16 feet

1 grid sq. = 1 sq. m.

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

Prepared by: RFCSS Rocky Flats Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: PDS 447202 SHT 02.DWG | Sheet 1 of 5 | Rev: 0

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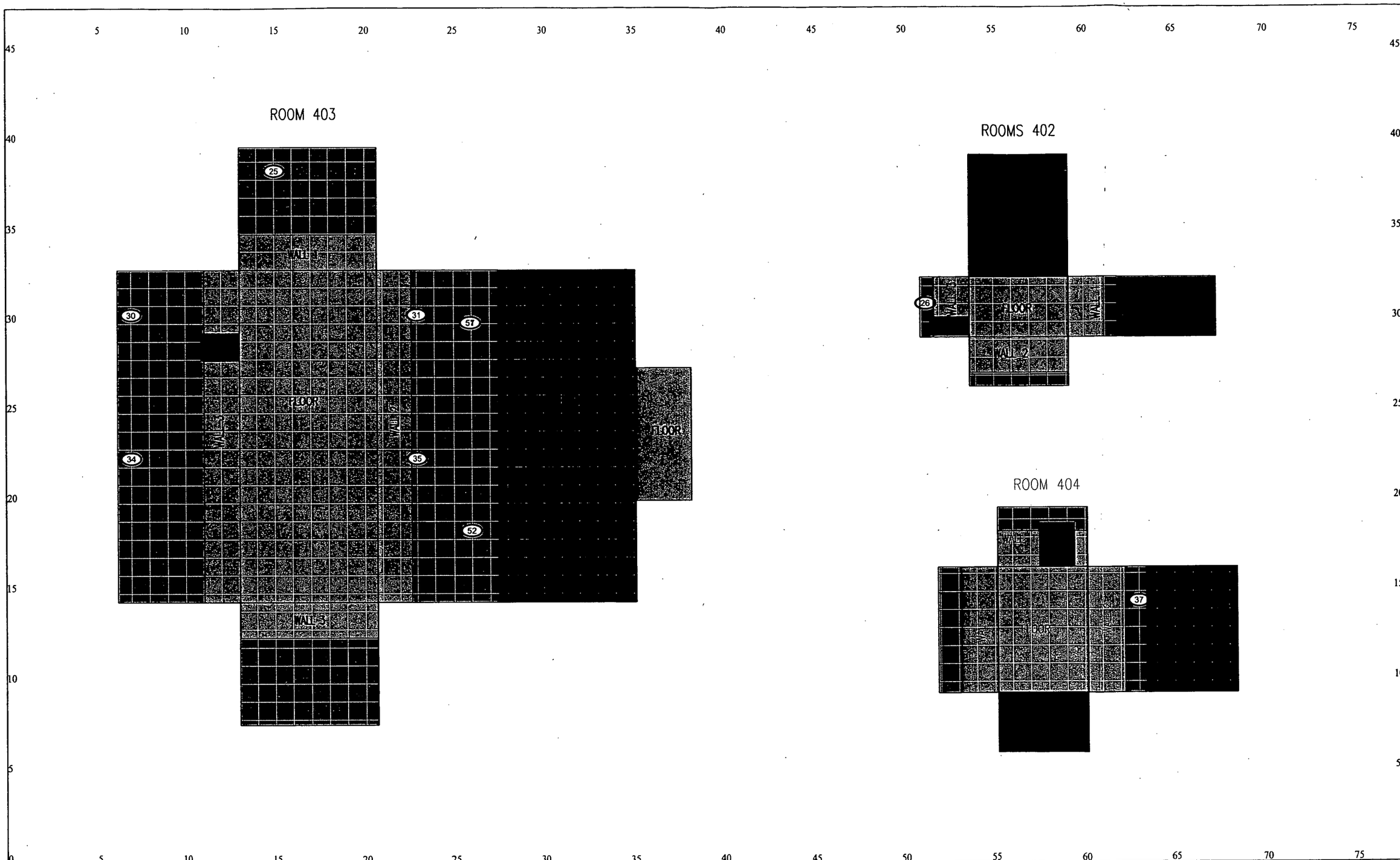


## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447202 Classification: 2

Survey Area/Unit Description: Rooms 402, 403 & 404, Walls >2m & Ceilings

Floor: 1,123 sq.m Total Area: 1,158 sq.m Grid Spaceing for Survey Area: 8 m x 8 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit
- Low Level Waste Area

N

0 FEET 16
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

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Prepared for: KAISER HILL

File Name: PDS 447202 SHT 03.DWG | Sheet 2 of 5 | Rev: 0

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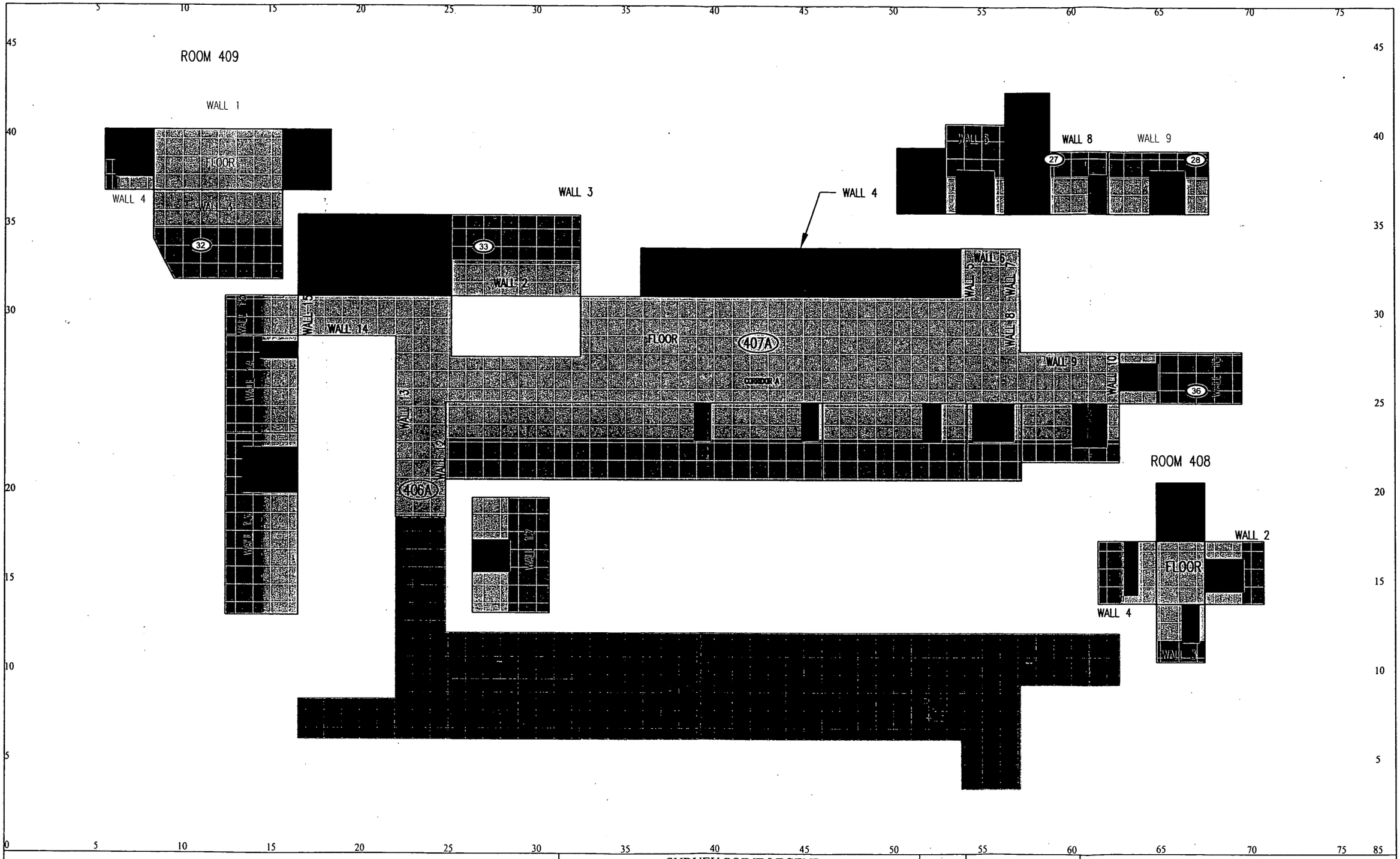


## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447202 Classification: 2

Survey Area/Unit Description: Rooms 406A,407A, 408, 409 & CORRIDOR A, Walls <2m, & Ceilings

Floor Area: 1,123 sq.m Total Area: 1,158 sq.m Grid Spaceing for Survey Area: 8 m x 8 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit
- Low Level Waste Area

N

0 FEET 16
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

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Prepared for: KAISER HILL

File Name: PDS 447202 SHT 04.DWG | Sheet 3 of 5 | Rev: 0

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ROOMS 410 & 411

## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447202 Classification: 2

Survey Area/Unit Description: Rooms 410 & 411, Walls >2m & Ceilings

Floor Area: 1,123 sq.m Total Area: 1,158 sq.m Grid Spaceing for Survey Area: 8 m x 8 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit
- Low Level Waste Area

N

0 FEET 1
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

Prepared by: RFBSS Rocky Flats Closure Site Services, LLC. A Bechtel Environmental Services Company

Prepared for: KAISER HILL

File Name: PDS 447202 SHT 05.DWG | Sheet 4 of 5 | Rev: 0

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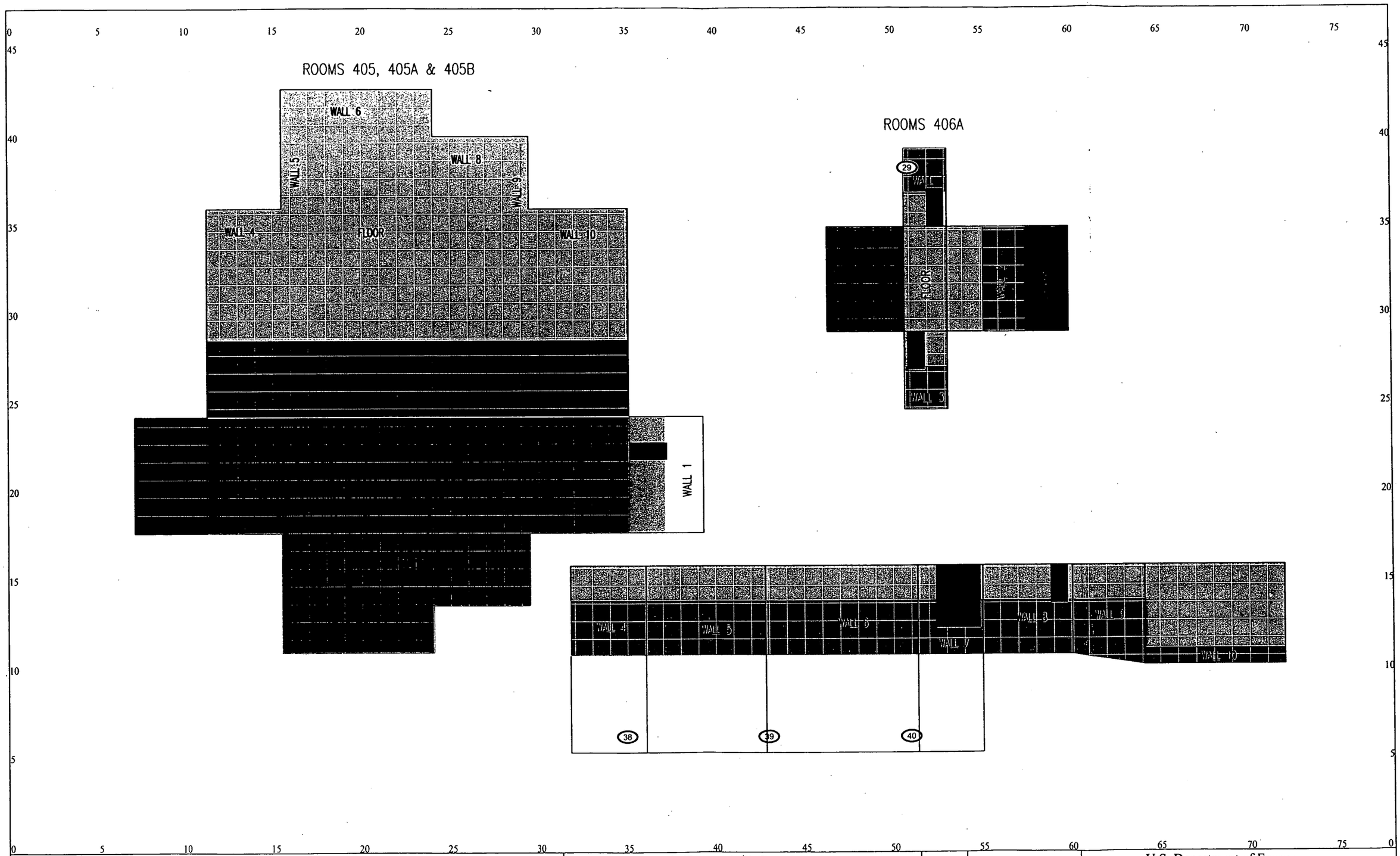


## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447202 Classification: 2

Survey Area/Unit Description: Rooms 405, 405A & 405B Walls >2m & Ceilings

Floor Area: 1,123 sq.m Total Area: 1,158 sq.m Grid Spaceing for Survey Area: 8 m x 8 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit
- Low Level Waste Area

N

0 FEET 16
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

Prepared by: RFCSS Rocky Flats Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: PDS 447202 SHT 06.DWG | Sheet: 5 of 5 | Rev: 0

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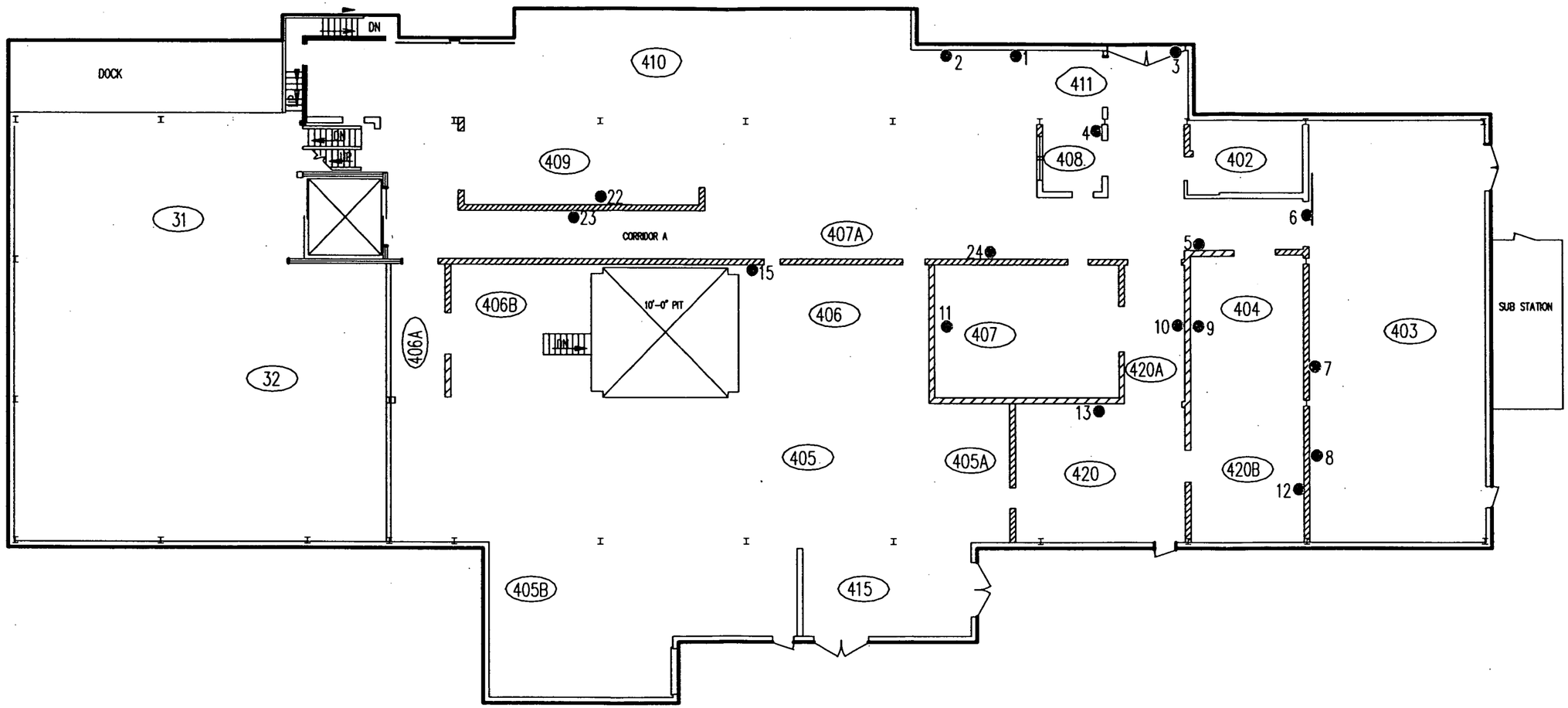


## PRE-DEMOLITION MEDIA SAMPLING MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447202 Classification: 2

Survey Area/Unit Description: Ceilings and >2m Walls

Floor Area: 1,123 sq.m Total Area: 3,034 sq.m Date: 09/21/2004

## SURVEY POINT LEGEND

# Wall Sample Location

# Floor Sample Location

Ceiling Sample Location

N

0 FEET 16

0 METERS 5

1 inch = 16 feet

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

Prepared by: RF ROCKY FLATS Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: MEDIA 447202 C-2.DWG | Sheet: 1 of 1 | Rev: 1

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| Survey Area: VIA 2 | Survey Unit: 447203 | Building: 447 |
|---|---|---|

**Description:** Room 415 All Surfaces

# Rocky Flats Environmental Technology Site
# Final Radiological Survey Summary Results

## Total Surface Activity Measurements

Nbr Random Measurements Required: 15
Nbr Random Measurements Performed: 15

Nbr Biased Measurements Required: 0
Nbr Biased Measurements Performed: 0

Nbr QC Required: 2
Nbr QC Performed: 2

### Beta

| | |
|---|---|
| Maximum: | 3,344.2 dpm/100cm² |
| Minimum: | -569.4 dpm/100cm² |
| Mean: | 658.2 dpm/100cm² |
| Standard Deviation: | 1,101.7 |
| QC Maximum: | 1,002.2 dpm/100cm² |
| QC Minimum: | 884.1 dpm/100cm² |
| QC Mean: | 943.1 dpm/100cm² |
| Uranium DCGL$_W$: | 5,000.0 dpm/100cm² |
| Uranium DCGL$_{EMC}$: | 15,000.0 dpm/100cm² |

## Removable Surface Activity Measurements

Nbr Random Measurements Required: 15
Nbr Random Measurements Performed: 15

Nbr Biased Measurements Required: 0
Nbr Biased Measurements Performed: 0

### Beta

| | |
|---|---|
| Maximum: | 392.0 dpm/100cm² |
| Minimum: | 284.0 dpm/100cm² |
| Mean: | 332.3 dpm/100cm² |
| Standard Deviation: | 32.1 |
| Uranium DCGL$_W$: | 1,000.0 |

## Media Sample Results

Nbr Random Required: 0
Nbr Random Collected: 0

Nbr Biased Required: 0
Nbr Biased Collected: 0

*Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.*



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| Survey Area: VIA 2 | Survey Unit: 447203 | Building: 447 |
|---|---|---|

Description: Room 415 All Surfaces

# Instrument Data Sheet

| Inst/RCT Number | RCT ID | Analysis Date | Instr Model | Instru S/N | Probe Type | Calibration Due Dt | Instru Efficiency Alpha | Instru Efficiency Beta | A-Priori MDA (dpm/100cm²) Alpha | A-Priori MDA (dpm/100cm²) Beta | Survey Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 712467 | 08/25/04 | Electra | 658 | DP-8 | 01/29/05 | NA | 0.160 | NA | 745.0 | S |
| 2 | 712193 | 08/27/04 | Electra | 1261 | DP-8 | 02/26/05 | NA | 0.160 | NA | 745.0 | S |
| 3 | 711447 | 08/27/04 | Electra | 672 | DP-8 | 01/12/05 | NA | 0.160 | NA | 745.0 | S |
| 4 | 712193 | 08/29/04 | Electra | 290 | DP-6 | 09/16/04 | NA | 0.220 | NA | 745.0 | T/S |
| 5 | 700831 | 08/29/04 | Ludlum 292 | 99042 | NA | 10/26/04 | NA | 0.250 | NA | 205.0 | R |
| 6 | 711447 | 08/29/04 | Electra | 3113 | DP-6 | 02/23/05 | NA | 0.220 | NA | 745.0 | Q/S |
| 7 | 712467 | 09/02/04 | Electra | 297 | DP-6 | 01/27/05 | NA | 0.220 | NA | 48.0 | T |

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

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| Survey Area: VIA 2 | Survey Unit: 447203 | Building: 447 |
|---|---|---|

**Description:** Room 415 All Surfaces

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447203PRP-N001 | 5 | N/A | 304.0 | |
| 447203PRP-N002 | 5 | N/A | 368.0 | |
| 447203PRP-N003 | 5 | N/A | 332.0 | |
| 447203PRP-N004 | 5 | N/A | 392.0 | |
| 447203PRP-N005 | 5 | N/A | 284.0 | |
| 447203PRP-N006 | 5 | N/A | 340.0 | |
| 447203PRP-N007 | 5 | N/A | 296.0 | |
| 447203PRP-N008 | 5 | N/A | 316.0 | |
| 447203PRP-N009 | 5 | N/A | 368.0 | |
| 447203PRP-N010 | 5 | N/A | 308.0 | |
| 447203PRP-N011 | 5 | N/A | 320.0 | |
| 447203PRP-N012 | 5 | N/A | 344.0 | |
| 447203PRP-N013 | 5 | N/A | 300.0 | |
| 447203PRP-N014 | 5 | N/A | 340.0 | |
| 447203PRP-N015 | 5 | N/A | 372.0 | |

**Comments:** Points 1, 2, 14, and 15 were moved because the initial locations were subsequently found to be areas that were contaminated > than the Uranium DCGL and will be managed as Low-Level Waste. New locations for these points were randomly picked in areas of the survey unit that were still being surveyed for unrestricted release.

| Survey Area: VIA 2 | Survey Unit: 447203 | Building: 447 |
|---|---|---|

Description: Room 415 All Surfaces

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447203PRP-N001 | 7 | N/A | -205.8 | |
| 447203PRP-N002 | 4 | N/A | -560.3 | |
| 447203PRP-N003 | 7 | N/A | 285.1 | |
| 447203PRP-N004 | 4 | N/A | 1,730.6 | |
| 447203QRP-N004 | 6 | N/A | 1,002.2 | |
| 447203PRP-N005 | 4 | N/A | 930.6 | |
| 447203PRP-N006 | 7 | N/A | 3,344.2 | |
| 447203PRP-N007 | 7 | N/A | -569.4 | |
| 447203PRP-N008 | 4 | N/A | 289.7 | |
| 447203PRP-N009 | 4 | N/A | 1,476.1 | |
| 447203QRP-N009 | 6 | N/A | 884.1 | |
| 447203PRP-N010 | 4 | N/A | 1,248.8 | |
| 447203PRP-N011 | 7 | N/A | -114.9 | |
| 447203PRP-N012 | 7 | N/A | -283.0 | |
| 447203PRP-N013 | 4 | N/A | -387.6 | |
| 447203PRP-N014 | 4 | N/A | 1,303.3 | |
| 447203PRP-N015 | 4 | N/A | 1,385.1 | |

**Comments:** Points 1, 2, 14, and 15 were moved because the initial locations were subsequently found to be areas that were contaminated > than the Uranium DCGL and will be managed as Low-Level Waste. New locations for these points were randomly picked in areas of the survey unit that were still being surveyed for unrestricted release.



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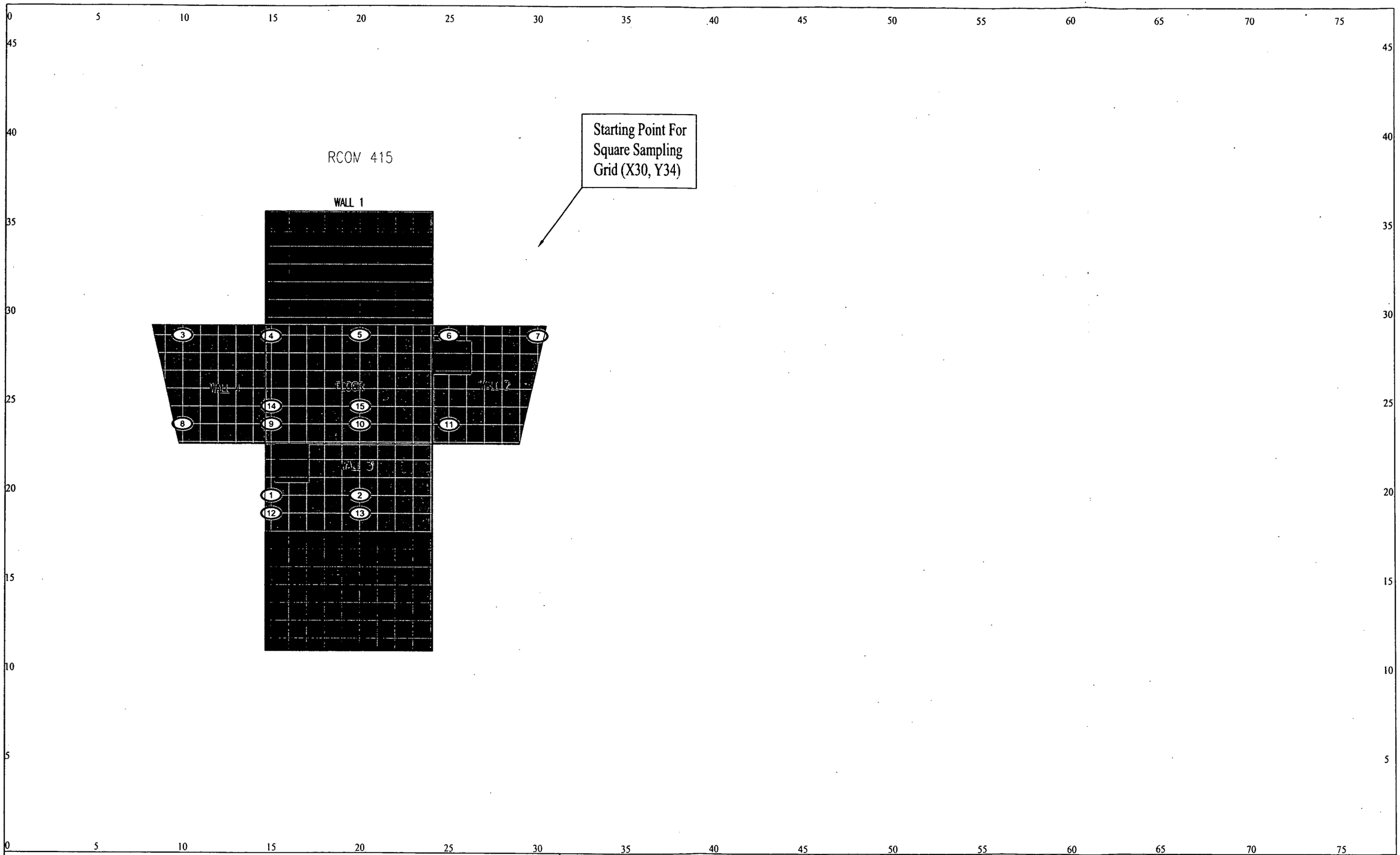


## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447203 Classification: 1

Survey Area/Unit Description: Room 415

Floor Area: 68 sq.m Total Area: 209 sq.m Grid Spaceing for Survey Area: 4 m x 4 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit
- Low Level Waste Area

N

0 FEET 16

0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

Prepared by: RFCSS Rocky Flats Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: PDS 447203 SHT 01.DWG | Sheet: 1 of 1 | Rev: 0

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| Survey Area: VIA 2 | Survey Unit: 447204 | Building: 447 |
|---|---|---|

**Description:** Rooms 36, 405 Pit, and 405B Pit, All Surfaces

# Rocky Flats Environmental Technology Site
# Final Radiological Survey Summary Results

## Total Surface Activity Measurements

Nbr Random Measurements Required: 15
Nbr Random Measurements Performed: 16

Nbr Biased Measurements Required: 0
Nbr Biased Measurements Performed: 0

Nbr QC Required: 2
Nbr QC Performed: 2

### Beta

| | |
|---|---|
| Maximum: | 2,832.1 dpm/100cm² |
| Minimum: | 1,050.2 dpm/100cm² |
| Mean: | 1,831.8 dpm/100cm² |
| Standard Deviation: | 534.6 |
| QC Maximum: | 3,145.5 dpm/100cm² |
| QC Minimum: | 2,759.1 dpm/100cm² |
| QC Mean: | 2,952.3 dpm/100cm² |
| Uranium $DCGL_W$: | 5,000.0 dpm/100cm² |
| Uranium $DCGL_{EMC}$: | 15,000.0 dpm/100cm² |

## Removable Surface Activity Measurements

Nbr Random Measurements Required: 15
Nbr Random Measurements Performed: 16

Nbr Biased Measurements Required: 0
Nbr Biased Measurements Performed: 0

### Beta

| | |
|---|---|
| Maximum: | 87.8 dpm/100cm² |
| Minimum: | -83.6 dpm/100cm² |
| Mean: | -31.3 dpm/100cm² |
| Standard Deviation: | 44.4 |
| Uranium $DCGL_W$: | 1,000.0 |

## Media Sample Results

Nbr Random Required: 0
Nbr Random Collected: 0

Nbr Biased Required: 0
Nbr Biased Collected: 0

*Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.*



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| Survey Area: VIA 2 | Survey Unit: 447204 | Building: 447 |
|---|---|---|

**Description:** Rooms 36, 405 Pit, and 405B Pit, All Surfaces

# Instrument Data Sheet

| Inst/RCT Number | RCT ID | Analysis Date | Instr Model | Instru S/N | Probe Type | Calibration Due Dt | Instru Efficiency Alpha | Instru Efficiency Beta | A-Priori MDA (dpm/100cm²) Alpha | A-Priori MDA (dpm/100cm²) Beta | Survey Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 712193 | 08/25/04 | Electra | 2404 | DP-8 | 02/03/05 | NA | 0.160 | NA | 745.0 | S |
| 2 | 711447 | 08/25/04 | Electra | 672 | DP-8 | 01/12/05 | NA | 0.160 | NA | 745.0 | S |
| 3 | 711447 | 08/25/04 | Electra | 3113 | DP-6 | 02/23/05 | NA | 0.220 | NA | 745.0 | S |
| 4 | 712193_ | 08/25/04 | Electra | 290 | DP-6 | 09/16/04 | NA | 0.220 | NA | 745.0 | S |
| 5 | 712467 | 09/03/04 | Electra | 297 | DP-6 | 01/27/05 | NA | 0.220 | NA | 745.0 | T/S |
| 7 | 702058 | 09/03/04 | Electra | 3370 | DP-6 | 02/16/05 | NA | 0.220 | NA | 745.0 | Q/S |
| 8 | 702058 | 09/03/04 | BC-4 | 773 | NA | 09/19/04 | NA | 0.140 | NA | 205.0 | R |

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

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| Survey Area: VIA 2 | Survey Unit: 447204 | Building: 447 |
|---|---|---|

**Description:** Rooms 36, 405 Pit, and 405B Pit, All Surfaces

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447204PRP-N001 | 8 | N/A | -40.7 | |
| 447204PRP-N002 | 8 | N/A | -33.6 | |
| 447204PRP-N003 | 8 | N/A | -26.4 | |
| 447204PRP-N004 | 8 | N/A | -19.3 | |
| 447204PRP-N005 | 8 | N/A | -19.3 | |
| 447204PRP-N006 | 8 | N/A | -83.6 | |
| 447204PRP-N007 | 8 | N/A | -69.3 | |
| 447204PRP-N008 | 8 | N/A | -19.3 | |
| 447204PRP-N009 | 8 | N/A | -76.4 | |
| 447204PRP-N010 | 8 | N/A | -5.0 | |
| 447204PRP-N011 | 8 | N/A | 30.7 | |
| 447204PRP-N012 | 8 | N/A | -76.4 | |
| 447204PRP-N013 | 8 | N/A | -69.3 | |
| 447204PRP-N014 | 8 | N/A | 87.8 | |
| 447204PRP-N015 | 8 | N/A | -55.0 | |
| 447204PRP-N016 | 8 | N/A | -26.4 | |

**Comments:**

| Survey Area: VIA 2 | Survey Unit: 447204 | Building: 447 |
|---|---|---|

**Description:** Rooms 36, 405 Pit, and 405B Pit, All Surfaces

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447204PRP-N001 | 5 | N/A | 2,327.5 | |
| 447204PRP-N002 | 5 | N/A | 1,454.8 | |
| 447204PRP-N003 | 5 | N/A | 1,436.6 | |
| 447204PRP-N004 | 5 | N/A | 1,600.2 | |
| 447204PRP-N005 | 5 | N/A | 2,195.7 | |
| 447204PRP-N006 | 5 | N/A | 2,463.9 | |
| 447204PRP-N007 | 5 | N/A | 2,832.1 | |
| 447204QRP-N007 | 7 | N/A | 2,759.1 | |
| 447204PRP-N008 | 5 | N/A | 1,754.8 | |
| 447204PRP-N009 | 5 | N/A | 1,568.4 | |
| 447204PRP-N010 | 5 | N/A | 1,050.2 | |
| 447204PRP-N011 | 5 | N/A | 1,118.4 | |
| 447204PRP-N012 | 5 | N/A | 1,600.2 | |
| 447204PRP-N013 | 5 | N/A | 1,563.9 | |
| 447204PRP-N014 | 5 | N/A | 2,182.1 | |
| 447204PRP-N015 | 5 | N/A | 1,536.6 | |
| 447204PRP-N016 | 5 | N/A | 2,623.0 | |
| 447204QRP-N016 | 7 | N/A | 3,145.5 | |

**Comments:**



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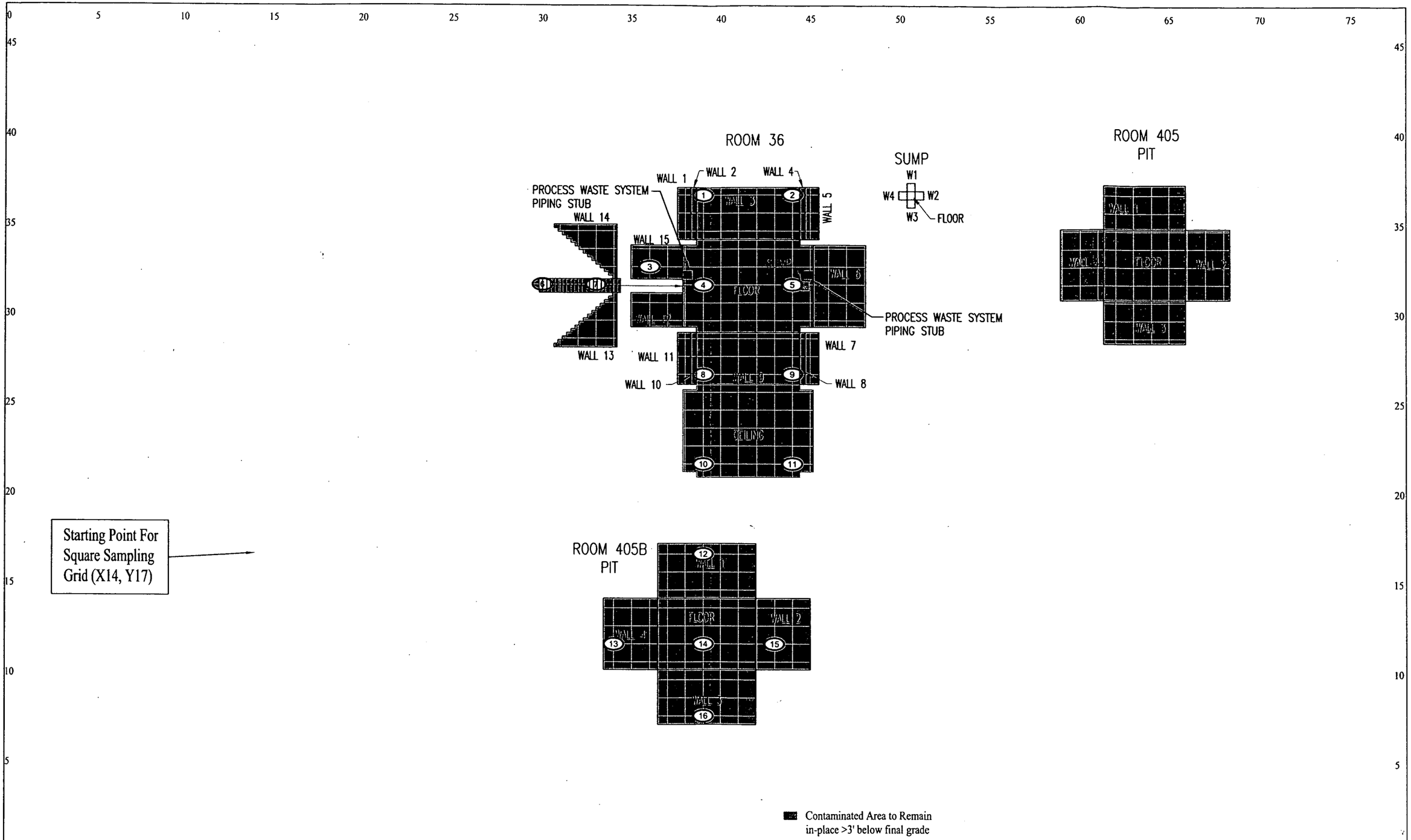


## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447204 Classification: 1

Survey Area/Unit Description: Rooms 36 405 Pit & 405B Pit, All Surfaces

Floor Area: 83 sq.m Total Area: 335 sq.m Grid Spaceing for Survey Area: 5 m x 5 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 16
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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Rocky Flats Encironmental Technology Site

Prepared by: RFCSS Rocky Flats Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: PDS 447204 SHT 01.DWG | Sheet: 1 of 1 | Rev: 0

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| Survey Area: VIA 2 | Survey Unit: 447205 | Building: 447 |
|---|---|---|

**Description:** Rooms 100, 101F, Sub-Station, & Northwest Dock

# Rocky Flats Environmental Technology Site
# Final Radiological Survey Summary Results

## Total Surface Activity Measurements

Nbr Random Measurements Required: 15
Nbr Random Measurements Performed: 16

Nbr Biased Measurements Required: 0
Nbr Biased Measurements Performed: 4

Nbr QC Required: 2
Nbr QC Performed: 2

### Beta

| | |
|---|---|
| Maximum: | 2,454.8 dpm/100cm² |
| Minimum: | -927.0 dpm/100cm² |
| Mean: | 556.3 dpm/100cm² |
| Standard Deviation: | 1,046.6 |
| QC Maximum: | 1,970.5 dpm/100cm² |
| QC Minimum: | 1,370.5 dpm/100cm² |
| QC Mean: | 1,670.5 dpm/100cm² |
| Uranium DCGL$_W$: | 5,000.0 dpm/100cm² |
| Uranium DCGL$_{EMC}$: | 15,000.0 dpm/100cm² |

## Removable Surface Activity Measurements

Nbr Random Measurements Required: 15
Nbr Random Measurements Performed: 16

Nbr Biased Measurements Required: 0
Nbr Biased Measurements Performed: 4

### Beta

| | |
|---|---|
| Maximum: | 132.4 dpm/100cm² |
| Minimum: | -51.6 dpm/100cm² |
| Mean: | 36.3 dpm/100cm² |
| Standard Deviation: | 54.8 |
| Uranium DCGL$_W$: | 1,000.0 |

