

**ATTACHMENT A**

**D&D Procedure Cover Page**

**CHARACTERIZATION/LICENSE TERMINATION PROCEDURE**

|   |
|---|
| <b>CONTAMINATION VERIFICATION SURVEYS PRIOR TO DEMOLITION</b> |
| <b>Procedure No. ZS-LT-400-001-002</b>                        |
| <b>Revision No. 0</b>   |

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Secondary Reviewer: (Print name / sign): Ron Shippee Ronald Shippee Date: 3/17/2016  
Ron Shippee

| Regulatory Required Reviews (per AD-11, "Regulatory Reviews")                                  |                              |  |
|--|------------------------------|--|
| Part 72 ISFSI Impact License: 10 CFR 72.48   | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| Part 50 License: 10 CFR 50.59 and 50.90  | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| Fire Protection: 10 CFR 50.48(f)   | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| Conditions of License: E-Plan: 10 CFR 50.54(q)   | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| Technical Review Required? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |                              |  |
| Secondary Reviewer: <u>CG Fuller / [Signature]</u>   |                              | DATE: <u>3/21/16</u>                   |
| <small>Print Name / Signature</small>  |                              |  |

| Approval Section   |                      |
|--|----------------------|
| DEPARTMENT MANAGER: <u>[Signature]</u><br><small>Robert F. Vetter</small>                                | DATE: <u>3/21/16</u> |
| DECOMMISSIONING PLANT MANAGER: <u>J. H. Ashburn [Signature]</u><br><small>Print Name / Signature</small> | DATE: <u>3/21/16</u> |

Effective Date: March 21, 2016

Summary of Changes in this Revision:

- Rev. 0 – Initial issue.

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## **1. PURPOSE AND SCOPE**

### **1.1. Purpose**

This procedure provides the guidance used to design, perform, control, evaluate and document Contamination Verification Surveys (CVS) performed to verify that pre-demolition contamination levels of radiological impacted systems, structures and components (SSCs) of the site Radiologically Controlled Area (RCA) and non-RCA are below the established limits for open air demolition.

### **1.2. Scope**

This procedure is applicable to all radiologically impacted SSCs that are scheduled for demolition and removal from site as radioactive waste. Performance of CVS will ensure airborne radioactivity levels remain within regulatory limits and off-site dose consequences remain As Low as Reasonably Achievable (ALARA).

## **2. RESPONSIBILITIES**

### **2.1. Characterization/License Termination (C/LT) Manager is responsible for:**

- Providing overall guidance and support for the development and implementation of CVS plans and survey packages.
- Reviewing and approving all CVS sample plans.
- Reviewing survey results and providing permission, through signature, that SSCs within a RCA are suitable for open-air demolition.

### **2.2. Vice President (VP) D&D/Construction is responsible for:**

- Ensuring, through signature, that all necessary decommissioning or remediation activities in the area are completed and safety concerns are addressed.

### **2.3. Project Construction Managers are responsible for:**

- Ensuring housekeeping is performed, any tools or equipment not required to support survey activities are removed, and additional measures necessary to limit the spread of contamination are implemented.
- Notifying the C/LT Group when SSCs are ready for turnover.
- Assisting in providing support and access to areas to be surveyed, as required.

### **2.4. Characterization/License Termination (C/LT) Engineers/C/LT Supervisors are responsible for:**

- Preparing CVS plans.
- Ensuring only approved instrumentation is used to perform CVS surveys and the instrumentation is capable of meeting the required Minimum Detectable Concentrations (MDCs).

- Ensuring CVS surveys are conducted in accordance with written CVS plans, based on approved procedures and work instructions.
- Control and implementation of CVS plan instructions during field activities.
- Ensuring SSC preparation prior to initiating CVS.
- Providing daily supervision and guidance to field survey technicians and performing quality checks of field activities.
- Ensuring CVS are performed, results, evaluated, and documented correctly.
- Establishing and maintaining isolation and control of structures, systems, and components to prevent inadvertent contamination.
- Reviewing and approving any work activities to be performed following completion of CVS in a specific area.
- Maintaining, and controlling survey packages and completed survey documentation.

