

NOTICE

All drawings located at the end of the document.

**RADIOLOGICAL POSTING
SURVEILLANCE PROGRAM**

RMRS/ADMIN-INSTR.101

Revision 0

Date Effective: 11/30/98

Page 1 of 14

APPROVED: _____

B. A. Watson
B. A. Watson, Group Manager, Radiological Controls

1. PURPOSE

This work instruction establishes guidelines to be used by applicable Radiological Operations personnel to perform periodic surveillances of radiologically posted areas, including long term Radioactive Material Areas. Both 10 CFR 835 and the Site Radiological Control Manual (Site RCM) require that certain areas and items be posted or labeled for control of personnel exposure to radioactive material and ionizing radiation.

2. SCOPE

This work instruction establishes requirements for and schedules for performing surveillances of radiological posting and labeling. Surveillance schedules herein are more than required by the Site RCM and may be waived by the Group Manager should incident weather conditions or other reasons be justified.

This work instruction is for the use of RMRS Radiological Operations personnel tasked with installing and maintaining radiologically posted areas, equipment and material. This work instruction is not an approved Site procedure, but a work instruction designed for the convenience of RMRS personnel. 10 CFR 835 and the Site RCM shall take precedence in the event of conflict between this work instruction.

Radiological Operations should include a review of postings and labeling as a part of their facility walk-throughs. Also, personnel should verify that posting and labeling are intact and appropriate as part of their routine activities. This instruction presumes these actions are taken, thus is intended to prompt personnel to inspect areas that may not be routinely inspected as part of routine daily activities.

3. PRE-REQUISITES

Personnel responsible for installing and maintaining radiological postings and labeling shall, as a minimum, be qualified Radiological Control Technician or Health and Safety Specialist.

4. RESPONSIBILITIES

4.1. Group Manager, Radiological Control Compliance

4.1.1. Review and approve all changes to this work instruction.

ADMIN RECORD

- 4.1.2. Implement this work instruction throughout the RMRS Radiological Control Organization.
 - 4.1.3. Ensure coordinated efforts between the Radiological Control Organization, Facility Management and Projects is maintained to fully implement the requirements of 10 CFR 835, the Site RCM and this work instruction.
 - 4.1.4. Review findings from periodic posting and labeling surveillances for collective significance and applicable future improvement actions.
- 4.2. Manager, Radiological Operations
- 4.2.1. Implement this work instruction within the Radiological Operations group.
 - 4.2.2. Provide direction to Radiological Technician Technical Supervisors (RCTTS) for performance of periodic radiological posting and labeling surveillances.
 - 4.2.3. Periodically review documentation of walk-throughs and periodic surveillances.
 - 4.2.4. Verify all RMRS long term (>60 days) Radioactive Material Areas are inspected at least semi-annually and a list of these RMAs is maintained.
 - 4.2.5. Verify the Controlled Area and other outdoor radiological areas are inspected at least semi-annually.
- 4.3. Radiological Control Technician Technical Supervisors
- 4.3.1. Establish surveillance schedules to ensure the Controlled Area, other outdoor radiological areas and all non-routinely inspected radiological areas under the cognizance of RMRS are inspected at least semi-annually.
- Note: It is not necessary to enter an area that has not been entered since the last surveillance to inspect interior postings. Such postings should be inspected and updated before allowing general personnel access to such areas.
- 4.3.2. Provide direction to qualified Radiological Control Technicians (RCT) and Health and Safety Specialists (HSS) to inspect, update, repair, remove and replace radiological postings and labeling as applicable.
 - 4.3.3. Ensure posting and labeling surveillances are documented, reviewed and maintained.
 - 4.3.4. Ensure damaged, missing and outdated postings and labeling are corrected as soon as practicable.
 - 4.3.5. Maintain and submit periodic posting surveillances to Radiological Operations Manager for review upon completion.
- 4.4. Radiological Control Technician (Health and Safety Specialist)
- 4.4.1. Verify radiological areas and equipment are posted and labeled in accordance with Site RCM requirements.
 - 4.4.2. Inspect, repair and replace damaged or missing radiological postings as part of routine activities.