## Media Sample Results

Nbr Random Required: 0
Nbr Random Collected: 0

Nbr Biased Required: 0
Nbr Biased Collected: 0

*Conclusion - A comparison of the random, biased and QC measurement results against the PDSP Table 7-1 Surface Contamination Guideline limits was conducted; the comparison demonstrates that this survey unit passes the criterion specified in the PDSP.*



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| Survey Area: VIA 2 | Survey Unit: 447205 | Building: 447 |
|---|---|---|

Description: Rooms 100, 101F, Sub-Station, & Northwest Dock

# Instrument Data Sheet

| Inst/RCT Number | RCT ID | Analysis Date | Instr Model | Instru S/N | Probe Type | Calibration Due Dt | Instru Efficiency Alpha | Instru Efficiency Beta | A-Priori MDA (dpm/100cm²) Alpha | A-Priori MDA (dpm/100cm²) Beta | Survey Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 712193 | 07/22/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |
| 2 | 712193 | 07/22/04 | Electra | 1512 | DP-6 | 11/01/04 | NA | 0.220 | NA | 745.0 | T/S |
| 3 | 712193 | 07/22/04 | Ludlum 292 | 99042 | NA | 10/26/04 | NA | 0.250 | NA | 205.0 | R |
| 4 | 712193 | 07/27/04 | Electra | 290 | DP-6 | 09/16/04 | NA | 0.220 | NA | 745.0 | S |
| 5 | 711447 | 07/27/04 | Electra | 3105 | DP-6 | 11/18/04 | NA | 0.220 | NA | 745.0 | T/S |
| 6 | 712467 | 07/27/04 | Electra | 3109 | DP-6 | 12/14/04 | NA | 0.220 | NA | 745.0 | Q/S |
| 7 | 712193 | 07/27/04 | Ludlum 292 | 99042 | NA | 10/26/04 | NA | 0.250 | NA | 205.0 | R |
| 8 | 712193 | 07/28/04 | Electra | 661 | DP-8 | 11/28/04 | NA | 0.160 | NA | 745.0 | S |

Survey Types: T = Total Surface Activity, Q = TSA QC, S = Scan, R = Removable Surface Activity, I = Investigation

83

| Survey Area: VIA 2 | Survey Unit: 447205 | Building: 447 |
|---|---|---|

**Description:** Rooms 100, 101F, Sub-Station, & Northwest Dock

# Random Removable Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447205PRP-N001 | 7 | N/A | -35.6 | |
| 447205PRP-N002 | 7 | N/A | 8.4 | |
| 447205PRP-N003 | 7 | N/A | 116.4 | |
| 447205PRP-N004 | 7 | N/A | 52.4 | |
| 447205PRP-N005 | 7 | N/A | -51.6 | |
| 447205PRP-N006 | 7 | N/A | 56.4 | |
| 447205PRP-N007 | 7 | N/A | -3.6 | |
| 447205PRP-N008 | 7 | N/A | 28.4 | |
| 447205PRP-N009 | 7 | N/A | 84.4 | |
| 447205PRP-N010 | 3 | N/A | -32.0 | |
| 447205PRP-N011 | 3 | N/A | 112.0 | |
| 447205PRP-N012 | 3 | N/A | 80.0 | |
| 447205PRP-N013 | 3 | N/A | 20.0 | |
| 447205PRP-N014 | 3 | N/A | 56.0 | |
| 447205PRP-N015 | 3 | N/A | -28.0 | |
| 447205PRP-N016 | 3 | N/A | 36.0 | |



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| Survey Area: VIA 2 | Survey Unit: 447205 | Building: 447 |
|---|---|---|

**Description:** Rooms 100, 101F, Sub-Station, & Northwest Dock

# Biased Removable Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447205PBP-N017 | 7 | N/A | 132.4 | |
| 447205PBP-N018 | 7 | N/A | 12.4 | |
| 447205PBP-N019 | 7 | N/A | 92.4 | |
| 447205PBP-N020 | 7 | N/A | -11.6 | |

**Comments:**

85

| Survey Area: VIA 2 | Survey Unit: 447205 | Building: 447 |
|---|---|---|

Description: Rooms 100, 101F, Sub-Station, & Northwest Dock

# Random/QC Total Surface Activity Data Sheet

| Random Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447205PRP-N001 | 5 | N/A | 868.4 | |
| 447205PRP-N002 | 5 | N/A | 795.7 | |
| 447205PRP-N003 | 5 | N/A | 545.7 | |
| 447205PRP-N004 | 5 | N/A | 686.6 | |
| 447205PRP-N005 | 2 | N/A | -927.0 | |
| 447205PRP-N006 | 5 | N/A | -545.2 | |
| 447205PRP-N007 | 5 | N/A | 1,659.3 | |
| 447205PRP-N008 | 5 | N/A | 1,900.2 | |
| 447205QRP-N008 | 6 | N/A | 1,370.5 | |
| 447205PRP-N009 | 5 | N/A | 2,454.8 | |
| 447205QRP-N009 | 6 | N/A | 1,970.5 | |
| 447205PRP-N010 | 2 | N/A | 1,241.1 | |
| 447205PRP-N011 | 2 | N/A | -308.9 | |
| 447205PRP-N012 | 2 | N/A | -731.6 | |
| 447205PRP-N013 | 2 | N/A | 1,286.6 | |
| 447205PRP-N014 | 2 | N/A | -472.5 | |
| 447205PRP-N015 | 2 | N/A | 1,154.8 | |
| 447205PRP-N016 | 2 | N/A | -858.9 | |



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| Survey Area: VIA 2 | Survey Unit: 447205 | Building: 447 |
|---|---|---|

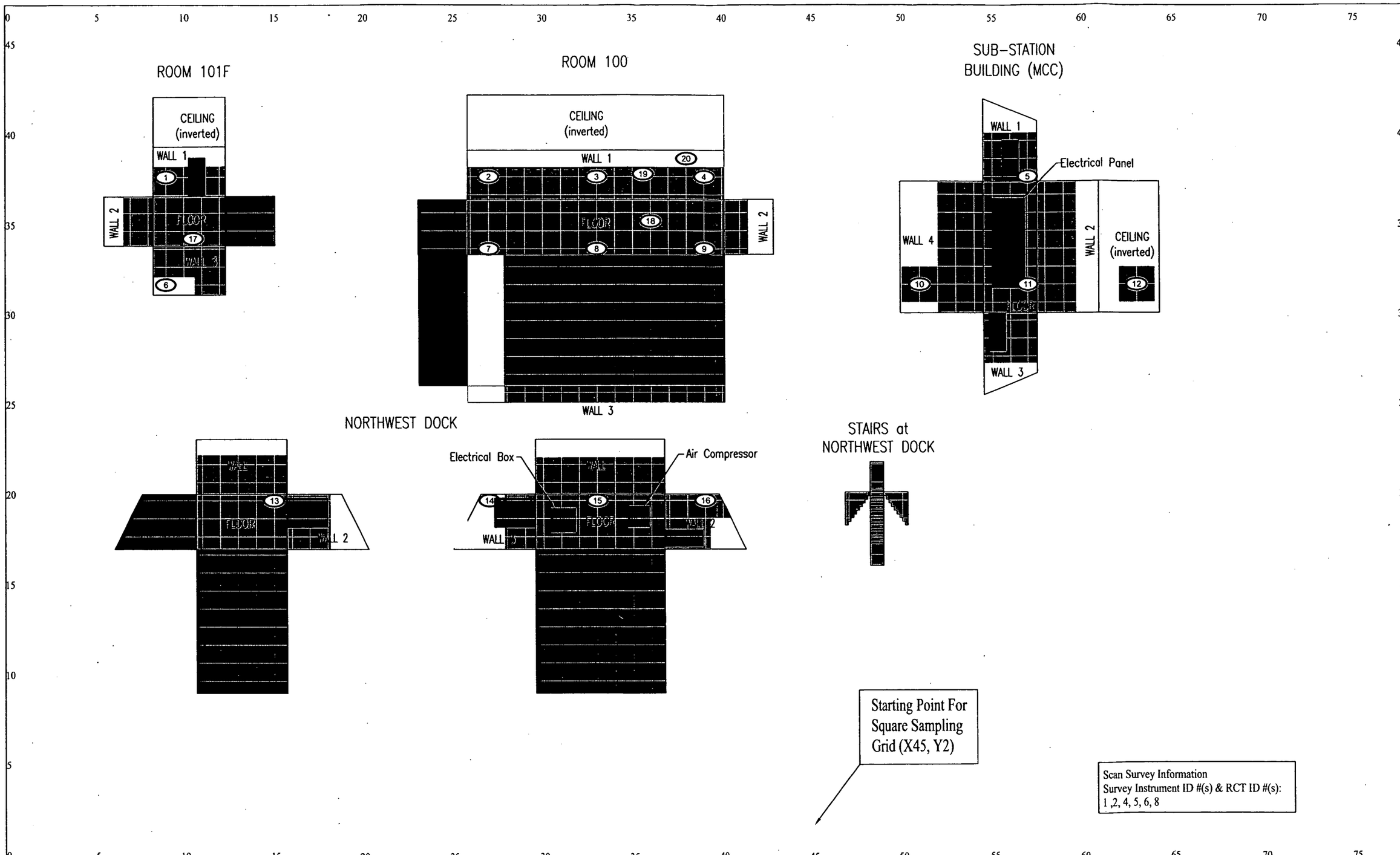
**Description:** Rooms 100, 101F, Sub-Station, & Northwest Dock

# Biased Total Surface Activity Data Sheet

| Biased Measurement Location | Inst / RCT Nbr | Net Alpha (dpm/100cm²) | Net Beta (dpm/100cm²) | |
|---|---|---|---|---|
| 447205PBP-N017 | 5 | N/A | 1,864.7 | |
| 447205PBP-N018 | 5 | N/A | 1,205.6 | |
| 447205PBP-N019 | 5 | N/A | -408.0 | |
| 447205PBP-N020 | 5 | N/A | -285.3 | |

**Comments:**

87




## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: 447205 Classification: 2

Survey Area/Unit Description: Rooms 100, 101F, Sub-Station & Northwest Dock

Floor Area: 128 sq.m Total Area: 524 sq.m Grid Spaceing for Survey Area: 6 m x 6 m

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 16
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

Prepared by: RF RFCS Rocky Flats Closure Site Services, LLC. A Kaiser-Hill Company

Prepared for: KAISER HILL

File Name: PDS 447205 SC.DWG | Sheet: 1 of 1 | Rev: 0

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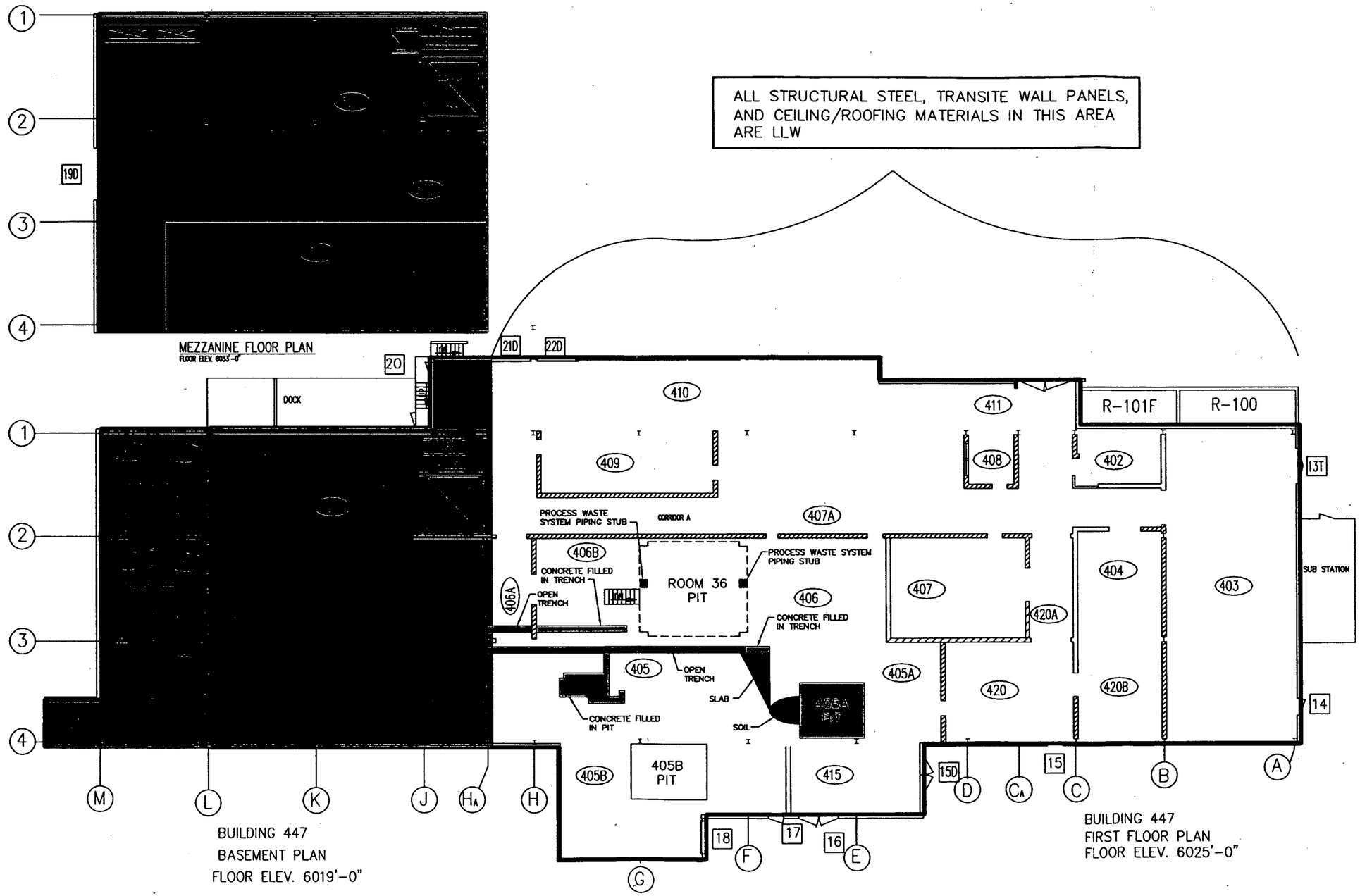


# BUILDING 447 LOW-LEVEL WASTE AREA MAP

## SURVEY POINT LEGEND

- Low-Level Waste Area to be Removed
- Contaminated Area to Remain in-place >3' below final grade
- Open/Inaccessible Area

N

0 FEET 20
0 METERS 6.5
1 inch = 20 feet

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

Prepared by: RFCDS Rocky Flats Closure Site Services, LLC

Prepared for: KAISER HILL

File Name: LLW B447 RED KEY MAP.DWG | Sheet: 1 of 1 | Rev: 0

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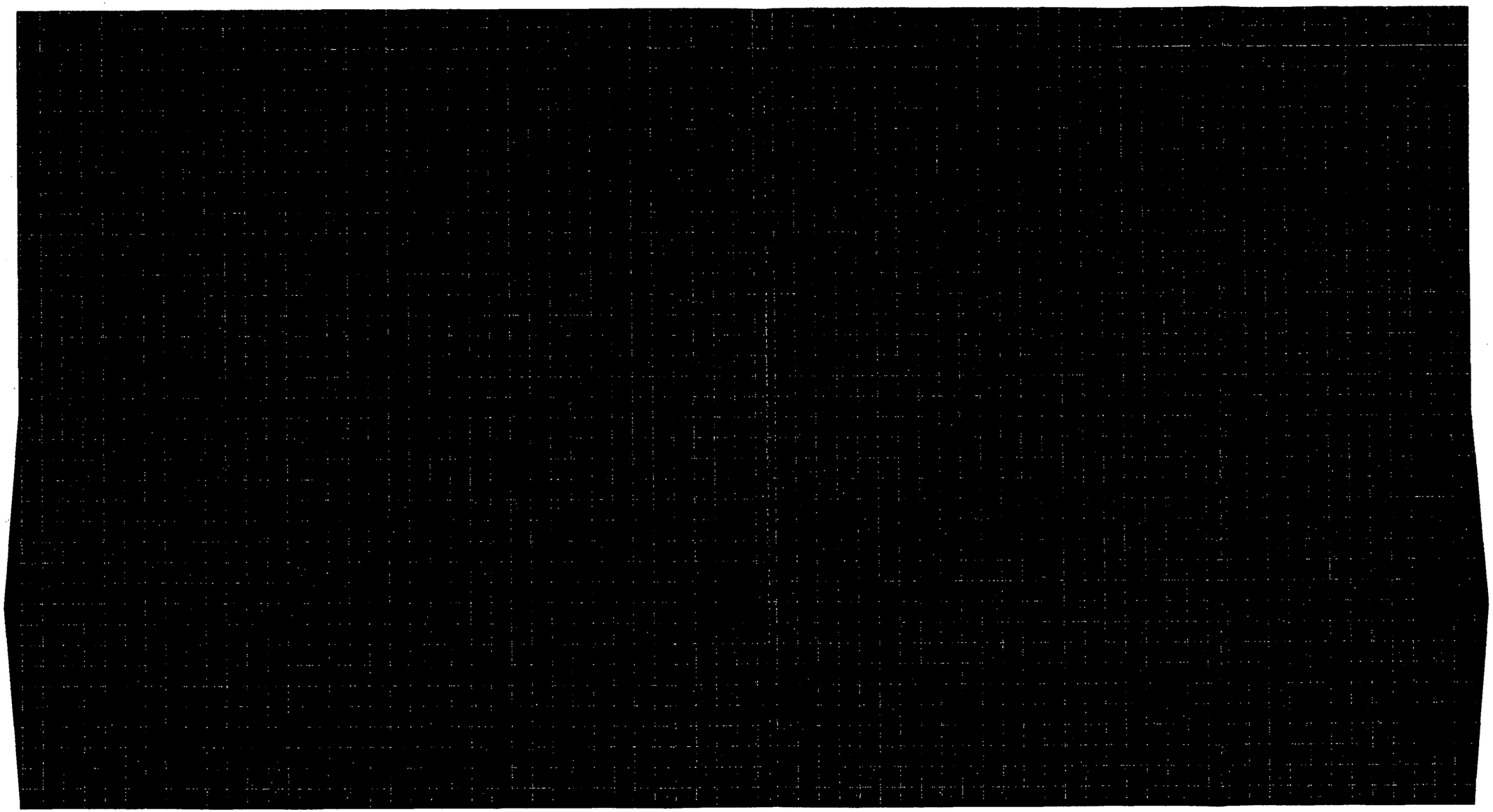
# BUILDING 447
# ROOF



## BUILDING 447 LOW-LEVEL WASTE AREA MAP

## SURVEY POINT LEGEND

- Radiological Scan Area
- Open/Inaccessible Area

N

0 FEET 16
0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

Prepared by: RF ROCKY FLATS Closure Site Services, LLC

Prepared for: KAISER HILL

File Name: LLW 447206 SHT 01.DWG | Sheet: 1 of 1 | Rev: 0

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## Building 447 Pit 405A Remaining Activity

| | Length (ft) | Width (ft) | Segment ($ft^2$) | Segment ($m^2$) | Beta dpm/100$cm^2$ (Note 1) | Total beta activity of wall /floor interface (pCi) | Contaminated volume ($ft^3$) (Note 2) | Trench volume ($cm^3$) | Concrete density ($g/cm^3$) | Beta pCi/g |
|---|---|---|---|---|---|---|---|---|---|---|
| North Wall | 15 | 0.667 | 10.005 | 0.9295 | 50,000 | 2,093,457 | 0.834 | 23,612 | 2.7 | 32.838 |
| South Wall | 15 | 0.667 | 10.005 | 0.9295 | 40,000 | 1,674,766 | 0.834 | 23,612 | 2.7 | 26.270 |
| East Wall | 13 | 0.667 | 8.671 | 0.8056 | 18,000 | 653,159 | 0.723 | 20,464 | 2.7 | 11.822 |
| West Wall | 13 | 0.667 | 8.671 | 0.8056 | 75,000 | 2,721,494 | 0.723 | 20,464 | 2.7 | 49.256 |
| West Floor sump area | 4 | 4 | 16 | 1.4864 | 90,000 | 6,026,143 | 1.333 | 37,760 | 2.7 | 59.108 |
| | | | | | | | | | | Average pCi/g |
| | | | | | Total pCi = | 13,169,018 | Total $cm^3$ = | 125,911 | 2.7 | 38.737 |

| | |
|---|---|
| Wildlife refuge limit U238 (Note 3) = | 351 |

Note 1 - dpm/100$cm^2$ values used is the highest measured activity on the surface
Note 2 - 1" was assumed to be the depth of contamination.
Note 3 - WRW for U238 is TOTAL ACTIVITY

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## Building 447 Room 405 Trench activity

| | Length (ft) | Depth (ft) | Segment $ft^2$ | Total $ft^2$ | Total $m^2$ | Beta $dpm/100cm^2$ (Note 1) | Total beta activity of trench (pCi) | Trench volume $ft^3$ | Trench volume $cm^3$ | Concrete density ($g/cm^3$) | Beta pCi/g |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Trench 1** | 21 | 1.666 | 34.986 | | | | | | | | |
| Cores 4 & 5 | 21 | 1.666 | 34.986 | | | | | | | | |
| | 2 | 1.666 | 3.332 | | | | | | | | |
| | | | | 73.30 | 6.8102 | 10,500 | 3,221,024 | 69.97 | 1,981,550 | 2.7 | 0.602 |
| **Trench 2** | 8.5 | 1 | 8.5 | | | | | | | | |
| Cores 1, 6 & 7 | 0.87 | 1 | 0.87 | | | | | | | | |
| | 3.66 | 1 | 3.66 | | | | | | | | |
| | 5.59 | 1 | 5.59 | | | | | | | | |
| | 2.41 | 1 | 2.41 | | | | | | | | |
| | 7 | 1 | 7 | | | | | | | | |
| | 2.5 | 1 | 2.5 | | | | | | | | |
| | 1 | 1 | 1 | | | | | | | | |
| | 3 | 1 | 3 | | | | | | | | |
| | 8.5 | 1 | 8.5 | | | | | | | | |
| | | | | 43.03 | 3.9976 | 5,000 | 900,364 | 71.49 | 2,024,597 | 2.7 | 0.165 |
| **Trench 3** | 6.166 | 1.25 | 7.7075 | | | | | | | | |
| Cores 2 & 8 | 6.166 | 1.25 | 7.7075 | | | | | | | | |
| | 7 | 1.25 | 8.75 | | | | | | | | |
| | 7 | 1.25 | 8.75 | | | | | | | | |
| | | | | 32.92 | 3.0584 | 15,000 | 2,066,465 | 53.95 | 1,527,864 | 2.7 | 0.501 |
| **Trench 4** | 3 | 1.25 | 3.75 | | | | | | | | |
| Core 3 | 1.5 | 1.25 | 1.875 | | | | | | | | |
| | 2 | 1.25 | 2.5 | | | | | | | | |
| | 7 | 1.25 | 8.75 | | | | | | | | |
| | 1 | 1.25 | 1.25 | | | | | | | | |
| | 8.5 | 1.25 | 10.625 | | | | | | | | |
| | | | | 28.75 | 2.6710 | 25,000 | 3,007,841 | 14.74 | 417,437 | 2.7 | 2.669 |
| **Concrete under Metal Angle[2]** | 136.4 | 0.25 | 34.1 | 34.1 | 3.1680 | 75,000 | 10,702,681 | 2.84 | 80,476 | 2.7 | **49.256** (max) |
| | | | | | | Total pCi = | 19,898,375 | Total $cm^3$ = | 6,031,924 | 2.7 | Avg. pCi/gm 1.222 |

**Wildlife refuge limit U238 (Note 3) = 351**

Note 1 - $dpm/100cm^2$ values used is the highest activity of the set of core samples associated with that trench
Note 2 - The highest $dpm/100cm^2$ value of the eight cores was used. 1" was assumed to be the depth of contamination.
Note 3 - WRW for U238 is TOTAL ACTIVITY

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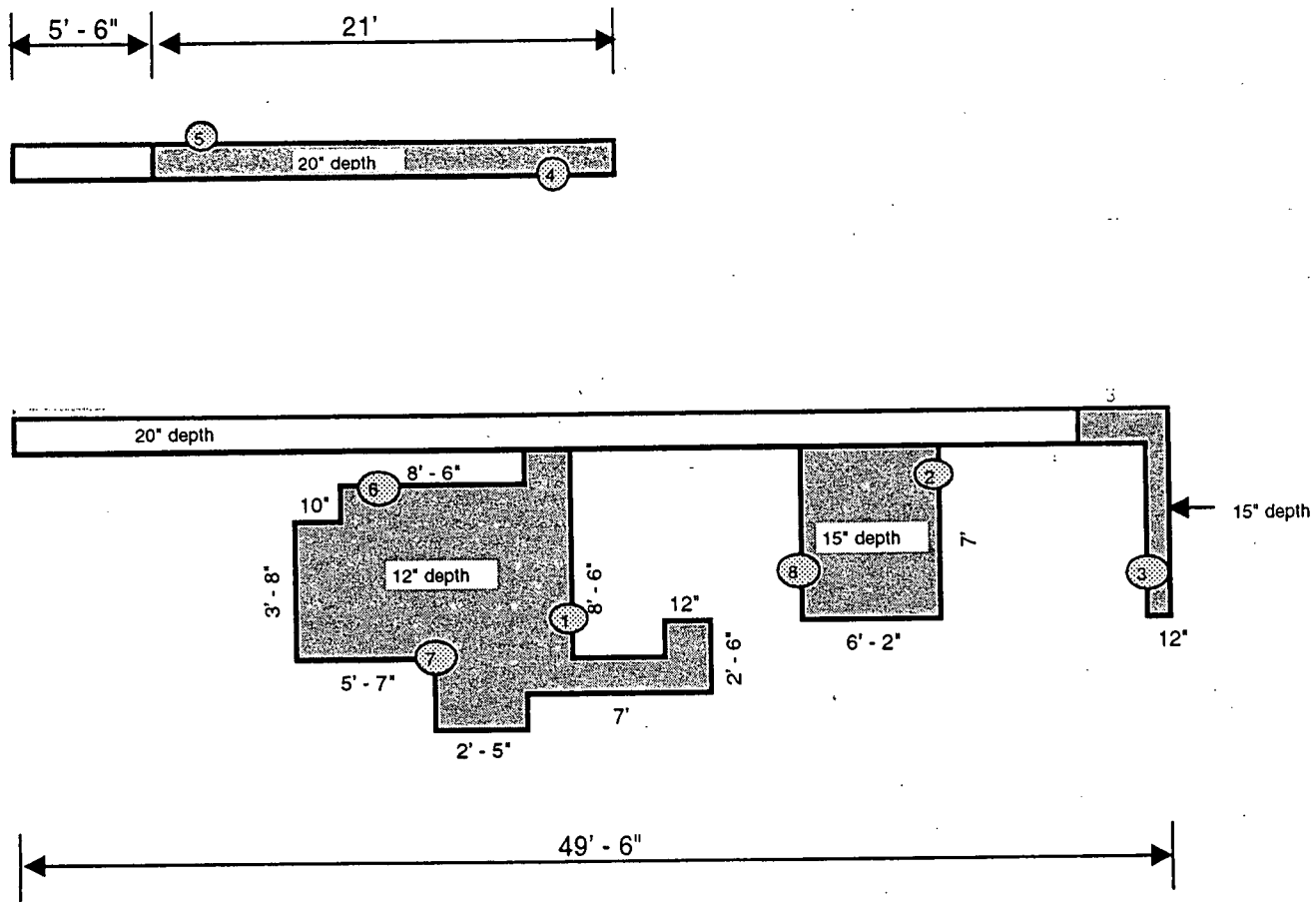
# 447 Trenches - Core Drill Locations

7/27/04

N

7/27/04 - Added core drill locations 6, 7, and 8.




denotes core drill location

denotes Concrete Filled

# Sodium Iodide Instrument Information

| Survey Area: | B447 | Room: | 36 | Survey Date(s): | 09/16/04 |
|---|---|---|---|---|---|

**Instrument Specifications**

| Instrument # | 1 | 2 |
|---|---|---|
| Meter Model: | TSA-MCA-465 | N/A |
| Meter Serial #: | 465069101 | N/A |
| Detector Model: | Teledyne | N/A |
| Detector #: | S-88-1 | N/A |
| Detector Size ($cm^2$): | 20 | N/A |
| Calibration Due Date: | 12/17/04 | N/A |
| Count Time (min) | 1 | N/A |
| Contact Efficiency | 0.00329% | N/A |

**Ratio Used***

| Depleted U Beta | 0.643 |
|---|---|

* Obtained from TBD-0146
portion of total activity that is Beta

**Comments**

All values assume depleted uranium is inside pipe
Values reported are conservative.

ROI = Region Of Interest. ROI for this survey selected using source ID As-4137. Channels selected to completely encompass 90 -92 Kev Peaks.
Count times for background and samples are equal. Sample area assumes 1/2 of 8" diameter , 5 inch long pipe is in detector's field of view.

Efficiency for survey determined using souce ID AS-4137, a 667.3 gram depleted uranium slab. Self attenuation of uranium slab aproximates concrete in pipe.
Attenuation Factors: Determined by placing slab of depleted uranium beneath 1/4 " thick piece of carbon Steel. All readings taken at 37 cm.

## Efficiency At 37 cm through .25" Iron

| | |
|---|---|
| Source As-4137 Activity (dpm | 540,513,000 |
| Background Countrate (CPM) | 1,550 |
| Source Countrate (cpm) | 19,355 |
| Net Counts per Minute | 17,805 |
| Efficency* | 0.00329% |

* For total activity, Alpha+Beta

Prepared By: Michael Wesselman [signature] 9/21/04
Print Sign Date

Reviewed By: Roger Warnick [signature] 9/21/04
Print Sign Date

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# Total Activity Estimates Using Sodium Iodide with MCA-465

| Survey Area: | B447 | Room: | 36 | Survey Date(s): | 09/16/04 |
|---|---|---|---|---|---|

| Sample Location # | Count time (min) | Sample Size ( $cm^2$ ) | Grosscounts( CPM) | Critical Level (dpm/100cm2) | Total Beta (dpm/100cm2) |
|---|---|---|---|---|---|
| Pipe | 1 | 202.5 | 2287 | 1,011,689 | 2,486,966 |
| Background | 1 | 202.5 | 2029 | 1,011,689 | N/A |
| | | | | | |
| | | | | | |
| | | | | | |

Prepared By: [illegible] [illegible] Michael Weissdorn 9/21/2004
Print Initial Date

Reviewed By: Roger Worrick rw 9/21/04
Print Initial Date

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# ATTACHMENT B-3

# 447 Exterior Confirmatory Survey

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# ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

## INSTRUMENT DATA

| | | | | | |
|---|---|---|---|---|---|
| Mfg. | Ludlum | Mfg. | Eberline | Mfg. | NE Electra |
| Model | 2929 | Model | SAC-4 | Model | DP-6 |
| Serial # | 99042 | Serial # | N/A | Serial # | NA |
| Cal Due | 10/26/04 | Cal Due | N/A | Cal Due | NA |
| Bkg | 0.1 cpmα | Bkg | N/A cpmα | Bkg | NA cpmα |
| Efficiency | 34.90 % | Efficiency | 33.00 % | Efficiency | NA % |
| MDA | 18 dpmα | MDA | 20 dpmα | MDA | ####### dpmα |
| Mfg. | Ludlum | Mfg. | Eberline | Mfg. | NE Electra |
| Model | 2929 | Model | BC-4 | Model | DP-6 |
| Serial # | 99042 | Serial # | N/A | Serial # | NA |
| Cal Due | 10/26/04 | Cal Due | N/A | Cal Due | NA |
| Bkg | 96.2 cpmβ | Bkg | N/A cpmβ | Bkg | NA cpmβ |
| Efficiency | 39.00 % | Efficiency | 25.00 % | Efficiency | NA % |
| MDA | 205 dpmβ | MDA | 200 dpmβ | MDA | ####### dpmβ |

Survey Tracking # N/A
Survey Type: Contamination
Building: B447 & B448
Location: External Surfaces
Purpose: Confirmation

RWP #: NA

Date: 8/16/04 Time: 0930

[redacted]

Print name Signature Emp. #

**PRN/REN # :** N/A
**Comments:** Nuclide of concern Depleted Uranium. Survey performed as confirmation of external surface areas.

## 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 |
|---|---|---|---|---|---|---|---|
| 1-20 | B447 External Surface | N/A | N/A | N/A | <205 | N/A | N/A |
| 21-40 | B448 External Surface | N/A | N/A | N/A | <205 | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

