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Subcontractors	Program Requirements Document	For Additional Info: <a href="http://EDMS">http://EDMS</a>	Effective Date: 05/31/06
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Manual: Subcontractors Requirements

**USE TYPE 3**Change Number: 311842

## 1. PURPOSE

Proper monitoring and control of demolition activities ensures these activities are accomplished in a safe manner and in accordance with existing requirements. This document implements requirements from codes and standards along with *contractor* (see def.) requirements. Any applicable regulatory or contractor requirements must be followed, with the most stringent requirement being met

## 2. APPLICABILITY

This document applies to all subcontractors who conduct demolition activities at the INL, as specified in their contract with contractor. Stricter requirements may be imposed by subcontractors upon their employees or subtier contractors. The requirements of this document must be followed by subcontractors; however, the means of implementation may vary as determined by the subcontractor.

## 3. REQUIREMENTS

- 3.1 Demolition work shall be in accordance with 29 CFR 1926, Subpart T.
- 3.2 A hazards analysis and a work plan shall be completed for the project before demolition begins.
- 3.3 Demolition work shall be done by qualified personnel.
- 3.4 Training documentation shall be verified, with particular attention being paid to mixed environments (such as an asbestos worker working in a confined space, in a radiological area, or on a hazardous waste site).
- 3.5 The number of personnel allowed in the demolition area shall be limited to those persons necessary to perform the work tasks.
- 3.6 Lines of demarcation shall be placed before any demolition work starts. Work areas and adjacent affected areas shall be protected or closed to unqualified or unauthorized personnel by the use of fences, signs, rope, or other appropriate barriers.
  - 3.6.1 The *contractor Point of Contact* (POC; see def.) shall be consulted for direction regarding additional signs, such as:
    - A. radiation signs

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- B. CERCLA postings
  - C. RCRA waste postings
  - D. asbestos removal or advisory signs
  - E. flammable or combustible material storage
- 3.6.2 Warning lights shall be placed on or about all barricades as necessary to prevent inadvertent pedestrian and vehicular access after dark.
- 3.7 Before demolition begins, an engineering survey of the structure shall be obtained from the contractor POC. This survey shall be in accordance with 29 CFR 1926.850.
- 3.8 The demolition project shall be monitored for regulatory compliance and compliance with this PRD.
- 3.9 If chutes are used, they must comply with the requirements of 29 CFR 1926.852.
- 3.10 Debris shall be removed and good housekeeping maintained as part of an ongoing process.
- 3.11 Pedestrian and vehicular traffic shall be controlled in any area that is closer than one-fourth of the height of the structure to the perimeter of the structure being demolished.
- 3.12 Demolition within operating facilities will have additional requirements. These requirements are:
- 3.12.1 Demolition within operating facilities primarily encompasses demolition associated with component or system replacement or upgrade in or near operating facilities.
  - 3.12.2 Each project that includes demolition will require a subcontractor generated demolition procedure that will positively identify systems to be demolished. The plan shall as a minimum identify individual components making up a system color coded ribbon and tape. Special attention to lockout/tagout should be considered for projects that systems are to be systematically de-energized as demolition activities progress.
- NOTE:** *See Appendix A for sample of demolition plan. The written demolition plan will have at least have the minimum elements described in Appendix A.*
- 3.12.3 All personnel engaged in demolition activities shall be trained to the demolition plan.

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#### **4. DEFINITIONS**

See LST-27

#### **5. REFERENCES**

##### **5.1 Source Documents**

29 CFR 1926, Subpart T, Demolition

40 CFR 61.145, Standard Demolition and Renovation

American National Standards Institute (ANSI) Standard A10.6-1990, Safety Requirements for Demolition Operations

ANSI A10.7-1989, Construction and Demolition & Commercial Explosives and Blasting Agents-Safety Requirements for Transportation, Storage, Handling, and Use

ANSI A10.8-1988, Construction and Demolition Operations & Scaffolding-Safety Requirements

ANSI A10.9-1983, Construction and Demolition Operations & Concrete and Masonry Work-Safety Requirements

ANSI A10.9a-1989, Construction and Demolition Operations & Concrete and Masonry Work [Supplement to ANSI A10.9-1983]

##### **5.2 Related Requirements**

The following documents may also contain requirements that apply to this activity:

PRD-1007, Construction Work Coordination and Hazard Control

PRD-2001, Personal Protective Equipment

PRD-2002, Fall Protection

PRD-2003, Ladders

PRD-2004, Scaffolding

PRD-2005, Walking and Working Surfaces

PRD-2007, Hoisting and Rigging

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PRD-2011, Electrical Safety

PRD-2012, Lockout and Tagout

PRD-2016, Material Handling, Storage, and Disposal

PRD-2017, Housekeeping and Sanitation

PRD-2022, Signs, Color Codes, and Barricades

PRD-2101, Hazard Communication

PRD-2107, Heat and Cold Stress

PRD-2108, Hearing Conservation

PRD-2109, Respiratory Protection

PRD-2110, Confined Spaces

## **6. APPENDIXES**

Appendix A, Sample Demolition Plan

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## Appendix A

### Sample – Demolition Plan

#### 1. PURPOSE

- 1.1 The purpose of this Technical Procedure Requirement is to establish requirements by which demolition activities will be performed.

