LOCKHEED MARTIN

ORNL/ER-415

**ENVIRONMENTAL
RESTORATION
PROGRAM**

**Final Deactivation Report
on the Radioisotope Area Services,
Building 3034,
at Oak Ridge National Laboratory,
Oak Ridge, Tennessee**

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LOCKHEED MARTIN ENERGY SYSTEMS, INC.
FOR THE UNITED STATES
DEPARTMENT OF ENERGY

**Final Deactivation Report
on the Radioisotope Area Services,
Building 3034,
at Oak Ridge National Laboratory,
Oak Ridge, Tennessee**

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Environmental Management Activities at
OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37831
managed by
LOCKHEED MARTIN ENERGY SYSTEMS, INC.
for the
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PREFACE

This is the *Final Deactivation Project Report on the Radioisotope Area Services, Building 3034, at Oak Ridge National Laboratory, Oak Ridge, Tennessee (ORNL/ER-415)*. Although this element of work is not part of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, it was accomplished in accordance with the substantive requirements of the Act. This work was performed under Work Breakdown Structure 1.6.6.2.10.02 (Activity Data Sheet 6504IS, "Isotopes Facilities Deactivation Project"). This document provides the Environmental Management and Enrichment Facilities Program with the final report on the deactivation of Bldg. 3034.

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ABBREVIATIONS

EM-40	Department of Energy Office of Environmental Restoration
EM-60	Office of Nuclear Materials and Facility Stabilization Program
MOA	Memorandum of Agreement
ORNL	Oak Ridge National Laboratory
P&E	Plant and Equipment
RCRA	Resource Conservation and Recovery Act
S&M	surveillance and maintenance

DEFINITIONS

Deactivation	The process of placing a facility in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program that is protective of workers, the public, and the environment until decommissioning is completed.
Decommissioning	Refers to the ultimate disposition of a facility. Also substitutes for previously used "Decontamination and Decommissioning."
Decontamination	The removal or reduction of radioactive or hazardous contamination from facilities, equipment, or soils by washing, heating, chemical or electro-chemical action, mechanical cleaning, or other techniques to achieve a stated objective or end condition.
End Point	A detailed specification for the final deactivation condition of areas and hardware within a facility and related documentation. An individual milestone towards the deactivation and/or the decommissioning of a facility.
End Point Technical Information	A compilation of documents to support end point conclusions.
Stakeholder	Individuals and organizations (i.e. regulators, local municipalities, the public, etc.) who may be directly or indirectly impacted by activities associated with the Isotopes Facilities Deactivation Project.
Turnover Package	A compilation of project-related documents to be given to a postdeactivation organization.

EXECUTIVE SUMMARY

The purpose of this report is to document the condition of Bldg. 3034, after completion of deactivation activities as outlined by the Department of Energy Office of Nuclear Materials and Facility Stabilization Program (EM-60) guidance documentation. This report outlines the activities conducted to place the facility in a safe and environmentally sound condition for transfer to the Department of Energy Office of Environmental Restoration (EM-40) Program.

This report provides a history and profile of Bldg. 3034 before commencement of deactivation activities and a profile of the building after completion of deactivation activities. Turnover items, such as the Postdeactivation Surveillance & Maintenance Plan, remaining hazardous materials, radiological controls, Safeguards and Security, quality assurance, facility operations, and supporting documentation provided in the Office of Nuclear Materials and Facility Stabilization Program (EM-60) Turnover Package, are discussed.

Building 3034 will require access to facilitate required surveillance and maintenance (S&M) activities to maintain the building safety envelope. Building 3034 was stabilized during deactivation so that when transferred to the EM-40 program, only a minimal S&M effort would be required to maintain the building safety envelope. In addition to the minimal S&M activities, the building will be occupied by the maintenance coordinator and the S&M supervisor for the Isotopes Facilities Deactivation Project. The exterior doors are locked when unoccupied to prevent unauthorized access.

All materials have been removed from the building. Piping and alarms have been deactivated.

1. INTRODUCTION

1.1 PURPOSE

This report documents the condition of Bldg. 3034 after completion of deactivation activities as outlined by the Department of Energy Office of Nuclear Materials and Facility Stabilization (EM-60) Program guidance documentation. This report outlines the activities conducted to place the facility in a safe and environmentally sound condition for transfer to the Department of Energy Office of Environmental Restoration (EM-40) Program.

This report provides a history and profile of the facility before commencement of deactivation activities and a profile of the building after completion of deactivation activities. Turnover items, such as the Postdeactivation Surveillance & Maintenance Plan, remaining hazardous materials, radiological controls, Safeguards and Security, quality assurance, facility operations, and supporting documentation provided in the Office of Nuclear Materials and Facility Stabilization Program (EM-60) Turnover Package, are discussed.

1.2 SCOPE

This report addresses the activities performed during deactivation associated with Bldg. 3034 to place the facility in a safe and environmentally sound condition to await decommissioning, the status of the facility, and the activities required to maintain the facility following deactivation. Attachment 1, "Building 3034 Floor Plan," provides a floor plan of Bldg. 3034 that illustrates the physical boundaries and scope of this Final Deactivation Project Report, which is limited to Bldg. 3034.

2. BACKGROUND

2.1 FACILITY DESCRIPTION

Building 3034 is a steel-frame structure covered by corrugated aluminum siding. The single-story facility has a floor area of 825 ft². The building houses the electrical distribution system for the isotopes area, serves as a storage area, serves as a stores drop point for supplies for the isotope area, and currently has two offices for the maintenance coordinator and the surveillance and maintenance (S&M) supervisor for the area and one other person.

No radioactive operations were ever performed in the building. The building served, at one time, as the area Plant and Equipment (P&E) Division services shop.

2.2 FACILITY HISTORY

Building 3034 was constructed in 1950 as part of the Isotopes Program. The building originally was a storage facility and the electrical distribution facility for the Oak Ridge National Laboratory (ORNL) isotopes area. It still functions as the electrical distribution facility and a storage area and has office space for two individuals. The P&E area service shop was also housed in this building.

3. FACILITY STATUS

3.1 PREDEACTIVATION FACILITY STATUS

Following approximately 40 years of operations, Bldg. 3034 was surplused. General housekeeping was maintained at a minimal level, and the building structural integrity was allowed to lapse.

3.1.1 Hazards Analysis

No predeactivation hazards analysis was performed. No process activities were performed in Bldg. 3034, and it was determined that the facility did not warrant a hazard analysis or safety analysis.

3.1.2 Internal Spaces

The general area contained furniture, cabinets, and various miscellaneous items used when the facility was in operation. The lead-based paint is chipping and peeling, providing a means of transferring contamination and endangering personnel and the environment. Approximately three-quarters of the facility has been scraped and painted.

Predeactivation radioactive contamination levels and radiation levels for the general area are listed in Tables 1 and 2, respectively. Predeactivation hazardous materials and waste located in the general area are listed in Table 3.

3.1.3 Building Structure and External Spaces

The structure and roof of Bldg. 3034 were inspected and found to be in generally good condition, with the exception of water in leakage through various paths.

3.1.4 Process, Utility, and Support Systems

3.1.4.1 Electrical power system

Before deactivation, the electrical power system provided power distribution for the electrical service to the entire isotopes area as well as to Bldg. 3034. Typical electrical loads were the lighting, heaters, and exhaust fans. A 480 VAC outlet also existed for use with welders and other equipment requiring this service.

3.1.4.2 Fire protection system

The fire protection system is a dry pipe fire suppression system for Bldg. 3034 and is available for use. The general area was equipped with sprinkler heads and alarms as required by the local fire code. In addition, fire extinguishers were placed strategically in and around Bldg. 3034. The fire protection system is not believed to be contaminated.

3.1.4.3 Building steam system

The building steam system provided steam for use in heating the general area of Bldg. 3034. Two heat exchangers were located in Bldg. 3034 to provide space heating for personnel. The building steam system is not believed to be contaminated. However, the majority of the steam piping within Bldg. 3034 is lagged with asbestos insulation materials.

3.1.4.4 Potable water system

Before deactivation, the potable water system provided water to the Bldg. 3034 safety shower. The potable water system is not believed to be contaminated.

3.1.4.5 Process drain system

Before deactivation, the process drain system provided a means of removing liquids from the area floor to the ORNL process waste system and treatment facility. The process drain system is a gravity drain system.

3.1.4.6 Natural gas system

The natural gas system to Bldg. 3034 was never used. The system has remained isolated from the building since the time of its installation and is not believed to be contaminated.

3.1.4.7 Plant air system

Before deactivation, the plant air system provided 110 psig air to Bldg. 3034. The plant air system was regulated and used for process activities and instrumentation throughout the facility. The plant air system is not believed to be contaminated.

3.1.5 Radioactive Material, Contamination, and Waste

Table 1 lists the radioactive contamination levels identified on radiation surveys conducted before deactivation. The contamination in this building was minimal and was, in general, brought in with equipment, which was repaired in the shop, or by vermin, birds, and small animals.

Table 1. Predeactivation radioactive contamination levels

Identification	Description	Quantity
General area (first and second level)	alpha smear—transferable contamination	<20 dpm/100cm ²
General area (first and second level)	beta/gamma smear—transferable contamination	<200 dpm/100cm ²

Table 2 lists radiation levels identified on radiation surveys conducted before deactivation.

Table 2. Predeactivation radiation levels

Identification	Description	Quantity
General area	Fixed and transferable radiation levels	Up to 33,000 dpm
		One pipe from 3033A 231,000 dpm

3.1.6 Hazardous Materials and Waste

Table 3 lists the hazardous materials and waste identified during facility walkdowns before deactivation.

Table 3. Building 3034 predeactivation hazardous materials and waste

Identification	Description	Quantity
Lead-based paint	Used as wall covering throughout building.	Indeterminate
Asbestos lagging	Used as pipe lagging throughout the building	Indeterminate
PCBs	Electrical devices and transformers	Indeterminate

3.2 POSTDEACTIVATION FACILITY STATUS

Attachment 2, "Building 3034 Postdeactivation Facility Photographs," contains photographs of the building conditions following deactivation activities.

3.2.1 Deactivation End Point Completion

End point criteria for deactivation activities and end point completion documentation are not applicable for Bldg. 3034. The requirement and guidance for these program elements were not developed before Bldg. 3034 deactivation.

3.2.2 Hazards Analysis

A postdeactivation hazards screening was performed. This hazards screening placed the facility in the "other industrial" category.

3.2.3 Internal Spaces

The miscellaneous items abandoned when the facility was no longer in use have been removed from the general area. No significant combustibles remain in the general area, and the general area of Bldg. 3034 has been decontaminated to remove transferable contamination from access-required spaces. The lead-based paint is chipping and peeling, providing a means of transferring the lead and endangering personnel and the environment. Approximately three-fourths of the building has been scraped and painted. Postdeactivation radioactive contamination levels and radiation levels for this area are listed in Tables 4 and 5, respectively. Postdeactivation hazardous materials and waste located in this area are listed in Table 6.

3.2.4 Building Structure and External Spaces

The structure and roof of Bldg. 3034 were inspected and found to be in generally good condition, with the exception of some water in leakage through various paths.

3.2.5 Process, Utility, and Support Systems

3.2.5.1 Electrical power system

All electrical services for the building proper, with the exception of lighting, have been disconnected or de-energized at the main breaker box. The electrical distribution system for the remainder of the isotopes area remains in use.

3.2.5.2 Fire protection system

The fire protection system is a dry system and remains available for use if there is a fire in the building.

3.2.5.3 Building steam system

The building steam system is in use for area heating.

3.2.5.4 Potable water system

The potable water system has been isolated, drained, and abandoned in place.

3.2.5.5 Process drain system

The process drain system has been abandoned in place. However, the process drain system remains connected to the ORNL process waste system.

3.2.5.6 Natural gas system

The natural gas system has been isolated, vented, and abandoned in place.

3.2.5.7 Plant air system

The plant air system has been isolated, vented, and abandoned in place.

3.2.6 Radioactive Material, Contamination, and Waste

Table 4 lists the radioactive contamination levels identified on radiation surveys conducted following deactivation.

Table 4. Postdeactivation radioactive contamination levels

Identification	Description	Quantity
General area	Alpha smear—transferable contamination	<20 dpm/100cm ²
General area	Beta/gamma smear—transferable contamination	<200 dpm/100cm ²
Ceiling	Beta/gamma smear—transferable contamination	One spot 250 dpm/100cm ² One spot 300 dpm/100cm ²

Table 5 lists radiation levels identified on radiation surveys conducted before deactivation:

Table 5. Postdeactivation radiation levels

Identification	Description	Quantity
General area	Fixed and transferable radiation levels	<0.1 mRem/h

3.2.7 Hazardous Materials and Waste

Table 6 lists the hazardous materials and waste identified during facility walkdowns following deactivation.

Table 6. Building 3034 postdeactivation hazardous materials and waste

Identification	Description	Quantity
Lead-based paint	Used as wall covering throughout building.	Indeterminate
Asbestos lagging	Used as pipe lagging throughout the building	Indeterminate
PCBs	Electrical devices and transformers	Indeterminate

4. BUILDING 3034 DEACTIVATION ACTIVITIES

The following section addresses the major activities performed during the deactivation of Bldg. 3034. The objectives of the deactivation process were to place the facility in a passively safe and environmentally stable configuration that can be efficiently and cost effectively maintained for an indefinite period of time. The major deactivation issues with regard to Bldg. 3034 are listed in the following sections.