**Date Reviewed:** 8/16/04 **RS Supervision:** [redacted]



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# ATTACHMENT C-1

# Beryllium Data Summary and Sample Maps

98

# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 1 | B447-1 | 501 | 04Z2533 | 444-08302004-213-159 | B447 PDS CHRCTRZTN SAMPLE PT 1, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 2 | B447-1 | 503 | 04D1099 | 444-08112004-213-114 | B447 CHARACTERIZATION POINT, MID. SECTION, ON FLOOR AT ENTRANCE DOOR; VIA 1 | <0.1 |
| 3 | B447-1 | 501 | 04Z2533 | 444-08302004-213-161 | B447 PDS CHRCTRZTN SAMPLE PT 3, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 4 | B447-1 | 503 | 04D1099 | 444-08112004-213-117 | B447 CHARACTERIZATION POINT, MID. SECTION, FLOOR AT CENTER OF ROOM; VIA 1 | <0.1 |
| 5 | B447-1 | 501 | 04Z2533 | 444-08302004-213-173 | B447 PDS CHRCTRZTN SAMPLE PT 5, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 6 | B447-1 | 503 | 04D1099 | 444-08112004-213-112 | B447 CHARACTERIZATION POINT, W. SECTION, FLOOR,CENTER OF ROOM IN DEMISTER STAGE; VIA 1 | <0.1 |
| 7 | B447-1 | 503 | 04Z2455 | 444-08252004-213-307 | B447 PDS CHRCHTRZTN POINT 7 - FLOOR; VIA 1 | <0.1 |
| 8 | B447-1 | 501 | 04Z2533 | 444-08302004-213-177 | B447 PDS CHRCTRZTN SAMPLE PT 8, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 9 | B447-1 | 501 | 04Z2533 | 444-08302004-213-164 | B447 PDS CHRCTRZTN SAMPLE PT 9, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 10 | B447-1 | 501 | 04Z2533 | 444-08302004-213-166 | B447 PDS CHRCTRZTN SAMPLE PT 10, POST FIXATIVE,FLOOR,VIA 1 | 0.643 |
| 10 | B447-1 | 501 | 04Z2537 | 444-090720040602-010 | B447 PDS CHARACTERIZATION POINT 10 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 11 | B447-1 | 501 | 04Z2533 | 444-08302004-213-167 | B447 PDS CHRCTRZTN SAMPLE PT 11, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 12 | B447-1 | 501 | 04Z2533 | 444-08302004-213-172 | B447 PDS CHRCTRZTN SAMPLE PT 12, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 13 | B447-1 | 501 | 04Z2533 | 444-08302004-213-179 | B447 PDS CHRCTRZTN SAMPLE PT 13, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 14 | B447-1 | 502 | 04Z2533 | 444-08302004-213-175 | B447 PDS CHRCTRZTN SAMPLE PT 14, POST FIXATIVE,FLOOR,VIA 1 | 0.383 |
| 14 | B447-1 | 502 | 04Z2534 | 444-09012004-213-117 | B447 PDS SAMPLE- POST FIXATIVE,FLOOR, SAMPLE PT 14, VIA 1 | < 0.1 |
| 14 | B447-1 | 502 | 04Z2537 | 444-090720040602-014 | B447 PDS CHARACTERIZATION POINT 14 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 15 | B447-1 | 503 | 04D1099 | 444-08112004-213-116 | B447 CHARACTERIZATION POINT, MID. SECTION, RED BEAM @ S. END NEAR TRANSITE; VIA 1 | <0.1 |
| 16 | B447-1 | 502 | 04Z2533 | 444-08302004-213-176 | B447 PDS CHRCTRZTN SAMPLE PT 16, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 16 | B447-1 | 502 | 04Z2534 | 444-09012004-213-119 | B447 PDS SAMPLE- POST FIXATIVE,FLOOR, SAMPLE PT 16, VIA 1 | < 0.1 |
| 17 | B447-1 | 501 | 04Z2533 | 444-08302004-213-171 | B447 PDS CHRCTRZTN SAMPLE PT 17, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 18 | B447-1 | 501 | 04Z2533 | 444-08302004-213-168 | B447 PDS CHRCTRZTN SAMPLE PT 18, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 19 | B447-1 | 502 | 04Z2533 | 444-08302004-213-174 | B447 PDS CHRCTRZTN SAMPLE PT 19, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 19 | B447-1 | 502 | 04Z2534 | 444-09012004-213-118 | B447 PDS SAMPLE- POST FIXATIVE,FLOOR, SAMPLE PT 19, VIA 1 | < 0.1 |
| 20 | B447-1 | 501 | 04Z2533 | 444-08302004-213-169 | B447 PDS CHRCTRZTN SAMPLE PT 20, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 21 | B447-1 | 503 | 04D1099 | 444-08112004-213-105 | B447 CHARACTERIZATION POINT, W. SECTION, SE CORNER ON FLOOR BY REMOVED TRANSITE; VIA 1 | <0.1 |
| 22 | B447-1 | 501 | 04Z2533 | 444-08302004-213-165 | B447 PDS CHRCTRZTN SAMPLE PT 22, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 23 | B447-1 | 501 | 04Z2533 | 444-08302004-213-158 | B447 PDS CHRCTRZTN SAMPLE PT 23, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 24 | B447-1 | 501 | 04Z2533 | 444-08302004-213-163 | B447 PDS CHRCTRZTN SAMPLE PT 24, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 25 | B447-1 | 501 | 04Z2533 | 444-08302004-213-178 | B447 PDS CHRCTRZTN SAMPLE PT 25, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 26 | B447-1 | 501 | 04Z2533 | 444-08302004-213-157 | B447 PDS CHRCTRZTN SAMPLE PT 26, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 27 | B447-1 | 501 | 04Z2533 | 444-08302004-213-160 | B447 PDS CHRCTRZTN SAMPLE PT 27, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 28 | B447-1 | 503 | 04D1099 | 444-08112004-213-108 | B447 CHARACTERIZATION POINT, B447 BIAS SAMPLE, W. SECTION, FLOOR @ EXIT DOOR TO R. 501; VIA 1 | <0.1 |
| 29 | B447-1 | 501 | 04Z2533 | 444-08302004-213-170 | B447 PDS CHRCTRZTN SAMPLE PT 29, POST FIXATIVE,FLOOR,VIA 1 | <0.1 |
| 101 | B447-1 | 503 | 04D1099 | 444-08112004-213-101 | B447 BIAS SAMPLE, W. SECTION, RED BEAM @ S. WALL NEAR TRANSITE WALL; VIA 1 | <0.1 |
| 102 | B447-1 | 503 | 04D1099 | 444-08112004-213-102 | B447 BIAS SAMPLE, W. SECTION, SW CORNER ON GALVANIZED SHEET METAL; VIA 1 | <0.1 |
| 103 | B447-1 | 503 | 04D1099 | 444-08112004-213-103 | B447 BIAS SAMPLE, W. SECTION, SW CORNER ON FLOOR BY REMOVED TRANSITE; VIA 1 | <0.1 |
| 104 | B447-1 | 503 | 04D1099 | 444-08112004-213-104 | B447 BIAS SAMPLE, W. SECTION, RED BEAM, S. WALL, NEAR FILTER FRAME; VIA 1 | <0.1 |
| 106 | B447-1 | 503 | 04D1099 | 444-08112004-213-106 | B447 BIAS SAMPLE, W. SECTION, ON S. END OF FILTER FRAME; VIA 1 | <0.1 |
| 107 | B447-1 | 503 | 04D1099 | 444-08112004-213-107 | B447 BIAS SAMPLE, W. SECTION, FLOOR EAST END; VIA 1 | 0.179 |
| 107 | B447-1 | 503 | 04Z2455 | 444-08252004-213-305 | B447 POSTDECON SAMPLE OF PT 107; B. 447 VIA 1 - POST DECON SAMPLES | <0.1 |
| 109 | B447-1 | 503 | 04D1099 | 444-08112004-213-109 | B447 BIAS SAMPLE, W. SECTION, FLOOR CENTER OF ROOM; VIA 1 | <0.1 |
| 110 | B447-1 | 503 | 04D1099 | 444-08112004-213-110 | B447 BIAS SAMPLE, W. SECTION, FLOOR @ NE ACCESS DOOR TO DEMISTER; VIA 1 | <0.1 |
| 111 | B447-1 | 503 | 04D1099 | 444-08112004-213-111 | B447 BIAS SAMPLE, W. SECTION, BASE OF E. DEMISTERS, ON CEMENT; VIA 1 | <0.1 |
| 113 | B447-1 | 503 | 04D1099 | 444-08112004-213-113 | B447 BIAS SAMPLE, W. SECTION, FLOOR AT ENTRANCE DOOR IN DEMISTER STAGE; VIA 1 | <0.1 |
| 115 | B447-1 | 503 | 04D1099 | 444-08112004-213-115 | B447 BIAS SAMPLE, MID. SECTION, ON W. DEMISTER FRAME; VIA 1 | <0.1 |
| 116 | B447-1 | 501 | 04Z2534 | 444-09012004-213-116 | B447 BIAS SAMPLE, POST FIXATIVE,W/N WALL BEAMS, VIA 1 | < 0.1 |
| 118 | B447-1 | 503 | 04D1099 | 444-08112004-213-118 | B447 BIAS SAMPLE, EAST SECTION, FLOOR AT ENTRANCE DOOR; VIA 1 | <0.1 |
| 119 | B447-1 | 503 | 04D1099 | 444-08112004-213-119 | B447 BIAS SAMPLE, EAST SECTION, DEMISTER UNIT; VIA 1 | <0.1 |
| 120 | B447-1 | 503 | 04D1099 | 444-08112004-213-120 | B447 BIAS SAMPLE, EAST SECTION, FLOOR AT SOUTH END; VIA 1 | <0.1 |
| 120 | B447-1 | 501 | 04Z2534 | 444-09012004-213-120 | B447 BIAS SAMPLE, POST FIXATIVE,FLOOR AT TOP OF STAIRS; VIA 1 | < 0.1 |
| 162 | B447-1 | 501 | 04Z2533 | 444-08302004-213-162 | B447 BIAS SAMPLE OF W BEAMS/PIPE PASSTHRU, POST FIXATIVE, VIA 1 | 0.148 |
| 162 | B447-1 | 501 | 04Z2537 | 444-090720040602-162 | B447 BIAS POINT 162 - POST FIXATIVE, PIPE PASSTHROUGH W WALL, VIA 1 | <0.1 |
| 180 | B447-1 | 501 | 04Z2533 | 444-08302004-213-180 | B447 BIAS SAMPLE,N/E WALL/TRANSITE, POST FIXATIVE | <0.1 |
| 181 | B447-1 | 501 | 04Z2533 | 444-08302004-213-181 | B447 BIAS SAMPLE, POST FIXATIVE,N/E WALL TOP BEAM,BEHIND OLD WALL | <0.1 |
| 182 | B447-1 | 501 | 04Z2533 | 444-08302004-213-182 | B447 BIAS SAMPLE, POST FIXATIVE,B/OVERHEAD BEAM, W/OF ELEVATOR | 0.214 |
| 182 | B447-1 | 501 | 04Z2537 | 444-090720040602-182 | B447 BIAS POINT 182 - POST FIXATIVE, BEAM, VIA 1 | <0.1 |
| 183 | B447-1 | 501 | 04Z2533 | 444-08302004-213-183 | B447 BIAS SAMPLE, POST FIXATIVE,OVERHEAD BEAM MIDDLE OF RM | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 184 | B447-1 | 501 | 04Z2533 | 444-08302004-213-184 | B447 BIAS SAMPLE, POST FIXATIVE,OVERHEAD BEAM AT W/N WALL | <0.1 |
| 185 | B447-1 | 501 | 04Z2533 | 444-08302004-213-185 | B447 BIAS SAMPLE, POST FIXATIVE,OVERHEAD BEAM AT W WALL, MIDDLE | <0.1 |
| 186 | B447-1 | 501 | 04Z2533 | 444-08302004-213-186 | B447 BIAS SAMPLE, POST FIXATIVE,OVERHEAD BEAM AT W/S WALL | <0.1 |
| 187 | B447-1 | 501 | 04Z2533 | 444-08302004-213-187 | B447 BIAS SAMPLE, POST FIXATIVE,OVERHEAD BEAM AT W/S WALL | <0.1 |
| 188 | B447-1 | 501 | 04Z2533 | 444-08302004-213-188 | B447 BIAS SAMPLE, POST FIXATIVE,OVERHEAD BEAM OUTSIDE 503 DOOR | <0.1 |
| 189 | B447-1 | 501 | 04Z2533 | 444-08302004-213-189 | B447 BIAS SAMPLE, POST FIXATIVE,OVERHEAD BEAM OUTSIDE 503 HATCH | <0.1 |
| 190 | B447-1 | 502 | 04Z2533 | 444-08302004-213-190 | B447 BIAS SAMPLE, POST FIXATIVE,OVERHEAD BEAM ABOVE PT 19 | <0.1 |
| 301 | B447-1 | 503 | 04Z2455 | 444-08252004-213-301 | B447 POSTDECON SAMPLE 3 FT SW OF PT 107; B. 447 VIA 1 - POST DECON SAMPLES | <0.1 |
| 301 | B447-1 | 502 | 04Z2537 | 444-090720040602-301 | B447 PDS CHARACTERIZATION NORTH OF POINT 14 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 302 | B447-1 | 503 | 04Z2455 | 444-08252004-213-302 | B447 POSTDECON SAMPLE 3 FT SE OF PT 107; B. 447 VIA 1 - POST DECON SAMPLES | <0.1 |
| 302 | B447-1 | 502 | 04Z2537 | 444-090720040602-302 | B447 PDS CHARACTERIZATION SOUTH OF POINT 14 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 303 | B447-1 | 503 | 04Z2455 | 444-08252004-213-303 | B447 POSTDECON SAMPLE 3 FT NE OF PT 107; B. 447 VIA 1 - POST DECON SAMPLES | <0.1 |
| 303 | B447-1 | 502 | 04Z2537 | 444-090720040602-303 | B447 PDS CHARACTERIZATION EAST OF POINT 14 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 304 | B447-1 | 503 | 04Z2455 | 444-08252004-213-304 | B447 POSTDECON SAMPLE 3 FT NW OF PT 107; B. 447 VIA 1 - POST DECON SAMPLES | <0.1 |
| 304 | B447-1 | 502 | 04Z2537 | 444-090720040602-304 | B447 PDS CHARACTERIZATION WEST OF POINT 14 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 305 | B447-1 | 501 | 04Z2537 | 444-090720040602-305 | B447 BIAS SAMPLE NORTH OF POINT 182 - POST FIXATIVE, BEAM, VIA 1 | <0.1 |
| 306 | B447-1 | 503 | 04Z2455 | 444-08252004-213-306 | B447 BIAS SAMPLE, E END ON MAIN FAN BLADES; VIA 1 | <0.1 |
| 306 | B447-1 | 501 | 04Z2537 | 444-090720040602-306 | B447 BIAS SAMPLE NORTH OF POINT 182 - POST FIXATIVE, BEAM, VIA 1 | <0.1 |
| 307 | B447-1 | 501 | 04Z2537 | 444-090720040602-307 | B447 BIAS SAMPLE SOUTH OF POINT 182 - POST FIXATIVE, BEAM, VIA 1 | <0.1 |
| 308 | B447-1 | 503 | 04Z2455 | 444-08252004-213-308 | B447 BIAS SAMPLE, E SECTION, FILTER FRAME, MIDDLE; VIA 1 | <0.1 |
| 308 | B447-1 | 501 | 04Z2537 | 444-090720040602-308 | B447 BIAS SAMPLE SOUTH OF POINT 182 - POST FIXATIVE, BEAM, VIA 1 | <0.1 |
| 309 | B447-1 | 503 | 04Z2455 | 444-08252004-213-309 | B447 BIAS SAMPLE, E SECTION, FLOOR/MOTOR - W END; VIA 1 | <0.1 |
| 309 | B447-1 | 501 | 04Z2537 | 444-090720040602-309 | B447 PDS CHARACTERIZATION NORTH OF POINT 10 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 310 | B447-1 | 503 | 04Z2455 | 444-08252004-213-310 | B447 BIAS SAMPLE, E SECTION, S. BEAMS/TRANSITE; VIA 1 | <0.1 |
| 310 | B447-1 | 501 | 04Z2537 | 444-090720040602-310 | B447 PDS CHARACTERIZATION SOUTH OF POINT 10 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 311 | B447-1 | 501 | 04Z2537 | 444-090720040602-311 | B447 PDS CHARACTERIZATION EAST OF POINT 10 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 312 | B447-1 | 501 | 04Z2537 | 444-090720040602-312 | B447 PDS CHARACTERIZATION WEST OF POINT 10 - POST FIXATIVE, FLOOR, VIA 1 | <0.1 |
| 313 | B447-1 | 501 | 04Z2537 | 444-090720040602-313 | B447 BIAS SAMPLE NORTH OF POINT 162 - POST FIXATIVE, PIPE PASSTHROUGH W WALL, VIA 1 | <0.1 |
| 314 | B447-1 | 501 | 04Z2537 | 444-090720040602-314 | B447 BIAS SAMPLE NORTH OF POINT 162 - POST FIXATIVE, PIPE PASSTHROUGH W WALL, VIA 1 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 315 | B447-1 | 501 | 04Z2537 | 444-090720040602-315 | B447 BIAS SAMPLE NORTH OF POINT 162 - POST FIXATIVE, PIPE PASSTHROUGH, VIA 1 | <0.1 |
| 316 | B447-1 | 501 | 04Z2537 | 444-090720040602-316 | B447 BIAS SAMPLE SOUTH OF POINT 162 - POST FIXATIVE, PIPE PASSTHROUGH W WALL, VIA 1 | <0.1 |
| 433 | B447-1 | 501 | 04Z2395 | 444-08172004-607-433 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-1 | 0.463 |
| 434 | B447-1 | 501 | 04Z2395 | 444-08172004-607-434 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-1 | 0.455 |
| 435 | B447-1 | 501 | 04Z2395 | 444-08172004-607-435 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-1 | 0.448 |
| 436 | B447-1 | 501 | 04Z2395 | 444-08172004-607-436 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-1 | 0.147 |
| 437 | B447-1 | 501 | 04Z2395 | 444-08172004-607-437 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-1 | 0.315 |
| 438 | B447-1 | 501 | 04Z2395 | 444-08172004-607-438 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-1 | 0.117 |
| 439 | B447-1 | 501 | 04Z2395 | 444-08172004-607-439 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-1 | 0.914 |
| 440 | B447-1 | 501 | 04Z2395 | 444-08172004-607-440 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-1 | 0.148 |
| 441 | B447-1 | 501 | 04Z2395 | 444-08172004-607-441 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-1 | <0.1 |
| 442 | B447-1 | 501 | 04Z2395 | 444-08172004-607-442 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION I-BEAM (OVERHEAD) - VIA-1 | 0.262 |
| 443 | B447-1 | 501 | 04Z2395 | 444-08172004-607-443 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION I-BEAM (OVERHEAD) - VIA-1 | 0.521 |
| 444 | B447-1 | 501 | 04Z2395 | 444-08172004-607-444 | B447 PDS BIAS SAMPLE POINT- PRE FIXATIVE APPLICATION I-BEAM (OVERHEAD)- VIA-1 | <0.1 |
| 448 | B447-1 | 503 | 04Z2396 | 444-08182004-01-448 | B447 PDS BIAS SAMPLE POINT - TRANSITE WALL BOARD, S WALL; VIA 1 | <0.1 |
| 449 | B447-1 | 501 | 04Z2396 | 444-08182004-01-449 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE, TRANSITE WALL BOARD, W WALL; VIA 1 | <0.1 |
| 450 | B447-1 | 501 | 04Z2396 | 444-08182004-01-450 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE, TRANSITE WALL BOARD, N WALL; VIA 1 | <0.1 |
| 589 | B447-1 | 503 | 04D1176 | 444-09132004-213-524 | B447 POSTJOB SAMPLE AFTER CINDERBLOCK WALL REMOVAL,E WALL TO 405B | <0.1 |
| 590 | B447-1 | 503 | 04D1176 | 444-09132004-213-525 | B447 POSTJOB SAMPLE AFTER CINDERBLOCK WALL REMOVAL,E WALL TO 405B | <0.1 |
| 591 | B447-1 | 503 | 04D1176 | 444-09132004-213-526 | B447 POSTJOB SAMPLE AFTER CINDERBLOCK WALL REMOVAL,E WALL TO 405B | <0.1 |
| 592 | B447-1 | 503 | 04D1176 | 444-09132004-213-527 | B447 POSTJOB SAMPLE AFTER CINDERBLOCK WALL REMOVAL,E WALL TO 405B | <0.1 |
| 1 | B447-2 | 410 | 04Z2393 | 444-08092004-213-001 | B. 447 PDS CHARACTERIZATION-SAMPLE POINT 1; FLOOR; VIA 2 | <0.1 |
| 2 | B447-2 | 403 | 04Z2225 | 444-07122004-213-002 | B. 447 PDS CHARACTERIZATION POINT 2 - FLOOR; B. 447 VIA 2 | <0.1 |
| 3 | B447-2 | 31 | 04Z2533 | 444-08302004-213-101 | B447 PDS CHRCTRZTN-SAMPLE PT 3- POST FIXATIVE, FLOOR,VIA 2 | <0.1 |
| 4 | B447-2 | 420B | 04Z2087 | 444-07132004-213-004 | B. 447 PDS CHARACTERIZATION POINT 4 - FLOOR; B. 447 VIA 2 | <0.1 |
| 5 | B447-2 | 100 | 04Z2225 | 444-07132004-213-005 | B. 444 PDS CHARACTERIZATION POINT 5 - FLOOR; B. 444 VIA 2 | 0.14 |
| 5 | B447-2 | 100 | 04Z2264 | 444-07282004-213-140 | B. 444 PDS - POSTJOB SAMPLE OF SAMPLE PT.5; VIA 2; floor | <0.1 |
| 5 | B447-2 | 405B | 04Z2265 | 444-07282004-213-005 | B. 447 PDS CHARACTERIZATION POINT 5;FLOOR; VIA-2 | <0.1 |
| 6 | B447-2 | 31 | 04Z2533 | 444-08302004-213-102 | B447 PDS CHRCTRZTN-SAMPLE PT 6- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 7 | B447-2 | 405B | 04Z2265 | 444-07282004-213-007 | B. 447 PDS CHARACTERIZATION POINT 7;FLOOR; VIA-2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 8 | B447-2 | 405B | 04Z2265 | 444-07282004-213-008 | B. 447 PDS CHARACTERIZATION POINT 8;FLOOR; VIA-2 | <0.1 |
| 9 | B447-2 | 403 | 04Z2225 | 444-07122004-213-009 | B. 447 PDS CHARACTERIZATION POINT 9 - FLOOR; B. 447 VIA 2 | <0.1 |
| 10 | B447-2 | 405B | 04Z2265 | 444-07282004-213-010 | B. 447 PDS CHARACTERIZATION POINT 10;FLOOR; VIA-2 | <0.1 |
| 11 | B447-2 | 403 | 04Z2225 | 444-07122004-213-011 | B. 447 PDS CHARACTERIZATION POINT 11 - FLOOR; B. 447 VIA 2 | <0.1 |
| 12 | B447-2 | 403 | 04Z2225 | 444-07122004-213-012 | B. 447 PDS CHARACTERIZATION POINT 12 - FLOOR; B. 447 VIA 2 | <0.1 |
| 13 | B447-2 | 415 | 04Z2265 | 444-07282004-213-013 | B. 447 PDS CHARACTERIZATION POINT 13;FLOOR; VIA-2 | <0.1 |
| 14 | B447-2 | 32 | 04Z2533 | 444-08302004-213-107 | B447 PDS CHRCTRZTN-SAMPLE PT 14- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 15 | B447-2 | 407A | 04Z2393 | 444-08092004-213-015 | B. 447 PDS CHARACTERIZATION-SAMPLE POINT 15; FLOOR; VIA 2 | <0.1 |
| 16 | B447-2 | 411 | 04Z2393 | 444-08092004-213-016 | B. 447 PDS CHARACTERIZATION-SAMPLE POINT 16; FLOOR; VIA 2 | <0.1 |
| 17 | B447-2 | 411 | 04Z2225 | 444-07122004-213-017 | B. 447 PDS CHARACTERIZATION POINT 17 - FLOOR; B. 447 VIA 2 | 0.282 |
| 17 | B447-2 | 403 | 04Z2265 | 444-07282004-213-150 | B. 447 PDS-POSTJOB CHRCTRZTN, PT.17;FLOOR; VIA-2 | <0.1 |
| 18 | B447-2 | 32 | 04Z2533 | 444-08302004-213-103 | B447 PDS CHRCTRZTN-SAMPLE PT 18- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 19 | B447-2 | 420 | 04Z2087 | 444-07132004-213-019 | B. 447 PDS CHARACTERIZATION POINT 19 - FLOOR; B. 447 VIA 2 | <0.1 |
| 20 | B447-2 | 407 | 04Z2087 | 444-07132004-213-020 | B. 447 PDS CHARACTERIZATION POINT 20 - FLOOR; B. 447 VIA 2 | <0.1 |
| 21 | B447-2 | 409 | 04Z2393 | 444-08092004-213-021 | B. 447 PDS CHARACTERIZATION-SAMPLE POINT 21; FLOOR; VIA 2 | <0.1 |
| 22 | B447-2 | 31 | 04Z2533 | 444-08302004-213-104 | B447 PDS CHRCTRZTN-SAMPLE PT 22- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 23 | B447-2 | 405B | 04Z2265 | 444-07282004-213-023 | B. 447 PDS CHARACTERIZATION POINT 23;FLOOR; VIA-2 | <0.1 |
| 24 | B447-2 | 31 | 04Z2533 | 444-08302004-213-105 | B447 PDS CHRCTRZTN-SAMPLE PT 24- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 25 | B447-2 | 32 | 04Z2533 | 444-08302004-213-106 | B447 PDS CHRCTRZTN-SAMPLE PT 25- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 26 | B447-2 | 31 | 04Z2533 | 444-08302004-213-111 | B447 PDS CHRCTRZTN-SAMPLE PT 26- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 27 | B447-2 | 409 | 04Z2393 | 444-08092004-213-027 | B. 447 PDS CHARACTERIZATION-SAMPLE POINT 27; FLOOR; VIA 2 | <0.1 |
| 28 | B447-2 | 415 | 04Z2265 | 444-07282004-213-028 | B. 447 PDS CHARACTERIZATION POINT 28;FLOOR; VIA-2 | 0.171 |
| 28 | B447-2 | 415 | 04Z2562 | 444-09092004-213-120 | B447 PDS POSTENCAP SAMPLE OF PT 28,VIA2,FLOOR | <0.1 |
| 29 | B447-2 | 32 | 04Z2533 | 444-08302004-213-108 | B447 PDS CHRCTRZTN-SAMPLE PT 29- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 30 | B447-2 | 405B | 04Z2265 | 444-07282004-213-030 | B. 447 PDS CHARACTERIZATION POINT 30;FLOOR; VIA-2 | <0.1 |
| 31 | B447-2 | 406B | 04Z2265 | 444-07282004-213-031 | B. 447 PDS CHARACTERIZATION POINT 31;FLOOR; VIA-2 | <0.1 |
| 32 | B447-2 | 405B | 04Z2265 | 444-07282004-213-032 | B. 447 PDS CHARACTERIZATION POINT 32;FLOOR; VIA-2 | <0.1 |
| 32 | B447-2 | 405B | 04Z2562 | 444-09092004-213-138 | B447 PDS POSTENCAP, SAMPLE PT 32,VIA2,FLOOR | <0.1 |
| 33 | B447-2 | 447 Elevator | 04Z2534 | 444-08302004-213-103 | B447 PDS SAMPLE POST FIXATIVE FLOOR @ CENTER NEAR HYD RAM HOLE, VIA2 | 4.97 |
| 33 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-205 | B447 POST ENCAP SAMPLE POINT 33- FLOOR AT CENTER NEAR RAM, VIA2 | <0.1 |
| 34 | B447-2 | 404 | 04Z2087 | 444-07132004-213-034 | B. 447 PDS CHARACTERIZATION POINT 34 - FLOOR; B. 447 VIA 2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 35 | B447-2 | 407A | 04Z2393 | 444-08092004-213-035 | B. 447 PDS CHARACTERIZATION-SAMPLE POINT 35; FLOOR; VIA 2 | <0.1 |
| 36 | B447-2 | 404 | 04Z2087 | 444-07132004-213-036 | B. 447 PDS CHARACTERIZATION POINT 36 - FLOOR; B. 447 VIA 2 | <0.1 |
| 37 | B447-2 | 406A | 04Z2265 | 444-07282004-213-037 | B. 447 PDS CHARACTERIZATION POINT 37;FLOOR; VIA-2 | <0.1 |
| 38 | B447-2 | 407A | 04Z2393 | 444-08092004-213-038 | B. 447 PDS CHARACTERIZATION-SAMPLE POINT 38; FLOOR; VIA 2 | <0.1 |
| 39 | B447-2 | 31 | 04Z2533 | 444-08302004-213-109 | B447 PDS CHRCTRZTN-SAMPLE PT 39- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 40 | B447-2 | 405A | 04Z2265 | 444-07282004-213-040 | B. 447 PDS CHARACTERIZATION POINT 40;FLOOR; VIA-2 | <0.1 |
| 41 | B447-2 | 405B | 04Z2265 | 444-07282004-213-041 | B. 447 PDS CHARACTERIZATION POINT 41;FLOOR; VIA-2 | <0.1 |
| 42 | B447-2 | 36 | 04Z2265 | 444-07282004-213-042 | B. 447 PDS CHARACTERIZATION POINT 42;FLOOR; VIA-2 | <0.1 |
| 43 | B447-2 | 405 | 04Z2265 | 444-07282004-213-043 | B. 447 PDS CHARACTERIZATION POINT 43;FLOOR; VIA-2 | <0.1 |
| 44 | B447-2 | 406B | 04Z2268 | 444-08022004-602-044 | B447 CHARACTERIZATION SAMPLE POINT #44 - FLOOR - VIA-2 | <0.1 |
| 45 | B447-2 | 447 NW DOCK | 04Z2265 | 444-07282004-213-045 | B447 PDS CHARACTERIZATION POINT 45; FLOOR; VIA 2 | <0.1 |
| 46 | B447-2 | 415 | 04Z2265 | 444-07282004-213-046 | B. 447 PDS CHARACTERIZATION POINT 46 FLOOR, VIA 2 | 0.388 |
| 46 | B447-2 | 415 | 04Z2562 | 444-09092004-213-117 | B447 PDS POSTENCAP SAMPLE OF PT 46,VIA2,FLOOR | <0.1 |
| 47 | B447-2 | 405B | 04Z2265 | 444-07282004-213-047 | B. 447 PDS CHARACTERIZATION POINT 47;FLOOR; VIA-2 | <0.1 |
| 48 | B447-2 | 420 | 04Z2087 | 444-07132004-213-048 | B. 447 PDS CHARACTERIZATION POINT 48 - FLOOR; B. 447 VIA 2 | <0.1 |
| 49 | B447-2 | 420 | 04Z2087 | 444-07132004-213-049 | B. 447 PDS CHARACTERIZATION POINT 49 - FLOOR; B. 447 VIA 2 | <0.1 |
| 50 | B447-2 | 403 | 04Z2225 | 444-07122004-213-050 | B. 447 PDS CHARACTERIZATION POINT 50 - FLOOR; B. 447 VIA 2 | <0.1 |
| 51 | B447-2 | 31 | 04Z2533 | 444-08302004-213-110 | B447 PDS CHRCTRZTN-SAMPLE PT 51- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 52 | B447-2 | 31 | 04Z2533 | 444-08302004-213-112 | B447 PDS CHRCTRZTN-SAMPLE PT 52- POST FIXATIVE,FLOOR,VIA 2 | <0.1 |
| 53 | B447-2 | 405B | 04Z2265 | 444-07282004-213-053 | B. 447 PDS CHARACTERIZATION POINT 53;FLOOR; VIA-2 | <0.1 |
| 54 | B447-2 | 405 | 04Z2265 | 444-07282004-213-054 | B. 447 PDS CHARACTERIZATION POINT 54;FLOOR; VIA-2 | <0.1 |
| 55 | B447-2 | 403 | 04Z2225 | 444-07122004-213-055 | 447 BIAS SAMPLE POINT - NW, FLOOR ON METAL; B. 447 VIA 2 | <0.1 |
| 56 | B447-2 | 403 | 04Z2225 | 444-07122004-213-056 | 447 BIAS SAMPLE POINT - N, FLOOR ON METAL; B. 447 VIA 2 | <0.1 |
| 57 | B447-2 | 403 | 04Z2225 | 444-07122004-213-057 | 447 BIAS SAMPLE POINT - @ DOOR 13T - FLOOR; B. 447 VIA 2 | <0.1 |
| 58 | B447-2 | 100 | 04Z2225 | 444-07122004-213-058 | B. 444 PDS CHARACTERIZATION POINT 58 - FLOOR; B. 444 VIA 2 | <0.1 |
| 59 | B447-2 | 403 | 04Z2225 | 444-07122004-213-059 | B. 447 BIAS SAMPLE POINT - ON BASE OF STANCHION; B. 447 VIA 2 | <0.1 |
| 60 | B447-2 | 403 | 04Z2225 | 444-07122004-213-060 | B. 447 BIAS SAMPLE POINT -FLOOR, NW, ON METAL SE AREA; B. 447 VIA 2 | <0.1 |
| 61 | B447-2 | 403 | 04Z2225 | 444-07122004-213-061 | B. 447 BIAS SAMPLE POINT -FLOOR @ N WALL; B. 447 VIA 2 | <0.1 |
| 62 | B447-2 | 403 | 04Z2225 | 444-07122004-213-062 | B. 447 BIAS SAMPLE POINT -N BEAM, RED, 4 FT HIGH; B. 447 VIA 2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 63 | B447-2 | 403 | 04Z2225 | 444-07122004-213-063 | B. 447 BIAS SAMPLE POINT -NE BEAM, RED, 4 FT HIGH; B. 447 VIA 2 | <0.1 |
| 64 | B447-2 | 403 | 04Z2225 | 444-07122004-213-064 | B. 447 BIAS SAMPLE POINT -E BEAM, WHITE, 6 FT HIGH; B. 447 VIA 2 | <0.1 |
| 65 | B447-2 | 403 | 04Z2225 | 444-07122004-213-065 | B. 447 BIAS SAMPLE POINT -W VERTICAL WALL TO 6 FT; B. 447 VIA 2 | <0.1 |
| 66 | B447-2 | 403 | 04Z2225 | 444-07122004-213-066 | B. 447 BIAS SAMPLE POINT -S VERTICAL WALL TO 6 FT; B. 447 VIA 2 | <0.1 |
| 67 | B447-2 | 100 | 04Z2225 | 444-07122004-213-067 | B. 444 PDS CHARACTERIZATION POINT 67 - FLOOR; B. 444 VIA 2 | <0.1 |
| 68 | B447-2 | 403 | 04Z2225 | 444-07122004-213-068 | B. 447 BIAS SAMPLE POINT -RED BEAM, N END, 7 FT HIGH; B. 447 VIA 2 | <0.1 |
| 69 | B447-2 | 403 | 04Z2225 | 444-07122004-213-069 | B. 447 BIAS SAMPLE POINT -MANLIFT WHEELS/BASE/FLOOR; B. 447 VIA 2 | <0.1 |
| 70 | B447-2 | 403 | 04Z2225 | 444-07122004-213-070 | B. 447 BIAS SAMPLE POINT -ELECTRICAL CORDS; B. 447 VIA 2 | <0.1 |
| 71 | B447-2 | 403 | 04Z2225 | 444-07122004-213-071 | B. 447 BIAS SAMPLE POINT-FLOOR @ DOOR TO HALLWAY 407A; B. 447 VIA 2 | <0.1 |
| 72 | B447-2 | 101F | 04Z2225 | 444-07122004-213-072 | B. 444 BIAS SAMPLE POINT-FLOOR @ DOOR TO RM. 101; B. 444 VIA 2 | <0.1 |
| 73 | B447-2 | 101F | 04Z2225 | 444-07122004-213-073 | B. 444 BIAS SAMPLE POINT-FLOOR, MIDDLE OF ROOM; B. 444 VIA 2 | <0.1 |
| 74 | B447-2 | 101F | 04Z2225 | 444-07122004-213-074 | B. 444 BIAS SAMPLE POINT-FLOOR, EAST END & METAL PLATE; B. 444 VIA 2 | <0.1 |
| 75 | B447-2 | 101F | 04Z2225 | 444-07122004-213-075 | B. 444 BIAS SAMPLE POINT-FLOOR, WEST END @ PLASTIC; B. 444 VIA 2 | <0.1 |
| 76 | B447-2 | 101F | 04Z2225 | 444-07122004-213-076 | B. 444 BIAS SAMPLE POINT-FLOOR, WEST END @ PLASTIC; B. 444 VIA 2 | <0.1 |
| 77 | B447-2 | 100 | 04Z2225 | 444-07122004-213-077 | B. 444 BIAS SAMPLE POINT- ON WALL LADDER @ STEPS; B. 444 VIA 2 | <0.1 |
| 78 | B447-2 | 100 | 04Z2225 | 444-07122004-213-078 | B. 444 BIAS SAMPLE POINT-RED VERT BEAM & LEDGE, S END; B. 444 VIA 2 | <0.1 |
| 79 | B447-2 | 100 | 04Z2225 | 444-07122004-213-079 | B. 444 BIAS SAMPLE POINT-BARRELS AND FLOOR, E END; B. 444 VIA 2 | <0.1 |
| 80 | B447-2 | 100 | 04Z2225 | 444-07122004-213-080 | B. 444 BIAS SAMPLE POINT-METAL PLATE ON FLOOR; B. 444 VIA 2 | <0.1 |
| 81 | B447-2 | 100 Mezzanine | 04Z2225 | 444-07122004-213-081 | B. 444 BIAS SAMPLE POINT-W GUARD RAIL; B. 444 VIA 2 | <0.1 |
| 82 | B447-2 | 100 Mezzanine | 04Z2225 | 444-07122004-213-082 | B. 444 BIAS SAMPLE POINT-VERTICAL WALL AND LEDGE, N; B. 444 VIA 2 | <0.1 |
| 83 | B447-2 | 100 Mezzanine | 04Z2225 | 444-07122004-213-083 | B. 444 BIAS SAMPLE POINT-S WHITE BEAM, 6FT ABOVE; B. 444 VIA 2 | <0.1 |
| 84 | B447-2 | 100 Mezzanine | 04Z2225 | 444-07122004-213-084 | B. 444 BIAS SAMPLE POINT-VERTICAL AND HORIZ BEAM, S; B. 444 VIA 2 | <0.1 |
| 85 | B447-2 | 100 Mezzanine | 04Z2225 | 444-07122004-213-085 | B. 444 BIAS SAMPLE POINT-FLOOR GRATING; B. 444 VIA 2 | <0.1 |
| 86 | B447-2 | 100 Mezzanine | 04Z2225 | 444-07122004-213-086 | B. 444 BIAS SAMPLE POINT- BLUE BEAM ON PLATFORM; B. 444 VIA 2 | <0.1 |
| 87 | B447-2 | 100 Mezzanine | 04Z2225 | 444-07122004-213-087 | B. 444 BIAS SAMPLE POINT- FLOOR GRATING; B. 444 VIA 2 | <0.1 |
| 88 | B447-2 | 403 | 04Z2225 | 444-07122004-213-088 | B. 447 BIAS SAMPLE POINT -FURNACE (ON PLASTIC & WHEELS); B. 447 VIA 2 | <0.1 |
| 89 | B447-2 | 403 | 04Z2225 | 444-07122004-213-089 | B. 447 BIAS SAMPLE POINT - FLOOR @ E WALL; B. 447 VIA 2 | <0.1 |
| 93 | B447-2 | 420 | 04Z2087 | 444-07132004-213-093 | B. 447 BIAS SAMPLE POINT-TOP RED BEAM, N END; B. 447 VIA 2 | <0.1 |
| 94 | B447-2 | 420 | 04Z2087 | 444-07132004-213-094 | B. 447 BIAS SAMPLE POINT-TOP WHITE BEAM, N END; B. 447 VIA 2 | 0.468 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 94 | B447-2 | 420 | 04Z2266 | 444-07292004-213-291 | B. 447 PDS POSTJOB-SAMPLE #94, BEAM,MIDDLE,N; VIA-2 | <0.1 |
| 95 | B447-2 | 420 | 04Z2087 | 444-07132004-213-095 | B. 447 BIAS SAMPLE POINT-TOP WHITE BEAM, W END; B. 447 VIA 2 | 0.19 |
| 95 | B447-2 | 420 | 04Z2266 | 444-07292004-213-286 | B. 447 PDS POSTJOB-SAMPLE #95, BEAM,MIDDLE,NW; VIA-2 | <0.1 |
| 96 | B447-2 | 420 | 04Z2087 | 444-07132004-213-096 | B. 447 BIAS SAMPLE POINT-ANGLE IRON, 8FT HIGH, E WALL; B. 447 VIA 2 | <0.1 |
| 97 | B447-2 | 420 | 04Z2087 | 444-07132004-213-097 | B. 447 BIAS SAMPLE POINT-TOP 2 RED BEAMS, E WALL; B. 447 VIA 2 | 0.484 |
| 97 | B447-2 | 420 | 04Z2266 | 444-07292004-213-296 | B. 447 PDS POSTJOB-SAMPLE #97, BEAM,MIDDLE,NE; VIA-2 | <0.1 |
| 98 | B447-2 | 420 | 04Z2087 | 444-07132004-213-098 | B. 447 BIAS SAMPLE POINT-RED BEAMS ABOVE NE DOOR; B. 447 VIA 2 | <0.1 |
| 99 | B447-2 | 407 | 04Z2087 | 444-07132004-213-099 | B. 447 BIAS SAMPLE POINT-TOP OF S BEAM @ CEILING; B. 447 VIA 2 | <0.1 |
| 100 | B447-2 | 407 | 04Z2087 | 444-07132004-213-100 | B. 447 BIAS SAMPLE POINT-TOP OF WALL @ CEILING, NW; B. 447 VIA 2 | <0.1 |
| 101 | B447-2 | 407 | 04Z2087 | 444-07132004-213-101 | B. 447 BIAS SAMPLE POINT-E BEAMS @ CEILING; B. 447 VIA 2 | <0.1 |
| 102 | B447-2 | 407 | 04Z2087 | 444-07132004-213-102 | B. 447 BIAS SAMPLE POINT-S WALL BEAMS; B. 447 VIA 2 | <0.1 |
| 103 | B447-2 | 407 | 04Z2087 | 444-07132004-213-103 | B. 447 BIAS SAMPLE POINT-S WALL; B. 447 VIA 2 | <0.1 |
| 104 | B447-2 | 407 | 04Z2087 | 444-07132004-213-104 | B. 447 BIAS SAMPLE POINT-N WALL; B. 447 VIA 2 | <0.1 |
| 105 | B447-2 | 407 | 04Z2087 | 444-07132004-213-105 | B. 447 BIAS SAMPLE POINT-E WALL; B. 447 VIA 2 | <0.1 |
| 106 | B447-2 | 407 | 04Z2087 | 444-07132004-213-106 | B. 447 BIAS SAMPLE POINT-N WALL & FLOOR; B. 447 VIA 2 | <0.1 |
| 107 | B447-2 | 420A | 04Z2087 | 444-07132004-213-107 | B. 447 BIAS SAMPLE POINT-@ DOORWAY TO 407A; B. 447 VIA 2 | <0.1 |
| 108 | B447-2 | 420A | 04Z2087 | 444-07132004-213-108 | B. 447 BIAS SAMPLE POINT-ELECTRICAL CORDS; B. 447 VIA 2 | <0.1 |
| 109 | B447-2 | 420A | 04Z2087 | 444-07132004-213-109 | B. 447 BIAS SAMPLE POINT-ELECTRICAL CORDS; B. 447 VIA 2 | <0.1 |
| 110 | B447-2 | 420A | 04Z2087 | 444-07132004-213-110 | B. 447 BIAS SAMPLE POINT-@ 407 DOORWAY; B. 447 VIA 2 | <0.1 |
| 111 | B447-2 | 420A | 04Z2087 | 444-07132004-213-111 | B. 447 BIAS SAMPLE POINT-ON STANCHION BASE; B. 447 VIA 2 | <0.1 |
| 112 | B447-2 | 420 | 04Z2087 | 444-07132004-213-112 | B. 447 BIAS SAMPLE POINT-@ 420A DOORWAY; B. 447 VIA 2 | <0.1 |
| 113 | B447-2 | 420 | 04Z2087 | 444-07132004-213-113 | B. 447 BIAS SAMPLE POINT-@ 420B DOORWAY; B. 447 VIA 2 | <0.1 |
| 114 | B447-2 | 420 | 04Z2087 | 444-07132004-213-114 | B. 447 BIAS SAMPLE POINT-MIDDLE OF ROOM; B. 447 VIA 2 | <0.1 |
| 115 | B447-2 | 420 | 04Z2087 | 444-07132004-213-115 | B. 447 BIAS SAMPLE POINT-2ND BEAM FROM FLOOR, S WALL; B. 447 VIA 2 | <0.1 |
| 116 | B447-2 | 420 | 04Z2087 | 444-07132004-213-116 | B. 447 BIAS SAMPLE POINT-2ND BEAM FROM CEILING,S WALL; B. 447 VIA 2 | <0.1 |
| 117 | B447-2 | 420B | 04Z2087 | 444-07132004-213-117 | B. 447 BIAS SAMPLE POINT-2ND BEAM FROM TOP, S WALL; B. 447 VIA 2 | <0.1 |
| 118 | B447-2 | 420B | 04Z2087 | 444-07132004-213-118 | B. 447 BIAS SAMPLE POINT-@ E END OF ROOM - FLOOR; B. 447 VIA 2 | <0.1 |
| 119 | B447-2 | 420B | 04Z2087 | 444-07132004-213-119 | B. 447 BIAS SAMPLE POINT-SW AREA OF ROOM - FLOOR; B. 447 VIA 2 | <0.1 |
| 120 | B447-2 | 420B | 04Z2087 | 444-07132004-213-120 | B. 447 BIAS SAMPLE POINT-SE AREA OF ROOM - FLOOR; B. 447 VIA 2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 121 | B447-2 | 404 | 04Z2087 | 444-07132004-213-121 | B. 447 BIAS SAMPLE POINT-SW AREA OF ROOM - FLOOR; B. 447 VIA 2 | <0.1 |
| 122 | B447-2 | 404 | 04Z2087 | 444-07132004-213-122 | B. 447 BIAS SAMPLE POINT-SE AREA OF ROOM - FLOOR; B. 447 VIA 2 | <0.1 |
| 123 | B447-2 | 404 | 04Z2087 | 444-07132004-213-123 | B. 447 BIAS SAMPLE POINT-NE AREA OF ROOM - FLOOR; B. 447 VIA 2 | <0.1 |
| 124 | B447-2 | 404 | 04Z2087 | 444-07132004-213-124 | B. 447 BIAS SAMPLE POINT-NW AREA OF ROOM - FLOOR; B. 447 VIA 2 | <0.1 |
| 125 | B447-2 | 404 | 04Z2087 | 444-07132004-213-125 | B. 447 BIAS SAMPLE POINT-BEAM @ N END; B. 447 VIA 2 | <0.1 |
| 126 | B447-2 | 404 | 04Z2087 | 444-07132004-213-126 | B. 447 BIAS SAMPLE POINT-BEAM IN MIDDLE OF ROOM; B. 447 VIA 2 | 0.131 |
| 126 | B447-2 | 404 | 04Z2266 | 444-07292004-213-281 | B. 447 PDS POSTJOB-SAMPLE #126, BEAM,MIDDLE; VIA-2 | <0.1 |
| 127 | B447-2 | 404 | 04Z2087 | 444-07132004-213-127 | B. 447 BIAS SAMPLE POINT-PIPE PASSTHROUGH; NW AREA; B. 447 VIA 2 | 0.491 |
| 127 | B447-2 | 404 | 04Z2266 | 444-07292004-213-276 | B. 447 PDS POSTJOB-SAMPLE #127, PIPE PASSTHROUGH; VIA-2 | <0.1 |
| 128 | B447-2 | 404 | 04Z2087 | 444-07132004-213-128 | B. 447 BIAS SAMPLE POINT-NW BEAM TO 407A; B. 447 VIA 2 | <0.1 |
| 129 | B447-2 | 404 | 04Z2087 | 444-07132004-213-129 | B. 447 BIAS SAMPLE POINT-TOP BEAM, NE CORNER; B. 447 VIA 2 | <0.1 |
| 130 | B447-2 | 420B | 04Z2087 | 444-07132004-213-130 | B. 447 BIAS SAMPLE POINT-MID BEAM, NW AREA; B. 447 VIA 2 | <0.1 |
| 131 | B447-2 | 420B | 04Z2087 | 444-07132004-213-131 | B. 447 BIAS SAMPLE POINT-2ND BEAM FROM FLOOR, S WALL; B. 447 VIA 2 | <0.1 |