- 4.4.3. Perform periodic posting and labeling surveillances as directed by RCTTS.
- 4.4.4. Document significant modifications, repairs and replacements of postings and submit to supervision for review and retention.
- 4.4.5. Inform supervision of areas with inadequate or inappropriate postings or labeling.
Control such areas to prevent personnel exposure to radioactive materials and ionizing radiation.

5. INSTRUCTION

5.1. Scheduling Posting and Labeling Surveillances

- 5.1.1. Annual surveillances shall be conducted at least twice each fiscal year (Oct. 1 – Sep 30), typically in October and April.
- 5.1.2. Radiological Control Technician Technical Supervisors will schedule posting and labeling surveillances. The five surveillance zones listed as attachments will be inspected at least semi-annually.
- 5.1.3. It is expected that RCTTS will utilize available resources to complete the surveillances when project support is at a minimum. Many of the surveillances may be performed in conjunction with project support and in the course of routine daily activities.
- 5.1.4. Radiological posting and labeling compliance must be maintained at all times. Significant non-compliances may warrant dedicated efforts to correct.
- 5.1.5. Schedules for posting surveillances shall be documented and provided to the Radiological Operations Manager for review and approval.

Note: Special consideration should be given to the following: 1) North and South Controlled Areas inspected in “good weather/foilage” months, 2) efforts to complete surveillances during slow project period should be made, 3) front load surveillances early in the year to avoid last minute rush to complete.

5.2. Surveillance Maps and Checklists

- 5.2.1. The following attachments should be used in performance of posting and labeling surveillances:
 - Radiological Safety Ownership Map
 - Controlled Area Map
 - Surveillance Zone Checklists
- 5.2.2. Efforts to verify accuracy and completeness of the maps and checklists should be made. Inconsistencies with actual conditions and area designations should be documented on applicable maps and/or checklist so they can be modified.

5.3. Posting and Labeling Deficiencies and Documentation

- 5.3.1. ALL SURVEILLANCES SHALL BE DOCUMENTED on the attached forms. RIR(s) shall be written to track generic posting and labeling deficiencies and conditions.
- 5.3.2. Efforts to correct deficiencies with postings “on the spot” should be made.
- 5.3.3. Posting and labeling discrepancies that cannot be remedied “on the spot” shall be documented. If the deficiency creates a plausible potential for unintentional personnel

exposure to radioactive material or ionizing radiation, the cognizant RCTTS shall be contacted immediately. The individual discovering the UNSAFE condition shall remain at the area and establish control to prevent unintentional entry by personnel.

- 5.3.4. Upon completion of surveillances, the documented results of the surveillances shall be submitted by the applicable RCTTS to the Radiological Operations Manager for review and approval.
- 5.3.5. The Radiological Operations Manager will ensure the surveillances are transmitted to RMRS Records to maintain and control as Quality Assurance records (RM-06.02).
- 5.3.6. The Group Manager, Radiological Control Compliance will be notified of significant or unsafe posting or labeling discrepancies.

6. ANNUAL REVIEW OF POSTING AND LABELING SURVEILLANCES

- 6.1. At the conclusion of each fiscal year, radiological surveillances shall be reviewed and evaluated by the Radiological Operations Manager, or designee.
- 6.2. A review of Radiological Improvement Reports resulting from improper posting and labeling should be included in the annual RIR evaluation performed in accordance with RMRS INSTR.012.
- 6.3. The Group Manager, Radiological Control Compliance shall review the year end posting and labeling surveillance results for significance and to develop and implement improvement actions as necessary.

7. RECORDS

The following Quality Assurance records are generated by this instruction:

- RMRS Radiological Posting & Labeling Surveillance Schedule Forms
- RMRS Radiological Posting & Labeling Surveillance Checklists
- Radiological Improvement Reports

The above stated Quality Assurance records shall be maintained in one-hour fire-rated cabinets while in process. When the record has been signed, transmit within thirty (30) days as follows:

- a) If applicable to the Waste Isolation Pilot Plant (WIPP) project, records shall be transferred in accordance with 1-PRO-077-WIPP-005, Management of WIPP Information Prior to Transmittal to WIPP Project File,
- b) If applicable to other RMRS projects, records shall be transferred to the RMRS Records Center in accordance with RM-06.02, Records Identification, Generation and Transmittal.