4.1 INTERNAL SPACES; ACCESS REQUIRED

4.1.1 General Areas

All unnecessary storage cabinets, desks, file cabinets and miscellaneous materials were removed from the building. Some were green-tagged for reuse. The remaining items were disposed of.

Lead based paint exists throughout the building as wall covering. The areas that were peeling and flaking have been repaired, and approximately three-fourths of the building has been repainted.

The remainder of the paint will remain as is. Paint condition is an inspection item in the S&M plan for Bldg. 3034.

4.2 INTERNAL SPACES; NO ACCESS REQUIRED

There are no internal spaces where no access is required in Bldg. 3034.

4.3 EXTERNAL SPACES

4.3.1 Building 3034 Structure

The exterior of Bldg. 3034 was inspected and found to be in generally good structural condition.

4.3.2 Building 3034 Roof

The roof of Bldg. 3034 was repaired/inspected and found to be in generally good structural condition.

4.4 OPERATIONAL SYSTEMS

4.4.1 Electrical Power System

All electrical services that were not essential to the basic surveillance and maintenance operations were disconnected at the main breaker box. The power distribution system for the isotopes area remains in service.

4.4.2 Fire Protection System

The fire protection is a dry pipe delivery system available for use if there is a fire in the building.

4.4.3 Process Drain System

The process floor drains remain in operation to direct any roof in leakage to the ORNL process waste system and prevent any uncontrolled contamination from leaving the building. No decontamination of the process drain system has been performed.

4.5 MOTHBALLED SYSTEMS

No "mothballed" systems are associated with Bldg. 3034.

4.6 ABANDONED SYSTEMS

4.6.1 Potable Water System

Potable water has been isolated from Bldg. 3034 by capping the incoming line.

4.6.2 Natural Gas System

Natural gas was vented and valved off.

4.6.3 Plant Air System

The plant air system has been depressurized and valved off.

5. TRANSITION ACTIVITIES

Building 3034 will be officially transferred from the Department of Energy Office of Facility Transition and Management (EM-60) Program to the EM-40 program by a Memorandum of Agreement (MOA). The building will be accepted "as is" by EM-40 at the time of transfer.

5.1 MEMORANDUM OF AGREEMENT

The MOA documents the requirements agreed upon between EM-40 and EM-60. The signed MOA indicates acceptance by EM-40 that the criteria outlined in the MOA have been completed satisfactorily, with the exception of post-transition punchlist items, and that the level of deactivation of the facility is acceptable for transition to the EM-40 program.

Post-transition punchlist items will be finished after deactivation is complete. The details of how the punchlist items will be completed and documented will be addressed in the MOA.

5.2 POST-TRANSITION ACTIVITIES

No post-transition punchlist items have been identified for Bldg. 3034. All deactivation activities have been completed before transfer to EM-40.

6. POSTDEACTIVATION S&M

The "Postdeactivation S&M Plan for Building 3034" covers S&M activities associated with the interior spaces, operational and mothballed systems, and external areas related to Bldg. 3034.

The specific objectives of the S&M program for Bldg. 3034 are as follows:

1. ensure adequate containment of contamination,
2. provide physical safety and security control,
3. maintain the facility in a manner that will minimize potential hazards to the public, and
4. provide a mechanism for the identification and compliance with applicable environmental, safety, and health requirements.

The "Postdeactivation S&M Plan for Building 3034" details the specific S&M items to be performed and estimates the annual cost of performance. The S&M cost estimates are based on previous operational costs associated with similar S&M activities at ORNL.

The S&M activities associated with Bldg. 3034 include the following types of activities:

- walkdowns and inspections for structural integrity, safety, radioactive contamination, and hazardous material conditions;
- general housekeeping of the interior and exterior of the building as needed; and
- maintenance activities required to maintain the security and safety envelop of the facility.

7. ABNORMAL ACTIVITIES/CONDITIONS

No abnormal activities/conditions have been identified for Bldg. 3034.

8. TURNOVER PACKAGE DOCUMENTATION

8.1 ADMINISTRATIVE TURNOVER PACKAGE

Administrative turnover consists of a collection of administrative documents. This includes procedures, agreements, and other documents not directly related to the physical facility. The level of detail depends on the conditions, requirements, and agreements specific to the facility.

Attachment 3, "Administrative Turnover Package Checklist" reflects the documents required for this facility with respect to administrative turnover. The following sections detail the contents of the applicable sections required for Bldg. 3034.

8.1.1 Final Deactivation Project Report

The Final Deactivation Project Report is a management summary of the facility deactivation completion, general status and conditions, demonstrating conformance with the U.S. Department of

Energy's specification of the overall end point. It identifies management actions needed that are not routine. Unresolved issues are also described.

8.1.2 Regulatory Compliance Documentation

Regulatory compliance documentation details the status/compliance of all regulatory commitments, for example, status of compliance with applicable regulations promulgated pursuant to statutes, such as Occupational Safety and Health Administration; Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act; and National Environmental Protection Act and the remediation process in the National Contingency Plan.

8.1.3 Interagency Agreements Documentation

Interagency Agreements identify the terms and milestones of agreements pending and entered into by the U.S. Department of Energy with Federal, state, and local agencies and the status of compliance. This includes settlement agreements, administrative or consent orders, and compliance plans to settle outstanding notices of violation.

8.1.4 Existing Permit Documentation

This documentation covers the status of existing permits, including National Pollutant Discharge Elimination System, air permits, RCRA, and others associated with the facility.

8.1.5 Corrective Action Documentation

Corrective action documentation lists the status of corrective actions completed and outstanding, from previous audits, inspections, and other similar activities (e.g., Tiger Team, Technical Safety Appraisal, Defense Nuclear Facility Safety Board, regulatory agencies, self assessments, business systems review), including identification of those items that need to be reevaluated and reviewed with respect to the facility's surplus condition.

8.1.6 Deactivation Locks Log and Keys

This log, which lists all deactivation lock and keys for facility access, isolation of electrical components, chaining of valves, and other situations where physical access is to be controlled, will be turned over to EM-40 at the time of transfer.

8.2 TECHNICAL TURNOVER PACKAGE

Technical turnover consists of a collection of technical documents that describe the facility, its equipment, and the conditions at the completion of all deactivation activities. The level of detail depends on the conditions, requirements, and agreements specific to the facility. Attachment 4, "Technical Turnover Package Checklist," reflects the documents required for this facility with respect to technical turnover. The following sections detail the contents of the applicable sections required for Bldg. 3034.

8.2.1 Updated Facility Drawings (Arrangement, Photoionization Detector, Loop)

The updated facility drawings consist of facility, room, and cell arrangement drawings to the extent they exist. However, except in unique circumstances, as-built drawings of the deactivated conditions within the facility are not provided. Also provided is the current status (including drawings) of the deactivation/safe shutdown (if applicable). The documentation addresses systems, such as the water, sewer, air, electric, gas, process (mechanical and chemical) and fire protection systems. Attachment 5, "Building 3034 Drawing List," contains a list of all current drawings as they pertain to Bldg. 3034.

Table 7. Building 3034 updated drawings

Number	Revision	Title
D-51926	A	Enclosure Buildings 3030 and 3034—Ventilation
D-51926		Piping, Heating, and Ventilation

8.2.2 "As Left" Photos of Spaces and Major Equipment

These photos include a description/photos of spaces for which access is not anticipated during S&M.

8.2.3 Hazardous Material Inventory and Survey

The hazardous material inventory and survey identifies the location of fixed hazardous materials, wastes, and contamination with characterization information.

8.2.4 Safeguards and Security Documentation

Inventory and Safeguards and Security documentation lays out the provisions for nuclear or other material remaining in the facility for which there is a requirement for accountability or protection from diversion.

8.2.5 Chemical Substance Inventory and Survey

The chemical substance inventory and survey is an inventory of chemical and hazardous substances remaining, if any, and characterization information.

8.2.6 Radioactive Materials Inventory and Survey

The radioactive materials inventory and survey is an inventory of radioactive and fissile material remaining as contamination with characterization information. This survey includes the final radiological/hazardous materials survey records, final configuration and surveillance and maintenance requirements, available drawings, specifications, procedures, manuals, and unplanned occurrences records applicable to the facility. Attachment 6, "Building 3034 Radiological Survey Data," contains the pertinent radiological data.

8.2.7 Facility Soil, Surface Water, and Groundwater Condition Report

For soil, surface water, and groundwater conditions at the facility, this report provides all available data and reports that describe those conditions and the nature and extent of contamination therein. It also identifies any known assessment requirements.

8.3 S&M TURNOVER PACKAGE

S&M turnover consists of a collection of documents required to support postdeactivation S&M activities. The level of detail depends on the S&M specific to the facility. Attachment 7, "S&M Turnover Package Checklist" reflects the documents required for this facility with respect to S&M turnover. The following sections detail the contents of the applicable sections required for Bldg. 3034.

8.3.1 Postdeactivation S&M Plan

This document describes the S&M plan for the facility after deactivation is complete, up to the initiation of decommissioning. The S&M activities will be integrated into the decommissioning work and phased out as decommissioning is completed.

8.3.2 Postdeactivation S&M Updated Safety Equipment List

This document describes the safety equipment that will remain in the facility during the postdeactivation S&M period.

8.3.3 Postdeactivation S&M Procedures

There are no postdeactivation S&M procedures for Bldg. 3034.

9. ASSOCIATED LITERATURE

Document Number	Document Title
Draft	Facility Deactivation End Points Handbook; Volume 1: Method and Examples.
Draft	Facility Deactivation End Points Handbook; Volume 2: Deactivation Practices.
DOE/EM-0246	Decommissioning Resource Manual. August 1995
ORNL/ER-249/R2	Martin Marietta Environmental Restoration Program; Work Plan for the Isotopes Facilities Deactivation Project at Oak Ridge National Laboratory, August 1995
	Oak Ridge National Laboratory; Local Emergency Manual, Isotope Area, Revision 94-1, January 1994

10. ATTACHMENTS

1. Building 3034 Floor Plan
2. Building 3034 Postdeactivation Facility Photographs
3. Administrative Turnover Package Checklist
4. Technical Turnover Package Checklist
5. Building 3034 Drawing List
6. Building 3034 Radiological Survey Data
7. S&M Turnover Package Checklist

ATTACHMENT 1
BUILDING 3034 FLOOR PLAN

**ATTACHMENT 1
BUILDING 3034
FLOOR PLAN**

ORNL DWG 97C-255

Building 3034

ATTACHMENT 2
BUILDING 3034
POSTDEACTIVATION FACILITY PHOTOGRAPHS

ATTACHMENT 3
ADMINISTRATIVE TURNOVER
PACKAGE CHECKLIST

Administrative Turnover Package Checklist

Item number	Document	Applicable ?
1	Final Deactivation Project Report	Yes
2	Emergency Response Plan	No
3	Safety Documentation (Category III or greater)	No
4	Regulatory Compliance Documentation	No
5	Interagency Agreements Documentation	No
6	Existing Permit Documentation	No
7	Corrective Action Documentation	No
8	Postdeactivation Punchlist	No
9	Deactivation Locks and Keys	Yes

ATTACHMENT 4
TECHNICAL TURNOVER
PACKAGE CHECKLIST

Technical Turnover Package Checklist

Item number	Document	Applicable ?
1	End Point Determination Report	No
2	End Points Completion Report	No
3	End Point Technical Information	No
4	Deactivation Work Plans	No
5	Updated Facility Drawings (arrangement, PID, Loop, etc.)	Yes
6	"As Left" Photos of Spaces and Major Equipment	Yes
7	Hazardous Material Inventory and Survey	No
8	Safeguards and Security Documentation	No
9	Chemical Substance Inventory and Survey	No
10	Radioactive Materials Inventory and Survey	No
11	Facility Soil, Surface Water, and Groundwater Condition Report	Yes

ATTACHMENT 5
BUILDING 3034
DRAWING LIST

Building 3034 Drawing List

Document number	Revision	Title
244139		Multumite switchboard - drawout type - front & side elevation
244158		Multumite switchboard - drawout type - rear & section views
244168		Multumite switchboard - drawout type - wiring diagram
287318		Multumite switchgear - drawout type
60205		Model "U-34" pump - rotary seal
A20375EB-001-A		Roof maint plan Bldg. 3033, 3034
D-18722		Location plan & excavation dets
D-25461		Allowable floor load signs
D-25462		Framing dets
D-50698		New substation & underground duct
D-56859		Transformer concrete foundation & pit
D-56861		Plot plan sht 1
D-56863		Plot plan sht 2
D-56864		Retaining wall & planter plan sht 1
D-6630		Equip location plan
D-6649		Foundation plan & dets
E20378D-002-D		Elec conn. diag
E20378ED-900-E		Inter bldg conn diag
E20378ED-901-E		Schem diag
E20378ED-902-E		Cont PNL MB FA dev int wurd
N3E-020384-A014		Isotope Facilities Deactivation Project energy isolation survey details Bldg 3034
N3E-020384-SK02		Isotope Facilities Deactivation Project energy isolation survey details Bldg 3034

**ATTACHMENT 6
BUILDING 3034
RADIOLOGICAL SURVEY DATA**

ORNL Radiological Survey Data

Survey Number: 3038-95-0931

3038 Field Office

Date: 7/12/95

Time: 11:45

Surveyor Badge Number: 34657

☐ Routine Survey

RWP Number: 105394

Building: 3034

Specific Location: second level floor, walls, ceiling.