| 132 | B447-2 | 420A | 04Z2087 | 444-07132004-213-132 | B. 447 BIAS SAMPLE POINT-BEAM, MIDDLE OF HALL; B. 447 VIA 2 | <0.1 |
| 133 | B447-2 | 407 | 04Z2087 | 444-07132004-213-133 | B. 447 BIAS SAMPLE POINT-BEAM IN CENTER OF ROOM; B. 447 VIA 2 | <0.1 |
| 134 | B447-2 | 407 | 04Z2087 | 444-07132004-213-134 | B. 447 BIAS SAMPLE POINT-BEAM, S WALL; B. 447 VIA 2 | <0.1 |
| 135 | B447-2 | 407 | 04Z2087 | 444-07132004-213-135 | B. 447 BIAS SAMPLE POINT-BEAM, W END; B. 447 VIA 2 | <0.1 |
| 136 | B447-2 | 407 | 04Z2087 | 444-07132004-213-136 | B. 447 BIAS SAMPLE POINT-@ CEILING TO 407A OPENING; B. 447 VIA 2 | <0.1 |
| 141 | B447-2 | 100 | 04Z2264 | 444-07282004-213-141 | B. 444 PDS - POSTJOB SAMPLE OF SAMPLE PT.5, N; VIA 2; floor | <0.1 |
| 142 | B447-2 | 100 | 04Z2264 | 444-07282004-213-142 | B. 444 PDS - POSTJOB SAMPLE OF SAMPLE PT.5, S; VIA 2; floor | <0.1 |
| 143 | B447-2 | 100 | 04Z2264 | 444-07282004-213-143 | B. 444 PDS - POSTJOB SAMPLE OF SAMPLE PT.5, E; VIA 2; floor | <0.1 |
| 144 | B447-2 | 100 | 04Z2264 | 444-07282004-213-144 | B. 444 PDS - POSTJOB SAMPLE OF SAMPLE PT.5, W; VIA 2; floor | <0.1 |
| 145 | B447-2 | 100 | 04Z2264 | 444-07282004-213-145 | B. 444 BIAS SAMPLE - @ DOOR 12T; VIA 2; floor | <0.1 |
| 146 | B447-2 | 100 | 04Z2264 | 444-07282004-213-146 | B. 444 BIAS SAMPLE - BETWEEN 11T AND 12T; VIA 2; floor | <0.1 |
| 147 | B447-2 | 100 | 04Z2264 | 444-07282004-213-147 | B. 444 BIAS SAMPLE - @ DOOR 11T; VIA 2; floor | <0.1 |
| 151 | B447-2 | 403 | 04Z2265 | 444-07282004-213-151 | B. 447 PDS-POSTJOB CHRCTRZTN, PT.17, N;FLOOR; VIA-2 | <0.1 |
| 152 | B447-2 | 403 | 04Z2265 | 444-07282004-213-152 | B. 447 PDS-POSTJOB CHRCTRZTN, PT.17, S;FLOOR; VIA-2 | <0.1 |
| 153 | B447-2 | 403 | 04Z2265 | 444-07282004-213-153 | B. 447 PDS-POSTJOB CHRCTRZTN, PT.17, E;FLOOR; VIA-2 | <0.1 |
| 154 | B447-2 | 403 | 04Z2265 | 444-07282004-213-154 | B. 447 PDS-POSTJOB CHRCTRZTN, PT.17, W;FLOOR; VIA-2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 157 | B447-2 | 447 NW DOCK | 04Z2265 | 444-07282004-213-157 | B: 447 BIAS SAMPLE, TOP OF SWITCHGEAR, W; VIA-2 | <0.1 |
| 158 | B447-2 | 447 NW DOCK | 04Z2265 | 444-07282004-213-158 | B. 447 BIAS SAMPLE, TOP OF SWITCHGEAR, E; VIA-2 | <0.1 |
| 159 | B447-2 | 447 NW DOCK | 04Z2265 | 444-07282004-213-159 | B. 447 BIAS SAMPLE, DOORWAY @ E DOOR; FLOOR; VIA-2 | <0.1 |
| 160 | B447-2 | 447 NW DOCK | 04Z2265 | 444-07282004-213-160 | B. 447 BIAS SAMPLE, DOORWAY @ W DOOR; FLOOR | <0.1 |
| 162 | B447-2 | 403 | 04Z2265 | 444-07282004-213-162 | B. 447 BIAS SAMPLE, E TRANSITE WALL; VIA-2 | <0.1 |
| 163 | B447-2 | 403 | 04Z2265 | 444-07282004-213-163 | B. 447 BIAS SAMPLE, S TRANSITE WALL; VIA-2 | <0.1 |
| 164 | B447-2 | 406 | 04Z2265 | 444-07282004-213-164 | B. 447 BIAS SAMPLE, ABOVE CHCTRZTN PT 42; FLOOR; VIA-2 | <0.1 |
| 165 | B447-2 | 406 | 04Z2265 | 444-07282004-213-165 | B. 447 BIAS SAMPLE, WHITE BEAM, E END; VIA-2 | 0.124 |
| 165 | B447-2 | 406 | 04Z2562 | 444-09092004-213-160 | B447 PDS POSTENCAP SAMPLE PT 165,BEAM,VIA2 | <0.1 |
| 166 | B447-2 | 406 | 04Z2265 | 444-07282004-213-166 | B. 447 BIAS SAMPLE, WHITE BEAM, MIDDLE; VIA-2 | <0.1 |
| 167 | B447-2 | 406 | 04Z2265 | 444-07282004-213-167 | B. 447 BIAS SAMPLE, WHITE BEAM, W END; VIA-2 | <0.1 |
| 168 | B447-2 | 406B | 04Z2265 | 444-07282004-213-168 | B. 447 BIAS SAMPLE, WHITE BEAM, MIDDLE; VIA-2 | <0.1 |
| 169 | B447-2 | 406B | 04D1176 | 444-09132004-213-508 | B447 POSTENCAP BIAS RESAMPLE PT169 BEAM VIA2 | 0.259 |
| 169 | B447-2 | 406B | 04D1177 | 444-09152004-213-706 | B447-POSTENCAP:SAMPLE PT 169,BEAM,VIA2 | <0.1 |
| 169 | B447-2 | 406B | 04Z2265 | 444-07282004-213-169 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.44; VIA-2 | 0.678 |
| 169 | B447-2 | 406B | 04Z2562 | 444-09092004-213-144 | B447 PDS POSTENCAP OF SAMPLE PT 169,BEAM@PASS THRU | 0.241 |
| 170 | B447-2 | 406 | 04Z2265 | 444-07282004-213-170 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.42; VIA-2 | <0.1 |
| 171 | B447-2 | 405 | 04Z2265 | 444-07282004-213-171 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.54; VIA-2 | 0.45 |
| 171 | B447-2 | 405 | 04Z2562 | 444-09092004-213-155 | B447 PDS POSTENCAP OF SAMPLE PT 171,BEAMS,VIA2 | <0.1 |
| 172 | B447-2 | 405A | 04Z2265 | 444-07282004-213-172 | B. 447 BIAS SAMPLE, WHITE BEAM, NW AREA; VIA-2 | 0.157 |
| 172 | B447-2 | 405A | 04Z2562 | 444-09092004-213-154 | B447 PDS POSTENCAP OF SAMPLE PT 172,BEAMS,VIA2 | <0.1 |
| 173 | B447-2 | 405 | 04Z2265 | 444-07282004-213-173 | B. 447 BIAS SAMPLE, WHITE BEAM, N AREA; VIA-2 | <0.1 |
| 174 | B447-2 | 405B | 04Z2265 | 444-07282004-213-174 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.5; VIA-2 | 0.158 |
| 174 | B447-2 | 405B | 04Z2562 | 444-09092004-213-167 | B447 PDS POSTENCAP SAMPLE PT 174,BEAMS,VIA2 | <0.1 |
| 175 | B447-2 | 405 | 04Z2265 | 444-07282004-213-175 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.43; VIA-2 | <0.1 |
| 176 | B447-2 | 405B | 04Z2265 | 444-07282004-213-176 | B. 447 BIAS SAMPLE, WHITE BEAM, CENTER/S END; VIA-2 | <0.1 |
| 177 | B447-2 | 405B | 04Z2265 | 444-07282004-213-177 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.10; VIA-2 | 0.256 |
| 177 | B447-2 | 405B | 04Z2562 | 444-09092004-213-173 | B447 PDS POSTENCAP,SAMPLE PT 177,BEAMS,VIA2 | <0.1 |
| 178 | B447-2 | 405B | 04D1176 | 444-09132004-213-501 | B447 POSTENCAP;BIAS RESAMPLE PT 178,BEAM,VIA2 | <0.1 |
| 178 | B447-2 | 405B | 04Z2265 | 444-07282004-213-178 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.23; VIA-2 | 0.52 |
| 178 | B447-2 | 405B | 04Z2562 | 444-09092004-213-170 | B447 PDS POSTENCAP SAMPLE PT 178,BEAMS,VIA2 | 0.124 |
| 179 | B447-2 | 405B | 04Z2265 | 444-07282004-213-179 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.7; VIA-2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 180 | B447-2 | 405B | 04Z2265 | 444-07282004-213-180 | B. 447 BIAS SAMPLE, RED BEAM OVER DOOR, SW END; VIA-2 | <0.1 |
| 181 | B447-2 | 405B | 04Z2265 | 444-07282004-213-181 | B. 447 BIAS SAMPLE, TRANSITE WALL, SW END; VIA-2 | <0.1 |
| 182 | B447-2 | 405B | 04Z2265 | 444-07282004-213-182 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.30; VIA-2 | <0.1 |
| 183 | B447-2 | 405B | 04Z2265 | 444-07282004-213-183 | B. 447 BIAS SAMPLE, PIPE PASS THROUGH OVER DOOR,NW; VIA-2 | <0.1 |
| 184 | B447-2 | 405B | 04Z2265 | 444-07282004-213-184 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.32; VIA-2 | 0.502 |
| 184 | B447-2 | 405B | 04Z2562 | 444-09092004-213-189 | B447 PDS POSTENCAP SAMPLE PT 184,BEAMS,VIA2 | <0.1 |
| 185 | B447-2 | 405B | 04Z2265 | 444-07282004-213-185 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.47; VIA-2 | <0.1 |
| 186 | B447-2 | 405B | 04Z2265 | 444-07282004-213-186 | B. 447 BIAS SAMPLE, WHITE BEAM, SW PIT AREA; VIA-2 | <0.1 |
| 187 | B447-2 | 405B | 04Z2265 | 444-07282004-213-187 | B. 447 BIAS SAMPLE,YELLOW CRANE, ABOVE PT.47; VIA-2 | <0.1 |
| 188 | B447-2 | 405B | 04Z2265 | 444-07282004-213-188 | B. 447 BIAS SAMPLE, S WALL, PLASTIC COVERING; VIA-2 | <0.1 |
| 189 | B447-2 | 405B | 04Z2265 | 444-07282004-213-189 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE PT.8; VIA-2 | 0.106 |
| 189 | B447-2 | 405B | 04Z2562 | 444-09092004-213-182 | B447 PDS POSTENCAP SAMPLE PT 189,BEAMS,VIA2 | <0.1 |
| 190 | B447-2 | 405B | 04Z2265 | 444-07282004-213-190 | B. 447 BIAS SAMPLE, WHITE BEAM, ABOVE OLD S.O.P.; VIA-2 | <0.1 |
| 191 | B447-2 | 405B | 04Z2265 | 444-07282004-213-191 | B. 447 BIAS SAMPLE, PIT, SW, METAL ON FLOOR; VIA-2 | 0.24 |
| 191 | B447-2 | 405B | 04Z2562 | 444-09092004-213-176 | B447 PDS POSTENCAP SAMPLE PT 191,IN PIT,VIA2 | <0.1 |
| 192 | B447-2 | 405B | 04Z2265 | 444-07282004-213-192 | B. 447 BIAS SAMPLE, PIT, NW LADDER; VIA-2 | <0.1 |
| 193 | B447-2 | 405B | 04Z2265 | 444-07282004-213-193 | B. 447 BIAS SAMPLE, PIT, S FLOOR; VIA-2 | <0.1 |
| 194 | B447-2 | 405B | 04Z2265 | 444-07282004-213-194 | B. 447 BIAS SAMPLE, PIT, N FLOOR; VIA-2 | <0.1 |
| 195 | B447-2 | 405B | 04Z2265 | 444-07282004-213-195 | B. 447 BIAS SAMPLE, @ OLD S.O.P. AREA, FLOOR; VIA-2 | 0.13 |
| 195 | B447-2 | 405B | 04Z2562 | 444-09092004-213-188 | B447 PDS POSTENCAP SAMPLE PT 195,FLOOR,VIA 2 | <0.1 |
| 196 | B447-2 | 405B | 04Z2265 | 444-07282004-213-196 | B. 447 BIAS SAMPLE, PIPES NEAR PIT, SW CORNER; VIA-2 | <0.1 |
| 197 | B447-2 | 405B | 04Z2265 | 444-07282004-213-197 | B. 447 BIAS SAMPLE, WALL, SOUTHWEST CORNER; VIA-2 | <0.1 |
| 198 | B447-2 | 405B | 04Z2265 | 444-07282004-213-198 | B. 447 BIAS SAMPLE, @ DOOR 17; FLOOR; VIA-2 | <0.1 |
| 199 | B447-2 | 405B | 04Z2265 | 444-07282004-213-199 | B. 447 BIAS SAMPLE, @ DOOR TO RM 405; FLOOR; VIA-2 | <0.1 |
| 200 | B447-2 | 405A | 04Z2265 | 444-07282004-213-200 | B. 447 BIAS SAMPLE, TRANSITE WALL, S WALL, E END; VIA-2 | <0.1 |
| 201 | B447-2 | 405 | 04Z2265 | 444-07282004-213-201 | B. 447 BIAS SAMPLE, TRANSITE WALL, S WALL, BY PIT; VIA-2 | <0.1 |
| 202 | B447-2 | 405A | 04Z2265 | 444-07282004-213-202 | B. 447 BIAS SAMPLE, CENTER OF ROOM; FLOOR; VIA-2 | <0.1 |
| 203 | B447-2 | 405 | 04Z2265 | 444-07282004-213-203 | B. 447 BIAS SAMPLE, METAL AROUND PIT; FLOOR; VIA-2 | <0.1 |
| 204 | B447-2 | 405B | 04Z2265 | 444-07282004-213-204 | B. 447 BIAS SAMPLE, MIDDLE OF ROOM-EAST END; FLOOR; VIA-2 | <0.1 |
| 205 | B447-2 | 405B | 04Z2265 | 444-07282004-213-205 | B. 447 BIAS SAMPLE, MIDDLE OF ROOM-CENTER/E FLOOR; VIA-2 | 0.102 |
| 205 | B447-2 | 405B | 04Z2562 | 444-09092004-213-110 | B447 PDS POSTENCAP SAMPLE OF PT 205,VIA2,FLOOR | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 206 | B447-2 | 405B | 04Z2265 | 444-07282004-213-206 | B. 447 BIAS SAMPLE,MIDDLE OF ROOM-CENTER/W.; FLOOR; VIA-2 | <0.1 |
| 207 | B447-2 | 405B | 04Z2265 | 444-07282004-213-207 | B. 447 BIAS SAMPLE, MIDDLE OF ROOM-WEST END; FLOOR; VIA-2 | <0.1 |
| 208 | B447-2 | 405B | 04Z2265 | 444-07282004-213-208 | B. 447 BIAS SAMPLE, WALL WEST END; VIA-2 | <0.1 |
| 209 | B447-2 | 405B | 04Z2265 | 444-07282004-213-209 | B. 447 BIAS SAMPLE, GRATE @ 406A; VIA-2 | <0.1 |
| 210 | B447-2 | 405 | 04Z2265 | 444-07282004-213-210 | B. 447 BIAS SAMPLE, PIT WALL, N SIDE; VIA-2 | <0.1 |
| 211 | B447-2 | 405 | 04Z2265 | 444-07282004-213-211 | B. 447 BIAS SAMPLE, PIT, MIDDLE; FLOOR; VIA-2 | <0.1 |
| 212 | B447-2 | 406 | 04Z2265 | 444-07282004-213-212 | B. 447 BIAS SAMPLE, WALL, EAST END; VIA-2 | <0.1 |
| 213 | B447-2 | 406 | 04Z2265 | 444-07282004-213-213 | B. 447 BIAS SAMPLE, NORTH END ON METAL; FLOOR; VIA-2 | <0.1 |
| 214 | B447-2 | 406 | 04Z2265 | 444-07282004-213-214 | B. 447 BIAS SAMPLE, WEST/MIDDLE OF ROOM; FLOOR; VIA-2 | <0.1 |
| 215 | B447-2 | 406 | 04Z2265 | 444-07282004-213-215 | B. 447 BIAS SAMPLE, EAST/MIDDLE OF ROOM;FLOOR; VIA-2 | <0.1 |
| 216 | B447-2 | 406B | 04Z2265 | 444-07282004-213-216 | B. 447 BIAS SAMPLE, WEST END;FLOOR; VIA-2 | <0.1 |
| 217 | B447-2 | 36 | 04Z2265 | 444-07282004-213-217 | B. 447 BIAS SAMPLE, STEPS INTO ROOM 36; VIA-2 | <0.1 |
| 218 | B447-2 | 36 | 04Z2265 | 444-07282004-213-218 | B. 447 BIAS SAMPLE, MIDDLE;FLOOR; VIA-2 | <0.1 |
| 219 | B447-2 | 36 | 04Z2265 | 444-07282004-213-219 | B. 447 BIAS SAMPLE, PIPE @ EAST WALL; VIA-2 | <0.1 |
| 220 | B447-2 | 36 | 04Z2265 | 444-07282004-213-220 | B. 447 BIAS SAMPLE, EAST END;FLOOR; VIA-2 | <0.1 |
| 221 | B447-2 | 405B | 04Z2265 | 444-07282004-213-221 | B. 447 BIAS SAMPLE, TRENCH EAST & FLOOR; VIA-2 | 0.128 |
| 221 | B447-2 | 405B | 04Z2562 | 444-09092004-213-114 | B447 PDS POSTENCAP, SAMPLE PT 221,VIA2,EAST TRENCH & FLOOR | <0.1 |
| 222 | B447-2 | 405B | 04Z2265 | 444-07282004-213-222 | B. 447 BIAS SAMPLE, TRENCH, MIDDLE;FLOOR; VIA-2 | <0.1 |
| 223 | B447-2 | 405B | 04Z2265 | 444-07282004-213-223 | B. 447 BIAS SAMPLE, TRENCH, WEST END;FLOOR; VIA-2 | <0.1 |
| 224 | B447-2 | 405B | 04Z2265 | 444-07282004-213-224 | B. 447 BIAS SAMPLE, GRATE ABOVE TRENCH, WEST END; VIA-2 | <0.1 |
| 225 | B447-2 | 406A | 04Z2265 | 444-07282004-213-225 | B. 447 BIAS SAMPLE, MIDDLE OF HALLWAY;FLOOR; VIA-2 | <0.1 |
| 226 | B447-2 | 406A | 04Z2265 | 444-07282004-213-226 | B. 447 BIAS SAMPLE, WEST END OF HALLWAY;FLOOR; VIA-2 | <0.1 |
| 227 | B447-2 | 36 | 04Z2265 | 444-07282004-213-227 | B. 447 BIAS SAMPLE, WEST END;FLOOR; VIA-2 | <0.1 |
| 228 | B447-2 | 405 | 04Z2265 | 444-07282004-213-228 | B. 447 BIAS SAMPLE, MANLIFT WHEELS; VIA-2 | <0.1 |
| 229 | B447-2 | 405 | 04Z2265 | 444-07282004-213-229 | B. 447 BIAS SAMPLE, MANLIFT WHEELS; VIA-2 | <0.1 |
| 230 | B447-2 | 415 | 04Z2265 | 444-07282004-213-230 | B. 447 BIAS SAMPLE, TRANSITE WALL, N END; VIA-2 | <0.1 |
| 231 | B447-2 | 415 | 04Z2265 | 444-07282004-213-231 | B. 447 BIAS SAMPLE, NW AREA;FLOOR; VIA-2 | <0.1 |
| 232 | B447-2 | 415 | 04Z2265 | 444-07282004-213-232 | B. 447 BIAS SAMPLE, NE AREA;FLOOR; VIA-2 | <0.1 |
| 233 | B447-2 | 415 | 04Z2265 | 444-07282004-213-233 | B. 447 BIAS SAMPLE, ELECTRICAL EQUIPMENT, E GEAR; VIA-2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 235 | B447-2 | 415 | 04Z2265 | 444-07282004-213-235 | B. 447 BIAS SAMPLE, ELECTRICAL EQUIPMENT, W GEAR; VIA-2 | <0.1 |
| 236 | B447-2 | 415 | 04Z2265 | 444-07282004-213-236 | B. 447 BIAS SAMPLE, WESTEND,FLOOR,VIA-2 | 0.248 |
| 236 | B447-2 | 415 | 04Z2562 | 444-09092004-213-116 | B447 PDS POSTENCAP SAMPLE OF PT 236,VIA2,FLOOR | <0.1 |
| 237 | B447-2 | 415 | 04Z2265 | 444-07282004-213-237 | B. 447 BIAS SAMPLE, LOUVRES, SOUTH END; VIA-2 | <0.1 |
| 238 | B447-2 | 47-2 Switch Gear | 04Z0279 | 444-11072003-213-101 | B447 PDS CHARACTERIZATION, ELECTRICAL ROOM - FLOOR - N | <0.1 |
| 239 | B447-2 | 47-2 Switch Gear | 04Z0279 | 444-11072003-213-102 | B447 PDS CHARACTERIZATION, ELECTRICAL ROOM - FLOOR - W | <0.1 |
| 240 | B447-2 | 47-2 Switch Gear | 04Z0279 | 444-11072003-213-103 | B447 PDS CHARACTERIZATION, ELECTRICAL ROOM - FLOOR - S | <0.1 |
| 241 | B447-2 | 47-2 Switch Gear | 04Z0279 | 444-11072003-213-104 | B447 PDS CHARACTERIZATION, ELECTRICAL ROOM - FLOOR - E | <0.1 |
| 242 | B447-2 | 47-2 Switch Gear | 04Z0279 | 444-11072003-213-106 | B447 PDS CHARACTERIZATION, ELECTRICAL ROOM - ON CONDUIT - W WALL | <0.1 |
| 243 | B447-2 | 47-2 Switch Gear | 04Z0279 | 444-11072003-213-110 | B447 PDS CHARACATERIZATION, ELECTRICAL ROOM - TOP OF TRANSFORMER - E END | <0.1 |
| 244 | B447-2 | 47-2 Switch Gear | 04Z0279 | 444-11072003-213-112 | B447 PDS CHARACTERIZATION, ELECTRICAL ROOM - ON OVERHEAD ANGLE IRON | <0.1 |
| 245 | B447-2 | 47-2 Switch Gear | 04Z0279 | 444-11072003-213-113 | B447 PDS CHARACTERIZATION, ELECTRICAL ROOM - LOWER VENT ON TRANSFORMER - W SIDE | <0.1 |
| 277 | B447-2 | 404 | 04Z2266 | 444-07292004-213-277 | B. 447 PDS POSTJOB-SAMPLE #127, DUCT PASSTHROUGH,NW; VIA-2 | <0.1 |
| 278 | B447-2 | 420B | 04Z2266 | 444-07292004-213-278 | B. 447 PDS POSTJOB-SAMPLE #127, DUCT PASSTHROUGH,E; VIA-2 | <0.1 |
| 279 | B447-2 | 420B | 04Z2266 | 444-07292004-213-279 | B. 447 PDS POSTJOB-SAMPLE #127, DUCT PASSTHROUGH,W; VIA-2 | <0.1 |
| 280 | B447-2 | 420B | 04Z2266 | 444-07292004-213-280 | B. 447 PDS POSTJOB-SAMPLE #127, DUCT PASSTHROUGH,SW; VIA-2 | <0.1 |
| 282 | B447-2 | 404 | 04Z2266 | 444-07292004-213-282 | B. 447 PDS POSTJOB-SAMPLE #126, BEAM,MIDDLE, N; VIA-2 | <0.1 |
| 283 | B447-2 | 404 | 04Z2266 | 444-07292004-213-283 | B. 447 PDS POSTJOB-SAMPLE #126, BEAM,MIDDLE, S; VIA-2 | <0.1 |
| 284 | B447-2 | 404 | 04Z2266 | 444-07292004-213-284 | B. 447 PDS POSTJOB-SAMPLE #126, BEAM,MIDDLE, E; VIA-2 | <0.1 |
| 285 | B447-2 | 404 | 04Z2266 | 444-07292004-213-285 | B. 447 PDS POSTJOB-SAMPLE #126, BEAM,MIDDLE, W; VIA-2 | <0.1 |
| 287 | B447-2 | 420 | 04Z2266 | 444-07292004-213-287 | B. 447 PDS POSTJOB-SAMPLE #95, BEAM,MIDDLE,NW-N; VIA-2 | <0.1 |
| 288 | B447-2 | 420 | 04Z2266 | 444-07292004-213-288 | B. 447 PDS POSTJOB-SAMPLE #95, BEAM,MIDDLE,NW-S; VIA-2 | <0.1 |
| 289 | B447-2 | 420 | 04Z2266 | 444-07292004-213-289 | B. 447 PDS POSTJOB-SAMPLE #95, BEAM,MIDDLE,NE; VIA-2 | <0.1 |
| 290 | B447-2 | 420 | 04Z2266 | 444-07292004-213-290 | B. 447 PDS POSTJOB-SAMPLE #95, BEAM,MIDDLE,NW-W; VIA-2 | <0.1 |
| 292 | B447-2 | 420 | 04Z2266 | 444-07292004-213-292 | B. 447 PDS POSTJOB-SAMPLE #94, BEAM,MIDDLE,N-N; VIA-2 | <0.1 |
| 293 | B447-2 | 420 | 04Z2266 | 444-07292004-213-293 | B. 447 PDS POSTJOB-SAMPLE #94, BEAM,MIDDLE,N-S; VIA-2 | <0.1 |
| 294 | B447-2 | 420 | 04Z2266 | 444-07292004-213-294 | B. 447 PDS POSTJOB-SAMPLE #94, BEAM,MIDDLE,N-E; VIA-2 | <0.1 |
| 295 | B447-2 | 420 | 04Z2266 | 444-07292004-213-295 | B. 447 PDS POSTJOB-SAMPLE #94, BEAM,MIDDLE,N-W; VIA-2 | <0.1 |
| 297 | B447-2 | 420 | 04Z2266 | 444-07292004-213-297 | B. 447 PDS POSTJOB-SAMPLE #97, BEAM,MIDDLE,NE-N; VIA-2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 298 | B447-2 | 420 | 04Z2266 | 444-07292004-213-298 | B. 447 PDS POSTJOB-SAMPLE #97, BEAM,MIDDLE,NE-S; VIA-2 | <0.1 |
| 299 | B447-2 | 420 | 04Z2266 | 444-07292004-213-299 | B. 447 PDS POSTJOB-SAMPLE #97, BEAM,MIDDLE,NE-E; VIA-2 | <0.1 |
| 300 | B447-2 | 420 | 04Z2266 | 444-07292004-213-300 | B. 447 PDS POSTJOB-SAMPLE #97, BEAM,MIDDLE,NE-W; VIA-2 | <0.1 |
| 301 | B447-2 | 420 | 04Z2266 | 444-07292004-213-301 | B. 447 PDS CHARACTERIZATION, TRANSITE WALL, S END; VIA-2 | <0.1 |
| 302 | B447-2 | 420B | 04Z2266 | 444-07292004-213-302 | B. 447 PDS CHARACTERIZATION, TRANSITE WALL, S END; VIA-2 | <0.1 |
| 303 | B447-2 | 404 | 04Z2266 | 444-07292004-213-303 | B. 447 PDS POSTJOB-FLOOR UNDER SAMPLE #126 AFTER DECON | <0.1 |
| 304 | B447-2 | 404 | 04Z2266 | 444-07292004-213-304 | B. 447 PDS POSTJOB-FLOOR UNDER SAMPLE #127 AFTER DECON | <0.1 |
| 305 | B447-2 | 420 | 04Z2266 | 444-07292004-213-305 | B. 447 PDS POSTJOB-FLOOR UNDER SAMPLE #95 AFTER DECON | <0.1 |
| 306 | B447-2 | 420 | 04Z2266 | 444-07292004-213-306 | B. 447 PDS POSTJOB-FLOOR UNDER SAMPLE #94 AFTER DECON | <0.1 |
| 309 | B447-2 | 401 | 04Z2393 | 444-08092004-213-309 | B. 447 BIAS SAMPLE POINT - FLOOR, CENTER OF ROOM; VIA 2 | <0.1 |
| 310 | B447-2 | 401 | 04Z2393 | 444-08092004-213-310 | B. 447 BIAS SAMPLE POINT-WALL/DOORFRAME; VIA 2 | <0.16 |
| 310 | B447-2 | 401 | 04Z2564 | 444-09112004 213-301 | B447-POSTENCAP SAMPLE PT 310,WALL/DOOR FRAME,VIA2 | <0.1 |
| 311 | B447-2 | 402 | 04Z2393 | 444-08092004-213-311 | B. 447 BIAS SAMPLE POINT- FLOOR @ WEST WALL; VIA 2 | <0.1 |
| 312 | B447-2 | 402 | 04Z2393 | 444-08092004-213-312 | B. 447 BIAS SAMPLE POINT- FLOOR @ NE CORNER; VIA 2 | <0.1 |
| 313 | B447-2 | 402 | 04Z2393 | 444-08092004-213-313 | B. 447 BIAS SAMPLE POINT- LEDGE/WALL AROUND ROOM; VIA 2 | <0.1 |
| 314 | B447-2 | 401A | 04Z2393 | 444-08092004-213-314 | B. 447 BIAS SAMPLE POINT- FLOOR @ DOOR TO 401/402; VIA 2 | <0.1 |
| 315 | B447-2 | 407A | 04Z2393 | 444-08092004-213-315 | B. 447 BIAS SAMPLE POINT- FLOOR, ADJACENT TO R.404; VIA 2 | <0.1 |
| 316 | B447-2 | 407A | 04Z2393 | 444-08092004-213-316 | B. 447 BIAS SAMPLE POINT- FLOOR @DOOR TO 420A HALL; VIA 2 | <0.1 |
| 317 | B447-2 | 407A | 04Z2393 | 444-08092004-213-317 | B. 447 BIAS SAMPLE POINT- FLOOR, SE OF DOORS 16&17; VIA 2 | <0.1 |
| 318 | B447-2 | 407A | 04Z2393 | 444-08092004-213-318 | B. 447 BIAS SAMPLE POINT- FLOOR @ DOORS 16&17; VIA 2 | <0.1 |
| 319 | B447-2 | 407A | 04Z2393 | 444-08092004-213-319 | B. 447 BIAS SAMPLE POINT- FLOOR @ DOORWAY TO R.411; VIA 2 | <0.1 |
| 320 | B447-2 | 407A | 04Z2393 | 444-08092004-213-320 | B. 447 BIAS SAMPLE POINT-FLOOR BETWEEN R.408 & 402; VIA 2 | <0.1 |
| 321 | B447-2 | 408 | 04Z2393 | 444-08092004-213-321 | B. 447 BIAS SAMPLE POINT-ON METAL SHELF, SW CORNER; VIA 2 | <0.1 |
| 322 | B447-2 | 408 | 04Z2393 | 444-08092004-213-322 | B. 447 BIAS SAMPLE POINT-FLOOR, NE CORNER; VIA 2 | <0.1 |
| 323 | B447-2 | 408 | 04Z2393 | 444-08092004-213-323 | B. 447 BIAS SAMPLE POINT-FLOOR, SW CORNER; VIA 2 | <0.1 |
| 324 | B447-2 | 408 | 04Z2393 | 444-08092004-213-324 | B. 447 BIAS SAMPLE POINT- ON WEST SHELF; VIA 2 | <0.1 |
| 325 | B447-2 | 407A | 04Z2393 | 444-08092004-213-325 | B. 447 BIAS SAMPLE POINT- FLOOR, SW OF R. 408; VIA 2 | <0.1 |
| 326 | B447-2 | 407A | 04Z2393 | 444-08092004-213-326 | B. 447 BIAS SAMPLE POINT- FLOOR @ E. DOOR TO R.406; VIA 2 | <0.1 |
| 327 | B447-2 | 408A | 04Z2393 | 444-08092004-213-327 | B. 447 BIAS SAMPLE POINT- FLOOR B/W R.408B & 408A; VIA 2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 328 | B447-2 | 408A | 04Z2393 | 444-08092004-213-328 | B. 447 BIAS SAMPLE POINT- FLOOR, N BERM; VIA 2 | <0.1 |
| 329 | B447-2 | 412 | 04Z2393 | 444-08092004-213-329 | B. 447 BIAS SAMPLE POINT- FLOOR, N BERM; VIA 2 | <0.1 |
| 330 | B447-2 | 407A | 04Z2393 | 444-08092004-213-330 | B. 447 BIAS SAMPLE POINT- FLOOR @ W. DOOR TO R.406; VIA 2 | <0.1 |
| 331 | B447-2 | 407A | 04Z2393 | 444-08092004-213-331 | B. 447 BIAS SAMPLE POINT- FLOOR @ E. DOOR TO R.409; VIA 2 | <0.1 |
| 332 | B447-2 | 412 | 04Z2393 | 444-08092004-213-332 | B. 447 BIAS SAMPLE POINT- FLOOR @ CENTER OF ROOM; VIA 2 | <0.1 |
| 333 | B447-2 | 407A | 04Z2393 | 444-08092004-213-333 | B. 447 BIAS SAMPLE POINT- FLOOR@CORRIDOR A, E. END; VIA 2 | <0.1 |
| 334 | B447-2 | 407A | 04Z2393 | 444-08092004-213-334 | B. 447 BIAS SAMPLE POINT- FLOOR@CORRIDOR A, MIDDLE; VIA 2 | <0.1 |
| 335 | B447-2 | 407A | 04Z2393 | 444-08092004-213-335 | B. 447 BIAS SAMPLE POINT- FLOOR@CORRIDOR A, W END; VIA 2 | <0.1 |
| 336 | B447-2 | 407A | 04Z2393 | 444-08092004-213-336 | B. 447 BIAS SAMPLE POINT- FLOOR @ HALL TO R.406A; VIA 2 | <0.1 |
| 337 | B447-2 | 407A | 04Z2393 | 444-08092004-213-337 | B. 447 BIAS SAMPLE POINT- FLOOR @ ELEVATOR DOORWAY; VIA 2 | 0.283 |
| 337 | B447-2 | 407A | 04Z2564 | 444-09112004 213-322 | B447-POSTENCAP SAMPLE PT 337,FLOOR,VIA2 | <0.1 |
| 338 | B447-2 | 407A | 04Z2393 | 444-08092004-213-338 | B. 447 BIAS SAMPLE POINT-FLOOR@BOTTOM OF S. STEPS; VIA 2 | <0.1 |
| 339 | B447-2 | 407A | 04Z2393 | 444-08092004-213-339 | B. 447 BIAS SAMPLE POINT-FLOOR @ W. DOOR TO R.409; VIA 2 | <0.1 |
| 340 | B447-2 | 410 | 04Z2393 | 444-08092004-213-340 | B. 447 BIAS SAMPLE POINT-FLOOR @ DOOR 20; VIA 2 | 0.114 |
| 340 | B447-2 | 410 | 04Z2564 | 444-09112004 213-311 | B447-POSTENCAP SAMPLE PT 340,FLOOR,VIA2 | <0.1 |
| 341 | B447-2 | 410 | 04Z2393 | 444-08092004-213-341 | B. 447 BIAS SAMPLE POINT-FLOOR@DOOR TO R.31 STEPS; VIA 2 | 0.1 |
| 341 | B447-2 | 410 | 04Z2564 | 444-09112004 213-312 | B447-POSTENCAP SAMPLE PT 341,FLOOR,VIA2 | <0.1 |
| 342 | B447-2 | 410 | 04Z2393 | 444-08092004-213-342 | B. 447 BIAS SAMPLE POINT-FLOOR NEAR DOOR 21D; VIA 2 | <0.1 |
| 343 | B447-2 | 410 | 04Z2393 | 444-08092004-213-343 | B. 447 BIAS SAMPLE POINT-FLOOR NEAR DOOR 22D; VIA 2 | <0.1 |
| 344 | B447-2 | 409 | 04Z2393 | 444-08092004-213-344 | B. 447 BIAS SAMPLE POINT-FLOOR @ S. WALL, CENTER; VIA 2 | <0.1 |
| 345 | B447-2 | 410 | 04Z2393 | 444-08092004-213-345 | B. 447 BIAS SAMPLE POINT-FLOOR,W OF DOOR TO R.601; VIA 2 | <0.1 |
| 346 | B447-2 | 410 | 04Z2393 | 444-08092004-213-346 | B. 447 BIAS SAMPLE POINT-FLOOR,SW OF DOOR TO R.601; VIA 2 | <0.1 |
| 347 | B447-2 | 410 | 04Z2393 | 444-08092004-213-347 | B. 447 BIAS SAMPLE POINT-FLOOR,W OF DOOR TO R.601; VIA 2 | <0.1 |
| 348 | B447-2 | 410 | 04Z2393 | 444-08092004-213-348 | B. 447 BIAS SAMPLE POINT-FLOOR,SE OF DOOR TO R.601; VIA 2 | <0.1 |
| 349 | B447-2 | 410 | 04Z2393 | 444-08092004-213-349 | B. 447 BIAS SAMPLE POINT-FLOOR, NE CORNER OF HALL; VIA 2 | <0.1 |
| 350 | B447-2 | 407A | 04Z2393 | 444-08092004-213-350 | B. 447 BIAS SAMPLE POINT-FLOOR @ STEPS TO R. 31; VIA 2 | <0.1 |
| 351 | B447-2 | 407A | 04Z2393 | 444-08092004-213-351 | B. 447 BIAS SAMPLE POINT-FLOOR UNDER STEPS TO R501; VIA 2 | <0.1 |
| 351 | B447-2 | 407A | 04Z2564 | 444-09112004 213-326 | B447-POSTENCAP SAMPLE PT 351,STEPS,VIA2 | <0.1 |
| 352 | B447-2 | 407A | 04Z2393 | 444-08092004-213-352 | B. 447 BIAS SAMPLE POINT-FLOOR AT ELEVATOR DOOR/EDGES; VIA 2 | 0.136 |
| 352 | B447-2 | 407A | 04Z2564 | 444-09112004 213-320 | B447-POSTENCAP SAMPLE PT 352,FLOOR,VIA2 | <0.1 |
| 353 | B447-2 | 410 | 04Z2393 | 444-08092004-213-353 | B. 447 BIAS SAMPLE POINT-FLOOR NW OF R. 409; VIA 2 | 0.354 |
| 353 | B447-2 | 410 | 04Z2564 | 444-09112004 213-307 | B447-POSTENCAP SAMPLE PT 353,FLOOR,VIA2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 359 | B447-2 | 411 | 04Z2394 | 444-08112004-213-359 | B. 447 BIAS SAMPLE- WHITE BEAM, NEAR DOOR 16, NW; VIA 2 | <0.1 |
| 360 | B447-2 | 411 | 04Z2394 | 444-08112004-213-360 | B. 447 BIAS SAMPLE-TRANSITE PANEL NEAR DOOR 16, NW; VIA 2 | <0.1 |
| 361 | B447-2 | 411 | 04Z2394 | 444-08112004-213-361 | B. 447 BIAS SAMPLE-RED/WHITE BEAMS,ABOVE DOOR 17; VIA 2 | <0.1 |
| 362 | B447-2 | 407A | 04Z2394 | 444-08112004-213-362 | B. 447 BIAS SAMPLE-WHITE BEAM E OF R.408; VIA 2 | <0.1 |
| 363 | B447-2 | 407A | 04Z2394 | 444-08112004-213-363 | B. 447 BIAS SAMPLE ABOVE POINT 15, WHITE BEAM VIA 2 | 0.144 |
| 363 | B447-2 | 407A | 04Z2564 | 444-09112004 213-356 | B447-POSTENCAP SAMPLE PT 363,BEAM,VIA 2 | <0.1 |
| 364 | B447-2 | 407A | 04Z2394 | 444-08112004-213-364 | B. 447 BIAS SAMPLE RED BEAM/TRANSITE, S OF DOOR 16; VIA 2 | <0.1 |
| 365 | B447-2 | 408 | 04Z2394 | 444-08112004-213-365 | B. 447 BIAS SAMPLE ON CINDERBLOCK WALL, E SIDE VIA 2 | 0.199 |
| 365 | B447-2 | 408 | 04Z2564 | 444-09112004 213-354 | B447-POSTENCAP SAMPLE PT 365,TOP OF BLOCK WALL | <0.1 |
| 366 | B447-2 | 402 | 04Z2394 | 444-08112004-213-366 | B. 447 BIAS SAMPLE ON RED BEAM, W SIDE, LOWER BEAM; VIA 2 | <0.1 |
| 367 | B447-2 | 402 | 04Z2394 | 444-08112004-213-367 | B. 447 BIAS SAMPLE ON WHITE BEAM, W SIDE, TOP VIA 2 | 0.105 |
| 367 | B447-2 | 402 | 04Z2564 | 444-09112004 213-353 | B447-POSTENCAP SAMPLE PT 367,BEAM,VIA2 | <0.1 |
| 368 | B447-2 | 407A | 04Z2394 | 444-08112004-213-368 | B. 447 BIAS SAMPLE ABOVE POINT 35, WHITE BEAM VIA 2 | 0.234 |
| 368 | B447-2 | 407A | 04Z2564 | 444-09112004 213-350 | B447-POSTENCAP SAMPLE PT 368,BEAM,VIA2 | <0.1 |
| 369 | B447-2 | 407A | 04Z2394 | 444-08112004-213-369 | B. 447 BIAS SAMPLE ABOVE POINT 38, WHITE BEAM VIA 2 | 0.203 |
| 369 | B447-2 | 407A | 04Z2564 | 444-09112004 213-349 | B447-POSTENCAP SAMPLE PT 369,BEAM,VIA2 | <0.1 |
| 370 | B447-2 | 407A | 04Z2394 | 444-08112004-213-370 | B. 447 BIAS SAMPLE WHITE BEAM ABOVE DOOR TO 407, VIA 2 | 0.119 |
| 370 | B447-2 | 407A | 04Z2564 | 444-09112004 213-331 | B447-POSTENCAP SAMPLE PT 370,BEAM,VIA2 | <0.1 |
| 371 | B447-2 | 407A | 04Z2394 | 444-08112004-213-371 | B. 447 BIAS SAMPLE, WHITE BEAM SW OF R. 408, VIA 2 | 0.183 |
| 371 | B447-2 | 407A | 04Z2564 | 444-09112004 213-332 | B447-POSTENCAP SAMPLE PT 371,BEAM,VIA2 | <0.1 |
| 372 | B447-2 | 408A | 04Z2394 | 444-08112004-213-372 | B. 447 BIAS SAMPLE, WHITE BEAM W OF R. 408, VIA 2 | 0.291 |
| 372 | B447-2 | 408A | 04Z2564 | 444-09112004 213-343 | B447-POSTENCAP SAMPLE PT 372,BEAM,VIA2 | <0.1 |
| 373 | B447-2 | 408A | 04Z2394 | 444-08112004-213-373 | B. 447 BIAS SAMPLE, ON TOP OF VENT DUCT, N END; VIA 2 | <0.1 |
| 374 | B447-2 | 408A | 04Z2394 | 444-08112004-213-374 | B. 447 BIAS SAMPLE, TRANSITE PANEL, N END; VIA 2 | <0.1 |
| 375 | B447-2 | 407A E. MEZZANINE | 04Z2394 | 444-08112004-213-375 | B. 447 BIAS SAMPLE, FLOOR AT E ACCESS AREA; VIA 2 | <0.1 |
| 376 | B447-2 | 407A E. MEZZANINE | 04Z2394 | 444-08112004-213-376 | B. 447 BIAS SAMPLE WHITE BEAM ABOVE E MEZZANINE E VIA 2 | 0.241 |
| 376 | B447-2 | 407A E. MEZZANINE | 04Z2564 | 444-09112004 213-359 | B447-POSTENCAP SAMPLE PT 376,BEAM,VIA 2 | <0.1 |
| 377 | B447-2 | 407A E. MEZZANINE | 04Z2394 | 444-08112004-213-377 | B. 447 BIAS SAMPLE WHITE BEAM UNDER E MEZZANINE, E VIA 2 | 11.99 |
| 377 | B447-2 | 407A E. MEZZANINE | 04Z2564 | 444-09112004 213-358 | B447-POSTENCAP SAMPLE PT 377,UNDERSIDE MEZZ | <0.1 |
| 378 | B447-2 | 407A E. MEZZANINE | 04Z2394 | 444-08112004-213-378 | B. 447 BIAS SAMPLE WHITE BEAM UNDER E MEZZANINE, W, VIA 2 | 1.85 |
| 378 | B447-2 | 407A E. MEZZANINE | 04Z2564 | 444-09112004 213-362 | B447-POSTENCAP SAMPLE PT 378,UNDERSIDE MEZZ | <0.1 |
| 379 | B447-2 | 407A E. MEZZANINE | 04Z2394 | 444-08112004-213-379 | B. 447 BIAS SAMPLE, FLOOR AT W ACCESS AREA, VIA 2 | 0.124 |
| 379 | B447-2 | 407A E. MEZZANINE | 04Z2564 | 444-09112004 213-361 | B447-POSTENCAP SAMPLE PT 379,FLOOR,VIA 2 | <0.1 |
| 380 | B447-2 | 407A | 04D1177 | 444-09152004-213-721 | B447-POSTENCAP:SAMPLE PT 380,BEAM,VIA2 | <0.1 |
| 380 | B447-2 | 407A | 04Z2394 | 444-08112004-213-380 | B. 447 BIAS SAMPLE WHITE BEAM W OF E MEZZANINE, VIA 2 | 0.231 |
| 380 | B447-2 | 407A | 04Z2564 | 444-09112004 213-368 | B447-POSTENCAP SAMPLE PT 380,BEAM,VIA 2 | 0.35 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 381 | B447-2 | 407A E. MEZZANINE | 04Z2394 | 444-08112004-213-381 | B. 447 BIAS SAMPLE WHITE BEAM ABOVE E. MEZZANINE W. VIA 2 | 0.428 |
| 381 | B447-2 | 407A E. MEZZANINE | 04Z2564 | 444-09112004 213-367 | B447-POSTENCAP SAMPLE PT 381,BEAM,VIA 2 | <0.1 |
| 382 | B447-2 | 407A E. MEZZANINE | 04Z2394 | 444-08112004-213-382 | B. 447 BIAS SAMPLE YELLOW BEAM E OF R. 409 N END VIA 2 | 0.118 |
| 382 | B447-2 | 407A E. MEZZANINE | 04Z2564 | 444-09112004 213-364 | B447-POSTENCAP SAMPLE PT 382,BEAM,VIA 2 | <0.1 |
| 383 | B447-2 | 407A E. MEZZANINE | 04Z2394 | 444-08112004-213-383 | B. 447 BIAS SAMPLE, FLOOR, CENTER OF E. MEZZANINE; VIA 2 | <0.1 |
| 384 | B447-2 | 407A W. MEZZANINE | 04Z2394 | 444-08112004-213-384 | B. 447 BIAS SAMPLE WHITE BEAM UNDER W. MEZZANINE E VIA 2 | 0.581 |
| 384 | B447-2 | 407A W. MEZZANINE | 04Z2564 | 444-09112004 213-371 | B447-POSTENCAP SAMPLE PT 384,UNDERSIDE MEZZ | <0.1 |
| 385 | B447-2 | 407A W. MEZZANINE | 04D1177 | 444-09152004-213-724 | B447-POSTENCAP:SAMPLE PT 385,BEAM,VIA2 | <0.1 |
| 385 | B447-2 | 407A W. MEZZANINE | 04Z2394 | 444-08112004-213-385 | B. 447 BIAS SAMPLE WHITE BEAM ABOVE W. MEZZANINE E VIA 2 | 0.941 |
| 385 | B447-2 | 407A W. MEZZANINE | 04Z2564 | 444-09112004 213-370 | B447-POSTENCAP SAMPLE PT 385,BEAM,VIA 2 | 0.26 |
| 386 | B447-2 | 407A W. MEZZANINE | 04Z2394 | 444-08112004-213-386 | B. 447 BIAS SAMPLE FLOOR OF W MEZZANINE E VIA 2 | 0.389 |
| 386 | B447-2 | 407A W. MEZZANINE | 04Z2564 | 444-09112004 213-373 | B447-POSTENCAP SAMPLE PT 386,FLOOR,VIA 2 | <0.1 |
| 387 | B447-2 | 407A W. MEZZANINE | 04Z2394 | 444-08112004-213-387 | B. 447 BIAS SAMPLE WHITE BEAM UNDER W. MEZZANINE W VIA 2 | 0.118 |
| 387 | B447-2 | 407A W. MEZZANINE | 04Z2564 | 444-09112004 213-372 | B447-POSTENCAP SAMPLE PT 387,UNDERSIDE MEZZ | <0.1 |
| 388 | B447-2 | 407A W. MEZZANINE | 04Z2394 | 444-08112004-213-388 | B. 447 BIAS SAMPLE WHITE BEAM ABOVE W. MEZZANINE W VIA 2 | 0.205 |
| 388 | B447-2 | 407A W. MEZZANINE | 04Z2564 | 444-09112004 213-374 | B447-POSTENCAP SAMPLE PT 388,BEAM,VIA 2 | <0.1 |
| 389 | B447-2 | 407A W. MEZZANINE | 04Z2394 | 444-08112004-213-389 | B. 447 BIAS SAMPLE FLOOR OF W MEZZANINE W VIA 2 | 0.187 |
| 389 | B447-2 | 407A W. MEZZANINE | 04Z2564 | 444-09112004 213-375 | B447-POSTENCAP SAMPLE PT 389 FLOOR,VIA 2 | <0.1 |
| 390 | B447-2 | 407A W. MEZZANINE | 04Z2394 | 444-08112004-213-390 | B. 447 BIAS SAMPLE,FLOOR OF W MEZZANINE, CENTER; VIA 2 | <0.1 |
| 391 | B447-2 | 407A | 04Z2394 | 444-08112004-213-391 | B. 447 BIAS SAMPLE ON H20 PIPES ABOVE ELEVATOR VIA 2 | 0.231 |
| 391 | B447-2 | 407A | 04Z2564 | 444-09112004 213-396 | B447-POSTENCAP SAMPLE PT 391, BEAM,VIA 2 | <0.1 |
| 392 | B447-2 | 407A | 04Z2394 | 444-08112004-213-392 | B. 447 BIAS SAMPLE PIPE PASS THRU OVER 406A HALL VIA 2 | 0.148 |
| 392 | B447-2 | 407A | 04Z2564 | 444-09112004 213-395 | B447-POSTENCAP SAMPLE PT 392, BEAM,VIA 2 | <0.1 |
| 393 | B447-2 | 407A | 04Z2394 | 444-08112004-213-393 | B. 447 BIAS SAMPLE WHITE BEAM W OF R. 408, VIA 2 | 0.174 |
| 393 | B447-2 | 407A | 04Z2564 | 444-09112004 213-407 | B447-POSTENCAP SAMPLE PT 393, BEAM,VIA 2 | <0.1 |
| 394 | B447-2 | 407A | 04Z2394 | 444-08112004-213-394 | B. 447 BIAS SAMPLE, RED BEAM W OF R. 408; VIA 2 | <0.1 |
| 395 | B447-2 | 407A | 04Z2394 | 444-08112004-213-395 | B. 447 BIAS SAMPLE, TRANSITE, W OF R. 408; VIA 2 | <0.1 |
| 396 | B447-2 | 407A | 04Z2394 | 444-08112004-213-396 | B. 447 BIAS SAMPLE WHITE BEAM ABOVE W STAIRS VIA 2 | 1.76 |
| 396 | B447-2 | 407A | 04Z2564 | 444-09112004 213-403 | B447-POSTENCAP SAMPLE PT 396, BEAM,VIA 2 | <0.1 |
| 397 | B447-2 | 410 | 04Z2394 | 444-08112004-213-397 | B. 447 BIAS SAMPLE, TRANSITE, W END OF HALL 410; VIA 2 | <0.1 |
| 398 | B447-2 | 410 | 04Z2394 | 444-08112004-213-398 | B. 447 BIAS SAMPLE, RED BEAM N OF STAIRS TO R. 31; VIA 2 | <0.1 |
| 399 | B447-2 | 410 | 04Z2394 | 444-08112004-213-399 | B. 447 BIAS SAMPLE WHITE BEAM OVER DOOR 21D VIA 2 | 0.38 |
| 399 | B447-2 | 410 | 04Z2564 | 444-09112004 213-412 | B447-POSTENCAP SAMPLE PT 399, BEAM,VIA 2 | <0.1 |
| 400 | B447-2 | 410 | 04Z2394 | 444-08112004-213-400 | B. 447 BIAS SAMPLE, WHITE BEAM SE OF DOOR 22D; VIA 2 | <0.1 |