8. REFERENCES

- 8.1. Site Radiological Control Manual
- 8.2. Title 10 Code of Federal Regulations Part 835, Occupational Radiation Protection
- 8.3. Implementation Guide, G-10 CFR 835/G1
- 8.4. RM-06.02, RMRS Records Identification, Generation and Transmittal
- 8.5. K-H Assessment No. 98-0153-KH, Radiological Posting and Labeling Program

Attachment A – RMRS Radiological Posting and Labeling Surveillance Schedule Form

Cognizant RCCTS: _____

Today's Date: _____ Scheduled Surveillance Date(s): _____

Date(s) Last Inspected: _____

- Area to be inspected:
- | | |
|--|---|
| <input type="checkbox"/> North Controlled Area | <input type="checkbox"/> South Controlled Area |
| <input type="checkbox"/> Industrial Area #1 | (400 complex, 130 lot, 549, misc.) |
| <input type="checkbox"/> Industrial Area #2 | (800 complex, WTF , T-1, 903P, 904P,
905 yard, 308B pump house, misc.) |
| <input type="checkbox"/> Protected Area | (RMRS areas in the Protected Area) |

Radiological Operations Manager: _____

Date Surveillance Completed: _____

Surveillance Documentation Satisfactory: Yes No

Reason Surveillance Not Complete (if applicable): _____

Date Surveillance Rescheduled (if applicable): _____

Attachment B1 – RMRS Radiological Posting and Labeling Surveillance Checklist

North Controlled Area

Today's Date: _____

Name: _____

List of known long term Radioactive Material Areas:

1. B995 Rubble Pile (North side of site by landfill)

Surveillance of Controlled Area postings: Completed Incomplete

Surveillance of B Series Pond's postings: Completed Incomplete

Surveillance of B995 rubble pile postings: Completed Incomplete

Other posted areas inspected (please provide as much detail as possible): _____

Discrepancies and status of corrections: _____

RIR #: _____ Date: _____

RCT: _____ RCT-TS: _____

Radiological Operations Manager: _____

Attachment B2 – RMRS Radiological Posting and Labeling Surveillance Checklist
South Controlled Area

Today's Date: _____

Name: _____

List of known long term Radioactive Material Areas:

1. Various OU5 Underground Radioactive Material Areas

Surveillance of Controlled Area postings: Completed Incomplete

Surveillance OU5 postings: Completed Incomplete

Other posted areas inspected (please provide as much detail as possible): _____

Discrepancies and status of corrections: _____

RIR #: _____ Date: _____

RCT: _____ RCT-TS: _____

Radiological Operations Manager: _____

Attachment B3 – RMRS Radiological Posting and Labeling Surveillance Checklist

Industrial Area #1 (400 complex, 130 lot, 549, misc.)

Today's Date: _____

Name: _____

List of known long term Radioactive Material Areas:

- | | |
|---|---------------------------------------|
| 1. Building 231 (valve vault #13) | 7. Building 453 |
| 2. 1 tanker W of T371 (labeled "Caution,
Internal Contamination) | 8. 3 cargo containers b/w B448 & B453 |
| 3. Building 440 | 9. 120 cargo containers by B664 |
| 4. Building 444 | 10. 2 Canberra trailers by B664 |
| 5. Building 444 loading dock | 11. Building 666 |
| 6. Building 449 | 12. 4 cargo containers by B666 |

Other posted areas inspected (please provide as much detail as possible):

Discrepancies and status of corrections: _____

RIR #: _____ Date: _____

RCT: _____ RCT-TS: _____

Radiological Operations Manager: _____

Attachment B4 – RMRS Radiological Posting and Labeling Surveillance Checklist

Industrial Area #2 (Page 1)

(800 complex, WTF , T-1, 903P, 904P, 905 yard, 308B pump house, misc.)