Description:

provided health physics coverage during decontamination effort.

Instruments Used and Calibration Due Date:

CTA-041 2/20/96

CTB-047 2/20/96

3038-9P 10/18/95

3038-8P 10/16/95

General Description of Radiological Conditions:

Please see ORNL RADIOLOGICAL SURVEY # 3038-95-0917 for information on area prior to start of job. All personnel were frisk at the end of the job. All personnel were found to be free and clear of any and all radioactive contamination. The outside of All tools were checked at the end of the job, no transferable contamination was found. The hand held scabbler gun was found to have non-transferable contamination. It was contaminated with 10,000 dpm beta-gamma. A survey of the area was performed at the completion of the job. The results of the survey are as follows: Inside the contamination area at the north end of the building non-transferable contamination levels ranged from 1,000 dpm beta-gamma up to 25,000 dpm beta-gamma. There was no transferable contamination found in this area. Inside the contamination area to the south end of the building was found to be free and clear of any and all radioactive contamination, transferable as well as non-transferable. All of the other various spots that were found on the floor on the second level of building 3034 were all <20 dpm/100 cm² alpha and <200 dpm/100 cm² beta-gamma. Only on of these spots towards the south end of the building was still contaminated after the decontamination effort (please see map for the exact location of this spot) The levels of the fixed contamination were 2,500 dpm beta-gamma. Two air samples were taken during this job. One air sample was taken in the work area (sample #158) and one sample was taken at the HEPA vac exhaust (sample #159). both air sample were counted six times over a period of 47 hours. Both air samples were found to be free and clear of any airborne radioactivity, Please see Air Sample Data Sheet(s) for both air samples.

Division or Group Needing the Survey: P&E

Person-hours spent on the survey: 6

of Pages: 6

Completed By: *C. H. Young*Reviewed by: *Slater*

Date: 8-6-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1-54	<20	<200	see map and smear sample data sheet for locations								

ORNL Radiological Survey Data

3038 Field Office

Date: 7/13/75 Time: 1300

Survey Number:

Give only DAI on sheets over
4pm/100 cm² s
4pm/100 cm² s

a B

1 SEE
2 SMER/L
3 SAMPLE
4 DATA
5 SHEETBUILDING 3034, SECOND LEVEL
FLOOR OF SECOND LEVEL

CTA-041 3038-
CTB-043 3038-
NORTH
WEST ← → EAST
SOUTH

Boundary Designations		
(S) - Smear Location	RA - Radiation Area	BA - Radiological Buffer Area
(L) - Large Area Smear	HR - High Radiation Area	CA - Contamination Area
(C) - Contact Dose Rate	VR - Very High Radiation Area	HC - High Contamination Area
(30) - 30 cm Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
(G) - General Area Dose Rate	RM - Radioactive Materials Area	SC - Soil Contamination Area
(SOP) - Step-off Pad	UM - Underground Radioactive Materials Area	
AS - Air Sample Location		

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

Page: _____

SMEAR SAMPLE DATA

NAME (P&S) B. GRAINGER		PHONE 46704	BLOG. NO. (P&S) 3034	LOCATION (SMEARS TAKEN) SECOND LEVEL-VARIOUS	DATE 7/12/95
EARS NUMBERED: 1		RESULTS REQUIRED:		DATE COUNTED 7/12/95 & 7/13/95	COUNTER OPERATOR W. J. J. 34657
3m	To	Date	Time		
VE D/M ONLY ON SMEARS OVER: 20 d/m α 200 d/m β		REMARKS: CTA-041 *SMEARS ARE FROM AREAS THAT WERE DECONTAMINATED THIS DATE. THIS IS A FOLLOW UP SURVEY. CTB-047			

α	β	LOCATION (*)	α	β	LOCATION (*)	α	β	LOCATION (*)
L20	L200	INSIDE "C" AREA CLOSE TO NORTH END	34 L20	L200	AIR SAMP. 953	67		
L20	L200	"	35 L20	L200	AIR SAMP. 953	68		
L20	L200	"	36 L20	L200	ELEC CORD W/953	69		
L20	L200	"	37 L20	L200	SCAB. GUN	70		
L20	L200	"	38 L20	L200	SCAB. GUN	71		
L20	L200	"	39 L20	L200	SCAB. GUN	72		
L20	L200	"	40 L20	L200	SCABLER	73		
L20	L200	"	41 L20	L200	SCABLER	74		
L20	L200	"	42 L20	L200	SCABLER	75		
L20	L200	"	43 L20	L200	SCABLER	76		
L20	L200	"	44 L20	L200	AIR HOSE	77		
L20	L200	"	45 L20	L200	AIR HOSE	78		
L20	L200	"	46 L20	L200	AIR HOSE	79		
L20	L200	"	47 L20	L200	AIR HOSE	80		
L20	L200	"	48 L20	L200	VAC. HOSE	81		
L20	L200	"	49 L20	L200	VAC. HOSE	82		
L20	L200	"	50 L20	L200	VAC. HOSE	83		
L20	L200	VARIOUS SPOTS	51 L20	L200	VAC. HOSE	84		
L20	L200	"	52 L20	L200	SM. Drum TOP	85		
L20	L200	"	53 L20	L200	SM. Drum Sides	86		
L20	L200	"	54 L20	L200	SM. Drum Sides	87		
L20	L200	"	55			88		
L20	L200	INSIDE "C" AREA CLOSE TO SOUTH END	56			89		
L20	L200	"	57			90		
L20	L200	"	58			91		
L20	L200	"	59			92		
L20	L200	HEPA VAC 1	60			93		
L20	L200	HEPA VAC 2	61			94		
L20	L200	HEPA VAC 3	62			95		
L20	L200	HEPA VAC 4	63			96		
L20	L200	AIR SAMP. 946	64			97		
L20	L200	AIR SAMP. 946	65			98		
L20	L200	CORD W/946	66			99		

Air Sample Data Sheet

HP Badge No.: 34657

RWP No.: 105394

Air Sample No. 159

Location: BUILDING 3034, SECOND LEVEL CAGE. (TAKEN AT THE HEPA VAC. EXHAUST)

Operation: DECONTAMINATION OF THE WALLS, FLOOR AND CEILING.

Flow Rate (cfm): 3.50

Pump ID: LVS0953

	Date	Time
Air Sample Start:	07/12/95	0700
Air Sample Stop:	07/12/95	1000

Filter Efficiency (%): 100.0

Count Results

Count Date	Time	Decay Time			Activity (d/m)		Concentration (uCi/cc)	
		Days	Hours	Minutes	Alpha	Beta-Gamma	Alpha	Beta-Gamma
07/12/95	1030	0	0	30	3369	11683	8.508 E-11	2.950 E-10
07/12/95	1200	0	2	0	473	1323	1.195 E-11	3.341 E-11
07/12/95	1445	0	4	45	127	441	3.207 E-12	1.114 E-11
07/13/95	0900	0	23	0	36	196	9.091 E-13	4.950 E-12
07/13/95	1500	1	5	0	43	63	1.086 E-12	1.591 E-12
07/14/95	0900	1	23	0	0	0	N/A	N/A

Air Sample Data Sheet

HP Badge No.: 34657

RWP No.: 105394

Air Sample No. 158

Location: BUILDING 3034, SECOND LEVEL CAGE. (SAMPLE TAKEN IN THE WORK AREA)

Operation: DECONTAMINATION OF WALLS, FLOOR AND CEILING.

Flow Rate (cfm): 3.50

Pump ID: LVS0946

	Date	Time
Air Sample Start:	07/12/95	0700
Air Sample Stop:	07/12/95	1000

Filter Efficiency (%): 100.0

Count Results

Count Time		Decay Time			Activity (d/m)		Concentration (uCi/cc)		
Date	Time	Days	Hours	Minutes	Alpha	Beta-Gamma	Alpha	Beta-Gamma	
07/12/95	1030	0	0	30	2815	9184	7.109 E-11	2.319 E-10	
07/12/95	1200	0	2	0	372	1141	9.394 E-12	2.881 E-11	
07/12/95	1445	0	4	45	89	525	2.248 E-12	1.326 E-11	
07/13/95	0900	0	23	0	34	161	8.586 E-13	4.066 E-12	
07/13/95	1500	1	5	0	34	21	8.586 E-13	5.303 E-13	
07/14/95	0900	1	23	0	0	0	N/A	N/A	

ORNL Radiological Survey Data

Survey Number: 3038-95-0788

3038 Field Office

Date: 6/9/95

Time: 06:35

Surveyor Badge Number: 626079

☐ Routine Survey

RWP Number: N/A

Building: 3034

Specific Location: Upstairs on north wall.

Description:

Comprehensive survey.

Instruments Used and Calibration Due Date:

CTB-047 2/20/96

CTA-041 2/20/96

3038-2B 10/23/95

3038-9P 10/18/95

General Description of Radiological Conditions:

All smears were <20 dpm/100 cm sq alpha and <200 dpm/100 cm sq beta-gamma. The only hot spot was a dirt dobber nest attached to the wall it probed 6,000 dpm beta-gamma and <300 dpm/100 cm sq alpha.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 3.5

of Pages: 2

Completed By: Deborah Crosson

Reviewed by: *Slater*

Date: 6-13-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map	9	<20	<200	See map
10	<20	<200	See map	11	<20	<200	See map	12	<20	<200	See map
13	<20	<200	See map	14	<20	<200	See map	15	<20	<200	See map
16	<20	<200	See map	17	<20	<200	See map	18	<20	<200	See map
19	<20	<200	See map	20	<20	<200	See map	21	<20	<200	See map
22	<20	<200	See map	23	<20	<200	See map	24	<20	<200	See map
25	<20	<200	See map	26	<20	<200	See map	27	<20	<200	See map
28	<20	<200	See map	29	<20	<200	See map	30	<20	<200	See map
31	<20	<200	See map	32	<20	<200	See map				

ORNL Radiological Survey Data

Survey Number: 3038-95-0788

3038 Field Office

Date: 6-9-95 Time: 0635

CTA-041 LTB-047

3038-2B+9P

Give only Dtd on smear over	
20 dpm/100 cm ² =	
300 dpm/100 cm ² =	

A	B
1 < 20	1 < 200
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32 < 20	32 < 200
33	33

North Wall

All areas except the 6k spot probed
 $< 1000 \text{ dpm}/100 \text{ cm}^2 \text{ BX}$. $< 300 \text{ dpm}/100 \text{ cm}^2 \text{ X}$

(#)	- Smear Location	Boundary Designations	
(#) - (#)	- Large Area Smear	RA - Radiation Area	BA - Radiological Buffer Area
#	- Contact Dose Rate	HR - High Radiation Area	CA - Contamination Area
#	- 30 cm Dose Rate	VR - Very High Radiation Area	HC - High Contamination Area
#	- General Area Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
SOP	- Step-off Pad	RM - Radioactive Materials Area	SC - Soil Contamination Area
AS	- Air Sample Location	UM - Underground Radioactive Materials Area	

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0918

3038 Field Office

Date: 7/10/95

Time: 18:03

Surveyor Badge Number: 34657

☐ Routine Survey

RWP Number: none

Building: 3034

Specific Location: south end of west wall

Description:

Performed a contamination survey. This included a direct frisk of the area as well as a smear survey. This Survey was completed by: C.G. Grainger, S.K. Burnette and G. Be nnette. THIS SURVEY WAS COMPLETED OVER A PERIOD OF SEVERAL DAYS AND MANY PORTABLE INSTRUMENTS WERE USED.