**2.5. Data Base/LTP Support Engineer is responsible for:**

- Maintaining CVS plan index and filing locations.
- Ensuring CVS packages and plans are properly labeled, stored, and controlled per RM-ZN-101, “Records Management Program” and ZS-LT-01, “Quality Assurance Project Plan (for Characterization and FRS).”
- Maintaining a list of LTP personnel authorized to access the files.
- Tracking the status of the CVS Survey Plans and support documents.

**2.6. Characterization/License Termination (C/LT) Technicians – are responsible for:**

- Performing CVS as directed by the C/LT Supervisor(s) using approved sample plans, procedures and other documentation as appropriate.
- Establishing and maintaining isolation access control measures prior to and during CVS activities.

**2.7. Project Personnel – are responsible for:**

- Reading and adhering to CVS postings and ensuring the integrity of CVS access controls is not compromised.

**2.8. Technical Lead/RE – is responsible for:**

Reviewing all survey packages prior to implementation and providing technical oversight during survey implementation and data review.

### 3. **DEFINITIONS/ACRONYMS**

- 3.1. **Measurement** - Radioactivity measurement obtained by placing a radiation detector near the surface or media being surveyed. An indication of the resulting radioactivity level is read out directly.
- 3.2. **Mean** - The average value obtained when the sum of individual values is divided by the total number of values.
- 3.3. **Minimal Detectable Count Rate** - The *a priori* minimum count rate that a specific instrument or technique can be expected to detect 95% of the time.
- 3.4. **Survey** - A systematic evaluation and documentation of radiological measurements with correctly calibrated instrument or instruments that meet the sensitivity required by the objective of the evaluation.
- 3.5. **CVS Area** - CVS areas are established based on logical physical boundaries and site landmarks for the purpose of documenting and conveying radiological information, and to facilitate the scheduling, management and performance of Open Air Demolition. The survey area may encompass one or more survey units.
- 3.6. **CVS Plans** - A collection of files and information in a standardized format for controlling and documenting field measurements collected for CVS. CVS plans contain at a minimum, survey instructions, the number and location of survey measurements and samples, survey maps, instrumentation requirements, and safety requirement as necessary. The CVS plan will contain all the QA records and other documentation relevant to the CVS of a survey unit.
- 3.7. **Survey Unit** - A contiguous unit within a survey area of similar use history and the same classification of contamination potential.

### 3.8. **ACRONYMNS**

|       |                                      |
|-------|--------------------------------------|
| ALARA | As Low As Reasonably Achievable      |
| CVS   | Contamination Verification Survey    |
| C/LT  | Characterization/License Termination |
| MDCR  | Minimum Detectable Count Rate        |
| QA    | Quality Assurance                    |
| QAAP  | Quality Assurance Project Plan       |
| QC    | Quality Control                      |
| RCA   | Radiological Controlled Area         |
| RE    | Radiological Engineer                |
| SSC   | Structures, Systems, Components      |
| TSD   | Technical Support Document           |
| QA    | Quality Assurance                    |

QAPP      Quality Assurance Project Plan  
ZSRP      Zion Station Restoration Project

#### **4. PRECAUTIONS, LIMITATIONS, AND PREREREQUISITES**

##### **4.1. Precautions**

- 4.1.1 Documents and databases containing CVS data and survey records are QA records when complete. Positive control of the records shall be maintained until such time that they are forwarded to Records Management.
- 4.1.2 When documenting survey information, all personnel shall ensure that QA records are in good quality and legible. Legibility is determined to be readable and reproducible.
- 4.1.3 The pre-survey walk down will identify potential industrial safety hazards within a specific unit.
- 4.1.4 Beware of physical changes to SSC resulting from decommissioning activities previously performed.

##### **4.2. Limitations**

- 4.2.1 Survey instrumentation and analytical laboratory equipment and procedures should be selected based on detection, sensitivity capabilities, and temperature limitations for the expected contaminants and their quantities.
- 4.2.2 Radiation detection and measurement instrumentation will be selected based on the type and quantity of radiation to be measured.
- 4.2.3 Only qualified C/LT Technicians will perform CVSs.