Today's Date: _____

Name: _____

List of known long term Radioactive Material Areas:

1. Building 865: 106, 108
2. Building 866 crates on east side
3. Building 881: 10, 10A-C, 12, 13, 15, 15A, 16, 19, 114B, 114 mezzanine fume scrubber, 114J, 114L, 121, 122A-D, 127C1, 130, 131, 131B-D, 137, 137A-G, 138, 139, 143A-F, 144A, 144 tunnel, 148, 161, 224, 225, 227, 243, 245W, 248A-B, 249, 249A-B, 254, 255, 264, 266A-D, 267, 268, 268A, 272, 276, 281, 281A, 283, 309A, 316
4. Building 883: 101, 106, 111, 128, 137
5. Building 884 and cargo containers
6. Building 886: 101, 102, 103, 104, 114, cargo containers
7. Building 887
8. T891P
9. T900C & G
10. 902 Pad
11. Building 903: Decon pad, cargo containers
12. 904 Pad
13. 906 Pad
14. Building 991: 160, 164, 170
15. Building 995: rolloffs

Attachment B5 – RMRS Radiological Posting and Labeling Surveillance Checklist

Protect Area

(RMRS areas in the Protected Area)

Today's Date: _____

Name: _____

List of known long term Radioactive Material Areas:

- | | |
|--|------------------------------------|
| 1. 2 cargos E of B569 | 7. Area N of 965 Pad (also FCA) |
| 2. 750 Pad | 8. 966 Decon Pad |
| 3. Wooden boxes & Guzzler truck W of
Tank 215 C | 9. 2 wooden boxes E of 968 Pad |
| 4. Wooden boxes E of 215D | 10. Wooden boxes on 968 Pad |
| 5. Building 964 | 11. Wooden boxes on and by 980 Pad |
| 6. 2 trailers N of B964 | 12. Building 984 |
| | 13. E of Building 984 |

Other posted areas inspected (please provide as much detail as possible): _____

Discrepancies and status of corrections: _____

RIR #: _____ Date: _____

RCT: _____ RCT-TS: _____

Radiological Operations Manager: _____

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Controlled Area
 RMRS Radiological Posting Inspection Zones
 and
 Radiological Safety Ownership Map

LEGEND

- Controlled Area Access Signs**
- ⊕ Main road large access sign
 - ⊕ Small sign attached to gates or fencing
 - ⊕ Small sign attached to fenceposts

- Controlled Area**
- RMRS Radiological Safety Ownership Area
 - ∩ Control Area Boundary

- Standard Map Features**
- ▒ Buildings and other structures
 - ▒ Lakes and ponds
 - ▒ Streams, ditches, or other drainage features
 - ▒ Fences and other barriers
 - ▒ Rocky Flats boundary
 - ▒ Paved roads
 - ▒ Dirt roads

DATA SOURCE:
 Buildings, fences, hydrography, roads and other structures from 1984 aerial fly-over data captured by ECHO RS, Las Vegas.
 Digitized from the orthophotograph, 1/96