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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 401 | B447-2 | 410 | 04Z2394 | 444-08112004-213-401 | B. 447 BIAS SAMPLE, WHITE BEAM E OF DOOR 22D; VIA 2 | <0.1 |
| 402 | B447-2 | 410 | 04Z2394 | 444-08112004-213-402 | B. 447 BIAS SAMPLE, ABOVE POINT 21, WHITE BEAM; VIA 2 | <0.1 |
| 403 | B447-2 | 410 | 04Z2394 | 444-08112004-213-403 | B. 447 BIAS SAMPLE,YELLOW BEAM, S OR R. 601 DOOR; VIA 2 | <0.1 |
| 404 | B447-2 | 410 | 04Z2394 | 444-08112004-213-404 | B. 447 BIAS SAMPLE,WHITE BEAM ABOVE DOOR TO R 601; VIA 2 | 0.149 |
| 404 | B447-2 | 410 | 04Z2564 | 444-09112004 213-417 | B447-POSTENCAP SAMPLE PT 404, BEAM,VIA 2 | <0.1 |
| 405 | B447-2 | 410 | 04Z2394 | 444-08112004-213-405 | B. 447 BIAS SAMPLE,TRANSITE, SE OF DOOR TO R.601; VIA 2 | <0.1 |
| 406 | B447-2 | 410 | 04Z2394 | 444-08112004-213-406 | B. 447 BIAS SAMPLE,WHITE BEAM, NE OF R. 408; VIA 2 | <0.1 |
| 407 | B447-2 | 410 | 04Z2394 | 444-08112004-213-407 | B. 447 BIAS SAMPLE,RED BEAM,N WALL, E CORNER; VIA 2 | <0.1 |
| 408 | B447-2 | 410 | 04Z2394 | 444-08112004-213-408 | B. 447 BIAS SAMPLE ABOVE POINT 1 WHITE BEAM VIA 2 | 0.133 |
| 408 | B447-2 | 410 | 04Z2564 | 444-09112004 213-424 | B447-POSTENCAP SAMPLE PT 408, BEAM,VIA 2 | <0.1 |
| 409 | B447-2 | 411 | 04Z2394 | 444-08112004-213-409 | B. 447 BIAS SAMPLE, TRANSITE ABOVE POINT 16; VIA | <0.1 |
| 410 | B447-2 | 411 | 04Z2394 | 444-08112004-213-410 | B. 447 BIAS SAMPLE,ABOVE POINT 16, WHITE BEAM; VIA 2 | <0.1 |
| 411 | B447-2 | 411 | 04Z2394 | 444-08112004-213-411 | B. 447 BIAS SAMPLE,RED BEAM N OF R. 408; VIA 2 | <0.1 |
| 412 | B447-2 | 409 | 04Z2394 | 444-08112004-213-412 | B. 447 BIAS SAMPLE RED BEAM E END LOWER, VIA 2 | 0.275 |
| 412 | B447-2 | 409 | 04Z2564 | 444-09112004 213-378 | B447-POSTENCAP SAMPLE PT 412,BEAM, VIA 2 | <0.1 |
| 413 | B447-2 | 409 | 04Z2394 | 444-08112004-213-413 | B. 447 BIAS SAMPLE,WHITE BEAM, E END; VIA 2 | <0.1 |
| 414 | B447-2 | 409 | 04Z2394 | 444-08112004-213-414 | B. 447 BIAS SAMPLE VENT DUCTWORK NE AREA, VIA 2 | 0.122 |
| 414 | B447-2 | 409 | 04Z2564 | 444-09112004 213-380 | B447-POSTENCAP SAMPLE PT 414, BEAM,VIA 2 | <0.1 |
| 415 | B447-2 | 409 | 04Z2394 | 444-08112004-213-415 | B. 447 BIAS SAMPLE TRANSITE N END VIA 2 | 0.153 |
| 415 | B447-2 | 409 | 04Z2564 | 444-09112004 213-383 | B447-POSTENCAP SAMPLE PT 415, BEAM,VIA 2 | <0.1 |
| 416 | B447-2 | 409 | 04Z2394 | 444-08112004-213-416 | B. 447 BIAS SAMPLE, YELLOW BEAM, S END; VIA 2 | <0.1 |
| 417 | B447-2 | 409 | 04Z2394 | 444-08112004-213-417 | B. 447 BIAS SAMPLE, ABOVE POINT 27, WHITE BEAM; VIA 2 | <0.1 |
| 418 | B447-2 | 409 | 04Z2394 | 444-08112004-213-418 | B. 447 BIAS SAMPLE PIPE PASS THRU SW AREA CEILING, VIA 2 | 0.193 |
| 418 | B447-2 | 409 | 04Z2564 | 444-09112004 213-391 | B447-POSTENCAP SAMPLE PT 418, PIPE PASS THROUGH,VIA 2 | <0.1 |
| 423 | B447-2 | 32 | 04Z2395 | 444-08172004-607-423 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR - VIA 2 | 0.212 |
| 424 | B447-2 | 32 | 04Z2395 | 444-08172004-607-424 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR - VIA 2 | 0.854 |
| 425 | B447-2 | 32 | 04Z2395 | 444-08172004-607-425 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR - VIA 2 | 0.529 |
| 426 | B447-2 | 32 | 04Z2395 | 444-08172004-607-426 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR - VIA 2 | 0.531 |
| 427 | B447-2 | 31 | 04Z2395 | 444-08172004-607-427 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR - VIA 2 | 0.361 |
| 428 | B447-2 | 31 | 04Z2395 | 444-08172004-607-428 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR - VIA 2 | 4.212 |
| 429 | B447-2 | 31 | 04Z2395 | 444-08172004-607-429 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - I-BEAM (OVERHEAD) - VIA 2 | 0.122 |
| 430 | B447-2 | 32 | 04Z2395 | 444-08172004-607-430 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - I-BEAM (OVERHEAD)- VIA-2 | <0.1 |
| 431 | B447-2 | 32 | 04Z2395 | 444-08172004-607-431 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION I-BEAM (OVERHEAD)- VIA-2 | <0.1 |
| 432 | B447-2 | 406A | 04Z2395 | 444-08172004-607-432 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION FLOOR - VIA-2 | <0.1 |
| 451 | B447-2 | 101 | 04Z2396 | 444-08182004-01-451 | B447 PDS BIAS SAMPLE POINT - RED IRON ON E WINDOW BETWEEN ROOMS 101 AND 100; VIA 2 | <0.1 |

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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 452 | B447-2 | 101 | 04Z2396 | 444-08182004-01-452 | B447 PDS BIAS SAMPLE POINT - RED IRON ON E WINDOW BETWEEN ROOMS 101 AND 100; VIA 2 | <0.1 |
| 453 | B447-2 | 101 | 04Z2396 | 444-08182004-01-453 | B447 PDS BIAS SAMPLE POINT - EXTERIOR TRANSITE ON E WINDOW BETWEEN ROOMS 101 AND 100; VIA 2 | <0.1 |
| 454 | B447-2 | 101 | 04Z2396 | 444-08182004-01-454 | B447 PDS BIAS SAMPLE POINT - RED IRON ON W WINDOW BETWEEN ROOMS 101 AND 100; VIA 2 | <0.1 |
| 455 | B447-2 | 101 | 04Z2396 | 444-08182004-01-455 | B447 PDS BIAS SAMPLE POINT - RED IRON ON W WINDOW BETWEEN ROOMS 101 AND 100; VIA 2 | <0.1 |
| 456 | B447-2 | 101 | 04Z2396 | 444-08182004-01-456 | B447 PDS BIAS SAMPLE POINT - EXTERIOR TRANSITE ON W WINDOW BETWEEN ROOMS 101 AND 100; VIA 2 | <0.1 |
| 457 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-753 | B447-POSTENCAP:SAMPLE PT 457, S DOOR RAIL,VIA2 | <0.1 |
| 457 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-101 | B447 BIAS SAMPLE POST FIXATIVE S/CENTER RAIL LOWER AREA VIA 2 | 0.419 |
| 457 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-202 | B447 POST ENCAP SAMPLE POINT 457 - SW RAIL LOWER AREA VIA 2 | 1.316 |
| 458 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-751 | B447-POSTENCAP:SAMPLE PT 458, N DOOR RAIL,VIA2 | <0.1 |
| 458 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-102 | B447 BIAS SAMPLE POST FIXATIVE N/CENTER RAIL LOWER AREA VIA 2 | 52 |
| 458 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-201 | B447 POST ENCAP SAMPLE POINT 458 - NW RAIL LOWER AREA VIA2 | 0.232 |
| 460 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-104 | B447 BIAS SAMPLE POST FIXATIVE FLOOR @ W ELEVATOR DOOR VIA 2 | 0.42 |
| 460 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-206 | B447 POST ENCAPSAMPLE POINT 460 - NW FLOOR, VIA2 | <0.1 |
| 461 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-750 | B447-POSTENCAP:SAMPLE PT 461, RM 31 DOOR LIP,VIA2 | <0.1 |
| 461 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-105 | B447 BIAS SAMPLE POST FIXATIVE LOWER DOOR LIP VIA 2 | 0.603 |
| 461 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-208 | B447 POST ENCAP SAMPLE POINT 461 - 31 DOOR LOWER N END VIA2 | 0.286 |
| 462 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-106 | B447 BIAS SAMPLE- POST FIXATIVE,E DOOR,S RAIL,LOWER AREA; VIA 2 | < 0.1 |
| 463 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-107 | B447 BIAS SAMPLE POST FIXATIVE E DOOR N RAIL LOWER AREA VIA 2 | 0.123 |
| 463 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-212 | B447 POST ENCAP SAMPLE POINT 463 - 406A DOOR RAIL, N END, UPPER | <0.1 |
| 464 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-757 | B447-POSTENCAP:SAMPLE PT 464,R.406A S RAIL,VIA2 | <0.1 |
| 464 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-108 | B447 BIAS SAMPLE POST FIXATIVE E DOOR S RAIL UPPER AREA VIA 2 | 0.209 |
| 464 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-211 | B447 POST ENCAPSAMPLE POINT 464 - 406A DOOR RAIL S END LOWER | 0.395 |
| 465 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-109 | B447 BIAS SAMPLE POST FIXATIVE E DOOR N RAIL UPPER AREA VIA 2 | 0.429 |
| 465 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-210 | B447 POST ENCAP SAMPLE POINT 465 - MAIN N RAIL, UPPER AREA, VIA2 | <0.1 |
| 466 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-761 | B447-POSTENCAP:SAMPLE PT 466,N MAIN RAIL,VIA2 | <0.1 |
| 466 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-110 | B447 BIAS SAMPLE POST FIXATIVE W DOOR 2ND FLOOR N RAIL VIA 2 | 10.9 |
| 466 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-213 | B447 POST ENCAP SAMPLE POINT 466 - MAIN N RAIL UPPER AREA VIA2 | 0.397 |
| 467 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-756 | B447-POSTENCAP:SAMPLE PT 467,S MAIN RAIL,VIA2 | <0.1 |
| 467 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-111 | B447 BIAS SAMPLE POST FIXATIVE W DOOR 2ND FLOOR S RAIL VIA 2 | 0.704 |

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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 467 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-203 | B447 POST ENCAP SAMPLE POINT 467 - S MAIN RAIL LOWER AREA, VIA 2 | 0.131 |
| 468 | B447-2 | 447 ELEVATOR | 04Z2534 | 444-08312004-213-112 | B447 BIAS SAMPLE - POST FIXATIVE W DOOR 1ST FLOOR -N RAIL, VIA 2 | 0.118 |
| 468 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-204 | B447 POST ENCAP SAMPLE POINT 468 - N MAIN RAIL, LOWER AREA, VIA 2 | <0.1 |
| 469 | B447-2 | 31 | 04Z2534 | 444-09012004-213-114 | B447 BIAS SAMPLE, POST FIXATIVE,WALL, S END, VIA 2 | < 0.1 |
| 470 | B447-2 | 32 | 04Z2534 | 444-09012004-213-121 | B447 BIAS SAMPLE, POST FIXATIVE,PIPE PASSTHRU FROM 501, VIA 2 | < 0.1 |
| 471 | B447-2 | 31 | 04Z2534 | 444-09012004-213-122 | B447 BIAS SAMPLE, POST FIXATIVE,PIPE PASSTHRU FROM 501, VIA 2 | < 0.1 |
| 472 | B447-2 | 32 | 04Z2534 | 444-09012004-213-123 | B447 BIAS SAMPLE, POST FIXATIVE,PIPE PASSTHRU FROM 501, VIA 2 | < 0.1 |
| 473 | B447-2 | 32 | 04Z2534 | 444-09012004-213-124 | B447 BIAS SAMPLE - POST FIXATIVE PIPE PASSTHRU FROM 501, VIA 2 | 0.193 |
| 473 | B447-2 | 32 | 04Z2563 | 444-09092004-213-233 | B447 POST ENCAP SAMPLE POINT 473 -PIPE PASSTHRUS, OVERHEAD, VIA2 | <0.1 |
| 474 | B447-2 | 32 | 04Z2534 | 444-09012004-213-115 | B447 BIAS SAMPLE, POST FIXATIVE,WALL, N END, VIA 2 | < 0.1 |
| 475 | B447-2 | 447 ELEVATOR | 04Z2535 | 444-09022004-213-101 | B447 BIAS SAMPLE, OVERHEAD 10 FEET FROM TOP, ON RAIL, VIA 2 | < 0.1 |
| 476 | B447-2 | 447 ELEVATOR | 04Z2535 | 444-09022004-213-102 | B447 BIAS SAMPLE OVERHEAD 10 FEET FROM TOP ON RAIL, VIA 2 | 0.324 |
| 476 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-214 | B447 POST ENCAP SAMPLE POINT 476 - COMPOSITE OF CEILING/BEAMS, VIA | <0.1 |
| 477 | B447-2 | 405B | 04Z2562 | 444-09092004-213-101 | B447 PDS POSTENCAP,W END,VIA2,FLOOR | <0.1 |
| 478 | B447-2 | 405B | 04Z2562 | 444-09092004-213-102 | B447 PDS POSTENCAP,W END,VIA2,FLOOR | <0.1 |
| 479 | B447-2 | 405B | 04Z2562 | 444-09092004-213-103 | B447 PDS POSTENCAP,W END,VIA2,FLOOR | <0.1 |
| 480 | B447-2 | 405B | 04Z2562 | 444-09092004-213-104 | B447 PDS POSTENCAP,W END,VIA2,FLOOR | <0.1 |
| 481 | B447-2 | 405B | 04Z2562 | 444-09092004-213-105 | B447 PDS POSTENCAP,W END,VIA2,FLOOR | <0.1 |
| 482 | B447-2 | 405B | 04Z2562 | 444-09092004-213-106 | B447 PDS POSTENCAP,W END,VIA2,FLOOR | <0.1 |
| 483 | B447-2 | 405B | 04Z2562 | 444-09092004-213-107 | B447 PDS POSTENCAP,W END,VIA2,FLOOR | <0.1 |
| 484 | B447-2 | 405B | 04Z2562 | 444-09092004-213-108 | B447 PDS POSTENCAP,SW OF SAMPLE PT205,VIA2,FLOOR | <0.1 |
| 485 | B447-2 | 405B | 04Z2562 | 444-09092004-213-109 | B447 PDS POSTENCAP,W OF SAMPLE PT205,VIA2,FLOOR | <0.1 |
| 486 | B447-2 | 405B | 04Z2562 | 444-09092004-213-111 | B447 PDS POSTENCAP,SE OF SAMPLE PT205,VIA2,FLOOR | <0.1 |
| 487 | B447-2 | 405B | 04Z2562 | 444-09092004-213-112 | B447 PDS POSTENCAP,E OF SAMPLE | <0.1 |
| 488 | B447-2 | 405B | 04Z2562 | 444-09092004-213-113 | B447 PDS POSTENCAP, W OF SAMPLE PT 221,VIA2,TRENCH | <0.1 |
| 489 | B447-2 | 405B | 04D1177 | 444-09152004-213-712 | B447-POSTENCAP:S OFSAMPLE PT 489,TRENCH GRATE,VIA2 | <0.1 |
| 489 | B447-2 | 405B | 04Z2562 | 444-09092004-213-115 | B447 PDS POSTENCAP, W OF SAMPLE PT 221,VIA2,TRENCH | 0.127 |
| 490 | B447-2 | 415 | 04Z2562 | 444-09092004-213-118 | B447 PDS POSTENCAP, E OF SAMPLE PT | <0.1 |
| 491 | B447-2 | 415 | 04Z2562 | 444-09092004-213-119 | B447 PDS POSTENCAP, SE OF SAMPLE PT 46,VIA2,FLOOR | <0.1 |
| 492 | B447-2 | 415 | 04Z2562 | 444-09092004-213-121 | B447 PDS POSTENCAP, N OF SAMPLE PT | <0.1 |
| 493 | B447-2 | 415 | 04Z2562 | 444-09092004-213-122 | B447 PDS POSTENCAP, NW OF SAMPLE PT 236,VIA2,FLOOR | <0.1 |
| 494 | B447-2 | 415 | 04Z2562 | 444-09092004-213-123 | B447 PDS POSTENCAP, N OF SAMPLE PT | <0.1 |
| 495 | B447-2 | 415 | 04Z2562 | 444-09092004-213-124 | B447 PDS POSTENCAP, NE OF SAMPLE PT 46,VIA2,FLOOR | <0.1 |
| 496 | B447-2 | 415 | 04Z2562 | 444-09092004-213-125 | B447 PDS POSTENCAP, NE OF SAMPLE PT 28,VIA2,FLOOR | <0.1 |

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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 497 | B447-2 | 406A | 04Z2562 | 444-09092004-213-126 | B447 PDS POSTENCAP,DOORWAY TO N HALL,VIA 2,FLOOR | <0.1 |
| 498 | B447-2 | 406A | 04D1177 | 444-09152004-213-711 | B447-POSTENCAP:SAMPLE PT 498,TRENCH GRATE AT DOORWAY,VIA2 | <0.1 |
| 498 | B447-2 | 406A | 04Z2562 | 444-09092004-213-127 | B447 PDS POSTENCAP,DOORWAY TO 405B,VIA | 0.177 |
| 499 | B447-2 | 406B | 04Z2562 | 444-09092004-213-128 | B447 PDS POSTENCAP UNDERNEATH DUCTWORK,NW CORNER | <0.1 |
| 500 | B447-2 | 406B | 04Z2562 | 444-09092004-213-129 | B447 PDS POSTENCAP,S END @ 2ND COLUMN,VIA 2,FLOOR | <0.1 |
| 501 | B447-2 | 406 | 04Z2562 | 444-09092004-213-130 | B447 PDS POSTENCAP,N END UNDER PASSTHRU,VIA2,FLOOR | <0.1 |
| 502 | B447-2 | 406 | 04Z2562 | 444-09092004-213-131 | B447 PDS POSTENCAP,CENTER OF ROOM,VIA2,FLOOR | <0.1 |
| 503 | B447-2 | 406 | 04Z2562 | 444-09092004-213-132 | B447 PDS POSTENCAP,CENTER OF ROOM,E END,VIA2,FLOOR | <0.1 |
| 504 | B447-2 | 406 | 04Z2562 | 444-09092004-213-133 | B447 PDS POSTENCAP,E END,VIA2,FLOOR | <0.1 |
| 505 | B447-2 | 405A | 04Z2562 | 444-09092004-213-134 | B447 PDS POSTENCAP,NE CORNER,VIA2,FLOOR | <0.1 |
| 506 | B447-2 | 405A | 04Z2562 | 444-09092004-213-135 | B447 PDS POSTENCAP,NE CORNER,VIA2,FLOOR | <0.1 |
| 507 | B447-2 | 405B | 04Z2562 | 444-09092004-213-136 | B447 PDS POSTENCAP @ OLD SOP,NE FLOOR, VIA2 | <0.1 |
| 508 | B447-2 | 405B | 04Z2562 | 444-09092004-213-137 | B447 PDS POSTENCAP, NE OF SAMPLE PT 32,VIA2,FLOOR | <0.1 |
| 509 | B447-2 | 405B | 04Z2562 | 444-09092004-213-139 | B447 PDS POSTENCAP, SW OF SAMPLE PT 32,VIA2,FLOOR | <0.1 |
| 510 | B447-2 | 405B | 04D1176 | 444-09132004-213-519 | B447 POSTENCAP;BIAS RESAMPLE PT 510, FLOOR VIA | <0.1 |
| 510 | B447-2 | 405B | 04Z2562 | 444-09092004-213-140 | B447 PDS POSTENCAP,W OF SAMPLE PT 32,VIA2,FLOOR | 0.106 |
| 511 | B447-2 | 406B | 04Z2562 | 444-09092004-213-141 | B447 PDS POSTENCAP,W OF SAMPLE 169,VIA2,BLOCK WALL | <0.1 |
| 512 | B447-2 | 406B | 04Z2562 | 444-09092004-213-142 | B447 PDS POSTENCAP,W OF SAMPLE 169,VIA2,BLOCK WALL | <0.1 |
| 513 | B447-2 | 31 | 04Z2533 | 444-08302004-213-113 | B447 BIAS SAMPLE ABOVE PT 6, POST FIXATIVE,BEAMS, VIA 2 | <0.1 |
| 514 | B447-2 | 31 | 04Z2533 | 444-08302004-213-114 | B447 BIAS SAMPLE ABOVE PT 3, POST FIXATIVE,BEAMS, VIA 2 | <0.1 |
| 515 | B447-2 | 31 | 04Z2533 | 444-08302004-213-115 | B447 BIAS SAMPLE ABOVE PT 24, POST FIXATIVE,BEAMS, VIA 2 | <0.1 |
| 516 | B447-2 | 406B | 04Z2562 | 444-09092004-213-143 | B447 PDS POSTENCAP,W OF SAMPLE 169,VIA2,BLOCK WALL | <0.1 |
| 517 | B447-2 | 406B | 04Z2562 | 444-09092004-213-145 | B447 PDS POSTENCAP,N OF SAMPLE PT169,BEAM,VIA2 | <0.1 |
| 518 | B447-2 | 406B | 04Z2562 | 444-09092004-213-146 | B447 PDS POSTENCAP,E OF SAMPLE PT169,BEAM,VIA2 | <0.1 |
| 519 | B447-2 | 31 | 04Z2533 | 444-08302004-213-119 | B447 BIAS SAMPLE, POST FIXATIVE, N BEAMS NEAR MID. OF RM, VIA 2 | <0.1 |
| 520 | B447-2 | 31 | 04Z2533 | 444-08302004-213-120 | B447 BIAS SAMPLE ABOVE PT 39, POST FIXATIVE,BEAMS, VIA 2 | <0.1 |
| 521 | B447-2 | 31 | 04Z2533 | 444-08302004-213-121 | B447 BIAS SAMPLE, POST FIXATIVE,NW BEAMS NEAR PLENUM, VIA 2 | <0.1 |
| 522 | B447-2 | 31 | 04Z2533 | 444-08302004-213-122 | B447 BIAS SAMPLE, POST FIXATIVE,W BEAMS NEAR PLENUM, VIA 2 | <0.1 |
| 523 | B447-2 | 406B | 04Z2562 | 444-09092004-213-147 | B447 PDS POSTENCAP,BEAM/PASSTHRU,NW CORNER,VIA 2 | <0.1 |
| 524 | B447-2 | 406B | 04Z2562 | 444-09092004-213-148 | B447 PDS POSTENCAP,BEAM, ABOVE STAIRS TO 36,VIA2 | <0.1 |
| 525 | B447-2 | 406B | 04Z2562 | 444-09092004-213-149 | B447 PDS POSTENCAP,BEAM,S/CENTER AREA OF ROOM,VIA2 | <0.1 |
| 526 | B447-2 | 406 | 04Z2562 | 444-09092004-213-150 | B447 PDS POSTENCAP,BEAM,N WALL/CENTER OF RM, VIA2 | <0.1 |
| 527 | B447-2 | 406 | 04Z2562 | 444-09092004-213-151 | B447 PDS POSTENCAP,BEAM,N WALL/CENTER OF RM, VIA2 | <0.1 |