##### **4.3. Prerequisites**

- 4.3.1 CVS shall be performed prior to open air demolition of radiologically impacted SSCs.
- 4.3.2 Decommissioning activities having the potential to contaminate areas to levels that exceed the open air demolition criteria shall be verified completed prior to implementing the CVS in that area.
- 4.3.3 Decommissioning activities having the potential to alter the final survey unit/SSC configuration shall be completed prior to implementing the CVS in that area.
- 4.3.4 Housekeeping activities that may interfere with the performance of the survey, such as clean-up of debris and/or removal of tools or equipment, shall be completed, as required by the C/LT Group, prior to initiating the CVS in that area.
- 4.3.5 All survey or counting instrumentation used to produce CVS data must be able to achieve adequate sensitivity to demonstrate contamination verification criteria.
- 4.3.6 The CVS Plan shall be approved by the C/LT Manager prior to implementation.

- 4.3.7 Release of the surveyed area for Open Air Demolition shall be approved by the C/LT Manager.
- 4.3.8 All personnel involved with the physical survey of a specific area shall receive a CVS plan brief prior to working in that area.
- 4.3.9 The use of computer-generated forms in lieu of procedural attachments is permitted provided the information required by the procedure is included on the forms.

## 5. **MAIN BODY**

### 5.1. **Turnover of CVS area to the C/LT Group**

- 5.1.1 The Project Construction Manager shall ensure, in coordination with the C/LT group, that the SSC is suitable for turnover to the C/LT Group by performing the following:
  - 1.) Complete any necessary pre-demolition engineering/construction activities in the survey unit/SSC.
  - 2.) Verify performance of housekeeping to ensure any tools or equipment not required to support survey activities have been removed.
  - 3.) Ensure any additional measures have been implemented, if required, to limit the spread of contamination from adjacent areas (i.e., plug vent louvers, cover floor gratings, etc.).
  - 4.) Ensure all safety issues have been addressed (i.e., cover holes in floor, etc.).
  - 5.) Sign the *Demolition & Decommissioning Group Request for Survey* section of Attachment 1 to signify area is acceptable for turnover.
  - 6.) Forward Attachment 1 to the VP D&D/Construction for signature.
- 5.1.2 The VP D&D/Construction shall ensure any necessary decommissioning or remediation activities in the survey unit/SSC are completed by signing the appropriate section of Attachment 1 and forwarding the attachment to the C/LT Group.
- 5.1.3 The C/LT Supervisor or C/LT RE shall verify the SSC is in a condition suitable for survey by signing the Demolition & Decommissioning Group Request for Survey section of Attachment 1.

### 5.2. **Access Control Measures**

**NOTE**

While it is highly desirable to control access to specific areas as soon as possible following completion of pre-demolition activities, it is absolutely essential that access be positively controlled at the time of and following the CVS.



- 5.2.1 The C/LT Technicians shall post the area and establish controls by performing the following:
- 1.) Place postings such as illustrated in Attachment 2 at the entrances to survey areas.
  - 2.) Use additional controls such as ropes, barricades, tamper proof seals, locks and contamination monitoring instrumentation for personnel and equipment prior to entering the area, as necessary.
- 5.2.2 The C/LT Supervisor shall verify postings have been established, sign Attachment 3, and forward to the C/LT RE.
- 5.2.3 The C/LT RE shall verify postings have been established, sign Attachment 3 and forward to C/LT Manager for review.
- 1.) File Attachment 3 with the survey plan for the survey unit/SSC.
- 5.2.4 Project personnel shall obtain authorization from the C/LT Supervisor prior to entering these areas.

### **5.3. Survey Design**

- 5.3.1 The C/LT RE shall prepare a survey plan as directed by the C/LT Manager:
- 1.) Ensure the survey plan contains, as a minimum, detailed survey instructions, a hazards / safety walk down and safety requirements, survey map(s), field data collection results, and smear sample result reports.
  - 2.) Divide large buildings (i.e., Auxiliary Building, Fuel Handling Building) into smaller survey units to optimize the performance of the CVS, if necessary.
    - A. Develop a CVS plan for one or multiple survey units.
    - B. Maintain a listing of all survey units and related CVS plans.
    - C. File the original Attachment 1 signed by the responsible D&D Project Construction Manager and VP D&D/Construction in each survey plan.
- 5.3.2 The C/LT RE shall prepare survey instructions for each survey unit as directed by the C/LT Manager.
- 1.) Complete Attachment 4, *Radiological Survey Instructions for CVS*, to document the survey instructions.
    - A. Enter the Package ID and Survey Unit/SSC using guidance from Table 1 of ZS-LT-04, *Characterization of Structural Survey Units That Will Not Be Subjected to Final Status Survey*.
    - B. Complete the *Historical Use* section.
      - i. Review previous operational radiological surveys, the Historical Site Assessment and radiological surveys performed in support of decommissioning, as appropriate.