Scale = 1: 21830
 1 inch represents approximately 1819 feet



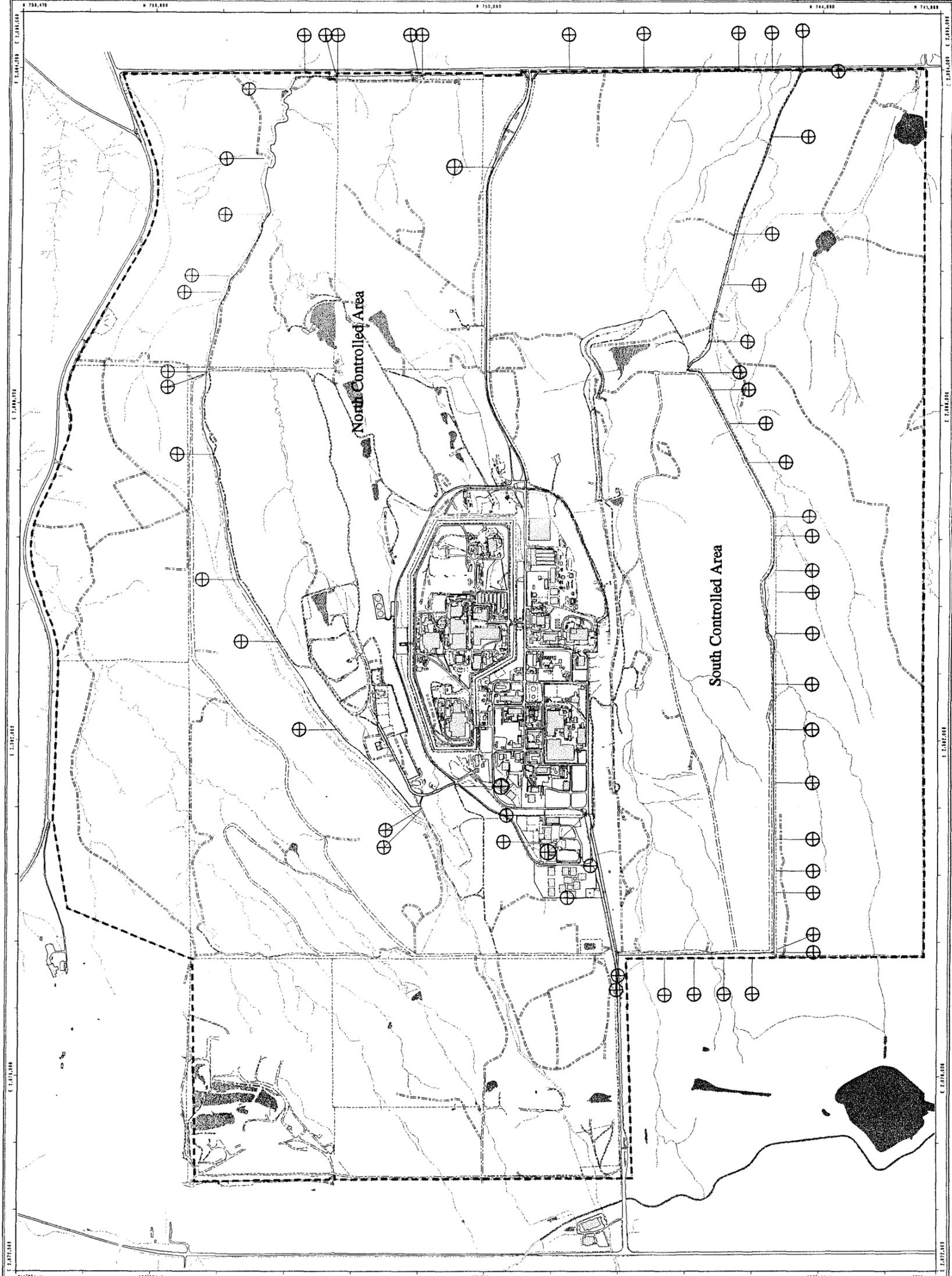
State Plane Coordinate Projection
 Colorado Central Zone
 Datum: NAD27

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

Prepared by:



MAP ID: 89-0005-rad-011 November 16, 1998



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RMRS Radiological Posting
 Inspection Zones
 and
 Radiological Safety Ownership Map
 Industrial Area

LEGEND

Landlord (Maintenance)

- D&D
- CSS (formerly DCI)
- RMRS
- SSOC
- Thermo NuTech
- Buildings or structures with no landlord assigned in database
- Industrial Area Posting Zone Boundary

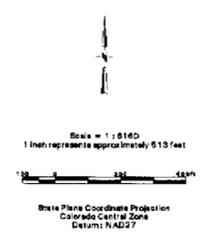
Industrial Controlled Areas

- CSS (formerly DCI)
- RMRS
- SSOC
- Thermo NuTech

Standard Map Features

- Buildings and other structures
- Solar evaporation ponds
- Fences and other barriers
- Paved roads

DATA SOURCE:
 Buildings, fences, hydrography roads and other structures from 1984 aerial imagery data captured by EG&G RSL, Las Vegas. Digitized from the orthophotographs. 1/95



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

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