Instruments Used and Calibration Due Date:

CTA-041 2/20/96

CTB-047 2/20/96

General Description of Radiological Conditions:

Seventy defensap smears were taken on this section of wall. All smear results were <20 dpm/100 cm² alpha and <200 dpm/100 cm² beta-gamma. Direct readings on this section of wall ranged from 1,000 dpm beta-gamma to 10,000 dpm beta-gamma.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 10

of Pages: 3

Completed By: *C. Grainger*Reviewed By: *State*

Date: 7-11-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	see map for location.	2	<20	<200	see map for location.	3	<20	<200	see map for location.
4	<20	<200	see map for location.	5	<20	<200	see map for location.	6	<20	<200	see map for location.
7	<20	<200	see map for location.	8	<20	<200	see map for location.	9	<20	<200	see map for location.
10	<20	<200	see map for location.	11	<20	<200	see map for location.	12	<20	<200	see map for location.
13	<20	<200	see map for location.	14	<20	<200	see map for location.	15	<20	<200	see map for location.
16	<20	<200	see map for location.	17	<20	<200	see map for location.	18	<20	<200	see map for location.
19	<20	<200	see map for location.	20	<20	<200	see map for location.	21	<20	<200	see map for location.
22	<20	<200	see map for location.	23	<20	<200	see map for location.	24	<20	<200	see map for location.
25	<20	<200	see map for location.	26	<20	<200	see map for location.	27	<20	<200	see map for location.
28	<20	<200	see map for location.	29	<20	<200	see map for location.	30	<20	<200	see map for location.
31	<20	<200	see map for location.	32	<20	<200	see map for location.	33	<20	<200	see map for location.
34	<20	<200	see map for location.	35	<20	<200	see map for location.	36	<20	<200	see map for location.
37	<20	<200	see map for location.	38	<20	<200	see map for location.	39	<20	<200	see map for location.
40	<20	<200	see map for location.	41	<20	<200	see map for location.	42	<20	<200	see map for location.
43	<20	<200	see map for location.	44	<20	<200	see map for location.	45	<20	<200	see map for location.
46	<20	<200	see map for location.	47	<20	<200	see map for location.	48	<20	<200	see map for location.
49	<20	<200	see map for location.	50	<20	<200	see map for location.	51	<20	<200	see map for location.
52	<20	<200	see map for location.	53	<20	<200	see map for location.	54	<20	<200	see map for location.
55	<20	<200	see map for location.	56	<20	<200	see map for location.	57	<20	<200	see map for location.
58	<20	<200	see map for location.	59	<20	<200	see map for location.	60	<20	<200	see map for location.
61	<20	<200	see map for location.	62	<20	<200	see map for location.	63	<20	<200	see map for location.
64	<20	<200	see map for location.	65	<20	<200	see map for location.	66	<20	<200	see map for location.
67	<20	<200	see map for location.	68	<20	<200	see map for location.	69	<20	<200	see map for location.
70	<20	<200	see map for location.								

One day: 64 sq ft area per
200 sq ft area per
200 sq ft area per

Survey Number: 3038-95-0918 3038 Field Office Date: 7/10/95 Time: 1730

(PLEASE SEE SMEAR SAMPLE DATA SHEET)

Cross Bars have been probed and smeared

3034 SOUTH END OF WEST WALL

probed & smeared --- SB

TOP

Back Side

FRONT SIDE

Rock Side

IK Bx probe

FLOOR

SB probe & smeared

INSTRUMENTS:

CTA-041, CTB-047

34657 740165 740968

Boundary Designations	
① - Smear Location	BA - Radiological Buffer Area
② - Large Area Smear	CA - Contamination Area
③ - Contact Dose Rate	HC - High Contamination Area
④ - 30 cm Dose Rate	FC - Fixed Contamination Area
⑤ - General Area Dose Rate	SC - Soil Contamination Area
⑥ - Step-off Pad	RM - Radioactive Materials Area
⑦ - Air Sample Location	UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mR/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

SMEAR SAMPLE DATA

NAME (HP&S) <u>STANGER / DURNITE / BENNETT</u>	PHONE <u>4-6704</u>	BLDG. NO. (HP&S) <u>3034</u>	LOCATION (SMEARS TAKEN) <u>SOUTH END OF EAST WALL</u>	DATE <u>7/10/95</u>
SMEARS NUMBERED: From <u>1</u> To <u>70</u>	RESULTS REQUIRED:	DATE COUNTED <u>VARIOUS</u>	COUNTER OPERATOR <u>Ch. Young / New York</u>	
GIVE D/M ONLY ON SMEARS OVER: <u>20</u> d/m α <u>200</u> d/m β	REMARKS: <u>CTA-041</u> <u>CTB-047</u>	SURVEY # <u>3038-95-918</u>		

α	β	LOCATION (*)	α	β	LOCATION (*)	α	β	LOCATION (*)
1 L20	L200	SEE MAP	34 L20	L200	SEE MAP	67 L20	L200	SEE MAP
2 L20	L200	SEE MAP	35 L20	L200	SEE MAP	68 L20	L200	SEE MAP
3 L20	L200	SEE MAP	36 L20	L200	SEE MAP	69 L20	L200	SEE MAP
4 L20	L200	SEE MAP	37 L20	L200	SEE MAP	70 L20	L200	SEE MAP
5 L20	L200	SEE MAP	38 L20	L200	SEE MAP	71		
6 L20	L200	SEE MAP	39 L20	L200	SEE MAP	72		
7 L20	L200	SEE MAP	40 L20	L200	SEE MAP	73		
8 L20	L200	SEE MAP	41 L20	L200	SEE MAP	74		
9 L20	L200	SEE MAP	42 L20	L200	SEE MAP	75		
10 L20	L200	SEE MAP	43 L20	L200	SEE MAP	76		
11 L20	L200	SEE MAP	44 L20	L200	SEE MAP	77		
12 L20	L200	SEE MAP	45 L20	L200	SEE MAP	78		
13 L20	L200	SEE MAP	46 L20	L200	SEE MAP	79		
14 L20	L200	SEE MAP	47 L20	L200	SEE MAP	80		
15 L20	L200	SEE MAP	48 L20	L200	SEE MAP	81		
16 L20	L200	SEE MAP	49 L20	L200	SEE MAP	82		
17 L20	L200	SEE MAP	50 L20	L200	SEE MAP	83		
18 L20	L200	SEE MAP	51 L20	L200	SEE MAP	84		
19 L20	L200	SEE MAP	52 L20	L200	SEE MAP	85		
20 L20	L200	SEE MAP	53 L20	L200	SEE MAP	86		
21 L20	L200	SEE MAP	54 L20	L200	SEE MAP	87		
22 L20	L200	SEE MAP	55 L20	L200	SEE MAP	88		
23 L20	L200	SEE MAP	56 L20	L200	SEE MAP	89		
24 L20	L200	SEE MAP	57 L20	L200	SEE MAP	90		
25 L20	L200	SEE MAP	58 L20	L200	SEE MAP	91		
26 L20	L200	SEE MAP	59 L20	L200	SEE MAP	92		
27 L20	L200	SEE MAP	60 L20	L200	SEE MAP	93		
28 L20	L200	SEE MAP	61 L20	L200	SEE MAP	94		
29 L20	L200	SEE MAP	62 L20	L200	SEE MAP	95		
30 L20	L200	SEE MAP	63 L20	L200	SEE MAP	96		
31 L20	L200	SEE MAP	64 L20	L200	SEE MAP	97		
32 L20	L200	SEE MAP	65 L20	L200	SEE MAP	98		
33 L20	L200	SEE MAP	66 L20	L200	SEE MAP	99		

ORNL Radiological Survey Data

Survey Number: 3038-95-0727	3038 Field Office	Date: 5/16/95	Time: 16:00
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Surveyor Badge Number: 740918	☒ Routine Survey	RWP Number: _____
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Building: 3034	Specific Location: UPSTAIRS, SOUTH WALL
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Description:	
Contamination survey only. Survey on wall, I beams and pipes. Starting from pipe on right side, to beam at left side. See map.	

Instruments Used and Calibration Due Date:	
CTA-041 2/20/96	CTB-047 2/20/96

General Description of Radiological Conditions:	
All smears were <20 dpm/100cm ² alpha and <200 dpm/100 cm ² beta-gamma. This survey completes the whole 3034 South Wall up to beam in overhead.	

Division or Group Needing the Survey: CT	Person-hours spent on the survey: 3
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# of Pages: 2	Completed By: <i>Wayne L. Baker</i>	Reviewed by: <i>Shane</i>	Date: 5/23/95
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Give only data on station over
 200
 200
 200

Survey Number: 3038-95-0727 3038 Field Office Date: 5/12/95 Time: 1600

1 < 20 < 200

2
3
4
5
6
7
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9
10
11
12
13
14
15
16
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20
21
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33
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35
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Smear Location

2nd floor
 3034 SOUTH WALL

Top of beam

Beams NOT smears

NOT smears

FLOOR

CTA - 047
 CTB - 041
 W36

Wayne Allison 746518

Boundary Designations	
① - Smear Location	BA - Radiological Buffer Area
② - Large Area Smear	CA - Contamination Area
③ - Contact Dose Rate	HC - High Contamination Area
④ - 30 cm Dose Rate	FC - Fixed Contamination Area
⑤ - General Area Dose Rate	SC - Soil Contamination Area
⑥ - Step-off Pad	UM - Underground Radioactive Materials Area
AS - Air Sample Location	

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0719		3038 Field Office		Date: 5/15/95	Time: 18:40
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Surveyor Badge Number: 740918

 ☐ Routine Survey

 RWP Number: _____

Building: 3034

 Specific Location: SOUTH WALL, 2nd floor EAST SIDE

Description: _____
SURVEY FOR CLEARANCE

Instruments Used and Calibration Due Date:

CTA-041	2/20/96	CTB-047	2/20/96	3038-4B	9/11/95	3038-11P	9/25/95
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General Description of Radiological Conditions:

All of wall surveyed <300 dpm/probe alpha, and <1000 dpm/probe beta-gamma EXCEPT crossbeam in middle of upper right side of wall, which was 2k-5k dpm/probe beta-gamma and 2600 dpm/probe alpha. All smears were <20 dpm/.100cm2 alpha and <200 dpm/100cm2 beta-gamma. SEE MAP

Division or Group Needing the Survey: CT

 Person-hours spent on the survey: 4.5

of Pages: 2
 Completed By: Wayne Robinson
 Reviewed by: State
 Date: 5-16-95

ORNL Radiological Survey Data

Survey Number: 3038-95-0865

3038 Field Office

Date: 6/23/95

Time: 06:15

Surveyor Badge Number: 626079

☐ Routine Survey

RWP Number: N/A

Building: 3034

Specific Location: Upstairs in cage area

Description:

Comprehensive survey.

Instruments Used and Calibration Due Date:

CTB-047 2/20/96

CTA-041 2/20/96

3038-4P 8/19/95

3038-1B 11/17/95

General Description of Radiological Conditions:

All smears were <20 dpm/100 cm sq alpha and <200 dpm/100 cm sq beta-gamma. The only spot that probed above 1000 dpm/100 cm sq beta-gamma was up to 25,000 dpm/100 cm sq and was <300 dpm/100 cm sq alpha.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 1

of Pages: 2

Completed By: Deborah Cross

Reviewed by: *Slats*

Date: 6-30-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map				

ORNL Radiological Survey Data

626079

Survey Number: 3038-95-0865

3038 Field Office

Date: 6-23-95 Time: 0615

3038-4P+1B

CTA-041

CTB-047

Give only DPM on smear over	
20	dpm/100 cm ² ±
200	dpm/100 cm ² ±
A	B
1	20
2	20
3	20
4	20
5	20
6	20
7	20
8	20
9	20
10	20
11	20
12	20
13	20
14	20
15	20
16	20
17	20
18	20
19	20
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23	20
24	20
25	20
26	20
27	20
28	20
29	20
30	20
31	20
32	20
33	20

North Wall

Boundary Designations	
(S) - Smear Location	RA - Radiation Area
(L) - Large Area Smear	BA - Radiological Buffer Area
(C) - Contact Dose Rate	CA - Contamination Area
(30) - 30 cm Dose Rate	VR - Very High Radiation Area
(#) - General Area Dose Rate	AR - Airborne Radioactivity Area
(SOP) - Step-off Pad	RM - Radioactive Materials Area
AS - Air Sample Location	SC - Soil Contamination Area
	UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3047-95-1006		3047 Field Office		Date: 8/2/95		Time: 21:04	
Surveyor Badge Number: 33947		☐ Routine Survey		RWP Number: N/A			
Building: 3034		Specific Location: 2nd Floor, West Wall, North Central Section					
Description:							
Completed comprehensive survey of the west wall, north central section, 2nd floor, bldg. 3034							
Instruments Used and Calibration Due Date:							
3047-02B		10/2/95		3047-06P		10/23/95	
CTA-032		3/17/96		CTB-001		3/17/96	
General Description of Radiological Conditions:							
See attached survey maps for specific radiological conditions. All accessible surfaces probed for alpha and beta gamma, and unless otherwise noted, all direct frisks <1000 dpm beta gamma, <300 dpm alpha.							
Division or Group Needing the Survey: CHEM TECH				Person-hours spent on the survey: 6			
# of Pages: 3		Completed By: <i>[Signature]</i>		Reviewed by: <i>[Signature]</i>		Date: 6-5-95	
Smear Results (dpm/100 cm ² unless noted)							
Smear Number	α	β	Location	Smear Number	α	β	Location
1-30	<20	<200	See page 2 map				

ORNL Radiological Survey Data

Survey Number: 3047-95-1006

3047 Field Office

Date: 6-2-95 Time: 2:104

Give only Dose rate on section over	
20	4pm/100 cm ² s
200	4pm/100 cm ² s
A	B
<20	<200
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
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95	95
96	96
97	97
98	98
99	99
100	100

3034 West Wall, North Central Section

2nd Floor

33947

CTA-032 3047-2B
CTB-001 3047-6P

(1)	- Smear Location	Boundary Designations	
(2)	- Large Area Smear	RA - Radiation Area	BA - Radiological Buffer Area
(3)	- Contact Dose Rate	HR - High Radiation Area	CA - Contamination Area
(4)	- 30 cm Dose Rate	VR - Very High Radiation Area	HC - High Contamination Area
(5)	- General Area Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
(SOP)	- Step-off Pad	RM - Radioactive Materials Area	SC - Soil Contamination Area
AS	- Air Sample Location	UM - Underground Radioactive Materials Area	

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

3047 Field Office

Date: 6-2-95 Time: 2:04

SURVEY NUMBER: 3047-25-1006

1. The company
 2. The company
 3. The company

3034 West Wall, North Central Section

2nd Floor

2-10-72

33947

33,000 sqm B10, 150 DRYTALS
ESTIMATED PROBS 19,000 sqm to
9/2/14

12/1/82

* UNABLE TO PROBE ANY AREA WITHIN 2 FT OF OLD WENT WALK FOR BITS DUE TO CLAYED

BACKER RD.