- ii. If necessary, interview site personnel knowledgeable of past uses and radiological conditions in the area.
- iii. Provide past and/or present radiological data that would assist in determining CVS survey requirements (loose or fixed contamination levels, radiation levels, and airborne contamination levels, etc.).

**NOTE**

The intensity of the CVS will vary dependent on the historical use of the area, as well as the potential for the area to contain residual radioactivity in excess of the open air demolition limits shown in Table 2.

C. Complete the *General Instructions/Comments* section.

- i. Prescribe the *minimum* gamma dose rate scan area coverage (percentage) using the guidance provided in Table 1, Recommended Area Coverage for Contamination Verification Surveys, and professional judgment.
- ii. Prescribe the number of static measurements required. A minimum of thirty (30) static measurements is required in each survey unit/SSC.
- iii. Prescribe the minimum number and general locations of loose surface contamination samples (100 cm<sup>2</sup> smears) required. A minimum of one (1) smear is required at each static measurement location.
- iv. Prescribe any actions to be taken if an area of elevated activity is identified (1.5 mR/hr or 75% of the limit) or if any loose surface contamination is identified in excess of the limits.

**Table 1, Recommended Area Coverage for Contamination Verification Surveys**

| Surface             | Minimum Scan Coverage | Static Measurements  | Smear Surveys   |
|---------------------|-----------------------|--|---|
| Floors              | 10%                   | Static measurements will be collected at a minimum of 30 biased locations and at any are of elevated activity identified during the scan survey. | Smear samples will be collected at the location of each static measurement and in each penetration. Smears shall be analyzed for β/γ and α contamination. |
| Walls < 2m          | 10%                   |  |   |
| Walls > 2m          | 5%                    |  |   |
| Ceilings            | 5%                    |  |   |
| Exterior Walls < 2m | 10%                   |  |   |
| Exterior Walls > 2m | 5%                    |  |   |
| Roof                | 10%                   |  |   |

2.) Identify the instruments to be used for the CVS as follows:

- A. Select instrumentation to provide both reliable operation and adequate sensitivity to demonstrate attainment of the established limits.

- B. Ensure instrumentation is setup, operated and maintained in accordance with the appropriate procedures.
- 5.3.3 The C/LT RE shall perform a Job Hazard Assessment (JHA) in accordance with ZS-SA-01, HASP and document the JHA on Attachment 3 and forward CVS Plan to the Technical Lead/RE for review.
- 5.3.4 The Technical Lead/RE shall review the survey plan to ensure the plan is appropriate for the SSC to be surveyed and sign when complete.
- 5.3.5 The Technical Lead/RE shall forward the survey plan to the C/LT Manager for review and approval.

#### **5.4. Survey Performance**

- 5.4.1 Prior to implementing the CVS Plan, the C/LT Supervisor shall perform a Pre-Job Briefing in accordance with HU-ZN-1211.
- 5.4.2 The C/LT Technician(s) shall obtain and review the survey instructions from the survey plan to ensure an understanding of survey requirements for that specific survey unit/SSC.
- 5.4.3 The C/LT Technician(s) shall obtain the instruments necessary to perform the survey as indicated in the survey instructions.
  - 1.) The C/LT Technician(s) shall use survey techniques in accordance with ZS-RP-105-001-001, "Radiological Surveys," applicable instrumentation procedures and instructions specified in the survey plan.
  - 2.) Perform a scan survey of the area using an energy compensated GM tube or Ion Chamber and check for areas of elevated activity in accordance with the survey instructions.
    - A. Record the readings on the appropriate survey map.
    - B. Document the verification survey using standard survey forms (examples are provided in Attachments 5 and 6).
  - 3.) Perform removable contamination surveys as follows:
    - A. Obtain an additional smear at each area of elevated activity identified during the scan survey.
    - B. Analyze all smears for  $\beta/\gamma$  and  $\alpha$  activity.
    - C. Determine the boundary of the elevated activity and physically mark the area in the field.
    - D. Annotate the location and record on the survey map.
- 5.4.4 The C/LT Technician(s) shall forward completed surveys to the C/LT Supervisor for review.