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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 528 | B447-2 | 406 | 04Z2562 | 444-09092004-213-152 | B447 PDS POSTENCAP,BEAM,N WALL/CENTER OF RM, VIA2 | <0.1 |
| 529 | B447-2 | 405A | 04Z2562 | 444-09092004-213-153 | B447 PDS POSTENCAP,SE OF SAMPLE PT 171,BEAMS,VIA2 | <0.1 |
| 530 | B447-2 | 405 | 04D1176 | 444-09132004-213-515 | B447 POSTENCAP;BIAS RESAMPLE PT530,BEAM,VIA2 | <0.1 |
| 530 | B447-2 | 405 | 04Z2562 | 444-09092004-213-156 | B447 PDS POSTENCAP:SW OF SAMPLE PT 172,BEAMS,VIA2 | 0.132 |
| 531 | B447-2 | 405 | 04D1176 | 444-09132004-213-513 | B447 POSTENCAP;BIAS RESAMPLE PT531,BEAM,VIA2 | <0.1 |
| 531 | B447-2 | 405 | 04Z2562 | 444-09092004-213-157 | B447 PDS POSTENCAP:SW OF SAMPLE PT 171,BEAMS,VIA2 | 0.112 |
| 532 | B447-2 | 406 | 04Z2562 | 444-09092004-213-158 | B447 PDS POSTENCAP,SW OF SAMPLE PT 165,BEAMS,VIA2 | <0.1 |
| 533 | B447-2 | 406 | 04Z2562 | 444-09092004-213-159 | B447 PDS POSTENCAP,N OF SAMPLE PT 165,BEAMS,VIA2 | <0.1 |
| 534 | B447-2 | 406 | 04Z2562 | 444-09092004-213-161 | B447 PDS POSTENCAP,S OF SAMPLE PT 165,BEAMS,VIA2 | <0.1 |
| 535 | B447-2 | 405 | 04Z2562 | 444-09092004-213-162 | B447 PDS POSTENCAP,W OF SAMPLE PT 171,BEAMS,VIA2 | <0.1 |
| 536 | B447-2 | 405B | 04D1176 | 444-09132004-213-512 | B447POSTENCAP;BIAS RESAMPLE PT536,BEAM,VIA2 | 0.125 |
| 536 | B447-2 | 405B | 04D1177 | 444-09152004-213-701 | B447-POSTENCAP:SAMPLE PT 536,BEAM,VIA2 | <0.1 |
| 536 | B447-2 | 405B | 04Z2562 | 444-09092004-213-163 | B447 PDS POSTENCAP,N OF SAMPLE PT 174,BEAMS,VIA2 | 0.116 |
| 537 | B447-2 | 405B | 04Z2562 | 444-09092004-213-164 | B447 PDS POSTENCAP,N OF SAMPLE PT 174,BEAMS,VIA2 | <0.1 |
| 538 | B447-2 | 405B | 04Z2562 | 444-09092004-213-165 | B447 PDS POSTENCAP,NE OF SAMPLE PT 174,BEAMS,VIA2 | <0.1 |
| 539 | B447-2 | 405B | 04Z2562 | 444-09092004-213-166 | B447 PDS POSTENCAP,SW OF SAMPLE PT 174,BEAMS,VIA2 | <0.1 |
| 540 | B447-2 | 405B | 04Z2562 | 444-09092004-213-168 | B447 PDS POSTENCAP,E OF SAMPLE PT 178,BEAMS,VIA2 | <0.1 |
| 541 | B447-2 | 405B | 04Z2562 | 444-09092004-213-169 | B447 PDS POSTENCAP,NE OF SAMPLE PT 178,BEAMS,VIA2 | <0.1 |
| 542 | B447-2 | 405B | 04Z2562 | 444-09092004-213-171 | B447 PDS POSTENCAP,E OF SAMPLE PT 178,BEAMS,VIA2 | <0.1 |
| 543 | B447-2 | 405B | 04Z2562 | 444-09092004-213-172 | B447 PDS POSTENCAP,SE OF SAMPLE PT 178,BEAMS,VIA2 | <0.1 |
| 544 | B447-2 | 405B | 04Z2562 | 444-09092004-213-174 | B447 PDS POSTENCAP,NW OF SAMPLE PT 178,BEAMS,VIA2 | <0.1 |
| 545 | B447-2 | 405B | 04Z2562 | 444-09092004-213-175 | B447 PDS POSTENCAP,E OF SAMPLE PT 191,IN PIT,VIA2 | <0.1 |
| 546 | B447-2 | 405B | 04Z2562 | 444-09092004-213-177 | B447 PDS POSTENCAP,W OF SAMPLE PT 191,IN | <0.1 |
| 547 | B447-2 | 405B | 04D1176 | 444-09132004-213-516 | B447 POSTENCAP;BIAS RESAMPLE PT547,INSIDE PIT SUMP | <0.1 |
| 547 | B447-2 | 405B | 04Z2562 | 444-09092004-213-178 | B447 PDS POSTENCAP,N OF SAMPLE PT191,IN PIT,VIA2 | 1.22 |
| 548 | B447-2 | 405B | 04Z2562 | 444-09092004-213-179 | B447 PDS POSTENCAP,N OF SAMPLE PT 191,IN PIT,VIA2 | <0.1 |
| 550 | B447-2 | 405B | 04Z2562 | 444-09092004-213-181 | B447 PDS POSTENCAP,N OF SAMPLE PT 189,BEAMS,VIA2 | <0.1 |
| 551 | B447-2 | 405B | 04Z2562 | 444-09092004-213-183 | B447 PDS POSTENCAP,SW OF SAMPLE PT 189,BEAMS,VIA2 | <0.1 |
| 552 | B447-2 | 405B | 04Z2562 | 444-09092004-213-184 | B447 PDS POSTENCAP,W OF SAMPLE PT 189,BEAMS,VIA2 | <0.1 |
| 553 | B447-2 | 405B | 04Z2562 | 444-09092004-213-185 | B447 PDS POSTENCAP,W OF SAMPLE PT 189,BEAMS,VIA2 | <0.1 |
| 554 | B447-2 | 405B | 04Z2562 | 444-09092004-213-186 | B447 PDS POSTENCAP,N OF SAMPLE PT 195,BEAMS,VIA 2 | <0.1 |
| 555 | B447-2 | 31 | 04Z2533 | 444-08302004-213-155 | B447 BIA SAMPLE -POST FIXATIVE STEPS TO 406A VIA2 | 0.178 |
| 555 | B447-2 | 31 | 04Z2563 | 444-09092004-213-216 | B447 POST ENCAP SAMPLE POINT 555 -STEPS TO 31, TOP,VIA 2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 556 | B447-2 | 31 | 04D1177 | 444-09152004-213-736 | B447-POSTENCAP:SAMPLE 556,SUMP NEAR STAIRS,VIA2 | <0.1 |
| 556 | B447-2 | 31 | 04Z2533 | 444-08302004-213-156 | B447-BIA SAMPLE - POST FIXATIVE PIT S OF STAIRS, VIA2 | 0.587 |
| 556 | B447-2 | 31 | 04Z2563 | 444-09092004-213-219 | B447-POST ENCAP SAMPLE POINT 556 -LIP OF PIT UNDER STEPS,VIA 2 | 0.248 |
| 557 | B447-2 | 405B | 04Z2562 | 444-09092004-213-187 | B447 PDS POSTENCAP,N OF SAMPLE PT 195,BEAMS,VIA 2 | <0.1 |
| 558 | B447-2 | 405B | 04Z2562 | 444-09092004-213-190 | B447 PDS POSTENCAP,S OF SAMPLE PT 184,BEAMS,VIA2 | <0.1 |
| 559 | B447-2 | 405B | 04Z2562 | 444-09092004-213-191 | B447 PDS POSTENCAP,SW OF SAMPLE PT 184,BEAMS,VIA2 | <0.1 |
| 560 | B447-2 | 405B | 04Z2562 | 444-09092004-213-192 | B447 PDS POSTENCAP,W OF SAMPLE PT 184,BEAMS,VIA2 | <0.1 |
| 561 | B447-2 | 405B | 04Z2562 | 444-09092004-213-193 | B447 PDS POSTENCAP,W OF SAMPLE PT 195,BEAMS,VIA2 | <0.1 |
| 562 | B447-2 | 405B | 04Z2562 | 444-09092004-213-194 | B447 PDS POSTENCAP,SW OF SAMPLE PT 195,BEAMS,VIA2 | <0.1 |
| 563 | B447-2 | 405B | 04Z2562 | 444-09092004-213-195 | B447 PDS POSTENCAP,CRANE RAILS, VIA 2 | <0.1 |
| 564 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-209 | B447 POST ENCAP ASSOCIATED WITH SAMPLE POINT 461 - 501 DOOR, UPPER END, VIA2 | <0.1 |
| 565 | B447-2 | 447 Elevator | 04Z2563 | 444-09092004-213-207 | B447 POST ENCAP - S OF SAMPLE POINT 460, FLOOR, VIA2 | <0.1 |
| 566 | B447-2 | 31 | 04Z2563 | 444-09092004-213-217 | B447 POST ENCAPWEST OF SAMLE POINT 555 -STEPS TO 31, MIDDLE STEPS,VIA 2 | <0.1 |
| 567 | B447-2 | 31 | 04Z2563 | 444-09092004-213-218 | B447 POST ENCAPWEST OF SAMPLE POINT 555 -STEPS TO 31, LOWER STEPS,VIA 2 | <0.1 |
| 568 | B447-2 | 31 | 04Z2563 | 444-09092004-213-220 | B447 POST ENCAP SOUTH OF SAMPLE POINT 556 - METAL LID OF PIT UNDER STEPS,VIA 2 | <0.1 |
| 569 | B447-2 | 32 | 04Z2563 | 444-09092004-213-231 | B447 POST ENCAP SOUTH WEST OF SAMPLE POINT 473 -PIPE PASSTHRUS, OVERHEAD, VIA2 | <0.1 |
| 570 | B447-2 | 32 | 04Z2563 | 444-09092004-213-232 | B447 POST ENCAP SOUTH EAST OF SAMPLE POINT 473 - PIPE PASSTHRUS, OVERHEAD, VIA2 | <0.1 |
| 571 | B447-2 | 32 | 04Z2563 | 444-09092004-213-234 | B447 POST ENCAP NORTH WEST OF SAMPLE POINT 473 -PIPE PASSTHRUS, OVERHEAD, VIA2 | <0.1 |
| 572 | B447-2 | 32 | 04Z2563 | 444-09092004-213-235 | B447 POST ENCAP NORTH WEST OF SAMPLE POINT 473 -PIPE PASSTHRUS, OVERHEAD, VIA2 | <0.1 |
| 573 | B447-2 | 405B | 04D1176 | 444-09132004-213-502 | B447 POSTENCAP;NE OF BIAS RESAMPLE PT178,BEAM,VIA2 | <0.1 |
| 574 | B447-2 | 405B | 04D1176 | 444-09132004-213-503 | B447 POSTENCAP;NE OF BIAS RESAMPLE PT178,BEAM,VIA2 | <0.1 |
| 575 | B447-2 | 405B | 04D1176 | 444-09132004-213-504 | B447 POSTENCAP;N OF BIAS RESAMPLE PT178,BEAM,VIA2 | <0.1 |
| 576 | B447-2 | 405B | 04D1176 | 444-09132004-213-505 | B447 POSTENCAP;W OF BIAS RESAMPLE PT178,BEAM,VIA2 | <0.1 |
| 577 | B447-2 | 406B | 04D1176 | 444-09132004-213-506 | B447 POSTENCAP;E OF BIAS RESAMPLE PT169,BEAM,VIA2 | <0.1 |
| 578 | B447-2 | 406B | 04D1176 | 444-09132004-213-507 | B447 POSTENCAP;E OF BIAS RESAMPLE PT169,BEAM,VIA2 | <0.1 |
| 579 | B447-2 | 406B | 04D1176 | 444-09132004-213-509 | B447 POSTENCAP;W OF BIAS RESAMPLE PT169,BEAM,VIA2 | <0.1 |
| 580 | B447-2 | 406B | 04D1176 | 444-09132004-213-510 | B447 POSTENCAP;W OF BIAS RESAMPLE PT169,BEAM,VIA2 | <0.1 |
| 581 | B447-2 | 405B | 04D1176 | 444-09132004-213-511 | B447 POSTENCAP;N OF BIAS RESAMPLE PT 536,BEAM,VIA2 | <0.1 |
| 582 | B447-2 | 405 | 04D1176 | 444-09132004-213-514 | B447 POSTENCAP;N OF BIAS RESAMPLE PT530,BEAM,VIA2 | <0.1 |

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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 583 | B447-2 | 405B | 04D1176 | 444-09132004-213-517 | B447 POSTENCAP;NORTH OF BIAS RESAMPLE PT 547,LIP OF PITSUMP | <0.1 |
| 584 | B447-2 | 405B | 04D1176 | 444-09132004-213-518 | B447 POSTENCAP;E OFBIAS RESAMPLE PT547,PIT SUMP | <0.1 |
| 585 | B447-2 | 405B | 04D1176 | 444-09132004-213-520 | B447 POSTENCAP;S OF BIAS RESAMPLE PT 510, FLOOR VIA 2 | <0.1 |
| 586 | B447-2 | 405B | 04D1176 | 444-09132004-213-521 | B447 POSTENCAP;S OF BIAS RESAMPLE PT 510, FLOOR VIA 2 | <0.1 |
| 587 | B447-2 | 405B | 04D1176 | 444-09132004-213-522 | B447 POSTENCAP;SW OF BIAS RESAMPLE PT 510, FLOOR VIA 2 | <0.1 |
| 588 | B447-2 | 405B | 04D1176 | 444-09132004-213-523 | B447 POSTENCAP;SW OF BIAS RESAMPLE PT 510, FLOOR VIA 2 | <0.1 |
| 593 | B447-2 | 401 | 04Z2564 | 444-09112004 213-302 | B447-POSTENCAP E OF BIAS SAMPLE PT 310,FLOOR,VIA2 | <0.1 |
| 594 | B447-2 | 402 | 04Z2564 | 444-09112004 213-303 | B447-POSTENCAP E OF BIAS SAMPLE PT 310,FLOOR,VIA2 | <0.1 |
| 595 | B447-2 | 402 | 04Z2564 | 444-09112004 213-304 | B447-POSTENCAP SE OF BIAS SAMPLE PT 310,FLOOR,VIA2 | <0.1 |
| 596 | B447-2 | 402 | 04Z2564 | 444-09112004 213-305 | B447-POSTENCAP S OF BIAS SAMPLE PT 310,FLOOR,VIA2 | <0.1 |
| 597 | B447-2 | 410 | 04Z2564 | 444-09112004 213-306 | B447-POSTENCAP N OF BIAS SAMPLE PT 353,FLOOR,VIA2 | <0.1 |
| 598 | B447-2 | 410 | 04Z2564 | 444-09112004 213-308 | B447-POSTENCAP W OF BIAS SAMPLE PT 353,FLOOR,VIA2 | <0.1 |
| 599 | B447-2 | 410 | 04Z2564 | 444-09112004 213-309 | B447-POSTENCAP NW OF BIAS SAMPLE PT 353,FLOOR,VIA2 | <0.1 |
| 600 | B447-2 | 410 | 04Z2564 | 444-09112004 213-310 | B447-POSTENCAP NW OF BIAS SAMPLE PT 353,FLOOR,VIA2 | <0.1 |
| 601 | B447-2 | 410 | 04Z2564 | 444-09112004 213-313 | B447-POSTENCAP S OF SAMPLE PT 340,FLOOR,VIA2 | <0.1 |
| 602 | B447-2 | 410 | 04Z2564 | 444-09112004 213-314 | B447-POSTENCAP SE OF SAMPLE PT 341,FLOOR,VIA2 | <0.1 |
| 603 | B447-2 | 410 | 04Z2564 | 444-09112004 213-315 | B447-POSTENCAP E OF SAMPLE PT 341,FLOOR,VIA2 | <0.1 |
| 604 | B447-2 | 407A | 04Z2564 | 444-09112004 213-316 | B447-POSTENCAP S OF SAMPLE PT 340,FLOOR,VIA2 | <0.1 |
| 605 | B447-2 | 407A | 04Z2564 | 444-09112004 213-317 | B447-POSTENCAP SE OF SAMPLE PT 341,FLOOR,VIA2 | <0.1 |
| 606 | B447-2 | 407A | 04Z2564 | 444-09112004 213-318 | B447-POSTENCAP N OF SAMPLE PT 352,FLOOR,VIA2 | <0.1 |
| 607 | B447-2 | 407A | 04Z2564 | 444-09112004 213-319 | B447-POSTENCAP E OF SAMPLE PT 352,FLOOR,VIA2 | <0.1 |
| 608 | B447-2 | 407A | 04Z2564 | 444-09112004 213-321 | B447-POSTENCAP E OF SAMPLE PT 352,FLOOR,VIA2 | <0.1 |
| 609 | B447-2 | 407A | 04Z2564 | 444-09112004 213-323 | B447-POSTENCAP E OF SAMPLE PT 337,FLOOR,VIA2 | <0.1 |
| 610 | B447-2 | 407A | 04Z2564 | 444-09112004 213-324 | B447-POSTENCAP S OF SAMPLE PT 337,FLOOR,VIA2 | <0.1 |
| 611 | B447-2 | 407A | 04Z2564 | 444-09112004 213-325 | B447-POSTENCAP SE OF SAMPLE PT 337,FLOOR,VIA2 | <0.1 |
| 612 | B447-2 | 407A | 04Z2564 | 444-09112004 213-327 | B447-POSTENCAP E OF SAMPLE PT 351,STEPS,VIA2 | <0.1 |
| 613 | B447-2 | 407A | 04D1177 | 444-09152004-213-733 | B447-POSTENCAP:SAMPLE 613,STEPS TO RM. 501,VIA2 | <0.1 |
| 613 | B447-2 | 407A | 04Z2564 | 444-09112004-213-328 | B447-POSTENCAP E OF SAMPLE PT 351 STEPS,VIA2 | 0.198 |
| 614 | B447-2 | 407A | 04D1177 | 444-09152004-213-734 | B447-POSTENCAP:SAMPLE 614,STEPS TO RM. 31,VIA2 | <0.1 |
| 614 | B447-2 | 407A | 04Z2564 | 444-09112004 213-329 | B447-POSTENCAP N OF SAMPLE PT 351 STEPS,VIA2 | 0.354 |
| 615 | B447-2 | 407A | 04Z2564 | 444-09112004 213-330 | B447-POSTENCAP NE OF SAMPLE PT 351,STEPS,VIA2 | <0.1 |
| 616 | B447-2 | 407A | 04Z2564 | 444-09112004 213-333 | B447-POSTENCAP W OF SAMPLE PT 371,BEAM,VIA2 | <0.1 |
| 617 | B447-2 | 407A | 04Z2564 | 444-09112004 213-334 | B447-POSTENCAP S OF SAMPLE PT 371,BEAM,VIA2 | <0.1 |
| 618 | B447-2 | 407A | 04Z2564 | 444-09112004 213-335 | B447-POSTENCAP SW OF SAMPLE PT 371,BEAM,VIA2 | <0.1 |
| 619 | B447-2 | 407A | 04Z2564 | 444-09112004 213-336 | B447-POSTENCAP BIAS SAMPLE OF TRANSITE/BEAM@E MEZZ | <0.1 |
| 620 | B447-2 | 407A | 04Z2564 | 444-09112004 213-337 | B447-POSTENCAP NW OF SAMPLE PT 372,BEAM,VIA2 | <0.1 |
| 621 | B447-2 | 407A | 04Z2564 | 444-09112004 213-338 | B447-POSTENCAP N OF SAMPLE PT 372,BEAM,VIA2 | <0.1 |
| 622 | B447-2 | 407A | 04Z2564 | 444-09112004 213-339 | B447-POSTENCAP NW OF SAMPLE PT 370,BEAM,VIA2 | <0.1 |
| 623 | B447-2 | 407A | 04Z2564 | 444-09112004 213-340 | B447-POSTENCAP NW OF SAMPLE PT 370,BEAM,VIA2 | <0.1 |
| 624 | B447-2 | 407A | 04Z2564 | 444-09112004 213-341 | B447-POSTENCAP NE OF SAMPLE PT 372,BEAM,VIA2 | <0.1 |
| 625 | B447-2 | 407A | 04Z2564 | 444-09112004 213-342 | B447-POSTENCAP NW OF SAMPLE PT 372,BEAM,VIA2 | <0.1 |
| 626 | B447-2 | 408 | 04Z2564 | 444-09112004 213-344 | B447-POSTENCAP W OF SAMPLE PT365,TOP OF BLOCK WALL | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 627 | B447-2 | 408 | 04Z2564 | 444-09112004 213-345 | B447-POSTENCAP S OF SAMPLE PT365,TOP OF BLOCK WALL | <0.1 |
| 628 | B447-2 | 407A | 04D1177 | 444-09152004-213-718 | B447-POSTENCAP:SAMPLE PT 628,PASSTHRU,VIA2 | <0.1 |
| 628 | B447-2 | 407A | 04Z2564 | 444-09112004 213-346 | B447-POSTENCAP SW OF SAMPLE PT 369,BEAM,VIA2 | 0.294 |
| 629 | B447-2 | 407A | 04Z2564 | 444-09112004 213-347 | B447-POSTENCAP SW OF SAMPLE PT 369,BEAM,VIA2 | <0.1 |
| 630 | B447-2 | 407A | 04Z2564 | 444-09112004 213-348 | B447-POSTENCAP SW OF SAMPLE PT 369,BEAM,VIA2 | <0.1 |
| 631 | B447-2 | 402 | 04Z2564 | 444-09112004 213-351 | B447-POSTENCAP N OF SAMPLE PT 368,BEAM,VIA2 | <0.1 |
| 632 | B447-2 | 402 | 04Z2564 | 444-09112004 213-352 | B447-POSTENCAP NW OF SAMPLE PT 367,BEAM,VIA2 | <0.1 |
| 633 | B447-2 | 407A | 04D1177 | 444-09152004-213-713 | B447-POSTENCAP:SAMPLE PT 633,BEAM,VIA2 | <0.1 |
| 633 | B447-2 | 407A | 04Z2564 | 444-09112004 213-355 | B447-POSTENCAP N OF SAMPLE PT 363,BEAM,VIA 2 | 0.16 |
| 634 | B447-2 | 407A | 04Z2564 | 444-09112004 213-357 | B447-POSTENCAP E OF SAMPLE PT 363,BEAM,VIA 2 | <0.1 |
| 635 | B447-2 | 407A | 04Z2564 | 444-09112004 213-360 | B447-POSTENCAP E OF SAMPLE PT 379,UNDERSIDE MEZZ | <0.1 |
| 636 | B447-2 | 407A | 04Z2564 | 444-09112004 213-363 | B447-POSTENCAP NE OF SAMPLE PT 379,FLOOR,VIA 2 | <0.1 |
| 637 | B447-2 | 407A | 04Z2564 | 444-09112004 213-365 | B447-POSTENCAP N OF SAMPLE PT 376,BEAM,VIA 2 | <0.1 |
| 638 | B447-2 | 407A | 04Z2564 | 444-09112004 213-366 | B447-POSTENCAP N OF SAMPLE PT 376,BEAM,VIA 2 | <0.1 |
| 639 | B447-2 | 407A | 04Z2564 | 444-09112004 213-369 | B447-POSTENCAP W OF SAMPLE PT 380,BEAM,VIA 2 | <0.1 |
| 640 | B447-2 | 407A | 04Z2564 | 444-09112004 213-376 | B447-POSTENCAP E OF SAMPLE PT 389,FLOOR,VIA 2 | <0.1 |
| 641 | B447-2 | 407A | 04Z2564 | 444-09112004 213-377 | B447-POSTENCAP W OF SAMPLE PT 386,FLOOR,VIA 2 | <0.1 |
| 642 | B447-2 | 409 | 04Z2564 | 444-09112004 213-379 | B447-POSTENCAP SW OF SAMPLE PT 412,BEAM,VIA 2 | <0.1 |
| 643 | B447-2 | 409 | 04Z2564 | 444-09112004 213-381 | B447-POSTENCAP E OF SAMPLE PT 414, BEAM,VIA 2 | <0.1 |
| 644 | B447-2 | 409 | 04Z2564 | 444-09112004 213-382 | B447-POSTENCAP W OF SAMPLE PT 414, BEAM,VIA 2 | <0.1 |
| 645 | B447-2 | 409 | 04Z2564 | 444-09112004 213-384 | B447-POSTENCAP W OF SAMPLE PT 415, BEAM,VIA 2 | <0.1 |
| 646 | B447-2 | 409 | 04Z2564 | 444-09112004 213-385 | B447-POSTENCAP SW OF SAMPLE PT 415, BEAM,VIA 2 | <0.1 |
| 647 | B447-2 | 409 | 04Z2564 | 444-09112004 213-386 | B447-POSTENCAP W OF SAMPLE PT 415, BEAM,VIA 2 | <0.1 |
| 648 | B447-2 | 409 | 04Z2564 | 444-09112004 213-387 | B447-POSTENCAP E OF SAMPLE PT 418,BEAM,VIA 2 | <0.1 |
| 649 | B447-2 | 409 | 04Z2564 | 444-09112004 213-388 | B447-POSTENCAP SW OF SAMPLE PT 412,BEAM,VIA 2 | <0.1 |
| 650 | B447-2 | 409 | 04Z2564 | 444-09112004 213-389 | B447-POSTENCAP S OF SAMPLE PT 414, BEAM,VIA 2 | <0.1 |
| 651 | B447-2 | 409 | 04Z2564 | 444-09112004 213-390 | B447-POSTENCAP SW OF SAMPLE PT 414, BEAM,VIA 2 | <0.1 |
| 652 | B447-2 | 409 | 04Z2564 | 444-09112004 213-392 | B447-POSTENCAP NW OF SAMPLE PT 418, BEAM,VIA 2 | <0.1 |
| 653 | B447-2 | 410 | 04Z2564 | 444-09112004 213-393 | B447-POSTENCAP NW OF SAMPLE PT 418, BEAM,VIA 2 | <0.1 |
| 654 | B447-2 | 410 | 04Z2564 | 444-09112004 213-394 | B447-POSTENCAP NW OF SAMPLE PT 418, BEAM,VIA 2 | <0.1 |
| 657 | B447-2 | 407A | 04Z2564 | 444-09112004 213-397 | B447-POSTENCAP E OF SAMPLE PT 392, BEAM,VIA 2 | <0.1 |
| 658 | B447-2 | 407A | 04Z2564 | 444-09112004 213-398 | B447-POSTENCAP E OF SAMPLE PT 391, BEAM,VIA 2 | <0.1 |
| 659 | B447-2 | 407A | 04Z2564 | 444-09112004 213-399 | B447-POSTENCAP E OF SAMPLE PT 392, BEAM,VIA 2 | <0.1 |
| 670 | B447-2 | 407A | 04Z2564 | 444-09112004 213-400 | B447-POSTENCAP E OF SAMPLE PT 391, BEAM,VIA 2 | <0.1 |
| 671 | B447-2 | 407A | 04Z2564 | 444-09112004 213-401 | B447-POSTENCAP S OF SAMPLE PT 393, BEAM,VIA 2 | <0.1 |
| 672 | B447-2 | 407A | 04D1177 | 444-09152004-213-730 | B447-POSTENCAP:SAMPLE PT 672,BEAM,VIA2 | <0.1 |
| 672 | B447-2 | 407A | 04Z2564 | 444-09112004 213-402 | B447-POSTENCAP NE OF SAMPLE PT 396,BEAM,VIA 2 | 0.659 |
| 673 | B447-2 | 407A | 04Z2564 | 444-09112004 213-404 | B447-POSTENCAP E OF SAMPLE PT 396, BEAM,VIA 2 | <0.1 |
| 674 | B447-2 | 407A | 04Z2564 | 444-09112004 213-405 | B447-POSTENCAP NW OF SAMPLE PT 393, BEAM,VIA 2 | <0.1 |
| 675 | B447-2 | 407A | 04D1177 | 444-09152004-213-731 | B447-POSTENCAP:SAMPLE 675,BEAM,VIA2 | <0.1 |
| 675 | B447-2 | 407A | 04Z2564 | 444-09112004 213-406 | B447-POSTENCAP W OF SAMPLE PT 393,BEAM,VIA 2 | 1.71 |
| 676 | B447-2 | 410 | 04Z2564 | 444-09112004 213-408 | B447-POSTENCAP NW OF SAMPLE PT 399, BEAM,VIA 2 | <0.1 |
| 677 | B447-2 | 410 | 04Z2564 | 444-09112004 213-409 | B447-POSTENCAP NW OF SAMPLE PT 399, BEAM,VIA 2 | <0.1 |
| 678 | B447-2 | 410 | 04Z2564 | 444-09112004 213-410 | B447-POSTENCAP W OF SAMPLE PT 399, BEAM,VIA 2 | <0.1 |
| 679 | B447-2 | 410 | 04Z2564 | 444-09112004 213-411 | B447-POSTENCAP SW OF SAMPLE PT 399, BEAM,VIA 2 | <0.1 |
| 680 | B447-2 | 410 | 04Z2564 | 444-09112004 213-413 | B447-POSTENCAP NE OF SAMPLE PT 396, BEAM,VIA 2 | <0.1 |
| 681 | B447-2 | 410 | 04Z2564 | 444-09112004 213-414 | B447-POSTENCAP SW OF SAMPLE PT 404, BEAM,VIA 2 | <0.1 |
| 682 | B447-2 | 410 | 04Z2564 | 444-09112004 213-415 | B447-POSTENCAP W OF SAMPLE PT 404, BEAM,VIA 2 | <0.1 |
| 683 | B447-2 | 410 | 04Z2564 | 444-09112004 213-416 | B447-POSTENCAP S OF SAMPLE PT 404, BEAM,VIA 2 | <0.1 |
| 684 | B447-2 | 410 | 04Z2564 | 444-09112004 213-418 | B447-POSTENCAP SE OF SAMPLE PT 404, BEAM,VIA 2 | <0.1 |
| 685 | B447-2 | 410 | 04Z2564 | 444-09112004 213-419 | B447-POSTENCAP N OF SAMPLE PT 414, BEAM,VIA 2 | <0.1 |
| 686 | B447-2 | 410 | 04Z2564 | 444-09112004 213-420 | B447-POSTENCAP N OF SAMPLE PT 382,BEAM,VIA 2 | <0.1 |
| 687 | B447-2 | 410 | 04Z2564 | 444-09112004 213-421 | B447-POSTENCAP N OF SAMPLE PT 382,BEAM,VIA 2 | <0.1 |
| 688 | B447-2 | 410 | 04Z2564 | 444-09112004 213-422 | B447-POSTENCAP NW OF SAMPLE PT 382,BEAM,VIA 2 | <0.1 |
| 689 | B447-2 | 410 | 04Z2564 | 444-09112004 213-423 | B447-POSTENCAP NW OF SAMPLE PT 382,BEAM,VIA 2 | <0.1 |
| 690 | B447-2 | 410 | 04Z2564 | 444-09112004 213-425 | B447-POSTENCAP NE OF SAMPLE PT 408, BEAM,VIA 2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 691 | B447-2 | 411 | 04Z2564 | 444-09112004 213-426 | B447-POSTENCAP E OF SAMPLE PT 408, BEAM,VIA 2 | <0.1 |
| 692 | B447-2 | 411 | 04Z2564 | 444-09112004 213-427 | B447-POSTENCAP NE OF SAMPLE PT 408, BEAM,VIA 2 | <0.1 |
| 693 | B447-2 | 411 | 04Z2564 | 444-09112004 213-428 | B447-POSTENCAP NW OF SAMPLE PT 365,BEAM,VIA2 | <0.1 |
| 694 | B447-2 | 411 | 04Z2564 | 444-09112004 213-429 | B447-POSTENCAP NW OF SAMPLE PT 365,BEAM,VIA2 | <0.1 |
| 695 | B447-2 | 407A | 04Z2564 | 444-09112004 213-430 | B447-POSTENCAP NW OF SAMPLE PT 367,BEAM,VIA2 | <0.1 |
| 696 | B447-2 | 407A | 04Z2564 | 444-09112004 213-431 | B447-POSTENCAP NW OF SAMPLE PT 367,BEAM,VIA2 | <0.1 |
| 697 | B447-2 | 407A | 04Z2564 | 444-09112004 213-432 | B447-POSTENCAP N OF SAMPLE PT 367,BEAM,VIA2 | <0.1 |
| 702 | B447-2 | 405B | 04D1177 | 444-09152004-213-702 | B447-POSTENCAP:N OF SAMPLE PT 536,BEAM,VIA2 | <0.1 |
| 703 | B447-2 | 405B | 04D1177 | 444-09152004-213-703 | B447-POSTENCAP:S OF SAMPLE PT 536,BEAM,VIA2 | <0.1 |
| 704 | B447-2 | 405B | 04D1177 | 444-09152004-213-704 | B447-POSTENCAP:E OF SAMPLE PT 536,BEAM,VIA2 | <0.1 |
| 705 | B447-2 | 405B | 04D1177 | 444-09152004-213-705 | B447-POSTENCAP:W OF SAMPLE PT 536,BEAM,VIA2 | <0.1 |
| 707 | B447-2 | 405B | 04D1177 | 444-09152004-213-707 | B447-POSTENCAP:W OF SAMPLE PT 169,BEAM,VIA2 | <0.1 |
| 708 | B447-2 | 405B | 04D1177 | 444-09152004-213-708 | B447-POSTENCAP:W OF SAMPLE PT 169,BEAM,VIA2 | <0.1 |
| 709 | B447-2 | 405B | 04D1177 | 444-09152004-213-709 | B447-POSTENCAP:E OF SAMPLE PT 169,BEAM,VIA2 | <0.1 |
| 710 | B447-2 | 405B | 04D1177 | 444-09152004-213-710 | B447-POSTENCAP:E OF SAMPLE PT 169,BEAM,VIA2 | <0.1 |
| 714 | B447-2 | 407A | 04D1177 | 444-09152004-213-714 | B447-POSTENCAP:S OF SAMPLE PT 633,BEAM,VIA2 | <0.1 |
| 715 | B447-2 | 407A | 04D1177 | 444-09152004-213-715 | B447-POSTENCAP:E OF SAMPLE PT 633,BEAM,VIA2 | <0.1 |
| 716 | B447-2 | 407A | 04D1177 | 444-09152004-213-716 | B447-POSTENCAP:E OF SAMPLE PT 633,BEAM,VIA2 | <0.1 |
| 717 | B447-2 | 407A | 04D1177 | 444-09152004-213-717 | B447-POSTENCAP:N OF SAMPLE PT 628,PASSTHRU,VIA2 | <0.1 |
| 719 | B447-2 | 407A | 04D1177 | 444-09152004-213-719 | B447-POSTENCAP:W OF SAMPLE PT 628,PASSTHRU,VIA2 | <0.1 |
| 720 | B447-2 | 407A | 04D1177 | 444-09152004-213-720 | B447-POSTENCAP:E OF SAMPLE PT 380,BEAM,VIA2 | <0.1 |
| 722 | B447-2 | 407A | 04D1177 | 444-09152004-213-722 | B447-POSTENCAP:W OF SAMPLE PT 380,BEAM,VIA2 | <0.1 |
| 723 | B447-2 | 407A | 04D1177 | 444-09152004-213-723 | B447-POSTENCAP:W OF SAMPLE PT 380,BEAM,VIA2 | <0.1 |
| 725 | B447-2 | 407A | 04D1177 | 444-09152004-213-725 | B447-POSTENCAP:W OF SAMPLE PT 385,BEAM,VIA2 | <0.1 |
| 726 | B447-2 | 407A | 04D1177 | 444-09152004-213-726 | B447-POSTENCAP:W OF SAMPLE PT 385,BEAM,VIA2 | <0.1 |
| 727 | B447-2 | 407A | 04D1177 | 444-09152004-213-727 | B447-POSTENCAP:NW OF SAMPLE PT 385,BEAM,VIA2 | <0.1 |
| 728 | B447-2 | 407A | 04D1177 | 444-09152004-213-728 | B447-POSTENCAP:SW OF SAMPLE PT 672,BEAM,VIA2 | <0.1 |
| 729 | B447-2 | 407A | 04D1177 | 444-09152004-213-729 | B447-POSTENCAP:S OF SAMPLE PT 672,BEAM,VIA2 | <0.1 |
| 732 | B447-2 | 407A | 04D1177 | 444-09152004-213-732 | B447-POSTENCAP:W OF SAMPLE 675,BEAM,VIA2 | <0.1 |
| 735 | B447-2 | 407A | 04D1177 | 444-09152004-213-735 | B447-POSTENCAP:SAMPLE 613,STEPS TO RM. 501,VIA2 | <0.1 |
| 737 | B447-2 | 31 | 04D1177 | 444-09152004-213-737 | B447-POSTENCAP:W OF SAMPLE 737,SUMP NEAR STAIRS,VIA2 | <0.1 |
| 752 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-752 | B447-POSTENCAP:SAMPLE NEAR PT 458, N DOOR RAIL,VIA2 | <0.1 |
| 754 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-754 | B447-POSTENCAP:R.501 S DOOR RAIL,VIA2 | <0.1 |
| 755 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-755 | B447-POSTENCAP:R.501 S DOOR,VIA2 | <0.1 |
| 758 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-758 | B447-POSTENCAP:NEAR SAMPLE PT 464,R.406A S RAIL,VIA2 | <0.1 |
| 759 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-759 | B447-POSTENCAP:NEAR SAMPLE 464,R.406A DOOR,VIA2 | <0.1 |
| 760 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-760 | B447-POSTENCAP:NEAR SAMPLE PT 203,S MAIN RAIL,VIA2 | <0.1 |
| 762 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-762 | B447-POSTENCAP:SAMPLE NEAR PT 466,N MAIN RAIL,VIA2 | <0.1 |
| 763 | B447-2 | 447 ELEVATOR | 04D1177 | 444-09152004-213-763 | B447-POSTENCAP:SAMPLE NEAR PT 466,N MAIN RAIL,VIA2 | <0.1 |
| 1 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-102 | B447 PDS SAMPLE- POST FIXATIVE,FLOOR, SAMPLE PT 1, VIA 3 | < 0.1 |
| 2 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-743 | B447-POSTENCAP:PDS SAMPLE PT 2,FLOOR, VIA3 | <0.1 |
| 3 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-740 | B447-POSTENCAP:PDS SAMPLE PT 3,FLOOR, VIA3 | <0.1 |
| 4 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-739 | B447-POSTENCAP:PDS SAMPLE PT 4,FLOOR, VIA3 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 5 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-742 | B447-POSTENCAP:PDS SAMPLE PT 5,FLOOR, VIA3 | <0.1 |
| 6 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-744 | B447-POSTENCAP:PDS SAMPLE PT 6,FLOOR, VIA3 | <0.1 |
| 7 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-738 | B447-POSTENCAP:PDS SAMPLE PT 7,FLOOR, VIA3 | <0.1 |
| 8 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-106 | B447 PDS SAMPLE- POST FIXATIVE,FLOOR, SAMPLE PT 8, VIA 3 | < 0.1 |
| 9 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-741 | B447-POSTENCAP:PDS SAMPLE PT 9,FLOOR, VIA3 | <0.1 |
| 10 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-107 | B447 PDS SAMPLE- POST FIXATIVE,FLOOR, SAMPLE PT 10, VIA 3 | < 0.1 |
| 11 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-104 | B447 PDS SAMPLE- POST FIXATIVE,FLOOR, SAMPLE PT 11, VIA 3 | < 0.1 |
| 12 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-108 | B447 PDS SAMPLE- POST FIXATIVE,FLOOR, SAMPLE PT 12, VIA 3 | < 0.1 |
| 13 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-103 | B447 PDS SAMPLE- POST FIXATIVE,FLOOR, SAMPLE PT 13, VIA 3 | < 0.1 |
| 101 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-101 | B447 BIAS SAMPLE- POST FIXATIVE,FLOOR, NW CORNER, VIA 3 | < 0.1 |
| 105 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-105 | B447 BIAS SAMPLE- POST FIXATIVE,FLOOR, E SIDE, NEAR COLUMN, VIA 3 | < 0.1 |
| 109 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-109 | B447 BIAS SAMPLE- POST FIXATIVE,FLOOR, SW AREA @ E COLUMN, VIA 3 | < 0.1 |
| 110 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-110 | B447 BIAS SAMPLE- POST FIXATIVE,FLOOR, SW AREA @ CENTER, VIA 3 | < 0.1 |
| 111 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-111 | B447 BIAS SAMPLE, POST FIXATIVE, WALL, N END, VIA 3 | < 0.1 |
| 112 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-112 | B447 BIAS SAMPLE, POST FIXATIVE, WALL, W SIDE, VIA 3 | < 0.1 |
| 113 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-113 | B447 BIAS SAMPLE, POST FIXATIVE,WALL, S END, VIA 3 | < 0.1 |
| 125 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-125 | B447 BIAS SAMPLE- POST FIXATIVE BEAMS ABOVE PT 12, VIA 3 | 0.179 |
| 125 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-224 | B447 POST ENCAP SAMPLE POINT 125 -BEAMS, S END, VIA 2 | <0.1 |
| 126 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-126 | B447 BIAS SAMPLE- POST FIXATIVE BEAMS ABOVE PT 8, VIA 3 | 0.491 |
| 126 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-228 | B447 POST ENCAP SAMPLE POINT 126 -BEAMS, MIDDLE, VIA 2 | <0.1 |
| 127 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-127 | B447 BIAS SAMPLE, POST FIXATIVE,BEAMS ABOVE PT 9, VIA 3 | < 0.1 |
| 128 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-128 | B447 BIAS SAMPLE, POST FIXATIVE,BEAMS ABOVE PT 7, VIA 3 | < 0.1 |
| 129 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-129 | B447 BIAS SAMPLE, POST FIXATIVE,BEAMS ABOVE PT 1, VIA 3 | < 0.1 |
| 130 | B447-3 | 447 PLENUM CHASE | 04Z2534 | 444-09012004-213-130 | B447 BIAS SAMPLE, POST FIXATIVE,OVERHEAD HATCH WALL, SW AREA; VIA 3 | < 0.1 |
| 131 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-221 | B447 POST ENCAP EAST OF SAMPLE POINT 125 - BEAMS, S END, VIA 2 | <0.1 |
| 132 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-222 | B447 POST ENCAP NORTH EAST OF SAMPLE POINT 125 - BEAMS, S END, VIA 2 | <0.1 |
| 133 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-223 | B447 POST ENCAP NORTH OF SAMPLE POINT 125 - BEAMS, S END, VIA 2 | <0.1 |
| 134 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-225 | B447 POST ENCAP SOUTH EAST OF SAMPLE POINT 126 - BEAMS, MIDDLE, VIA 2 | <0.1 |
| 135 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-226 | B447 POST ENCAP SOUTH WEST OF SAMPLE POINT 126 - BEAMS, MIDDLE, VIA 2 | <0.1 |