Wm
HPE PAPER 33,000 LBS
TO 231,000 LBS B/S NO
DETACHABLE AFMA.

1	1
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91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

(2)	(c)	(d)	<p>Large Area Smear</p> <p>RA - Radiation Area</p> <p>BA - Radiological Buffer Area</p> <p>CA - Contamination Area</p> <p>HC - High Contamination Area</p> <p>FC - Filled Contamination Area</p> <p>SC - Soil Contamination Area</p> <p>AS - Air Sample Location</p> <p>RM - Radioactive Materials Area</p> <p>UM - Underground Radioactive Materials Area</p>
<p>Boundary Designations</p>			
<p>Indicate specific raditions: B - Beta (mR/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.</p>			

ORNL Radiological Survey Data

Survey Number:

3038 Field Office:

Date: 5/5/95 Time: 0650

Give only OMI on survey area	
square m ² :	
square m ² :	
A	B
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
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32	32
33	33

Surveyed shelf beam 1K-8K dpm/probe BY (all over)
 < 300 ~~MB~~ Alpha
 DN/PPA

A. Section up to 1K BY
 < 300 ~~MB~~ Alpha

B. Section < 1000 DN/probe BY
 < 300 ~~MB~~ Alpha

FLOOR

3038-1B
 3038-1P
 3038-7P

Wiping Station: 74.918
 Sham Bait 740165

Sensor Location		Boundary Designations	
(A)	- Large Area Sensor	RA - Radiation Area	BA - Radiological Buffer Area
(B)	- Contact Dose Rate	HR - High Radiation Area	CA - Contamination Area
(C)	- 30 cm Dose Rate	VR - Very High Radiation Area	HC - High Contamination Area
(D)	- General Area Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
(EOP)	- Step-off Pad	RM - Radioactive Materials Area	SC - Soil Contamination Area
(AS)	- Air Sample Location	UM - Underground Radioactive Materials Area	

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

Page: _____

ORNL Radiological Survey Data

Survey Number: 3038-95-0924

3038 Field Office

Date: 6/7/95

Time: 05:00

Surveyor Badge Number: 740968

☐ Routine Survey

RWVP Number: _____

Building: 3034

Specific Location: 2nd floor, west wall, north section

Description:

Performed a smear survey as well as a direct frisk of the area.

Instruments Used and Calibration Due Date:

CTA-041 2/20/96

CTB-047 2/20/96

3038-1P

9/6/95

General Description of Radiological Conditions:

All smears that were counted for alpha contamination were <20 dpm/100cm². All smears that were counted for beta-gamma contamination were <200 dpm/100cm². All non transferable contamination levels were <1000 dpm.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 4

of Pages: 2

Completed By:

Garland B. Smith

Reviewed by:

State

Date: 7/11/95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	see map	2	<20	<200	see map	3	<20	<200	see map
4	<20	<200	see map	5	<20	<200	see map	6	<20	<200	see map
7	<20	<200	see map	8	<20	<200	see map	9	<20	<200	see map
10	<20	<200	see map	11	<20	<200	see map	12	<20	<200	see map
13	<20	<200	see map	14	<20	<200	see map	15	<20	<200	see map
16	<20	<200	see map	17	<20	<200	see map	18	<20	<200	see map
19	<20	<200	see map	20	<20	<200	see map	21	<20	<200	see map
22	<20	<200	see map	23	<20	<200	see map	24	<20	<200	see map
25	<20	<200	see map								

Survey Number: 3038-95-0924

Date: 6-7-95 Time: 0500

α		β	
1	20	1	200
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
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9		9	
10		10	
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19		19	
20		20	
21		21	
22		22	
23		23	
24		24	
25	↓	25	↓
26		26	
27		27	
28		28	
29		29	
30		30	
31		31	
32		32	
33		33	

Smears 1 thru 16 were counted
for Alpha, B7 contamination. All
were ≤ 20 , $\leq 200 \text{ dpm}/100 \text{ cm}^2$. b6b7
6-7-45 6-7-45

CTA 041/CTB 047

Gamma 17 Thru 25 were counted
for Alpha, B γ contamination All
were $< 20, \angle 200 \text{ dpm}/100 \text{ cm}^2$. 66u 6.3
56u

/// - Denotes this section of wall ^{East Drive} has been probed for BX containing iong, with results of <1000 dpm.
BbW. 0500 6-4-95 3038-01P

Page: _____

ORNL Radiological Survey Data

Survey Number: 3038-95-0800	3038 Field Office	Date: 5/2/95	Time: 16:30
Surveyor Badge Number: 626079	☒ Routine Survey	RWP Number: N/A	
Building: 3034	Specific Location: South wall upstairs		
Description: Comprehensive survey.			
Instruments Used and Calibration Due Date:			
3038-3P 9/18/95 3038-2I 6/26/95			
General Description of Radiological Conditions: The only probe readings above 1000 dpm/100 cm sq beta-gamma were on dirt dobber nests built on the wall. The highest reading was 100,000 dpm beta-gamma and this nest was removed, so the highest remaining nest is 6,000 dpm beta-gamma. All probed <300 dpm/100 cm sq alpha.			
Division or Group Needing the Survey: CT		Person-hours spent on the survey: 2	
# of Pages: 2	Completed By: Deborah Cramer	Reviewed by: Alatis	Date: 6-13-95

One copy D44 of this form
 NA
 NA
 Survey Number: 3038-95 3038 Field Office Date: 5-2-95 Time: 1630
 3038-3P+2I

2nd floor
 3034 SOUTH WALL

(partially removed)
 up to 3k (on under side) 1300 dpm up to 1k
 100k (Removed)
 6k probed not probed
 Suspect possible internal contamination
 FLOOR

* Dirt dobber nests
 all probed < 300 dpm/100 cm² alpha

Boundary Designations	
(C) - Smear Location	RA - Radiation Area
(C) - Large Area Smear	BA - Radiological Buffer Area
(C) - Contact Dose Rate	CA - Contamination Area
(C) - 30 cm Dose Rate	VR - Very High Radiation Area
(C) - General Area Dose Rate	HC - High Contamination Area
(C) - Step-off Pad	AR - Airborne Radioactivity Area
(C) - Air Sample Location	FC - Fixed Contamination Area
	SC - Soil Contamination Area
	UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0921

3038 Field Office

Date: 7/11/95

Time: 12:49

Surveyor Badge Number: 740165

☒ Routine Survey

RWP Number: N/A

Building: 3034

Specific Location: SECOND FLOOR WEST WALL

Description:

PERFORMED DIRECT FRISK & SMEARED WEST WALL.

Instruments Used and Calibration Due Date:

3038-1P

9/6/95

CTA-041

2/20/96

CTB-047

2/20/96

General Description of Radiological Conditions:ALL AREAS THAT WERE FRISK & SMEARED WERE <20 DPM/100cm² & <300 DPM/100cm² ALPHA & <200 DPM/100cm² & <1000 DPM/100cm² B/G.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 4

of Pages: 2

Completed By: *Shawn Buntz* 740165Reviewed by: *Mark*

Date: 7/11/95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1-60	<20	<200	SEE MAP								

Survey Number: 3058-95-0921 3038 Field Office Date: 7/11/95 Time: 12:49

Date: 7/11/95 Time: 12:49

Time: 12:49

3034 WEST WALL

FLOOR

3038-01P
Produced Pursuant to

CTA-041, CTB-047

746115 ~~746115~~ ~~746115~~

(a)	<p>① - Large Area Smear</p> <p>② - Small Area Smear</p>	<p>RA - Radiation Area</p> <p>BA - Radiological Buffer Area</p>
(b)	<p>① - Contact Dose Rate</p> <p>② - 10 cm Dose Rate</p> <p>③ - General Area Dose Rate</p>	<p>HA - High Radiation Area</p> <p>VA - Very High Radiation Area</p> <p>AF - Airborne Radioactivity Area</p> <p>SC - Soil Contamination Area</p>
(c)	<p>① - Step-On Pad</p> <p>② - Air Sample Location</p>	<p>RM - Radioactive Materials Area</p> <p>UM - Unwound Radioactive Materials Area</p>

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific raditions: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

Default units are in mR/hr and are for open window/beta/gamma readings. Letter suffixes with the number indicate specific radia tions: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0700

3038 Field Office

Date: 5/11/95

Time: 17:00

Surveyor Badge Number: 740165

☐ Routine Survey

RWP Number: _____

Building: 3034

Specific Location: 2ND FLOOR EAST CAGE WALL

Description:

2ND FLOOR EAST CAGE WALL BESIDE DOOR TO THE STAIRS.

Instruments Used and Calibration Due Date:

3038-11P 9/25/95

3038-4B 9/11/95

CTB-047 2/20/96

CTA-041 2/20/96

General Description of Radiological Conditions:

DIRECT FRISK READINGS WERE <1000 DPM/100cm²B/G AND <300 DPM/100cm² ALPHA. ALL SMEARS WERE <200 DPM/100cm² B/G AND <20 DPM/100cm² ALPHA.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 2

of Pages: 2

Completed By: SK Burnette

Reviewed by: *Alto*

Date: 5-16-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	SEE MAP	2	<20	<200	SEE MAP	3	<20	<200	SEE MAP
4	<20	<200	SEE MAP	5	<20	<200	SEE MAP	6	<20	<200	SEE MAP
7	<20	<200	SEE MAP	8	<20	<200	SEE MAP	9	<20	<200	SEE MAP
10	<20	<200	SEE MAP	11	<20	<200	SEE MAP	12	<20	<200	SEE MAP
13	<20	<200	SEE MAP	14	<20	<200	SEE MAP	15	<20	<200	SEE MAP
16	<20	<200	SEE MAP	17	<20	<200	SEE MAP	18	<20	<200	SEE MAP
19	<20	<200	SEE MAP	20	<20	<200	SEE MAP				

ORNL Radiological Survey Data

Survey Number: 3038-95-0700

3038 Field Office

Date: 5/11/95 Time: 1700

(c)	(d)	<p>Large Area Street</p> <p>Street Location</p> <p>RA - Radiation Area</p> <p>BA - Radiological Buffer Area</p> <p>CA - Contamination Area</p> <p>HC - High Contamination Area</p> <p>FC - Fixed Contamination Area</p> <p>SC - Soil Contamination Area</p>
		<p>RM - Radioactive Material Area</p> <p>UM - Underground Radioactive Materials Area</p>
		<p>Step-Off Pad</p> <p>General Area Dose Rate</p> <p>30 cm Dose Rate</p> <p>Contact Dose Rate</p> <p>High Radiation Area</p> <p>Very High Radiation Area</p> <p>Alpha-Radiation Area</p> <p>Radioactive Material Area</p> <p>Soil Contamination Area</p>
		<p>AS - Air Sample Location</p>
		<p>Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific raditions: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.</p>

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary

There doesn't seem to be any more information about this.

3038-11, 3038-048, CT#-041, CT#-047

ORNL Radiological Survey Data

Survey Number: 3038-95-0802	3038 Field Office	Date: 6/2/95 Time: 10:00
Surveyor Badge Number: <u>628079</u>	☐ Routine Survey	RWP Number: <u>N/A</u>
Building: <u>3034</u>	Specific Location: <u>Upstairs cage wall.</u>	
Description: <u>Comprehensive survey.</u>		
Instruments Used and Calibration Due Date:		
3038-3P 9/18/95	3038-9P 10/18/95	CTB-047 2/20/96 CTA-041 2/20/96
General Description of Radiological Conditions:		
<u>All smears were <20 dpm/100 cm sq alpha and <200 dpm/100 cm sq beta-gamma. All areas probed <1000 dpm/100 cm sq beta-gamma.</u>		
Division or Group Needing the Survey: <u>CT</u>		Person-hours spent on the survey: <u>3</u>
# of Pages: <u>2</u>	Completed By: <u>Deborah Crossino</u>	Reviewed by: <u>Slats</u> Date: <u>6-25-95</u>

Smear Results (dpm/100 cm ² unless noted)											
Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map	9	<20	<200	See map
10	<20	<200	See map	11	<20	<200	See map	12	<20	<200	See map
13	<20	<200	See map	14	<20	<200	See map	15	<20	<200	See map
16	<20	<200	See map	17	<20	<200	See map	18	<20	<200	See map
19	<20	<200	See map	20	<20	<200	See map	21	<20	<200	See map
22	<20	<200	See map	23	<20	<200	See map				

ORNL Radiological Survey Data

Survey Number: 3038-95-0802

3038 Field Office

Date: 5-23-95 Time: 1730

3038-3P

3038-9P on 6-2-95

Give only Dd on smears over
 20 dpm/100 cm² ±
 200 dpm/100 cm² ±

a	β
1 < 20	1 < 200
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23 < 20	23 < 200
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33

EAST CAGE WALL

3034 2nd floor

All these smears are on the
outside of the cage.