**5.5. Turnover Areas for Demolition**

5.5.1 Upon completion of survey activities, the C/LT Supervisor shall perform the following:

- 1.) Verify all required measurements were collected and the survey results are below the criteria for turnover to the demolition contractor (see Table 2 below).

**Table 2, Recommended Open Air Demolition Limits**

| Total Surface Contamination   | Loose Surface Contamination     |                               |
|---|---------------------------------|-------------------------------|
|   | $\beta / \gamma$                | $\alpha$                      |
| 2 mR/hr contact   | 1000 dpm/100cm <sup>2</sup> Max | 20 dpm/100cm <sup>2</sup> Max |
| Greater than 2 mR/hr contact other material other than concrete as authorized by RP | 300 dpm/100cm <sup>2</sup> Avg. |                               |

- A. Calculate the mean and maximum values for all direct measurements and loose surface contamination measurements obtained.
  - B. Sign and date Attachment 1 under C/LT Group Review/Approvals.
  - C. Forward completed survey package to the responsible C/LT RE for review.
- 5.5.2 The C/LT RE shall sign/date Attachment 1 after review and forward package to C/LT Manager for final review and closeout.
- 5.5.3 The C/LT RE shall forward a completed copy of Attachment 1 to the VP of D&D/Construction and notify the Director of Radiation Protection in writing that the CVS of the specific survey unit has been completed.
- 5.5.4 The C/LT RE shall forward all original attachments with the completed survey package to the Database and LTP Support Engineer.

**6. REFERENCES**

- 6.1. ZSRP License Termination Plan
- 6.2. NRC HPPOS-071, Control of Radioactively Contaminated Material
- 6.3. NRC-HPPOS-073, Surveys of Waste from Nuclear Reactor Facilities before Disposal.
- 6.4. NRC Information Notice No. 85-92, Control of Radioactively Contaminated Materials, May 1981.
- 6.5. TSD-10-002, Technical Basis for Radiological Limits for Structure/Building Open Air Demolition.
- 6.6. ISO 7503-1, “Evaluation of surface contamination – Part 1: Beta emitters (maximum beta energy greater than 0.15 MeV) and alpha emitters”, 1988.
- 6.7. AD-20, Records Management Program
- 6.8. ZS-LT-01, Quality Assurance Project Plan (QAPP) for Characterization and FRS

- 6.9. ZS-LT-02, Characterization Survey Plan
- 6.10. ZS-RP-103-003-001, Radiological Postings and Labeling Requirements
- 6.11. ZS-RP-105-001-001, Radiological Surveys
- 6.12. ZS-RP-108-000-000, Radiological Instrumentation Program
- 6.13. Instrument Operation Manuals
- 6.14. ZS-LT-04, Characterization of Structural Survey Units That Will Not Be Subjected To Final Status Survey
- 6.15. ZS-SA-01, ZionSolutions Health and Safety Plan
- 6.16. HU-ZN-1211, Pre Job Briefings

## 7. **RECORDS**

- 7.1. Attachment 1 - CVS Area Release for Demolition
- 7.2. Attachment 3 – CVS Area Turnover, Acceptance and Access Control
- 7.3. Attachment 4 – Radiological Survey Instructions for Contamination Verification Survey
- 7.4. Attachment 5 – Direct Measurement and Loose Surface Contamination Survey Data
- 7.5. Attachment 6 – Survey Map (Example)

## 8. **ATTACHMENTS**

- 8.1. Attachment 1 - CVS Area Release for Demolition
- 8.2. Attachment 2 – Example Posting for Pre-Demolition Surveys
- 8.3. Attachment 3 – CVS Area Turnover, Acceptance and Access Control
- 8.4. Attachment 4 – Radiological Survey Instructions for Contamination Verification Survey
- 8.5. Attachment 5 – Direct Measurement and Loose Surface Contamination Survey Data
- 8.6. Attachment 6 – Survey Map (Example)