#### 2. SCOPE AND APPLICABILITY

- 2.1 This guideline is applicable to mechanical and electrical demolition activities within operating facilities. This guide will provide a consistent and positive method for identification and removal of individual components within a system.
- 2.2 The definition of demolition is the removal of piping systems, electrical systems, system components, or the removal of any item within an operating facility.

#### 3. PREREQUISITES

- 3.1 The requirements for the implementation of this guideline shall be identified in the project documents.
- 3.2 Personnel performing demolition activities shall be trained to the requirements of this procedure and evidence of such shall be noted in the Pre Job Briefing and training records.

#### 4. INSTRUCTIONS

##### 4.1 Planning and Coordination

- 4.1.1 The job supervisor shall coordinate all demolition efforts and interface with the various crafts and Operations Support personnel involved. Coordination will include outage planning, demolition walkdowns, and will support safe operation of the facility as required.
- 4.1.2 The job supervisor shall walk the job daily with the individual crafts involved in the demolition activities. The job supervisor may elect to pass this requirement on to the individual craft foreman, however one individual shall be responsible for all demolition activities associated with the project.

##### 4.2 Identification Marking

- 4.2.1 Color coded identification marking shall be applied to all systems shown on the project documentation prior to starting demolition activities. The

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color-coding shall identify whether the system is identified for demolition. Work control documents must specifically identify the systems to be removed, including all relevant mitigations for hazards of the system. Work control must also identify how system that will be partially removed will be marked, to distinguish sections to be removed from sections to remain in place. Color tape or ribbon will be placed as follows:

**Red** – systems NOT prepared for demolition or removal.

**Green** – systems identified and prepared for demolition

- 4.2.2 The color code system shall include a positive means for verification that a system or component is approved for removal.

### 4.3 Pre Job Briefing

- 4.3.1 A Pre Job Briefing shall be held prior to each shift's demolition activities to address the guidelines and safety requirements outlined in this procedure. Pre Job Briefings shall include a review of the color code system, a review of the drawings at the job site identifying the components to be removed.

**NOTE:** *Some projects may only provide schematic drawings. Special attention should be place on the actual field conditions when using schematic drawings for planning purposes.*

### 4.4 Walkdown Verification

- 4.4.1 **Initial walkdown.** The systems shall be walked down initially at the start of the project with Operations Support personnel. The initial walkdown will be performed as verification that the correct system components have been identified.
- 4.4.2 **Pre-demolition walkdown.** Pre-demolition walkdowns with the job supervisor and Operations Support personnel will be performed prior to each shift to ensure the identification markings are correct. Ribbon/tape shall be applied to the systems for the demolition activity. The job supervisor shall also remove any ribbon/tape that is out of date. The job supervisor shall discuss with operations support personnel all lockout / tagout requirements and ensure lockout / tagouts are in place prior to flagging the system.
- 4.4.3 **Changes.** If there are changes to project scope or changes due to design errors or omissions the new work shall be reviewed and walked down.

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- 4.4.4 **Daily post demo.** The job supervisor should perform a walkdown at the end of the each shift and prior to weekend or holiday breaks to ensure the job site has been left in a safe condition. The walkdown should include construction signs and barriers and changes to operational postings that may need to be updated due to removed equipment and components.

#### **4.5 Demolition**

- 4.5.1 Employees shall only demolish systems that have the proper ribbon/tape identifying the system. If a system contains a ribbon that is out of date or improper system identification the employees shall notify the foreman or job supervisor.
- 4.5.2 Employees shall only demolish systems that they are qualified to remove. The job supervisor shall ensure each worker meets the qualifications required for assigned activities.

#### **4.6 Post Demolition / Post Job Review**

- 4.6.1 At the completion of demolition activities, the job supervisor shall walkdown the project with the individual craft supervision and Operations Support personnel to ensure all identified systems have been removed and left in a safe condition for continued operation of the plant and for follow-on installation crews.
- 4.6.2 The post demolition walkdown shall include a review of the drawings to further ensure all system components have been removed.

### **5. APPENDICES**

#### **5.1 Attachments**

- 5.1.1 None

#### **5.2 Exhibits**

- 5.2.1 None