* All areas probed < 1000 dpm/100 cm² Bγ.

②	- Smear Location	Boundary Designations	
②-④	- Large Area Smear	RA - Radiation Area	BA - Radiological Buffer Area
#	- Contact Dose Rate	HR - High Radiation Area	CA - Contamination Area
#	- 30 cm Dose Rate	VR - Very High Radiation Area	HC - High Contamination Area
#	- General Area Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
[SOP]	- Step-off Pad	RM - Radioactive Materials Area	SC - Soil Contamination Area
AS	- Air Sample Location	UM - Underground Radioactive Materials Area	

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0726 3038 Field Office Date: 5/16/95 Time: 15:37

Surveyor Badge Number: 34657 ☐ Routine Survey RWP Number: _____

Building: 3034 Specific Location: UPSTAIRS STORAGE CAGE

Description:

CONTAMINATION SURVEY OTF THE EAST CAGE WALL. THIS SURVEY IS FOR THE SECOND LARGE SECTION TO THE SOUTH SIDE THE DOOR.(SEE MAP)

Instruments Used and Calibration Due Date:

CTA-041 2/20/96 CTB-047 2/20/96 3038-2B 10/23/95 3038-9P 10/18/95

General Description of Radiological Conditions:

ALL DIRECT READINGS WERE <300 DPMALPHA AND <1000 DPM BETA-GAMMA. THERE WERE SIXTEEN SMEARS TAKEN ON THIS SECTION OF THE CAGE WALL. ALL SMEARS WERE FOUND TO BE FREE AND CLEAR OF ANY RADIOACTIVE CONTAMINATION. (<20 DPM/100 CM² ALPHA AND <200 DPM/100 CM² BETA-GAMMA).

Division or Group Needing the Survey: CT Person-hours spent on the survey: 1.5

of Pages: 2 Completed By: *Blahung 34657* Reviewed by: *Slats* Date: 5/23/95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	SEE MAP FOR LOCATION	2	<20	<200	SEE MAP FOR LOCATION	3	<20	<200	SEE MAP FOR LOCATION
4	<20	<200	SEE MAP FOR LOCATION	5	<20	<200	SEE MAP FOR LOCATION	6	<20	<200	SEE MAP FOR LOCATION
7	<20	<200	SEE MAP FOR LOCATION	8	<20	<200	SEE MAP FOR LOCATION	9	<20	<200	SEE MAP FOR LOCATION
10	<20	<200	SEE MAP FOR LOCATION	11	<20	<200	SEE MAP FOR LOCATION	12	<20	<200	SEE MAP FOR LOCATION
13	<20	<200	SEE MAP FOR LOCATION	14	<20	<200	SEE MAP FOR LOCATION	15	<20	<200	SEE MAP FOR LOCATION
16	<20	<200	SEE MAP FOR LOCATION	17	<20	<200	SEE MAP FOR LOCATION				

ORNL Radiological Survey Data

Survey Number: 3038-95-0726 3038 Field Office

Date: 5/16/95 Time: 3:00pm

Give only Dose rate values over
 20 $\mu\text{R}/100 \text{ cm}^2 \text{ s}$
 200 $\mu\text{R}/100 \text{ cm}^2 \text{ s}$

INSTRUMENTS USED:

CTA-041 3038-09P
 CTB-047 3038-02B

EAST CAGE WALL

By: C. H. Haining 74657

A	B
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33

Door

To downstairs

Bldg. 3034 2nd Floor

Symbol	Designation	Boundary Designations
①	- Smear Location	RA - Radiation Area
②	- Large Area Smear	BA - Radiological Buffer Area
③	- Contact Dose Rate	CA - Contamination Area
④	- 30 cm Dose Rate	HR - High Radiation Area
⑤	- General Area Dose Rate	VR - Very High Radiation Area
⑥	- Step-off Pad	AR - Airborne Radioactivity Area
⑦	- Air Sample Location	RM - Radioactive Materials Area
		SC - Soil Contamination Area
		UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0674

3038 Field Office

Date: 5/2/95

Time: 16:30

Surveyor Badge Number: 626079

☐ Routine Survey

RWP Number: _____

Building: 3034

Specific Location: Upstairs cage area.

Description:

Comprehensive survey of building. Part of this survey was done on 4/25/95.

Instruments Used and Calibration Due Date:

CTB-047 2/20/96

CTA-041 2/20/96

3038-8P 10/16/95

3038-3P 9/18/95

General Description of Radiological Conditions:

The whole area probed <1000 dpm/100 cm sq bet-gamma. All smears were <20 dpm/100 cm sq alpha and <200 dpm/100 cm sq beta-gamma.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 4

of Pages: 2

Completed By: Deborah CrossReviewed by: Steve

Date: 5-16-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map	9	<20	<200	See map
10	<20	<200	See map	11	<20	<200	See map	12	<20	<200	See map
13	<20	<200	See map	14	<20	<200	See map	15	<20	<200	See map
16	<20	<200	See map	17	<20	<200	See map	18	<20	<200	See map
19	<20	<200	See map	20	<20	<200	See map	21	<20	<200	See map
22	<20	<200	See map	23	<20	<200	See map	24	<20	<200	See map
25	<20	<200	See map	26	<20	<200	See map	27	<20	<200	See map
28	<20	<200	See map	29	<20	<200	See map	30	<20	<200	See map
31	<20	<200	See map	32	<20	<200	See map	33	<20	<200	See map
34	<20	<200	See map	35	<20	<200	See map	36	<20	<200	See map
37	<20	<200	See map	38	<20	<200	See map	39	<20	<200	See map

626079

ORNL Radiological Survey Data

Survey Number: 3038-95-0674

3038 Field Office

Date: 5-2-95 Time: 1630

CTA-041 CTB-047

3038-8P on 4-25-95

3038-3P on 5-2-95

Give only D&S on smear over
 $\frac{20}{200}$ dpm/100 cm² α
 $\frac{200}{200}$ dpm/100 cm² β

α	β
1 < 20	1 < 200
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33 < 20	33 < 200

EAST CAGE WALL

3034 2nd floor

Inside of cage only.

Probes < 1,000 dpm/100 cm² B γ + < 500 dpm/100 cm² α

34 < 20	34 < 200
35	
36	
37	
38	
39 < 20	39 < 200
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	

Symbol	Description	Boundary Designations
(S)	- Smear Location	RA - Radiation Area
(L)	- Large Area Smear	BA - Radiological Buffer Area
(C)	- Contact Dose Rate	HR - High Radiation Area
(30)	- 30 cm Dose Rate	VR - Very High Radiation Area
(G)	- General Area Dose Rate	HC - High Contamination Area
(SOP)	- Step-off Pad	AR - Airborne Radioactivity Area
(AS)	- Air Sample Location	FC - Fixed Contamination Area
		SC - Soil Contamination Area
		RM - Radioactive Materials Area
		UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0801

3038 Field Office

Date: 6/2/95

Time: 14:00

Surveyor Badge Number: 626079

☐ Routine Survey

RWP Number: N/A

Building: 3034

Specific Location: Upstairs cage wall on north end.

Description:

Comprehensive survey.

Instruments Used and Calibration Due Date:

3038-9P 10/18/95

3038-2B 10/23/95

CTB-047 2/20/96

CTA-041 2/20/96

General Description of Radiological Conditions:

All smears were <20 dpm/100 cm sq alpha and <200 dpm/100 cm sq beta-gamma. The only spot above 1000 dpm/100 cm sq beta-gamma was a 6,000 dpm spot and it probed <300 dpm/100 cm sq alpha.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 1.5

of Pages: 2

Completed By: Delmar Chasno

Reviewed by: [Signature]

Date: 6-13-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map	9	<20	<200	See map
10	<20	<200	See map	11	<20	<200	See map	12	<20	<200	See map
13	<20	<200	See map	14	<20	<200	See map	15	<20	<200	See map
16	<20	<200	See map	17	<20	<200	See map				

ORNL Radiological Survey Data

626079

Survey Number: 3038-95-0801

3038 Field Office

Date: 6-2-95 Time: 1400

CTB-047 CTA-041

3038-9P + 2B

EAST CAGE WALL
ON NORTH END Smears taken on outside of cage.

*All areas probed $< 1000 \text{ dpm}/100 \text{ cm}^2$ except for the 6k spot and it was $< 300 \text{ dpm}/100 \text{ cm}^2$ alpha

Symbol	Description	Boundary Designations	
		RA - Radiation Area	BA - Radiological Buffer Area
①	Smear Location	HR - High Radiation Area	CA - Contamination Area
②	Large Area Smear	VR - Very High Radiation Area	NC - High Contamination Area
③	Contact Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
④	30 cm Dose Rate	RM - Radioactive Materials Area	SC - Soil Contamination Area
⑤	General Area Dose Rate	UM - Underground Radioactive Materials Area	
⑥	Step-off Pad		
⑦	Air Sample Location		

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3047-95-1077		3047 Field Office		Date: 5/16/95		Time: 15:00	
Surveyor Badge Number: 626444		☒ Routine Survey		RWP Number: N/A			
Building: 3034		Specific Location: North-East Cage					
Description:							
Conducted contamination survey of the North-East Cage wall in building 3034.							
Instruments Used and Calibration Due Date:							
CTA-032		3/17/96		CTB-001		3/17/96	
3047-01P		9/18/95		3047-02B		10/2/95	
General Description of Radiological Conditions:							
The maximum non-transferable contamination was 10,000 dpm/100cm ² beta-gamma. The maximum transferable contamination was 400 dpm/100cm ² beta-gamma. This smear was taken on the floor adjoining the front of the wall.							
Division or Group Needing the Survey: CHEM TECH				Person-hours spent on the survey: 1.5			
# of Pages: 2		Completed By: <i>Zing Davis</i>		Reviewed by: <i>Slats</i>		Date: 7-11-95	
Smear Results (dpm/100 cm ² unless noted)							
Smear Number	α	β	Location	Smear Number	α	β	Location
1-13	<20	<200	See map	14	<20	400	See map

ORNL Radiological Survey Data

Date: 5/16/75 Time: 15:00

3047 Field Office

Survey Number: 3047-95-1077

Handwritten signature
626444

Probes 400dpm 28
FLOOR
Probes 100dpm 28

CTA-032
CTB-001
3047-01P
3047-02B

Count rate (cpm)	Count rate (dpm)	Count rate (Bq)
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

Boundary Designations	Boundary Designations
BA - Radiological Buffer Area	RA - Radiation Area
CA - Contamination Area	HR - High Radiation Area
HC - High Contamination Area	VR - Very High Radiation Area
FC - Fixed Contamination Area	AR - Airborne Radioactivity Area
SC - Soil Contamination Area	RM - Radioactive Materials Area
UM - Underground Radioactive Materials Area	AS - Air Sample Location
SOP - Step-off Pad	
# - General Area Dose Rate	
# - 30 cm Dose Rate	
# - Contact Dose Rate	
(C) - Large Area Smear	
(S) - Smear Location	

Default units are in mR/hr and are for open window betagamma readings. Letter suffixes with the number indicate specific radiactions: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0725

3038 Field Office

Date: 5/16/95

Time: 15:22

Surveyor Badge Number: 34657

☐ Routine Survey

RWP Number: _____

Building: 3034

Specific Location: UPSTAIRS STORAGE CAGE

Description:

CONTAMINATION SURVEY OF THE EAST CAGE WALL. THIS IS FOR THE SECOND LARGE SECTION OF THE WIRE WALL FROM THE NORTH END OF THE BUILDING.

Instruments Used and Calibration Due Date:

CTA-041 2/20/96

CTB-047 2/20/96

3038-2B 10/23/95

3038-9P 10/18/95

General Description of Radiological Conditions:

ALL DIRECT READINGS WERE <300 DPM ALPHA AND <1000 DPM BETA-GAMMA. THERE WERE FOURTEEN SMEARS TAKEN ON THIS SECTION OF THE CAGE WALL. ALL SMEARS WERE FOUND TO BE FREE AND CLEAR OF ANY RADIOACTIVE CONTAMINATION. (<20 DPM/100 CM² ALPHA AND <200 DPM/100 CM² BETA-GAMMA).

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 1.5

of Pages: 2

Completed By: *Chang*

34657

Reviewed by: *Slater*

Date: 5/23/95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	SEE MAP FOR LOCATION	2	<20	<200	SEE MAP FOR LOCATION	3	<20	<200	SEE MAP FOR LOCATION
4	<20	<200	SEE MAP FOR LOCATION	5	<20	<200	SEE MAP FOR LOCATION	6	<20	<200	SEE MAP FOR LOCATION
7	<20	<200	SEE MAP FOR LOCATION	8	<20	<200	SEE MAP FOR LOCATION	9	<20	<200	SEE MAP FOR LOCATION
10	<20	<200	SEE MAP FOR LOCATION	11	<20	<200	SEE MAP FOR LOCATION	12	<20	<200	SEE MAP FOR LOCATION
13	<20	<200	SEE MAP FOR LOCATION	14	<20	<200	SEE MAP FOR LOCATION				

ORNL Radiological Survey Data

Count rate - DPM to counts per
 20 sec/100 cm² :
 200 sec/100 cm² :

Survey Number: 3038-95-0725

3038 Field Office

Date: 5/16/95 Time: 3:00pm

EAST CAGE WALL
ON NORTH END INSTRUMENTS USED: By: *D. H. King 39457*

3038-09P

3038-02B

CTA-041

CTB-047

Boundary Designations	
(S) - Smear Location	RA - Radiation Area
(L) - Large Area Smear	BA - Radiological Buffer Area
(C) - Contact Dose Rate	CA - Contamination Area
(F) - 30 cm Dose Rate	HR - High Radiation Area
(G) - General Area Dose Rate	VR - Very High Radiation Area
(SCP) - Step-off Pad	AR - Airborne Radioactivity Area
AS - Air Sample Location	FC - Fixed Contamination Area
	EC - Soil Contamination Area
	UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0803

3038 Field Office

Date: 6/2/95

Time: 15:30

Surveyor Badge Number: 626079

☐ Routine Survey

RWP Number: N/A

Building: 3034

Specific Location: Upstairs cage wall.