## 9. **FORMS**

None

**Attachment 1  
Contamination Verification Survey Area  
Release for Demolition**

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Information Use

| <b>Demolition &amp; Decommissioning Group Request for Survey</b>  |                   |
|---|-------------------|
| Area to be Demolished: _____ Scheduled Demolition Date: _____   |                   |
| Waste Disposition: _____  |                   |
| Decommissioning activities having the potential to contaminate the survey unit at level that exceed the open air demolition limits have been completed and safety concerns have been addressed, as appropriate. |                   |
| <input type="checkbox"/> <u>Condition suitable for Turnover to C/LT Group and for performance of CVS.</u>   |                   |
| _____   | _____             |
| Project Construction Manager or designee  | Date              |
| _____   | _____             |
| VP President D&D Construction or designee   | Date              |
| _____   | _____             |
| C/LT Supervisor or RE   | Date              |
| <b>C/LT Group Review/Approvals</b>  |                   |
| Area(s) CVS completion date: _____  |                   |
| Data reviewed by C/LT Supervisor for Pre-Demolition Survey Completion:  |                   |
|   | _____ (sign/date) |
| Data reviewed by C/LT RE for Pre-Demolition   |                   |
|   | _____ (sign/date) |
| Indicate the appropriate response below   |                   |
| <b>Review and Close Out</b>   |                   |
| The final radiological control condition for this area is:  |                   |
| <input type="checkbox"/> The area(s) listed above meet the criteria to be released for open air demolition.   |                   |
| <input type="checkbox"/> The area(s) listed above do not meet the criteria to be released for demolition because:   |                   |
| <input type="checkbox"/> The area(s) listed above are released for demolition with the following restrictions:  |                   |
| <input type="checkbox"/> RP job coverage required   |                   |
| <input type="checkbox"/> RWP required   |                   |
| <input type="checkbox"/> Further surveys required during intermediate steps of demolition (attach requirements to this form)  |                   |
| <input type="checkbox"/> No radioactive materials are to be stored in this area.  |                   |
| <input type="checkbox"/> Special waste disposal or segregation methods required (attach requirements to this form)  |                   |
| <input type="checkbox"/> Other:   |                   |
| _____   | _____             |
| C/LT Manager or designee  | Date              |

# NOTICE

**A PRE-DEMOLITION SURVEY IS IN PROGRESS  
OR HAS BEEN COMPLETED IN THIS AREA**

**NO DECOMMISSIONING/DEMOLITION  
ACTIVITIES ARE TO BE PERFORMED IN THIS  
AREA**

**THE USE, MOVEMENT OR STORAGE OF  
RADIOACTIVE MATERIAL IS PROHIBITED IN  
THIS AREA**

**ENTRY OF PERSONNEL IN THIS AREA IS  
PROHIBITED WITHOUT THE AUTHORIZATION  
OF C/LT SUPERVISION**

**CONTACT: \_\_\_\_\_**

**EXTENSION: \_\_\_\_\_**

**Attachment 3  
CVS Area Turnover and Access Control**

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Information Use

| <b>Turnover / Acceptance of Area</b>   |   |   |
|--|---|---|
| Hazardous Awareness Pre walk down of Survey Unit   |   |   |
| <input type="checkbox"/> - Cold work environment   | <input type="checkbox"/> - Hazardous Atmospheres  | <input type="checkbox"/> - Exposed electrical circuitry |
| <input type="checkbox"/> - Stinging Insects  | <input type="checkbox"/> - Load bearing stresses  | <input type="checkbox"/> - Sharp Objects or surfaces    |
| <input type="checkbox"/> - Hazardous plants and/ or animals  | <input type="checkbox"/> - Lack of structural integrity                                 | <input type="checkbox"/> - Falling Objects              |
| <input type="checkbox"/> - Tripping Hazards  | <input type="checkbox"/> - Released of stored energy sources (hydraulic, steam, etc...) | <input type="checkbox"/> - Other*                       |
| <input type="checkbox"/> - Standing Water > 1 ft deep  | <input type="checkbox"/> - Buried utilities   | <input type="checkbox"/> - Other*                       |
| <input type="checkbox"/> - Fall hazards  | <input type="checkbox"/> - Overhead power lines   |   |
| <input type="checkbox"/> - Work @ height > 6ft   | <input type="checkbox"/> - Kinetic energy sources (moving equipment)                    |   |
| <input type="checkbox"/> - Open excavations  | <input type="checkbox"/> - Vehicle traffic  |   |
| *Comments: _____<br>_____<br>_____   |   |   |
| <input type="checkbox"/> Area meets the criteria for turnover  | <input type="checkbox"/> Access Controls are instituted and completed.                  | <input type="checkbox"/> Area is acceptable for CVS     |
| _____<br>C/LT Supervisor   | _____<br>Date   |   |
| _____<br>C/LT RE   | _____<br>Date   |   |
| The area meets the criteria for turnover to the C/LT Group. Access Controls have been established. Area is acceptable for CVS. |   |   |
| _____<br>C/LT Manager  | _____<br>Date   |   |
| Comments: _____<br>_____<br>_____<br>_____   |   |   |