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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 136 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-745 | B447-POSTENCAP:SAMPLE PT 136,CEILING/BEAM,VIA3 | <0.1 |
| 136 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-227 | B447 POST ENCAP EAST OF SAMPLE POINT 126 - BEAMS, MIDDLE, VIA 2 | 0.424 |
| 137 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-229 | B447 POST ENCAP NORTH EAST OF SAMPLE POINT 126 - BEAMS, N END, VIA 2 | <0.1 |
| 138 | B447-3 | 447 PLENUM CHASE | 04Z2563 | 444-09092004-213-230 | B447 POST ENCAP NORTH OF SAMPLE POINT 126 - BEAMS, N END, VIA 2 | <0.1 |
| 139 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-746 | B447-POSTENCAP:N OF SAMPLE PT 136,CEILING/BEAM,VIA3 | <0.1 |
| 140 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-747 | B447-POSTENCAP:S OF SAMPLE PT 136,CEILING/BEAM,VIA3 | <0.1 |
| 141 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-748 | B447-POSTENCAP:E OF SAMPLE PT 136,CEILING/BEAM,VIA3 | <0.1 |
| 142 | B447-3 | 447 PLENUM CHASE | 04D1177 | 444-09152004-213-749 | B447-POSTENCAP:W OF SAMPLE PT 136,CEILING/BEAM,VIA3 | <0.1 |
| 418 | B447-3 | 447 PLENUM CHASE | 04Z2395 | 444-08172004-607-418 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR HCA - VIA 3 | 0.428 |
| 419 | B447-3 | 447 PLENUM CHASE | 04Z2395 | 444-08172004-607-419 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR HCA - VIA 3 | 0.343 |
| 420 | B447-3 | 447 PLENUM CHASE | 04Z2395 | 444-08172004-607-420 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR HCA - VIA 3 | 0.985 |
| 421 | B447-3 | 447 PLENUM CHASE | 04Z2395 | 444-08172004-607-421 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR - VIA 3 | 2.79 |
| 422 | B447-3 | 447 PLENUM CHASE | 04Z2395 | 444-08172004-607-422 | B447 PDS BIAS SAMPLE POINT - PRE FIXATIVE APPLICATION - FLOOR - VIA 3 | 1.2 |
| 1 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-201 | B447 PDS CHARACTERIZATION - TOP OF HATCH INTO ROOM 406 | <0.1 |
| 2 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-202 | B447 PDS CHARACTERIZATION - ON HORIZONTAL BEAM | <0.1 |
| 3 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-203 | B447 PDS CHARACTERIZATION - ON TOP OF BEAM AT WALLED OFF AREA | <0.1 |
| 4 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-204 | B447 PDS CHARACTERIZATION - ON VERTICLE PIPING AND ON BASE | <0.1 |
| 5 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-205 | B447 PDS CHARACTERIZATION - ON FLOOR | <0.1 |
| 6 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-206 | B447 PDS CHARACTERIZATION - ON HORIZONTAL BEAM | <0.1 |
| 7 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-207 | B447 PDS CHARACTERIZATION - ON SPACER BAR | <0.1 |
| 8 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-208 | B447 PDS CHARACTERIZATION - ON FLOOR | <0.1 |
| 9 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-209 | B447 PDS CHARACTERIZATION - ON HORIZONTAL BEAM | <0.1 |
| 10 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-210 | B447 PDS CHARACTERIZATION - ON VERTICLE BEAM | <0.1 |
| 11 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-211 | B447 PDS CHARACTERIZATION - ON FLOOR | <0.1 |
| 12 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-212 | B447 PDS CHARACTERIZATION - ON HORIZONTAL BEAM | <0.1 |
| 13 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-213 | B447 PDS CHARACTERIZATION - ON FLOOR AT BASE OF VERTICLE BEAM | <0.1 |
| 14 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-214 | B447 PDS CHARACTERIZATION - ON HORIZONTAL BEAM | <0.1 |
| 15 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-215 | B447 PDS CHARACTERIZATION - ON FLOOR | 0.118 |
| 15 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-040 | B.447 POSTDECON SAMPLE OF PT15-MEMBRANE FLOOR | <0.1 |
| 16 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-216 | B447 PDS CHARACTERIZATION - ON CAST IRON VENT PIPE | <0.1 |
| 17 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-217 | B447 PDS CHARACTERIZATION - ON SPACER BAR | <0.1 |
| 18 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-218 | B447 PDS CHARACTERIZATION - ON PIPING | <0.1 |
| 19 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-219 | B447 PDS CHARACTERIZATION - ON FLOOR | 0.252 |

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# Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 19 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-045 | B.447 POSTDECON SAMPLE OF PT19-MEMBRANE FLOOR | <0.1 |
| 20 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-220 | B447 PDS CHARACTERIZATION - ON CAST IRON VENT PIPE | <0.1 |
| 21 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-221 | B447 PDS CHARACTERIZATION - INSIDE CUT OFF SE TION OF CAST IRON VENT PIPE | <0.1 |
| 22 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-222 | B447 PDS CHARACTERIZATION - ON PIPING | <0.1 |
| 23 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-223 | B447 PDS CHARACTERIZATION - INSIDE CUT OFF PIPE | <0.1 |
| 24 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-224 | B447 PDS CHARACTERIZATION - ON TOP OF NORTH HATCH INTO ROOM 403 | <0.1 |
| 25 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-225 | B447 PDS CHARACTERIZATION - ON TOP OF CENTER HATCH INTO ROOM 403 | <0.1 |
| 26 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-226 | B447 PDS CHARACTERIZATION - ON CENTER HATCH HANDLES AND SIDE SEALS | <0.1 |
| 27 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-227 | B447 PDS CHARACTERIZATION - ON SOUTH HATCH HANDLES AND SIDE SEALS | <0.1 |
| 28 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-228 | B447 PDS CHARACTERIZATION - ON TOP OF SOUTH HATCH INTO ROOM 403 | 0.108 |
| 28 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-055 | B.447 POSTDECON SAMPLE OF PT28-MEMBRANE FLOOR ON SOUTH HATCH | <0.1 |
| 29 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-229 | B447 PDS CHARACTERIZATION - ON FLOOR | 0.268 |
| 29 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-050 | B.447 POSTDECON SAMPLE OF PT29-MEMBRANE FLOOR | <0.1 |
| 30 | B447-Attic | 447 ATTIC | 04Z2082 | 444-06252004-01-230 | B447 PDS CHARACTERIZATION - ON EAST WALL VENT | <0.1 |
| 31 | B447-Attic | 447 ATTIC | 04Z2084 | 444-07022004-603-001 | B447 PDS CHARACTERIZATION - ON FLOOR AT 3'X2' OPENING | <0.1 |
| 32 | B447-Attic | 447 ATTIC | 04Z2084 | 444-07022004-603-002 | B447 PDS CHARACTERIZATION - ON IRON BEAM AT OPENING | <0.1 |
| 33 | B447-Attic | 447 ATTIC | 04Z2084 | 444-07022004-603-003 | B447 PDS CHARACTERIZATION - ON FLOOR, 20 FEET WEST OF OPENING | <0.1 |
| 34 | B447-Attic | 447 ATTIC | 04Z2084 | 444-07022004-603-004 | B447 PDS CHARACTERIZATION - ON IRON BEAM, 20 FEET WEST OF OPENING | <0.1 |
| 35 | B447-Attic | 447 ATTIC | 04Z2084 | 444-07022004-603-005 | B447 PDS CHARACTERIZATION - ON GREEN TARP, 22 FEET WEST OF OPENING | <0.1 |
| 36 | B447-Attic | 447 ATTIC | 04Z2084 | 444-07022004-603-006 | B447 PDS CHARACTERIZATION - ON IRON BEAM 25 FEET WEST OF OPENING | <0.1 |
| 37 | B447-Attic | 447 ATTIC | 04Z2084 | 444-07022004-603-007 | B447 PDS CHARACTERIZATION - ON PIPE ELBOW, 30 FEET SW OF OPENING | <0.1 |
| 38 | B447-Attic | 447 ATTIC | 04Z2084 | 444-07022004-603-008 | B447 PDS CHARACERIZATION - ON METAL SHEETING, 10 FEET NW OF OPENING | <0.1 |
| 39 | B447-Attic | 447 ATTIC | 04Z2084 | 444-07022004-603-009 | B447 PDS CHARACTERIZATION - ON FLOOR AT "HOT SPOT", CENTER OF WESTERN SECTION OF CRAWL SPACE | <0.1 |
| 41 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-041 | B.447 POSTDECON SAMPLE 3FT N OF PT15-MEMBRANE FLOOR | <0.1 |
| 42 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-042 | B.447 POSTDECON SAMPLE 3FT S OF PT15-MEMBRANE FLOOR | <0.1 |
| 43 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-043 | B.447 POSTDECON SAMPLE 3FT E OF PT15-MEMBRANE FLOOR | <0.1 |
| 44 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-044 | B.447 POSTDECON SAMPLE 3FT W OF PT15-MEMBRANE FLOOR | <0.1 |
| 46 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-046 | B.447 POSTDECON SAMPLE 3FT N OF PT19-MEMBRANE FLOOR | <0.1 |
| 47 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-047 | B.447 POSTDECON SAMPLE 3FT S OF PT19-MEMBRANE FLOOR | <0.1 |
| 48 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-048 | B.447 POSTDECON SAMPLE 3FT E OF PT19-MEMBRANE FLOOR | <0.1 |



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## Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 cm$^2$) |
|---|---|---|---|---|---|---|
| 49 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-049 | B.447 POSTDECON SAMPLE 3FT W OF PT19-MEMBRANE FLOOR | <0.1 |
| 51 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-051 | B.447 POSTDECON SAMPLE 3FT S OF PT29-MEMBRANE FLOOR | <0.1 |
| 52 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-052 | B.447 POSTDECON SAMPLE 3FT N OF PT29-MEMBRANE FLOOR | <0.1 |
| 53 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-053 | B.447 POSTDECON SAMPLE 3FT E OF PT29-MEMBRANE FLOOR | <0.1 |
| 54 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-054 | B.447 POSTDECON SAMPLE 3FT W OF PT29-MEMBRANE FLOOR | <0.1 |
| 56 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-056 | B.447 POSTDECON SAMPLE 3FT S OF PT28-MEMBRANE FLOOR | <0.1 |
| 57 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-057 | B.447 POSTDECON SAMPLE 3FT N OF PT28-MEMBRANE FLOOR | <0.1 |
| 58 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-058 | B.447 POSTDECON SAMPLE 3FT E OF PT28-MEMBRANE FLOOR | <0.1 |
| 59 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-059 | B.447 POSTDECON SAMPLE 3FT W OF PT28-MEMBRANE FLOOR | <0.1 |
| 60 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-060 | B.447 POSTDECON SAMPLE OF MEMBRANE FLOOR, SE AREA | <0.1 |
| 61 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-061 | B.447 POSTDECON SAMPLE OF MEMBRANE FLOOR, SW AREA | <0.1 |
| 62 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-062 | B.447 POSTDECON SAMPLE OF MEMBRANE FLOOR, NW AREA | <0.1 |
| 63 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-063 | B.447 POSTDECON SAMPLE OF MEMBRANE FLOOR, NE AREA | <0.1 |
| 64 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-064 | B.447 POSTDECON SAMPLE OF I-BEAM, E END, N SECTION | <0.1 |
| 65 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-065 | B.447 POSTDECON SAMPLE OF I-BEAM, E END, MIDDLE SECTION | <0.1 |
| 66 | B447-Attic | 447 ATTIC | 04Z2452 | 444-08232004-213-066 | B.447 POSTDECON SAMPLE OF I-BEAM, E END, S SECTION | <0.1 |
| 161 | EXTERIOR | EXTERIOR | 04Z2265 | 444-07282004-213-161 | B. 447 BIAS SAMPLE, DOORWAY @ DOOR 20T; FLOOR | <0.1 |
| 660 (VIA #2) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-101 | B. 447 PDS BIAS SAMPLE POINT- ROOF ON EAST SIDE 20 FEET FROM THE EAST EDGE | <0.1 |
| 661 (VIA #1) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-102 | B. 447 PDS BIAS SAMPLE POINT- ROOF ON WEST SIDE 30 FEET FROM THE WEST EDGE. | <0.1 |
| 662 (VIA #2) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-103 | B. 447 PDS BIAS SAMPLE POINT- NEXT TO NORTH ROLL UP DOOR - ON WEST SIDE OF DOOR ON LEDGE BETWEEN CONCRETE AND CINDER BLOCK WALL | <0.1 |
| 663 (VIA #1) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-104 | B. 447 PDS BIAS SAMPLE POINT- CONCRETE PAD ON WEST SIDE OF BUILDING, IN THE CENTER OF THE PAD | <0.1 |
| 664 (VIA #3) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-105 | B. 447 PDS BIAS SAMPLE POINT- EXTERIOR OF DUCTWORK BETWEEN B447 AND B451, TOP OF DUCT NEXT TO B447 | <0.1 |
| 665 (VIA #2) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-106 | B. 447 PDS BIAS SAMPLE POINT- COOLING TOWER INSIDE ACCESS DOOR ON BEAM THAT SUPPORTS THE FAN | <0.1 |
| 666 (VIA #2) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-107 | B. 447 PDS BIAS SAMPLE POINT- EQUIPMENT NEXT TO COOLING TOWER (GUTTER, PIPE AND EXTERIOR OF DUCT) | <0.1 |
| 667 (VIA #2) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-108 | B. 447 PDS BIAS SAMPLE POINT- WINDOW LEDGE NEXT TO DOOR 16 | <0.1 |
| 668 (VIA #2) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-109 | B. 447 PDS BIAS SAMPLE POINT- SMALL CONCRETE PAD EXTERIOR OF DOOR 15, IN CENTER OF PAD | <0.1 |
| 669 (VIA #2) | EXTERIOR | EXTERIOR | 04D1179 | 444-09142004-620-110 | B. 447 PDS BIAS SAMPLE POINT- CENTER OF CONCRETE PAD EXTERIOR OF DOOR 13T | <0.1 |



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## Building 447 PDSR Be Sample Results Table

| Sample Map Location # | VIA | Room | RIN | Sample Number | Sample Location | Result (ug/100 $cm^2$) |
|---|---|---|---|---|---|---|

**Footnotes:**

(1) Shaded rows are beryllium results prior to the application of fixative. The unshaded rows are the final "as left" condition sample results. Fixative was applied over all elevated locations as well as extending to the boundaries of clean sample locations surrounding the elevated locations. No further investigation sampling is required.

All initial sample locations above 0.1 ug/100cm2 had fixative applied and were then re-sampled.

Also, additonal biased post-fixative samples were collected in the same general area of the initial elevated sample locations.

(2) Gaps in the sample numbering sequence are acceptable. Some sample numbers were never used. Some sample numbers were elevated, then decontaminated, and then resampled using the same initial sample number.



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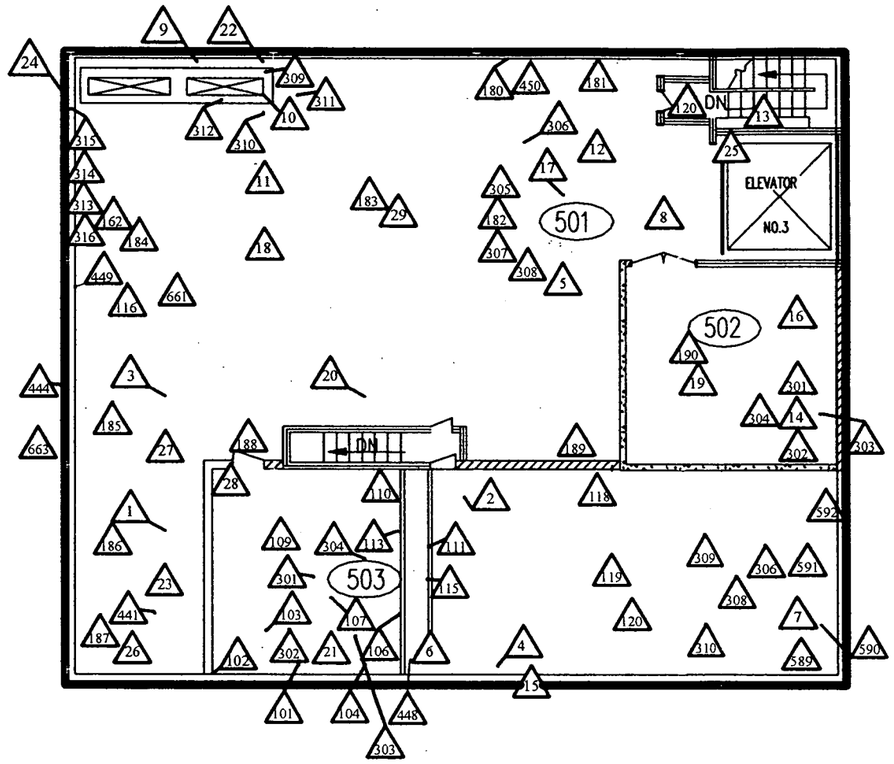


## PDS BERYLLIUM SAMPLE MAP

BLDG: B447 Survey Area: 447-VIA-1 Survey Unit: N/A Classification: N/A

Survey Area/Unit Description: B447, VIA-1, All Rooms

Floor Area: 309 sq.m Total Area: N/A Grid Spaceing for Survey Area: N/A

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 14
0 METERS 5

1 INCH = 14 feet
1 grid sq. = 1 sq. m.

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

Prepared by: Rocky Flats Closure Site Services, LLC

Prepared for: KAISER HILL

File Name: B447 VIA-1 Be.DWG | Sheet: 1 of 1 | Rev: 4

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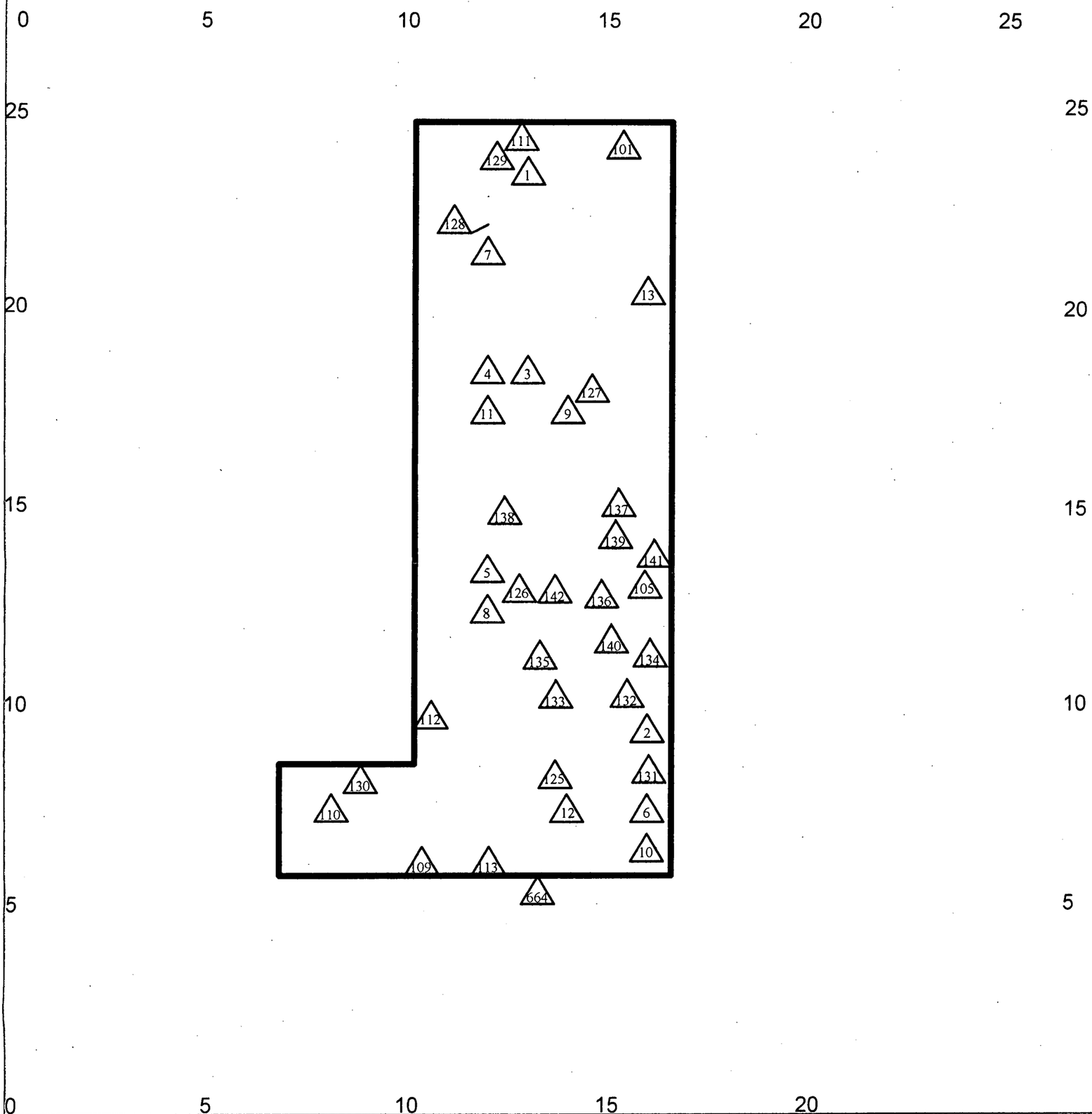
# PDS BERYLLIUM SAMPLE MAP

BLDG: B447 Survey Area: VIA-3 Survey Unit: N/A Classification: N/A

Survey Area/Unit Description: B447-VIA-3 All Rooms

Floor Area: 131 sq.m Total Area: N/A Grid Spaceing for Survey Area: N/A




## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location

N

0 FEET 12

0 METERS 4.0

1 inch = 12 feet

1 grid sq. = 1 sq. m.

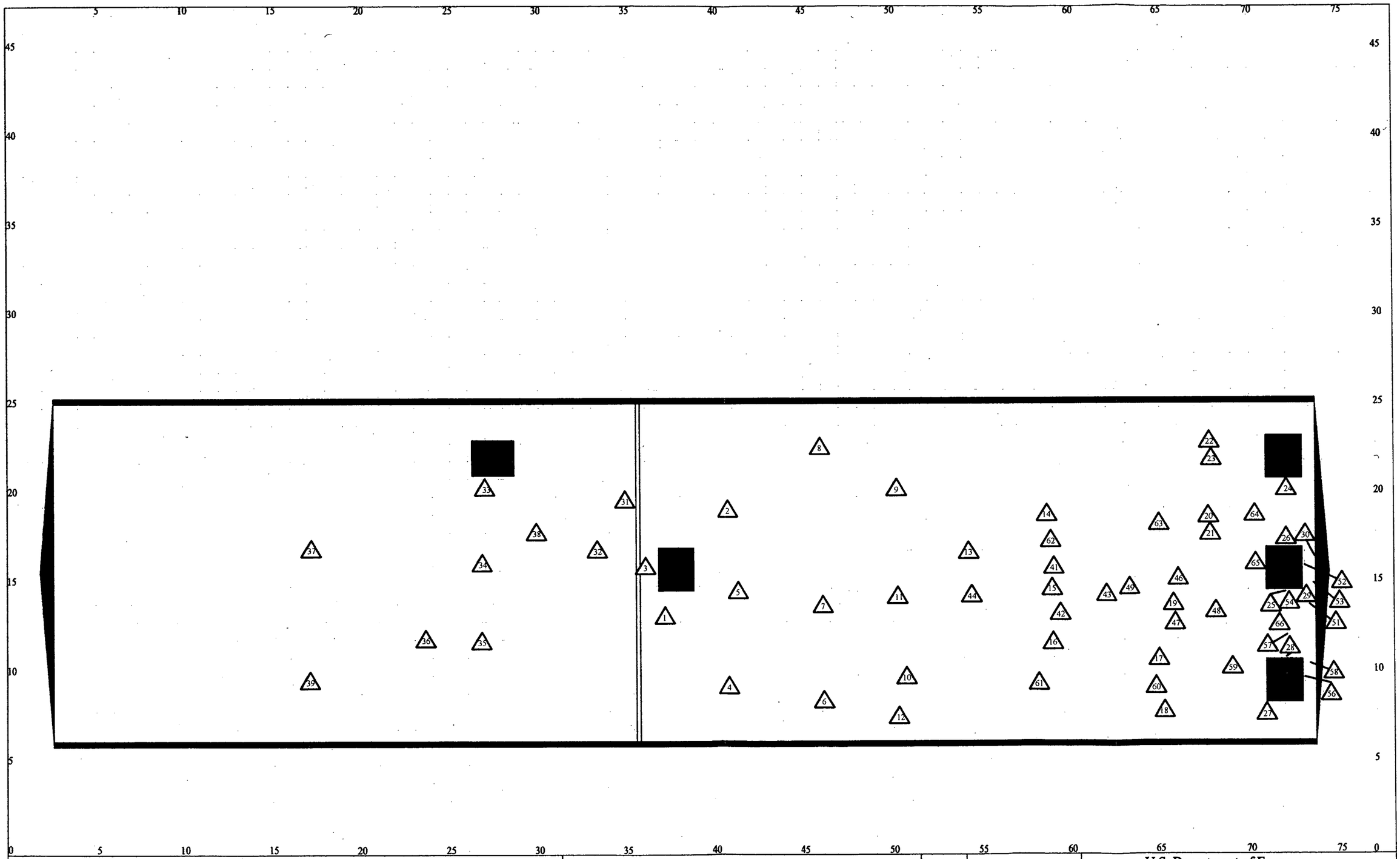
U.S. Department of Energy

Rocky Flats Environmental Technology Site

Prepared by: ROCKY FLATS Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: B447_VIA-3_Be.DWG | Sheet 1of 1 | Rev: 4



## PDS BERYLLIUM SAMPLE MAP

BLDG: 447 Survey Area: ATTIC Survey Unit: **N/A** Classification: N/A

Survey Area/Unit Description: 447 Attic

Floor Area: 1,445 sq.m Total Area: N/A Grid Spaceing for Survey Area: N/A

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CBRCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 INCH 16

0 METERS 5

1 inch = 16 feet

1 grid sq. = 1 sq. m.

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

Prepared by: Rocky Flats Closure Site Services, LLC

Prepared for: KAISER HILL

File Name: B447 VIA-2 SHT 2 Be.DWG | Sheet 2 of 2 | Rev: 1

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# ATTACHMENT C-2

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

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**RCRA/CERCLA Constituents Data Summary – Building 447**
**(RIN04S0378)**

| Sample Location / Media/Sample Number | Sample Map Number | Analysis | Result (mg/L) |
|---|---|---|---|
| Bldg. 447 Elevator Pit/ Concrete Slab/Sample Number: 04S0378-001 | 1 | 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.



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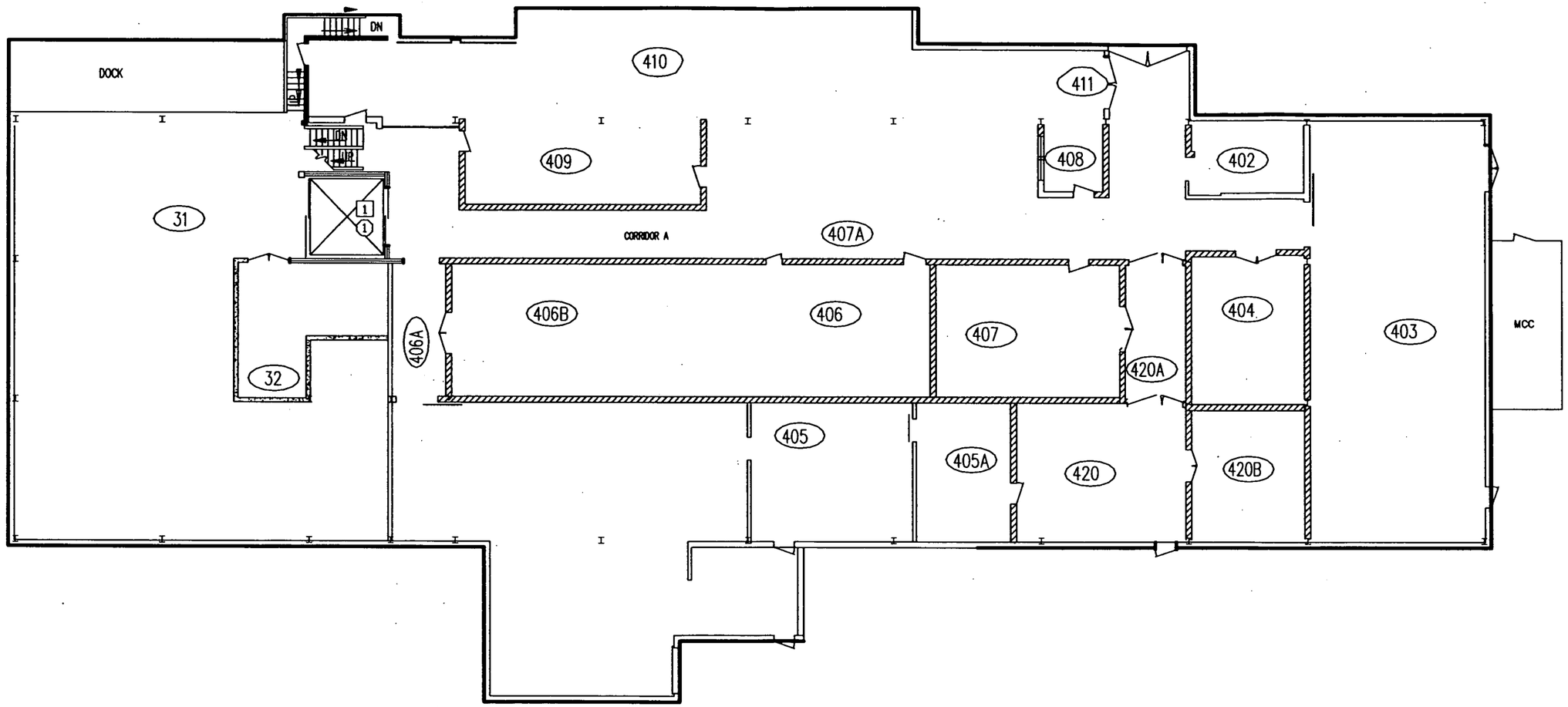
## PCB Data Summary – Building 447
## (RIN04S0396)

| Sample Number | Sample Map Number | Sample Location | Arcolor Analysis | Results (ppm) |
|---|---|---|---|---|
| 04S0396-001 | 1 | Bldg. 447, Elevator Oil | All | < 50 |

**Regulatory Limit for PCB's: 50 ppm**




## PRE-DEMOLITION SURVEY MAP

BLDG: 447 Survey Area: VIA-2 Survey Unit: N/A Classification: N/A

Survey Area/Unit Description: ELEVATOR CHEMICAL SAMPLE MAP, RCRA/CERCLA/PCB

Floor Area: N/A Total Area: N/A Grid Spaceing for Survey Area: N/A

## SURVEY POINT LEGEND

- Radiological RSA & TSA Location
- Radiological RSA , TSA & Sample Location
- Beryllium Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Radiological Scan Area
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 16

0 METERS 5

1 inch = 16 feet
1 grid sq. = 1 sq. m.

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

Prepared by: RF BSS Rocky Flats Closure Site Services, LLC.