Description:

Comprehensive survey.

Instruments Used and Calibration Due Date:

3038-9P 10/18/95

CTB-047

2/20/96

CTA-041

2/20/96

General Description of Radiological Conditions:

All smears <20 dpm/100 cm sq alpha and <200 dpm/100 cm sq beta-gamma. All areas probed <1000 dpm/100 cm sq beta-gamma.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 1.5

of Pages: 2

Completed By: Deborah Chazano

Reviewed by: *Statt*

Date: 6-13-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map	9	<20	<200	See map
10	<20	<200	See map	11	<20	<200	See map	12	<20	<200	See map
13	<20	<200	See map	14	<20	<200	See map	15	<20	<200	See map
16	<20	<200	See map								

ORNL Radiological Survey Data

Survey Number: 3038-95-0803

3038 Field Office

Date: 6-2-95 Time: 10:00 1530

CTB-047 CTA-041

3038-9P

Count rate (CPM) on surface over	
20	dpm/100 cm ² =
200	dpm/100 cm ² =

a	B
1	<20
2	<20
3	<20
4	<20
5	<20
6	<20
7	<20
8	<20
9	<20
10	<20
11	<20
12	<20
13	<20
14	<20
15	<20
16	<20
17	<20
18	<20
19	<20
20	<20
21	<20
22	<20
23	<20
24	<20
25	<20
26	<20
27	<20
28	<20
29	<20
30	<20
31	<20
32	<20
33	<20

EAST CAGE WALL

To downstairs

Bldg. 3034 2nd Floor

Beam on outside cage.

* All smears on the outside of cage.

* All areas probed < 1000 dpm/100 cm² BY.

Symbol	Smear Location	Boundary Designations
①-⑩	Large Area Smear	RA - Radiation Area
⑪-⑲	Contact Dose Rate	HR - High Radiation Area
⑳	30 cm Dose Rate	VR - Very High Radiation Area
㉑	General Area Dose Rate	AR - Airborne Radioactivity Area
[SOP]	Step-off Pad	RM - Radioactive Materials Area
AS	Air Sample Location	UM - Underground Radioactive Materials Area
		BA - Radiological Buffer Area
		CA - Contamination Area
		HC - High Contamination Area
		FC - Fixed Contamination Area
		SC - Soil Contamination Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0733

3038 Field Office

Date: 5/9/95

Time: 18:00

Surveyor Badge Number: 628079

☐ Routine Survey

RWP Number: N/A

Building: 3034

Specific Location: Cage area on 2nd floor.

Description:

Comprehensive survey of east cage wall on north end.

Instruments Used and Calibration Due Date:

3038-4P 8/19/95

3038-2B 10/23/95

CTB-047 2/20/96

CTA-041 2/20/96

General Description of Radiological Conditions:

All smears were <20 dpm/100 cm and <200 dpm/100 cm sq beta-gamma. The only probe reading above 1000 dpm/100 cm sq beta-gamma probed 37,000 dpm beta-gamma and <300 dpm/100 cm sq alpha.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 1.5

of Pages: 2

Completed By:

D. L. Cross

Reviewed by:

State

Date: 6-5-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map	9	<20	<200	See map
10	<20	<200	See map	11	<20	<200	See map	12	<20	<200	See map
13	<20	<200	See map	14	<20	<200	See map	15	<20	<200	See map
16	<20	<200	See map	17	<20	<200	See map				

ORNL Radiological Survey Data

Survey Number: 3038-45-0737

3038 Field Office

Date: 5-9-95 Time: 1900

CTA-041 CTB-047 3038-4P 3038-2f

EAST CAGE WALL
ON NORTH END

FLOOR

Area surveyed probes
 $< 1000 \text{ dpm/100 cm}^2$ BY (except for 37K spot)
 $+< 300 \text{ dpm/100 cm}^2$

Smears no. 1-12
 are for both sides.
 (Example smear no.
 is for that area from
 and back)

Symbol	Smear Location	Boundary Designations	
⊙	Large Area Smear	RA - Radiation Area	BA - Radiological Buffer Area
⊙	Contact Dose Rate	HR - High Radiation Area	CA - Contamination Area
⊙	30 cm Dose Rate	VR - Very High Radiation Area	HC - High Contamination Area
⊙	General Area Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
⊙	Stop-off Pad	RM - Radioactive Materials Area	SC - Soil Contamination Area
AS	Air Sample Location	UM - Underground Radioactive Materials Area	

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3047-95-1070	3047 Field Office	Date: 6/30/95	Time: 7:00								
Surveyor Badge Number: 33947	☒ Routine Survey	RWP Number: N/A									
Building: 3034	Specific Location: Second Level, North East Corner of Floor.										
Description: Continued the comprehensive survey of 3034, north east floor, second level.											
Instruments Used and Calibration Due Date:											
3047-10P	12/2/95	3047-01B	12/14/95								
General Description of Radiological Conditions:											
All direct frisks <300 dpm/100cm ² alpha, <1000 dpm/100cm ² beta gamma (unless otherwise noted on map). No transferable contamination detected.											
Division or Group Needing the Survey: CEHM TECH		Person-hours spent on the survey: 2									
# of Pages: 2	Completed By: <i>[Signature]</i>	Reviewed by: <i>[Signature]</i>	Date: 7-11-95								
Smear Results (dpm/100 cm² unless noted)											
Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1-20	<20	<200	See map								

ORNL Radiological Survey Data

Survey Number: 3047-95-1070

3047 Field Office

Date: 6-30-95 Time: 1400

Give only Dose on bottom row	
20	cpm/100 cm ² e
200	cpm/100 cm ² e
A	B
1	<20
2	1-400
3	2-200
4	3
5	4
6	5
7	6
8	7
9	8
10	9
11	10
12	11
13	12
14	13
15	14
16	15
17	16
18	17
19	18
20	19
21	20
22	21
23	22
24	23
25	24
26	25
27	26
28	27
29	28
30	29
31	30
32	31
33	32
34	33

3034 Second Level

Boundary Designations	
(S) - Smear Location	RA - Radiation Area
(S) - Large Area Smear	BA - Radiological Buffer Area
# - Contact Dose Rate	HR - High Radiation Area
# - 30 cm Dose Rate	CA - Contamination Area
# - General Area Dose Rate	VR - Very High Radiation Area
[SOP] - Step-off Pad	AR - Airborne Radioactivity Area
AS - Air Sample Location	HC - High Contamination Area
	FC - Fixed Contamination Area
	RM - Radioactive Materials Area
	SC - Soil Contamination Area
	UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0917

3038 Field Office

Date: 7/10/95

Time: 17:29

Surveyor Badge Number: 34657

☐ Routine Survey

RWP Number: NONE

Building: 3034

Specific Location: floor of the second level.

Description:

A contamination survey of the floor of the entire second level of building 3034 was performed. This included a direct frisk as well as a smear survey. Two separate areas were marked off as a contamination areas. VARIOUS PORTABLE INSTRUMENTS WERE USED DURING THIS SURVEY BY DIFFERENT PEOPLE OVER A PERIOD OF SEVERAL DAYS.

Instruments Used and Calibration Due Date:

CTA-041 2/20/96

CTB-047 2/20/96

General Description of Radiological Conditions:

Non-transferable contamination levels ranged from 2,000 dpm beta-gamma up to 80,000 dpm beta-gamma. Transferable contamination levels ranged from 125 dpm/100 cm² beta-gamma to 250 dpm/100 cm² beta-gamma. The areas that the transferable contamination was found has been marked off as a contamination area(s).

Division or Group Needing the Survey: CT

Person-hours spent on the survey: > 10

of Pages: 3

Completed By: *[Signature]*Reviewed by: *[Signature]*

Date: 7-11-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	see map	2	<20	125	see map	3	<20	<200	see map
4	<20	<200	see map	5	<20	<200	see map	6	<20	<200	see map
7	<20	250	see map	8	<20	<200	see map	9	<20	<200	see map
10	ND/ASC	ND/GMT	see map	11	ND/ASC	ND/GMT	see map	12	ND/ASC	ND/GMT	see map

ORNL Radiological Survey Data

Count rate (CPM) in counts per minute
Background (BKG) in counts per minute
Floor level (FL) in feet

Survey Number: 3038-95-917

3038 Field Office

Date: 7/10/95 Time: 1745

BUILDING 3034, SECOND LEVEL CEILING FLOOR OF SECOND LEVEL

1	B
2	CA
3	125
4	
5	
6	CA
7	250
8	CA
9	CA
10	ND/ASC ND/GMT
11	ND/ASC ND/GMT
12	ND/ASC ND/GMT
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
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31	
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47	
48	
49	
50	
51

NORTH
WEST ← → EAST
SOUTH

CTA-0411

CTB-0417

[Signature] 94657

Symbol	Description	Boundary Designations
①	Smear Location	RA - Radiation Area
②	Large Area Smear	BA - Radiological Buffer Area
③	Contact Dose Rate	CA - Contamination Area
④	30' cm Dose Rate	HC - High Contamination Area
⑤	General Area Dose Rate	FC - Fixed Contamination Area
⑥	Step-off Pad	SC - Soil Contamination Area
⑦	Air Sample Location	RM - Radioactive Materials Area
		UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Core map Q13 to ensure over
 1000/100 cm² =
 1000/100 cm² =

Survey Number: 3038-9547 3038 Field Office

Date: 7/10/85 Time: 1745

BUILDING 3034, SECOND LEVEL CEILING FLOOR OF SECOND LEVEL

Direct
 RESULTS
 ONLY!

[Signature]
 5/10/85

Boundary Designations	
① - Smear Location	RA - Radiation Area
② - Large Area Smear	BA - Radiological Buffer Area
③ - Contact Dose Rate	CA - Contamination Area
④ - 30 cm Dose Rate	HC - High Contamination Area
⑤ - General Area Dose Rate	FC - Fixed Contamination Area
⑥ - Step-off Pad	RM - Radioactive Materials Area
AS - Air Sample Location	SC - Soil Contamination Area
	UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0836

3038 Field Office

Date: 6/16/95

Time: 06:15

Surveyor Badge Number: 626079

☐ Routine Survey

RWP Number: N/A

Building: 3034

Specific Location: Ceiling in upstairs cage area.

Description:

Comprehensive survey.

Instruments Used and Calibration Due Date:

CTB-047 2/20/96

CTA-041 2/20/96

3038-4P 8/19/95

3038-1B 11/17/95

General Description of Radiological Conditions:

All areas smeared <20 dpm/100 cm sq alpha and <200 dpm/100 cm sq beta-gamma. One spot probed 47,000 dpm beta-gamma and it was <300 dpm/100 cm sq alpha.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 2.5

of Pages: 2

Completed By: *Delorich Cross*Reviewed by: *Slatten*

Date: 6-23-95

Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map	9	<20	<200	See map
10	<20	<200	See map	11	<20	<200	See map	12	<20	<200	See map
13	<20	<200	See map	14	<20	<200	See map	15	<20	<200	See map
16	<20	<200	See map	17	<20	<200	See map	18	<20	<200	See map
19	<20	<200	See map	20	<20	<200	See map	21	<20	<200	See map
22	<20	<200	See map	23	<20	<200	See map	24	<20	<200	See map
25	<20	<200	See map	26	<20	<200	See map	27	<20	<200	See map
28	<20	<200	See map	29	<20	<200	See map	30	<20	<200	See map
31	<20	<200	See map	32	<20	<200	See map	33	<20	<200	See map
34	<20	<200	See map	35	<20	<200	See map				

ORNL Radiological Survey Data

Cost only \$24 on sample, over

<u>20</u>	open/100 cm ² :
<u>200</u>	open/100 cm ² :

Survey Number: 3038-95-2836

3038 Field Office

Date: 6-16-95 Time: 0615

3038-4P+1B

CTB-047

CTA-041

(b)	- Smear Location	Boundary Designations	
(c)	- Large Area Smear	RA - Radiation Area	BA - Radiological Buffer Area
(d)	- Contact Dose Rate	HR - High Radiation Area	CA - Contamination Area
(e)	- 30 cm Dose Rate	VR - Very High Radiation Area	HC - High Contamination Area
(f)	- General Area Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
(g)	- Step-off Pad	RM - Radioactive Materials Area	SC - Soil Contamination Area
(h)	- Air Sample Location	UM - Underground Radioactive Materials Area	

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

All areas probed $< 1000 \text{ dpm}/100 \text{ cm}^2$ except for the 47K dpm spot and it was $< 300 \text{ dpm}/100 \text{ cm}^2$.