**Attachment 4**  
**Radiological Survey Instructions for Contamination**  
**Verification Survey**  
 (Page 1 of 2)

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 Information Use

|                             |                         |
|-----------------------------|-------------------------|
| <b>PACKAGE ID:</b>          | <b>SURVEY UNIT/SSC:</b> |
| <b>Description of Area:</b> |                         |
|                             |                         |
| <b>Historical Use</b>       |                         |
|                             |                         |
| <b>General Instructions</b> |                         |
|                             |                         |
|                             |                         |
|                             |                         |

**Attachment 4**  
**Radiological Survey Instructions for Contamination**  
**Verification Survey**  
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|   |                  |                             |            |      |            |
|---|------------------|-----------------------------|------------|------|------------|
| <b>Package ID:</b>  |                  | <b>CVS Survey Unit/SSC:</b> |            |      |            |
| <b>Instrumentation</b>  |                  |                             |            |      |            |
| Measurement Type  | Instrument Model | Detector Model              | Scan Speed | Mode | Count Time |
|   |                  |                             |            |      |            |
|   |                  |                             |            |      |            |
|   |                  |                             |            |      |            |
|   |                  |                             |            |      |            |
|   |                  |                             |            |      |            |
|   |                  |                             |            |      |            |
| Individuals performing survey have read and understood this plan and are aware of the hazards identified on Attachment 3. |                  |                             |            |      |            |
| Performed by:   |                  |                             | Date:      |      |            |
|   |                  |                             |            |      |            |
| Performed by:   |                  |                             | Date:      |      |            |
|   |                  |                             |            |      |            |
| Performed by:   |                  |                             | Date:      |      |            |
|   |                  |                             |            |      |            |
| Performed by:   |                  |                             | Date:      |      |            |
|   |                  |                             |            |      |            |
| <b>Instructions Prepared by:</b>  |                  |                             |            |      |            |
| _____   |                  |                             | _____      |      |            |
| C/LT RE   |                  |                             | Date       |      |            |
| <b>Instructions Reviewed by:</b>  |                  |                             |            |      |            |
| _____   |                  |                             | _____      |      |            |
| Technical Lead/RE   |                  |                             | Date       |      |            |
| <b>Instructions Approved by:</b>  |                  |                             |            |      |            |
| _____   |                  |                             | _____      |      |            |
| C/LT Manager  |                  |                             | Date       |      |            |



# Attachment 6 Survey Map Example

ZS-LT-400-001-002  
Revision 0  
Information Use

SURVEY #: \_\_\_\_\_ DATE: / / TIME: \_\_\_\_\_

Survey UNIT: \_\_\_\_\_ BLDG: \_\_\_\_\_ ELEV: \_\_\_\_\_

Description: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

Name: \_\_\_\_\_ Sign: \_\_\_\_\_

**Purpose of Survey:**

Class 1  Class 2  Class 3  N/A

**Disposition Option:**

| INST-MODEL | SERIAL# | Pre-✓                    | Post-✓                   |
|------------|---------|--------------------------|--------------------------|
|            |         | <input type="checkbox"/> | <input type="checkbox"/> |
|            |         | <input type="checkbox"/> | <input type="checkbox"/> |
|            |         | <input type="checkbox"/> | <input type="checkbox"/> |
|            |         | <input type="checkbox"/> | <input type="checkbox"/> |

**Beta-gamma-Contact-Dose-rate-Survey**

All Doserates are <2mR/hr

**Smear-Survey**

Results attached for smear results

**Materials and Equipment-Description**

| Item# | Description |
|-------|-------------|
| N/A   | See Map     |
| N/A   | N/A         |
| N/A   | N/A         |
| N/A   | N/A         |
| N/A   | N/A         |

**NOTE: Doserates are in mR/hr unless otherwise noted**

DATE: / / RPS-Approval (Signature) \_\_\_\_\_

DATE: / / \_\_\_\_\_