Prepared for: KAISER HILL

File Name: PDS 447201 RCRA.DWG | Sheet 1 of 1 | Rev: 0

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| STOLLER RFETS | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | COC: 04S0378#001 ¶04S0378#001 | Page 1 of 2 |
|---|---|---|---|

| | | |
|---|---|---|
| Sampler(s) (time/date) | Contact/Requester PODOLSKY, STEWART / OMAN, KIMBERLY | Telephone No. 7624 / 7129 |
| RIN 04S0378 | Sampling Origin B447 | Purchase Order/Charge Code EDD501PD |
| Project Title BLDG.447 ELEVATOR PIT | Logbook No. Miller | Ice Chest No. Temp. |
| To (Lab) General Engineering | Method of Shipment | Bill of Lading/Air Bill No. 6285-7197-3863 |
| Protocol SI-ASI4-S02-001 | Related COC (if any) 002 | PRE #040127-T130C-001 |

POSSIBLE SAMPLE HAZARDS/REMARKS

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

119851 %

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 |
|---|---|---|---|---|---|---|---|
| 04S0378 -001.001 | | SOLID | 8.23.04 0730 | B447 119851-001 ~~P/C~~ → | 1-Sample | GPC-A-003 (GROSS ALPHA/BETA) [14dF] {GROSS ALPHA; GROSS BETA} | None; 4 C |
| | | | | 119852-001 → | | MET-A-023 (METALS 6010/6010B) [14dF] {See Item 1} | None; 4 C |
| | | | | 119855-001 → | | MET-A-031 (Metals (TCLP)) [14dF] {See Item 2} | None; 4 C |
| | | | | 119857-001 → | | SVO-A-007 (SEMI-VOLATILE ORGANICS 8270B) [14dF] {See Item 3} | None; 4 C |
| | | | | 119858-001 → | | VOA-A-013 (VOLATILE ORGANICS 8260, PREP 5035) [14dF] {See Item 4} | None; 4 C |
| | | | | 119859-001 → | | VOA-A-016 (TCLP VOA 1311/8260) [14dF] {See Item 5} | None; 4 C |

| Relinquished By: | Date/Time | Received By: | Date/Time | Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|---|---|---|---|
| [signature] | 8-24-04 1005 | FTLG #1 | 8-24-04 1005 | FTLG #1 | 8/24/04 1200 | [signature] | 8/24/04 1200 |
| [signature] | 8/24/04 1200 | FED-EX | | Fedex | 0930 8/25/04 | [signature] | 8/25/04 0930 |
| | | | | | | | |

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: 08/23/04 10:14 (Version:coc_r22.rpt)

RIN# 04S0378

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*General Engineering Laboratories, LLC*

# METALS
-1-
## INORGANICS ANALYSIS DATA PACKAGE

**SDG No:** 04S0378-MET **METHOD TYPE:** SW846

**SAMPLE ID:** 119852001 **CLIENT ID:** 04S0378-001.001

**CONTRACT:** KHCO00100BOA

**MATRIX:** MISC SOLID **DATE RECEIVED** 25-AUG-04 **LEVEL:** Low **%SOLIDS:**

| CAS No | Analyte | Result | Units | C | Qual | M | MDL | Instrument ID | Analytical Run |
|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 9880 | mg/kg | | * | P | 0.782 | TRACE2 | 090304-2 |
| 7440-36-0 | Antimony | 0.339 | mg/kg | U | N | P | 0.339 | TRACE2 | 090304-2 |
| 7440-38-2 | Arsenic | 6.3 | mg/kg | B | | P | 0.204 | TRACE2 | 090304-2 |
| 7440-39-3 | Barium | 126 | mg/kg | | *N | P | 0.132 | TRACE2 | 090204-1 |
| 7440-41-7 | Beryllium | 0.15 | mg/kg | B | * | MS | 0.0117 | ICPMS3 | 040904-4 |
| 7440-42-8 | Boron | 11.7 | mg/kg | | * | P | 0.472 | TRACE2 | 090304-2 |
| 7440-43-9 | Cadmium | 0.17 | mg/kg | B | | MS | 0.00778 | ICPMS3 | 040904-4 |
| 7440-70-2 | Calcium | 74900 | mg/kg | | * | P | 2.57 | TRACE2 | 090204-1 |
| 7440-47-3 | Chromium | 15.3 | mg/kg | | * | P | 0.159 | TRACE2 | 090304-2 |
| 7440-48-4 | Cobalt | 3.9 | mg/kg | B | | P | 0.0787 | TRACE2 | 090304-2 |
| 7440-50-8 | Copper | 21.3 | mg/kg | | * | P | 0.2 | TRACE2 | 090304-2 |
| 7439-89-6 | Iron | 11600 | mg/kg | | * | P | 1.55 | TRACE2 | 090304-2 |
| 7439-92-1 | Lead | 8.5 | mg/kg | B | | P | 0.28 | TRACE2 | 090304-2 |
| 7439-93-2 | Lithium | 3.3 | mg/kg | B | *N | MS | 0.0189 | ICPMS3 | 040904-4 |
| 7439-95-4 | Magnesium | 1980 | mg/kg | | N | P | 1.15 | TRACE2 | 090204-1 |
| 7439-96-5 | Manganese | 105 | mg/kg | | *N | P | 0.129 | TRACE2 | 090304-2 |
| 7439-97-6 | Mercury | 0.0043 | mg/kg | B | | AV | 0.000981 | MER179 | 090204S1-3 |
| 7439-98-7 | Molybdenum | 8.4 | mg/kg | B | | P | 0.125 | TRACE2 | 090304-2 |
| 7440-02-0 | Nickel | 23.6 | mg/kg | | * | P | 0.0842 | TRACE2 | 090304-2 |
| 7440-09-7 | Potassium | 1780 | mg/kg | | | P | 3.53 | TRACE2 | 090304-2 |
| 7782-49-2 | Selenium | 1.8 | mg/kg | B | | P | 0.16 | TRACE2 | 090304-2 |
| 7631-86-9 | Silica | 3330 | mg/kg | | *N | P | 2.43 | TRACE2 | 090304-2 |
| 7440-22-4 | Silver | 0.089 | mg/kg | U | | P | 0.089 | TRACE2 | 090304-2 |
| 7440-23-5 | Sodium | 702 | mg/kg | B | N | P | 7.16 | TRACE2 | 090204-1 |
| 7440-24-6 | Strontium | 306 | mg/kg | | * | P | 0.0514 | TRACE2 | 090304-2 |
| 7440-28-0 | Thallium | 0.986 | mg/kg | U | | P | 0.986 | TRACE2 | 090304-2 |

Comments:



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*General Engineering Laboratories, LLC*

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 04S0378-MET METHOD TYPE: SW846

SAMPLE ID: 119852001 CLIENT ID: 04S0378-001.001

CONTRACT: KHCO00100BOA

MATRIX: MISC SOLID DATE RECEIVED 25-AUG-04 LEVEL: Low %SOLIDS:

| CAS No | Analyte | Result | Units | C | Qual | M | MDL | Instrument ID | Analytical Run |
|---|---|---|---|---|---|---|---|---|---|
| 7440-31-5 | Tin | 0.98 | mg/kg | B | | P | 0.376 | TRACE2 | 090304-2 |
| 7440-32-6 | Titanium | 480 | mg/kg | | * | P | 0.0488 | TRACE2 | 090304-2 |
| 7440-61-1 | Uranium | 3 | mg/kg | B | | P | 2.33 | TRACE2 | 090304-2 |
| 7440-62-2 | Vanadium | 130 | mg/kg | | *N | P | 0.0895 | TRACE2 | 090304-2 |
| 7440-66-6 | Zinc | 63.1 | mg/kg | | *N | P | 0.166 | TRACE2 | 090304-2 |

Comments:



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*General Engineering Laboratories, LLC*

# METALS
-1-
## INORGANICS ANALYSIS DATA PACKAGE

**SDG No:** 04S0378-METT **METHOD TYPE:** SW846

**SAMPLE ID:** 119855001 **CLIENT ID:** 04S0378-001.001

**CONTRACT:** KHCO00100BOA

**MATRIX:** MISC LIQUID **DATE RECEIVED** 25-AUG-04 **LEVEL:** Low **%SOLIDS:**

| CAS No | Analyte | Result | Units | C | Qual | M | MDL | Instrument ID | Analytical Run |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 23.8 | ug/L | U | | P | 23.8 | TRACE2 | 090304-1 |
| 7440-39-3 | Barium | 910 | ug/L | B | | P | 3.93 | TRACE2 | 090304-1 |
| 7440-43-9 | Cadmium | 3.86 | ug/L | U | | P | 3.86 | TRACE2 | 090304-1 |
| 7440-47-3 | Chromium | 7.8 | ug/L | B | | P | 7.35 | TRACE2 | 090304-1 |
| 7439-92-1 | Lead | 26.6 | ug/L | U | | P | 26.6 | TRACE2 | 090304-1 |
| 7439-97-6 | Mercury | 0.472 | ug/L | U | N | AV | 0.472 | MER536 | 090704W1-2 |
| 7782-49-2 | Selenium | 42.8 | ug/L | B | | P | 33.8 | TRACE2 | 090304-1 |
| 7440-22-4 | Silver | 11.8 | ug/L | U | | P | 11.8 | TRACE2 | 090304-1 |

Comments:

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1B
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

04S0378-001.001

Lab Name: GEL, LLC. Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 04S0378-SVO

Matrix: (soil/water) MISC SOLID Lab Sample ID: 119857001

Sample wt/vol: 10.0 (g/mL) G Lab File ID: S7H3113

Level: (low/med) LOW Date Received: 08/25/04

% Moisture: 0 decanted: (Y/N) N Date Extracted: 08/31/04

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 08/31/04

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 108-95-2 | Phenol | 1980 | U |
| 111-44-4 | bis(2-Chloroethyl) ether | 1980 | U |
| 95-57-8 | 2-Chlorophenol | 1980 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1980 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1980 | U |
| 100-51-6 | Benzyl alcohol | 3900 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1980 | U |
| 108-60-1 | bis(2-Chloroisopropyl)ether | 1980 | U |
| 95-48-7 | o-Cresol | 1980 | U |
| 621-64-7 | N-Nitrosodipropylamine | 1980 | U |
| 106-44-5 | m,p-Cresols | 1980 | U |
| 67-72-1 | Hexachloroethane | 1980 | U |
| 98-95-3 | Nitrobenzene | 1980 | U |
| 78-59-1 | Isophorone | 1980 | U |
| 88-75-5 | 2-Nitrophenol | 1980 | U |
| 105-67-9 | 2,4-Dimethylphenol | 1980 | U |
| 111-91-1 | bis(2-Chloroethoxy)methane | 1980 | U |
| 120-83-2 | 2,4-Dichlorophenol | 1980 | U |
| 65-85-0 | Benzoic acid | 9910 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1980 | U |
| 91-20-3 | Naphthalene | 1980 | U |
| 106-47-8 | 4-Chloroaniline | 3900 | U |
| 87-68-3 | Hexachlorobutadiene | 1980 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 3900 | U |
| 91-57-6 | 2-Methylnaphthalene | 1980 | U |
| 77-47-4 | Hexachlorocyclopentadiene | 1980 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 1980 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 1980 | U |
| 91-58-7 | 2-Chloronaphthalene | 1980 | U |
| 88-74-4 | o-Nitroaniline | 9910 | U |
| 99-09-2 | m-Nitroaniline | 9910 | U |
| 131-11-3 | Dimethylphthalate | 1980 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 1980 | U |

1C
SVOA ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

04S0378-001.001

Lab Name: GEL, LLC. Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 04S0378-SVO

Matrix: (soil/water) MISC SOLID Lab Sample ID: 119857001

Sample wt/vol: 10.0 (g/mL) G Lab File ID: S7H3113

Level: (low/med) LOW Date Received: 08/25/04

% Moisture: 0 decanted: (Y/N) N Date Extracted: 08/31/04

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 08/31/04

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 208-96-8 | Acenaphthylene | 1980 | U |
| 83-32-9 | Acenaphthene | 1980 | U |
| 51-28-5 | 2,4-Dinitrophenol | 9910 | U |
| 132-64-9 | Dibenzofuran | 1980 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 1980 | U |
| 84-66-2 | Diethylphthalate | 1980 | U |
| 100-02-7 | 4-Nitrophenol | 9910 | U |
| 86-73-7 | Fluorene | 1980 | U |
| 7005-72-3 | 4-Chlorophenylphenylether | 1980 | U |
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | 9910 | U |
| 100-01-6 | p-Nitroaniline | 9910 | U |
| 122-39-4 | Diphenylamine | 1980 | U |
| 126-73-8 | Tributylphosphate | 9910 | U |
| 101-55-3 | 4-Bromophenylphenylether | 1980 | U |
| 118-74-1 | Hexachlorobenzene | 1980 | U |
| 87-86-5 | Pentachlorophenol | 9910 | U |
| 85-01-8 | Phenanthrene | 1980 | U |
| 120-12-7 | Anthracene | 1980 | U |
| 84-74-2 | Di-n-butylphthalate | 1980 | U |
| 206-44-0 | Fluoranthene | 1980 | U |
| 129-00-0 | Pyrene | 1980 | U |
| 85-68-7 | Butylbenzylphthalate | 1980 | U |
| 56-55-3 | Benzo(a)anthracene | 1980 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 3900 | U |
| 218-01-9 | Chrysene | 1980 | U |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | 1980 | U |
| 117-84-0 | Di-n-octylphthalate | 1980 | U |
| 205-99-2 | Benzo(b)fluoranthene | 1980 | U |
| 207-08-9 | Benzo(k)fluoranthene | 1980 | U |
| 50-32-8 | Benzo(a)pyrene | 1980 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 1980 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 1980 | U |
| 191-24-2 | Benzo(ghi)perylene | 1980 | U |

FORM I SV-2 OLM03.0

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1F
SVOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
04S0378-001.001

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 04S0378-SVO

Matrix: (soil/water) MISC SOLID Lab Sample ID: 119857001

Sample wt/vol: 10.0 (g/mL) G Lab File ID: S7H3113

Level: (low/med) LOW Date Received: 08/25/04

% Moisture: _____ decanted: (Y/N)___ Date Extracted:08/31/04

Concentrated Extract Volume: 1.00(mL) Date Analyzed: 08/31/04

Injection Volume: 0.5(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

Number TICs found: 30

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN ALDOL CONDENSATE | 2.87 | 28100 | JAB |
| 2. 19780-11-1 | 2-DODECEN-1-YL(-)SUCCINIC AN | 7.56 | 2150 | NJ |
| 3. | UNKNOWN | 7.63 | 1910 | J |
| 4. | UNKNOWN | 7.66 | 2220 | J |
| 5. | UNKNOWN | 7.69 | 2280 | J |
| 6. 55255-85-1 | CYCLOPENTANE, 1,1'-[3-(2-CYC | 7.78 | 2110 | NJ |
| 7. | UNKNOWN | 7.83 | 2690 | J |
| 8. 3386-33-2 | OCTADECANE, 1-CHLORO- | 7.85 | 3030 | NJ |
| 9. | UNKNOWN | 7.91 | 2530 | J |
| 10. | UNKNOWN | 7.93 | 2210 | J |
| 11. | UNKNOWN | 7.96 | 2240 | J |
| 12. | UNKNOWN | 7.99 | 1980 | J |
| 13. | UNKNOWN | 8.03 | 2640 | J |
| 14. 1599-67-3 | 1-DOCOSENE | 8.12 | 4010 | NJ |
| 15. | UNKNOWN | 8.21 | 2120 | J |
| 16. | UNKNOWN | 8.23 | 2680 | J |
| 17. | UNKNOWN | 8.27 | 2230 | J |
| 18. | UNKNOWN | 8.30 | 2310 | J |
| 19. 18435-45-5 | 1-NONADECENE | 8.33 | 2670 | NJ |
| 20. | UNKNOWN | 8.38 | 4130 | J |
| 21. | UNKNOWN | 8.44 | 2360 | J |
| 22. | UNKNOWN | 8.59 | 2880 | J |
| 23. | UNKNOWN | 8.65 | 2080 | J |
| 24. | UNKNOWN | 8.72 | 2790 | J |
| 25. | UNKNOWN | 8.85 | 1970 | J |
| 26. | UNKNOWN | 8.96 | 2030 | J |
| 27. | UNKNOWN | 9.03 | 2240 | J |
| 28. | UNKNOWN | 9.78 | 2820 | J |
| 29. | UNKNOWN | 9.86 | 2550 | J |
| 30. | UNKNOWN | 9.98 | 2840 | J |

FORM I SV-TIC OLM03.0

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

04S0378-001.001

Lab Name: GEL, LLC. Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 04S0378-VOAT

Matrix: (soil/water) WATER Lab Sample ID: 119859001

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1Z648

Level: (low/med) LOW Date Received: 08/25/04

% Moisture: not dec. _____ Date Analyzed: 09/05/04

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L | Q |
|---|---|---|---|
| 75-01-4 | Vinyl chloride | 50.0 | U |
| 75-35-4 | 1,1-Dichloroethylene | 50.0 | U |
| 78-93-3 | 2-Butanone | 50.0 | U |
| 67-66-3 | Chloroform | 50.0 | U |
| 56-23-5 | Carbon tetrachloride | 50.0 | U |
| 107-06-2 | 1,2-Dichloroethane | 50.0 | U |
| 71-43-2 | Benzene | 50.0 | U |
| 79-01-6 | Trichloroethylene | 50.0 | U |
| 127-18-4 | Tetrachloroethylene | 50.0 | U |
| 108-90-7 | Chlorobenzene | 50.0 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 50.0 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 50.0 | U |

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

04S0378-001.001

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 04S0378-VOAT

Matrix: (soil/water) WATER Lab Sample ID: 119859001

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: 1Z648

Level: (low/med) LOW Date Received: 08/25/04

% Moisture: not dec. _____ Date Analyzed: 09/05/04

GC Column: RTX-VOLATILES ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 1.75 | 192 | JB |
| 2. | | | | |
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

04S0378-001.001

Lab Name: GEL, LLC. Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 04S0378-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 119858001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 8P2Z515

Level: (low/med) LOW Date Received: 08/25/04

% Moisture: not dec. _____ Date Analyzed: 09/03/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 5.0 | U |
| 74-87-3 | Chloromethane | 5.0 | U |
| 75-01-4 | Vinyl chloride | 5.0 | U |
| 74-83-9 | Bromomethane | 5.0 | U |
| 75-00-3 | Chloroethane | 5.0 | U |
| 75-69-4 | Trichlorofluoromethane | 5.0 | U |
| 75-35-4 | 1,1-Dichloroethylene | 5.0 | U |
| 67-64-1 | Acetone | 38.6 | J |
| 76-13-1 | Trichlorotrifluoroethane | 5.0 | U |
| 75-15-0 | Carbon disulfide | 126 | |
| 75-09-2 | Methylene chloride | 5.0 | U |
| 156-60-5 | trans-1,2-Dichloroethylene | 5.0 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.0 | U |
| 78-93-3 | 2-Butanone | 3.8 | J |
| 156-59-2 | cis-1,2-Dichloroethylene | 5.0 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.0 | U |
| 74-97-5 | Bromochloromethane | 5.0 | U |
| 67-66-3 | Chloroform | 5.0 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 0.63 | J |
| 563-58-6 | 1,1-Dichloropropene | 5.0 | U |
| 56-23-5 | Carbon tetrachloride | 5.0 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.0 | U |
| 71-43-2 | Benzene | 5.0 | U |
| 79-01-6 | Trichloroethylene | 5.0 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.0 | U |
| 74-95-3 | Dibromomethane | 5.0 | U |
| 75-27-4 | Bromodichloromethane | 5.0 | U |
| 10061-01-5 | cis-1,3-Dichloropropylene | 5.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 50.0 | U |
| 108-88-3 | Toluene | 1.8 | J |
| 10061-02-6 | trans-1,3-Dichloropropylene | 5.0 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.0 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.0 | U |

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

04S0378-001.001

Lab Name: GEL, LLC. Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 04S0378-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 119858001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 8P2Z515

Level: (low/med) LOW Date Received: 08/25/04

% Moisture: not dec. _____ Date Analyzed: 09/03/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG | Q |
|---|---|---|---|
| 591-78-6 | 2-Hexanone | 50.0 | U |
| 127-18-4 | Tetrachloroethylene | 5.6 | |
| 124-48-1 | Dibromochloromethane | 5.0 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.0 | U |
| 108-90-7 | Chlorobenzene | 5.0 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.0 | U |
| 100-41-4 | Ethylbenzene | 5.0 | U |
| 1330-20-7 | Xylenes (total) | 5.0 | U |
| 100-42-5 | Styrene | 0.40 | J |
| 75-25-2 | Bromoform | 5.0 | U |
| 98-82-8 | Isopropylbenzene | 5.0 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.0 | U |
| 108-86-1 | Bromobenzene | 5.0 | U |
| 103-65-1 | n-Propylbenzene | 5.0 | U |
| 95-49-8 | 2-Chlorotoluene | 5.0 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.0 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.39 | J |
| 106-43-4 | 4-Chlorotoluene | 5.0 | U |
| 98-06-6 | tert-Butylbenzene | 5.0 | U |
| 135-98-8 | sec-Butylbenzene | 5.0 | U |
| 99-87-6 | 4-Isopropyltoluene | 5.0 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.0 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.0 | U |
| 104-51-8 | n-Butylbenzene | 5.0 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.0 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 5.0 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.0 | U |
| 87-68-3 | Hexachlorobutadiene | 5.0 | U |
| 91-20-3 | Naphthalene | 5.0 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.0 | U |

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

04S0378-001.001

Lab Name: GENERAL ENGINEERING LABOR Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 04S0378-VOA

Matrix: (soil/water) SOIL Lab Sample ID: 119858001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 8P2Z515

Level: (low/med) LOW Date Received: 08/25/04

% Moisture: not dec. _____ Date Analyzed: 09/03/04

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|
| 1. | UNKNOWN | 2.09 | 195 | J |
| 2. 110-54-3 | HEXANE | 3.34 | 10.2 | J |
| 3. 104-76-7 | 1-HEXANOL, 2-ETHYL- | 8.64 | 36.6 | J |
| 4. | UNKNOWN HYDROCARBON | 9.21 | 8.4 | J |
| 5. | UNKNOWN HYDROCARBON | 9.26 | 15.5 | J |
| 6. | UNKNOWN CYCLOALKANE | 9.57 | 8.6 | J |
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STOLLER REETS

8/30/04

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

COC: 04S0396#001
¶04S0396#001WÄ



| | | |
|---|---|---|
| Sampler(s) S. Powell / D. Boyles (time/date) | Contact/Requester PODOLSKY, STEWART / OMAN, KIMBERLY | Telephone No. 7624 / 994-1360 |
| RIN 04S0396 | Sampling Origin B444 | Purchase Order/Charge Code EDD54CAN |
| Project Title B447 ELEVATOR OIL | Logbook No. 96 Blue Van | Ice Chest No. / Temp. 5.8 |
| To (Lab) Severn-Trent Denver | Method of Shipment Hand Delivery | Bill of Lading/Air Bill No. N/A |
| Protocol ST-AS14-SOP-001 | Related COC (if any) 002 #003 | PRE 040127-T130C-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 |
|---|---|---|---|---|---|---|---|
| 04S0396 -001.001 | | WASTE | 8/30/04 1331 | B444 | 50-ML AG | MET-A-022 (METALS - 6010/6010B - SINGLE) [7dF] (BERYLLIUM) | None; 4 C |
| | | | | | | PEP-A-007 (PCB ONLY SW846 8082) [7dF] (See Item 1) | None; 4 C |
| 04S0396 -001.002 | | WASTE | ↓ 1331 | B444 | 50-ML P/G | GPC-A-003 (GROSS ALPHA/BETA) [7dF] (GROSS ALPHA; GROSS BETA) | None; None |

Item 1 PEP-A-007: AROCLOR-1016; AROCLOR-1221; AROCLOR-1232; AROCLOR-1242; AROCLOR-1248; AROCLOR-1254; AROCLOR-1260

| Relinquished By: | Date/Time | Received By: | Date/Time | Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|---|---|---|---|
| [signature] | 8/31/04 1320 | [signature] | 8/31/04 1320 | FAG# 1 | 9/1/04 1330 | [signature] | 9/1/04 1330 |
| [signature] | 9/1/04 1500 | [signature] | 9/1/04 1500 | | | | |
| | | | | | | | |

| 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: 08/26/04 13:14 (Version:coc_r22.rpt) |
|---|---|---|---|

KAISER-HILL LLC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:04S0396

Matrix: (soil/water) SO Lab Sample ID:D4I010338 001
Method: SW846 8082
PCBs (8082)

Sample WT/Vol: 1 / g Date Received: 09/01/04
Work Order: GPE5R1AF Date Extracted:09/02/04
Dilution factor: 10 Date Analyzed: 09/07/04
Moisture %:

QC Batch: 4246408

Client Sample Id: 04S0396-001.001

| CAS NO. | COMPOUND | CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor 1016 | 9900 | U |
| 11104-28-2 | Aroclor 1221 | 9900 | U |
| 11141-16-5 | Aroclor 1232 | 9900 | U |
| 53469-21-9 | Aroclor 1242 | 9900 | U |
| 12672-29-6 | Aroclor 1248 | 9900 | U |
| 11097-69-1 | Aroclor 1254 | 9900 | U |
| 11096-82-5 | Aroclor 1260 | 9900 | U |

| SURROGATE RECOVERY | % | ACCEPTABLE LIMITS |
|---|---|---|
| Decachlorobiphenyl | | (62 - 145 ) |
| Tetrachloro-m-xylene | | (60 - 130 ) |

FORM I



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# ATTACHMENT D

# Data Quality Assessment (DQA) Detail

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# 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 Survey Packages, which correlate to unique (MARSSIM) Survey Units. Chemical data are organized by RIN (Report Identification Number) and are traceable to the sample number and corresponding sample location.

Media samples were taken and analyzed by ISOCS Canberra gamma spectroscopy or BC-4 scaler counters. Uranium and/or other naturally occurring isotope activity were evaluated against, and were less than the Uranium $DCGL_w$ (5,000 dpm/100cm$^2$) unrestricted release limits. Media results were converted to dpm/100cm$^2$ using media conversion tables, evaluated against the uranium DCGL limits, and are the values reported in Attachment B-2. Survey designs were implemented for Building 447 based on the uranium limits (DCGLs), as applicable, in the unrestricted release decision process.

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

## 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 following conditions:

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- The paint was removed from 100 % of the floor surfaces in B447. Also, some walls were removed and managed as LLW. The following media samples were on these surfaces and have been removed from the survey unit: 2, 5, 7, 8-16, 20, 23-25, 27, 29-34, 40, 41, 43-50, 52-59, 62, 63, 72, 73, 74, 85, 88, 91, 94, 95, 96, 97, 99, 101, 103, 104, 108, 110-114, 116-126, 130-135, 137-141, 159, 163, 164, 166-172, 175, 181, 182, 184-193, 202-205, 212, 236, 237, 240-243, 245-255, 257-261, 264, 265, 267, 269, 271, 273, 276-278, 285, 288-295, 310, 312-317, 322, 323, and 348-352. Contamination greater than the Uranium DCGL unrestricted release limits was identified in survey unit 447201 during Pre-PDS surveys in rooms 31 and 32. Attempts to decontaminate the areas below the unrestricted release limits were unsuccessful, therefore, rooms 31 and 32 will be managed and disposed of as LLW and were not surveyed as part of this PDS. Furthermore, the removal of rooms 31 and 32 reduced the area of survey unit 447202 from 1,424 $m^2$ to 1,123 $m^2$ and was the area used to calculate the minimum number of samples required per MARSSIM. Initial sample net activity at locations 483 (8,048.6 dpm/100$cm^2$) and 484 (6,748.6 dpm/100$cm^2$) was identified greater than the Uranium DCGL unrestricted release limits. A square meter investigation was performed in accordance with RSP 16.01 for each location. The average results of the investigation for each location were less than the Uranium DCGL unrestricted release limits and are the values reported in the TSA Data Summary. No further investigation is required. Refer to Attachment B-2 for survey results and locations.

- Media sample locations 14, 16, 17, 18, 19, 20 and 21 were deleted from survey unit 447202 because the wall they were located on was removed during pre-demolition activities. Also, contamination greater than the Uranium DCGL unrestricted release limits was identified in survey unit 447202 during Pre-PDS surveys in rooms 31 and 32. Attempts to decontaminate the areas below the unrestricted release limits were unsuccessful, therefore rooms 31 and 32 will be managed and disposed of as LLW and were not surveyed as part of this PDS. Furthermore, the removal of rooms 31 and 32 reduced the floor area of survey unit 447202 from 1,424 $m^2$ to 1,123 $m^2$ and was the area used to calculate the minimum number of samples required per MARSSIM. Refer to Attachment B-2 for survey results and locations.

- During initial PDS surveys, contamination was identified in survey unit 447203 greater than the Uranium unrestricted release levels on the upper north wall and ceiling. Consequently, these areas will be managed and disposed of as LLW. Because sample locations 1, 2, 14 and 15 fell within the boundary of the contaminated areas, they were moved to the remaining portion of the survey unit that was surveyed as part of this PDS and as new random locations.

- Numerous areas of contamination were identified in survey unit 447204 that were greater than the Uranium DCGL unrestricted release limits during the Pre-PDS surveys for Pit 405A. This area will be greater than three feet below final grade and will not be remediated. Consequently, Pit 405A was not surveyed as part of this PDSR. Additionally, survey locations 3, 6 and 7 originally located in the 405A Pit were relocated as systematic survey locations in Room 36 Pit.

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- After decontamination efforts and prior to application of fixative, several locations had levels of Be contamination above action levels. All areas containing loose beryllium contamination above 0.1 $\mu g/100cm^2$ were immobilized using fixatives to below the unrestricted release limit of 0.2 $\mu g/100cm^2$. Levels up to 10.9 $\mu g/100cm^2$ were immobilized using fixative.

Media samples were collected in accordance with the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP) requirements. The media sample results and sample location maps are located in Attachment B-2 and the RISS Characterization Project files. All final "as left" results for media samples were below the Uranium unrestricted release limits. The survey unit packages were reviewed as part of the DQA process and verified that the original project DQOs satisfied MARSSIM guidance and DQO objectives were met.

Based upon an independent review of the radiological data, it was determined that the original project DQOs satisfied MARSSIM guidance. Except as noted above, all remaining facility contamination levels were below applicable PDSP DCGL unrestricted release levels. Minimum survey requirements were met, sampling/survey protocol was performed in accordance with applicable RSPs, survey units were properly designed and bounded, and instrument performance and calibration 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. Level 2 Isolation Controls have been posted to prevent the inadvertent introduction of contamination into Building 447. On this basis, Building 447 is ready for demolition.



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## Table D-1 V&V of Radiological Results - Buildings 447

| V&V CRITERIA, RADIOLGICAL SURVEYS | | K-H RSP 16.00 Series MARSSIM (NUREG-1575) | | |
|---|---|---|---|---|
| QUALITY REQUIREMENTS | | | | |
| | Parameters | Measure | Frequency | COMMENTS |
| ACCURACY | Initial calibrations | 90%<x<110% | ≥1 | Multi-point calibration through the measurement range encountered in the field; programmatic records. |
| | Daily source checks | 80%<x<120% | ≥1/day | Performed daily/within range. |
| | Local area background: Field | Typically < 10 dpm | ≥1/day | All local area backgrounds were within expected ranges (i.e., no elevated anomalies.) |
| PRECISION | Field duplicate measurements for TSA | ≥5% of real survey points | ≥10% of reals | N/A |
| REPRESENTATIVENESS | MARSSIM methodology: Survey Units 447201, 447202, 447203, 447204, 447206 and 447301. | 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<br>Usable results vs. unusable | >95%<br>>95% | NA | See Table D-3 for details. |
| SENSITIVITY | Detection limits | (Uranium)<br>TSA: ≤2,500 dpm/100cm$^2$<br>RSA: ≤500 dpm/100cm$^2$ | all measures | PDS MDAs ≤ 50% $DCGL_w$ |

## Table D-2 V&V of Beryllium Results - Building 447

| V&V CRITERIA, CHEMICAL ANALYSES | | DATA PACKAGE | | |
|---|---|---|---|---|
| BERYLLIUM | Prep: NMAM 7300<br>METHOD: OSHA ID-125G | LAB ---> | Johns Manville<br>Littleton, Colorado | |
| | | RIN ----> | Numerous RINs –<br>See Table D-7 Below | |
| | | | | COMMENTS |
| QUALITY | REQUIREMENTS | Measure | Frequency | All final PDS results were below unrestricted release levels. |
| ACCURACY | Calibrations<br>Initial | Linear calibration | ≥1 | |
| | Continuing | 80%<%R<120% | ≥1 | |
| | LCS/MS | 80%<%R<120% | ≥1 | |
| | Blanks – lab & field | <MDL | ≥1 | |
| | Interference check std (ICP) | NA | NA | |
| PRECISION | LCSD | 80%<%R<120%<br>(RPD<20%) | ≥1 | |
| | Field duplicate | All results < RL | ≥1 | |
| REPRESENTATIVENESS | COC | Qualitative | NA | |
| | Hold times/preservation | Qualitative | NA | |
| | Controlling Documents (Plans, Procedures, maps, etc.) | Qualitative | NA | |
| COMPARABILITY | Measurement units | Ug/100cm$^2$ | NA | |
| COMPLETENESS | Plan vs. Actual samples<br>Usable results vs. unusable | >95%<br>>95% | NA | |
| SENSITIVITY | Detection limits | MDL of<br>0.00084 ug/swipe | all measures | |

## Table E-3 V&V of Volatile Organic Compounds (VOCs) - Building 447

| V&V CRITERIA, CHEMICAL ANALYSES | | DATA PACKAGE | | |
|---|---|---|---|---|
| VOCs | METHOD: SW8260 | LAB ----> | General Engineering Laboratories, LLC Charleston, SC | |
| | | RIN ----> | RIN04S0378 | |
| 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<br>Usable results vs. unusable | >95%<br>>95% | NA | |
| SENSITIVITY | Detection limits | Various | all analytes | |

## Table E-4 V&V of Semi-Volatile Organic Compounds (SVOCs) - Building 447

| V&V CRITERIA, CHEMICAL ANALYSES | | DATA PACKAGE | | |
|---|---|---|---|---|
| SVOCs | METHOD: SW8270 | LAB ----> | General Engineering Laboratories, LLC Charleston, SC | |
| | | RIN ----> | RIN04S0378 | |
| 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<br>Usable results vs. unusable | >95%<br>>95% | NA | |
| SENSITIVITY | Detection limits | Various | all analytes | |

## Table E-5 V&V of Metals -Building 447

| V&V CRITERIA, CHEMICAL ANALYSES | | DATA PACKAGE | | |
|---|---|---|---|---|
| Metals (total) | METHOD: SW6010/6020 | LAB ----> | General Engineering Laboratories, LLC Charleston, SC | |
| | | RIN ----> | RIN04S0378 | |
| QUALITY REQUIREMENTS | | Measure | Frequency | COMMENTS |
| ACCURACY | Calibrations: Initial | linear calibration | ≥1/batch | TCLP results below associated action levels and regulatory limits. |
| | 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<br>Usable results vs. unusable | >95%<br>>95% | NA | |
| SENSITIVITY | Detection limits | Various | all analytes | |

# Table E-6 V&V of PCBs - Building 447

| V&V CRITERIA, CHEMICAL ANALYSES | | DATA PACKAGE | | |
|---|---|---|---|---|
| PCBs | METHOD: SW8082 | LAB ----> | Severn-Trent, Denver, Co. | |
| | | RIN ----> | RIN04S0396 | |
| | | | | COMMENTS |
| QUALITY REQUIREMENTS | | Measure | Frequency | All results were less than regulatory limits. |
| ACCURACY | Calibrations: Initial | $r^2$ >0.99 | ≥1/batch | |
| | 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<br>≤45 days analysis | NA | |
| | Controlling Documents (Plans, Procedures, maps, etc.) | Qualitative | NA | |
| COMPARABILITY | Measurement units | ug/kg | NA | |
| COMPLETENESS | Plan vs. Actual samples<br>Usable results vs. unusable | >95%<br>>95% | NA | |
| SENSITIVITY | Detection limits | Various | all analytes | |

## Table D-7 Data Completeness Summary – Building 447

| 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 447-VIA 1 (interior) | 39 samples (29 random/10 biased) | 91 samples (48 random/43 biased) | [1] After application of fixative no Be contamination found at any location, all results were below associated action levels | 10CFR850; OSHA ID-125G<br><br>RIN04Z2537, RIN04Z2533, RIN04Z2395, RIN04Z2455, RIN04D0199 and RIN04Z1176.<br><br>[1] Refer to Attachment D, *Data Quality Assurance Detail,* regarding discussion of Be contamination identified greater than the associated action levels (0.2 ug/100cm$^2$) and investigative levels (0.1 ug/100cm$^2$). |
| Beryllium | Building 447-VIA 2 (interior) | 74 samples (54 random/20 biased) | 625 samples (367 random/258 biased) | [1] After application of fixative no Be contamination found at any location, all results were below associated action levels | 10CFR850; OSHA ID-125G<br><br>RIN04Z2562, RIN04Z253, RIN04Z2533, RIN04Z2395, RIN04Z2394, RIN04Z2396, RIN04Z2393, RIN04Z2268, RIN04Z2266, RIN04Z0279, RIN04Z2225, RIN04Z2087, RIN04Z2563, RIN04D1177, RIN04Z2268, RIN04Z1176, RIN04Z2265 and RIN04Z2264.<br><br>[1] Refer to Attachment D, *Data Quality Assurance Detail,* regarding discussion of Be contamination identified greater than the associated action levels (0.2 ug/100cm$^2$) and investigative levels (0.1 ug/100cm$^2$). |
| Beryllium | Building 447-VIA 3 (interior) | 33 samples (13 random/20 biased) | 38 samples (27 random/11 biased) | [1] After application of fixative no Be contamination found at any location, all results were below associated action levels | 10CFR850; OSHA ID-125G<br><br>RIN04Z2534, RIN04Z2563 and RIN04D1177.<br><br>[1] Refer to Attachment D, *Data Quality Assurance Detail,* regarding discussion of Be contamination identified greater than the associated action levels (0.2 ug/100cm$^2$) and investigative levels (0.1 ug/100cm$^2$). |

## Table D-7 Data Completeness Summary – Building 447

| 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 447 Attic (interior) | 0 samples | 62 Random (interior) | [1] After application of fixative no Be contamination found at any location, all results were below associated action levels | 10CFR850; OSHA ID-125G<br><br>RIN04Z2082 – sample map locations 1-14, 16, 18, 20-27 and 30<br><br>RIN04Z2084 – sample map locations 31-39<br><br>RIN04Z2452 – sample map locations 15, 19, 28, 29, 41-44, 46-49, 51-54 and 56-66<br><br>[1] Refer to Attachment D, *Data Quality Assurance Detail,* regarding discussion of Be contamination identified greater than the associated action levels (0.2 ug/100cm$^2$) and investigative levels (0.1 ug/100cm$^2$). |
| Beryllium | Building 447 Exterior | 0 samples | 10 Biased (interior) | No Be contamination found at any location, all results were below associated action levels | 10CFR850; OSHA ID-125G<br><br>RIN04D1179: map locations 661 and 663 are located on the VIA-1 map; map locations 660, 662, 665-669 and 161 are located on the VIA-2 map; map location 664 is located on the VIA-3 map<br><br>All results were below the action level (0.2 ug/100cm$^2$) and the investigative level (0.1 ug/100cm$^2$). |
| VOCs | Building 447 (interior) | 1 plus 1 duplicate | 1 sample (solid – concrete) | No VOC contamination identified, all results were below regulatory limits | 6CCR 1007-3; SW846 1311/Method 8260<br><br>RIN04S0378 |
| SVOCs | Building 447 (interior) | 1 plus 1 duplicate | 1 sample (solid – concrete) | No SVOC contamination identified, all results were below regulatory limits | 6CCR 1007-3; SW846 1311/Method 8270/8270C<br><br>RIN04S0378 |

## Table D-7 Data Completeness Summary – Building 447

| 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.) |
|---|---|---|---|---|---|
| Metals (total and TCLP) | Building 447 (interior) | 1 plus 1 duplicate | 1 sample (solid – concrete) | No Metal contamination identified, all results were below regulatory limits | SW846 1311; SW846 6010/6010B<br><br>RIN04S0378 |
| PCBs | Building 447 (interior) | 1 plus 1 duplicate | 1 sample (liquid – oil) | No PCB contamination identified, all results were below regulatory limits | 40CFR761; SW846/Method 8082<br><br>RIN04S0396 |
| Radiological | Survey Area VIA-2<br>Survey Unit: 447201<br>Building 447 – VIA #2, Rooms 31, 32, 402, 403, 404, 405, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and corridor A – Floors and Walls < 2 meters (interior) | 186 β TSA (systematic)<br><br>186 β RSA (systematic)<br><br>12 QC TSA<br><br>100% scan | 279 β TSA (186 systematic/93 biased)<br><br>279 β RSA (186 systematic/93 biased)<br><br>93 media (paint)<br><br>93 Pre and Post β TSA and 93 Pre and Post β RSA samples<br><br>12 QC TSA<br><br>100% scan | [1]Contamination identified greater than the Uranium unrestricted release limits – Rooms 31 and 32 | Uranium DCGLs used.<br><br>[1]Refer to Attachment D, *Data Quality Assessment Detail,* for a detailed discussion regarding the following anomalous conditions:<br>• Deletion of media sample locations.<br>• The designation of rooms 31 and 32 as LLW areas.<br>• Results of the square meter investigation performed for locations 483 and 484 that were greater than the Uranium DCGL unrestricted release limits. |

## Table D-7 Data Completeness Summary – Building 447

| ANALYTE | Building/Area/Unit | Sample Number Planned (Real & QC)[A] | Sample Number Taken (Real & QC ) | Project Decisions (Conclusions) & Uncertainty | Comments (RIN, Analytical Method, Qualifications, etc.) |
|---|---|---|---|---|---|
| Radiological | Survey Area VIA-2<br>Survey Unit: 447202<br>Building 447 – VIA #2, Rooms 31, 32, 402, 403, 404, 405, 405B, 406, 406A, 406B, 407, 407A, 408, 409, 410, 411, 420, 420A, 420B and Corridor A – Ceilings and Walls > 2 meters (interior) | 28 β TSA (systematic)<br><br>28 β RSA (systematic)<br><br>2 QC TSA<br><br>50% scan | 28 β TSA (systematic)<br><br>28 β RSA (systematic)<br><br>17 media (paint)<br><br>17 Pre and Post β TSA and 21 Pre and Post β RSA samples<br><br>2 QC TSA<br><br>50% scan | Contamination identified greater than the Uranium unrestricted release limits – Rooms 31 and 32 | Uranium DCGLs used.<br><br>[1]Refer to Attachment D, *Data Quality Assessment Detail,* discussion regarding the deletion of sample locations 14, 16, 17, 18, 19, 20 and 21 and the designation of rooms 31 and 32 as LLW areas. |
| Radiological | Survey Area VIA-2<br>Survey Unit: 447203<br>Building 447 – VIA #2, Room 415 – all surfaces | 17 β TSA (systematic)<br><br>17 β RSA (systematic)<br><br>2 QC TSA<br><br>100% scan | 15 β TSA (systematic)<br><br>15 β RSA (systematic)<br><br>2 QC TSA<br><br>100% scan | [1]Contamination identified greater than the Uranium unrestricted release levels – ceiling and wall | Uranium DCGLs used.<br><br>[1]Refer to Attachment D, *Data Quality Assessment Detail,* for a detailed discussion on the areas identified during PDS surveys that were greater than the Uranium DCGL unrestricted release levels that will be managed as Low Level Waste. |
| Radiological | Survey Area VIA-2<br>Survey Unit: 447204<br>Building 447 – VIA #2, Pits 405 and 405B Pit and Room 36 – all surfaces | 16 β TSA (systematic)<br><br>16 β RSA (systematic)<br><br>2 QC TSA<br><br>100% scan | 16 β TSA (systematic)<br><br>16 β RSA (systematic)<br><br>2 QC TSA<br><br>100% scan | [1]Contamination identified greater than the Uranium unrestricted release limits – Pit 405A | Uranium DCGLs used.<br><br>[1]Refer to Attachment D, *Data Quality Assessment Detail,* regarding contamination identified > than the Uranium unrestricted levels in the 405A Pit and the relocation of survey locations 3, 6 and 7 to Room 36 Pit. |

## Table D-7 Data Completeness Summary – Building 447

| ANALYTE | Building/Area/Unit | Sample Number Planned (Real & QC)[A] | Sample Number Taken (Real & QC ) | Project Decisions (Conclusions) & Uncertainty | Comments (RIN, Analytical Method, Qualifications, etc.) |
|---|---|---|---|---|---|
| Radiological | Survey Area VIA-2<br>Survey Unit: 447205<br>Building 447 – VIA #2, Rooms 100, 101F, Sub Station and Northwest Dock | 20 β TSA (16 systematic/4 biased)<br><br>20 β RSA (16 systematic/4 biased)<br><br>2 QC TSA<br><br>100% scan of floors, and 25% scan of walls and ceilings | 20 β TSA (16 systematic/4 biased)<br><br>20 β RSA (16 systematic/4 biased)<br><br>2 QC TSA<br><br>100% scan of floors, and 25% scan of walls and ceilings | No contamination at any location; all values below unrestricted release levels | Uranium DCGLs used. |