ORNL Radiological Survey Data

Survey Number: 3038-95-0925		3038 Field Office		Date: 7/6/95		Time: 07:00	
Surveyor Badge Number: 740968		☐ Routine Survey		RWP Number: _____			
Building: 3034		Specific Location: Second level ceiling.					
Description:							
Performed a smear survey as well as a direct frisk of the area.							
Instruments Used and Calibration Due Date:							
CTA-041		2/20/96		CTB-026		2/20/96	
				3038-5P		6/13/95	
General Description of Radiological Conditions:							
All smears that were counted for alpha contamination were <20 dpm/100cm ² . All smears that were counted for beta-gamma contamination were <200 dpm/100cm ² . All non transferable contamination levels were <1000 dpm unless otherwise noted on map.							
Division or Group Needing the Survey: CT				Person-hours spent on the survey: 4			
# of Pages: 2		Completed By: <i>Samuel B. Miller</i>		Reviewed by: <i>Shirley</i>		Date: 7-11-95	
Smear Results (dpm/100 cm² unless noted)							
Smear Number	α	β	Location	Smear Number	α	β	Location
1-63	<20	<200	see map				

ORNL Radiological Survey Data

Survey Number: 3038-95-0925 3038 Field Office Date: 7-6-95 Time: 0700

BUILDING 3034, SECOND LEVEL CEILING

THIRD SECTION FROM THE NORTH END OF BUILDING

Sanford Buntin 740968

CTA 041/CTB 047

3038-05P

(*) denotes 300cpm Bx in area
Due to High Background from Piping.

Boundary Designations	
(S) - Smear Location	RA - Radiation Area
(L) - Large Area Smear	BA - Radiological Buffer Area
(C) - Contact Dose Rate	HR - High Radiation Area
(30) - 30 cm Dose Rate	CA - Contamination Area
(G) - General Area Dose Rate	VR - Very High Radiation Area
(SCP) - Step-off Pad	AR - Airborne Radioactivity Area
AS - Air Sample Location	RM - Radioactive Materials Area
	SC - Soil Contamination Area
	UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0922		3038 Field Office		Date: 7/11/95		Time: 13:05	
Surveyor Badge Number: 740165		☒ Routine Survey		RWP Number: N/A			
Building: 3034		Specific Location: SECOND LEVEL CEILING, second section from northwall					
Description: PERFORMED DIRCT FRISK & SMEARED SECOND FLOOR CEILING.							
Instruments Used and Calibration Due Date:							
3038-8P 10/16/95		3038-08B 12/24/95		CTB-047 2/20/96		CTA-041 2/20/96	
General Description of Radiological Conditions:							
DIRECT FRISK READINGS RANGE FROM 1K TO 5K DPM/100cm ² B/G & ALPHA READINGS WERE <300 DPM/100cm ² . ALL SMEARS THAT WERE TAKEN WERE <20DPM/100cm ² ALPHA & <200DPM/100cm ² B/G. SEE MAP FOR SPECIFIC LOCATIONS.							
Division or Group Needing the Survey: CT				Person-hours spent on the survey: 4			
# of Pages: 3		Completed By: <i>Shirley Burt</i>		Reviewed by: <i>Shirley Burt</i>		Date: 7-11-95	
Smear Results (dpm/100 cm² unless noted)							
Smear Number	α	β	Location	Smear Number	α	β	Location
1-30	<20	<200	SEE MAP				

ORNL Radiological Survey Data

Survey Number: 3038-95-0922

3038 Field Office

Date: 7/11/97 Time: 13:05

BUILDING 3034, SECOND LEVEL CEILING

SECOND SECTION FROM THE NORTH END OF BUILDING

note: All readings are for Beta-Gamma rad.

John Smith
74065CTA-041, CTB-047
3038-08P, 3038-08B

Symbol	Description	Boundary Designations
①	Smear Location	RA - Radiation Area
②	Large Area Smear	BA - Radiological Buffer Area
③	Contact Dose Rate	HR - High Radiation Area
④	30 cm Dose Rate	CA - Contamination Area
⑤	General Area Dose Rate	VR - Very High Radiation Area
⑥	Step-off Pad	HC - High Contamination Area
⑦	Air Sample Location	AR - Airborne Radioactivity Area
⑧		FC - Fixed Contamination Area
⑨		RM - Radioactive Materials Area
⑩		SC - Soil Contamination Area
⑪		UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0922

3038 Field Office

Date: 7/11/95 Time: 13:05

BUILDING 3034, SECOND LEVEL CEILING

SECOND SECTION FROM THE NORTH END OF BUILDING

Don Burt 7/11/95 CTA-011, CTB-047, 3038-08P, 3038-08B

Boundary Designations	
① - Smear Location	RA - Radiation Area
② - Large Area Smear	BA - Radiological Buffer Area
③ - Contact Dose Rate	CA - Contamination Area
④ - 30 cm Dose Rate	HC - High Contamination Area
⑤ - General Area Dose Rate	FC - Fixed Contamination Area
⑥ - Step-off Pad	SC - Soil Contamination Area
AS - Air Sample Location	UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

 Survey Number: 3038-95-0920 3038 Field Office

 Date: 7/11/95 Time: 11:30 AM

Give only OMA on smear over
<u>L20</u> dpm/100 cm ² s
<u>200</u> dpm/100 cm ² s

a	B
1 L20	1 L200
2 L20	2 L200
3 L20	3 L200
4 L20	4 L200
5 L20	5 L200
6 L20	6 L200
7 L20	7 L200
8 L20	8 L200
9 L20	9 L200
10 L20	10 L200
11 L20	11 L200
12 L20	12 L200
13 L20	13 L200
14 L20	14 L200
15 L20	15 L200
16 L20	16 L200
17 L20	17 L200
18 L20	18 L200
19 L20	19 L200
20 L20	20 L200
21 L20	21 L200
22 L20	22 L200
23 L20	23 L200
24 L20	24 L200
25 L20	25 L200
26 L20	26 L200
27 L20	27 L200
28 L20	28 L200
29 L20	29 L200
30 L20	30 L200
31 L20	31 L200
32 L20	32 L200
33 L20	33 L200

BUILDING 3034, SECOND LEVEL CEILING FOURTH SECTION FROM THE NORTH END OF BUILDING

① - Smear Location	Boundary Designations	
② - Large Area Smear	RA - Radiation Area	BA - Radiological Buffer Area
③ - Contact Dose Rate	HR - High Radiation Area	CA - Contamination Area
④ - 30 cm Dose Rate	VR - Very High Radiation Area	HC - High Contamination Area
⑤ - General Area Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
[SOP] - Step-off Pad	RM - Radioactive Materials Area	SC - Soil Contamination Area
AS - Air Sample Location	UM - Underground Radioactive Materials Area	

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

ORNL Radiological Survey Data

Survey Number: 3038-95-0875

3038 Field Office

Date: 6/23/95

Time: 07:00

Surveyor Badge Number: 626079

☐ Routine Survey

RWP Number: N/A

Building: 3034

Specific Location: Upstairs in cage area.

Description:

Comprehensive survey.

Instruments Used and Calibration Due Date:

3038-4P 8/19/95

3038-1B 11/17/95

CTB-047 2/20/96

CTA-041 2/20/96

General Description of Radiological Conditions:

All smears were <200 dpm/100 cm sq beta-gamma and <20 dpm/100 cm sq alpha. All areas probed were <1000 dpm/100 cm sq beta-gamma.

Division or Group Needing the Survey: CT

Person-hours spent on the survey: 1.5

of Pages: 2 Completed By: Deborah Crossino Reviewed by: *Sluts* Date: 6-30-95Smear Results (dpm/100 cm² unless noted)

Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map	9	<20	<200	See map
10	<20	<200	See map	11	<20	<200	See map	12	<20	<200	See map
13	<20	<200	See map	14	<20	<200	See map	15	<20	<200	See map
16	<20	<200	See map	17	<20	<200	See map	18	<20	<200	See map
19	<20	<200	See map	20	<20	<200	See map	21	<20	<200	See map
22	<20	<200	See map	23	<20	<200	See map	24	<20	<200	See map

ORNL Radiological Survey Data

Count only DPM, no counts over
 20 dpm/100 cm² =
 200

Survey Number: 3038-95-0875

3038 Field Office

Date: 6-23-95 Time: 0700

3038-4P+1B

CTA-041 CTB-04

6 B
 <20 <200

North Wall

Legend		Boundary Designations	
(S)	- Smear Location	RA - Radiation Area	BA - Radiological Buffer Area
(S)	- Large Area Smear	HR - High Radiation Area	CA - Contamination Area
S	- Contact Dose Rate	VR - Very High Radiation Area	HC - High Contamination Area
S	- 30 cm Dose Rate	AR - Airborne Radioactivity Area	FC - Fixed Contamination Area
S	- General Area Dose Rate	RM - Radioactive Materials Area	SC - Soil Contamination Area
(SOP)	- Step-off Pad	UM - Underground Radioactive Materials Area	
AS	- Air Sample Location		

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

All areas probed < 1000 dpm/100 cm² BY page 2

ORNL Radiological Survey Data

Survey Number: 3038-95-0835 3038 Field Office Date: 8/15/95 Time: 08:15

Surveyor Badge Number: 626079 ☐ Routine Survey RWP Number: N/A

Building: 3034 Specific Location: Ceiling in upstairs cage area.

Description:
Comprehensive survey.

Instruments Used and Calibration Due Date:
CTB-047 2/20/96 CTA-041 2/20/96 3038-4P 3038-1B

General Description of Radiological Conditions:
The highest smears were 139 dpm/100 cm sq alpha on smear no. 18 and 637 dpm/100 cm sq beta-gamma on smear no. 31. One spot probed 25,000 dpm beta-gamma and another probed 3,000 beta-gamma and 1,370 dpm/100 cm sq alpha a second was taken to try and obtain a higher sample for the gamma spec. team but resulted in a smear no higher and afterward the spot no longer probed.

Division or Group Needing the Survey: CT Person-hours spent on the survey: 2.5

of Pages: 2 Completed By: Deborah Cresano Reviewed by: Date:

Smear Results (dpm/100 cm ² unless noted)											
Smear Number	α	β	Location	Smear Number	α	β	Location	Smear Number	α	β	Location
1	<20	<200	See map	2	<20	<200	See map	3	<20	<200	See map
4	<20	<200	See map	5	<20	<200	See map	6	<20	<200	See map
7	<20	<200	See map	8	<20	<200	See map	9	<20	<200	See map
10	<20	<200	See map	11	<20	<200	See map	12	<20	<200	See map
13	<20	<200	See map	14	<20	<200	See map	15	<20	<200	See map
16	<20	<200	See map	17	<20	<200	See map	18	139	203	See map
19	<20	<200	See map	20	<20	<200	See map	21	<20	<200	See map
22	<20	<200	See map	23	<20	<200	See map	24	<20	<200	See map
25	<20	<200	See map	26	<20	<200	See map	27	<20	<200	See map
28	<20	<200	See map	29	<20	<200	See map	30	<20	<200	See map
31	<20	637	See map	32	<20	<200	See map				

ORNL Radiological Survey Data

626079

Count only GM on smear over
 - 20 * spot/100 cm² *
 - 200 spot/100 cm² *

Survey Number: 3038-95-0835

3038 Field Office

Date: 6-15-95 Time: 0615

3038-4P+1B CTA-041 CTB-047
 3034 Ceiling (upstairs) Sprinkler

A	B
1	
2	
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Symbol	Description	Boundary Designations
⊙	- Smear Location	RA - Radiation Area
⊙-⊙	- Large Area Smear	BA - Radiological Buffer Area
⊙	- Contact Dose Rate	CA - Contamination Area
⊙	- 30 cm Dose Rate	VR - Very High Radiation Area
⊙	- General Area Dose Rate	HC - High Contamination Area
[SOP]	- Step-off Pad	AR - Airborne Radioactivity Area
AS	- Air Sample Location	FC - Fixed Contamination Area
		SC - Soil Contamination Area
		RM - Radioactive Materials Area
		UM - Underground Radioactive Materials Area

Default units are in mR/hr and are for open window beta/gamma readings. Letter suffixes with the number indicate specific radiations: B - Beta (mRad/hr), G - Gamma (mR/hr), N - Neutron (mRem/hr). Boundary designations are looking from the designations into the zoned area.

All areas probed < 1000 dpm/100 cm² BT except the 25k beta spot and it probed < 300 dpm/100 cm².

**ATTACHMENT 7
S&M TURNOVER
PACKAGE CHECKLIST**

S&m Turnover Package Checklist

Item number	Document	Applicable ?
1	Postdeactivation Surveillance and Maintenance Plan	Yes
2	Postdeactivation Surveillance and Maintenance Updated Effluent Monitoring Plan	No
3	Postdeactivation Surveillance and Maintenance Updated Safety Equipment List	No
4	Postdeactivation Surveillance and Maintenance Procedures	No
5	Postdeactivation Surveillance and Maintenance Recommendations	No
6	Mothballed Systems Lay-up and Restart Documentation	No

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