



**Allen, Pam, NMENV**

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**From:** Maestas, Ricardo, NMENV  
**Sent:** Thursday, October 01, 2015 2:01 PM  
**To:** Allen, Pam, NMENV  
**Subject:** FW: Work Control Document MWO00021  
**Attachments:** 00042915\_work order for decontamination.pdf

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**From:** Anthony Stone [<mailto:anthony.stone@cbfo.doe.gov>]  
**Sent:** Thursday, March 26, 2015 8:09 AM  
**To:** Maestas, Ricardo, NMENV  
**Cc:** George Basabilvazo; Chavez, Rick - RES ([Rick.Chavez@wipp.ws](mailto:Rick.Chavez@wipp.ws)); Russ Patterson  
**Subject:** Work Control Document MWO00021

Ricardo,

Recently, you showed some interest in the Underground Decontamination Document the site is working too. Attached is the Work Control Document that addresses your interest. I would like to talk with you further and go over this document at your convenience. Please give me a call when you have a moment.

V/R,

*Anthony R. Stone*  
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**MWO00021**

Revision 0

**UNDERGROUND DECONTAMINATION**

Maintenance Procedure

**Reference Use**

AU00

**APPROVED FOR USE**

**CHANGE HISTORY SUMMARY**

Revision Number	Date Issued	Description of Changes
0	01/09/15	New procedure for decontamination of equipment and Areas

**1.0 SCOPE**

This WCD provides decontamination methods for the underground (U/G). The decontamination method to be used will be at the discretion of the Field Work Supervisor after consultation with Radiological Control. The scope includes the following:

- Work area inspection and equipment setup
- Initial radiological surveys
- Optional equipment methods
  - HEPA Vacuum (Section 5.4)
  - Wiping decontamination (Section 5.5)
  - Water spray decontamination (Section 5.6)
- Processing equipment through decontamination areas
- Decontamination of areas in the U/G
- Waste disposition

**2.0 PRECAUTIONS AND LIMITATIONS**

**2.1 PRECAUTIONS**

- Personnel may be exposed to Pinch Point Hazards while opening/closing access panels to equipment compartments.
- Personnel may be exposed to Heavy/Awkward Lifting Hazards when setting up radiological decontamination areas.
- Personnel may be exposed to a Mobile Equipment Hazard when equipment is trammed to an area designated for radiological decontamination.
- Personnel may be exposed to a Noise Hazard while operating equipment.
- Personnel may be exposed to a Radiological Contamination Hazard when decontaminating equipment or areas.

- Personnel may be exposed to a Chemical Hazard while performing decontamination activities on equipment.
- Personnel may be exposed to an Electrical Hazard when performing water spray activities in area decontamination.
- Personnel may be exposed to poor illumination when decontaminating equipment or areas.

## 2.2 LIMITATIONS

- [ ] 2.2.1 The operational restrictions and interim controls of ESS-2014-09 *WIPP Habitability Evaluation of the Safety of the Situation*, applicable to decontamination remain in effect and are applicable for this scope of work.
- [ ] 2.2.2 Entry into the U/G shall be in accordance with MWO00534.
- [ ] 2.2.3 Use of Liquid fueled vehicles/Equipment shall be in accordance with MWO90534.

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### NOTE

Steps [ ] 3.1.1 through [ ] 3.1.3 may be performed in any order.

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## 3.0 PREREQUISITES

### 3.1 ADMINISTRATIVE

- [ ] 3.1.1 Field Work Supervisor (FWS) **CONDUCT** pre-job brief per WP 04-AD3030.
- [ ] 3.1.2 **FWS ENSURE** all personnel have read, understand and have signed the applicable RWP.
  - [ ] 3.1.2.1 **FWS ENSURE** the Site Medical Nurse or Emergency Services Technicians perform vitals and assessment of personnel that are required to wear respirator and document results.
- [ ] 3.1.3 **IF** a liquid fueled vehicle/equipment is to be used, **THEN FWS ENSURE** personnel are aware that MWO90534 must be initiated prior to equipment start-up.
- [ ] 3.1.4 **FWS ENSURE** Administrative prerequisites are complete.

### 3.2 TASK PREPARATION

- [ ] 3.2.1 **ENSURE** items shown in Section 4.0 are available.

**4.0 MATERIAL AND EQUIPMENT LIST**

ITEM	MATERIAL DESCRIPTION	QTY	UNIT	PR/WHSE STOCK NO.
1	*Rags		Ea.	38-01634
2	*Scrub wipes		Ea.	38-01784
3	*HEPA Vacuum Filters		Ea.	
4	*Decontamination Solution		Ea.	
5	*Water		Ea.	
6	*Fixative/Latex Paint		Ea.	

\*As Required

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Description
Personal Protective Clothing Specified In Rwp
*Leather/Mechanic Gloves
Powered Air Purifying Reprsirator (Papr) W/ Organic Hepa Cartridges
*Ear Plugs
*Apron
*Knee Pads

\*As Required

**SPECIAL EQUIPMENT**

Description
*HEPA Vacuum
*Spare PAPR Batteries
*Water Pump Sprayers
*Airless Sprayer
*Extension Cord W/GFCI
*Step stool/ladder
*Hand-held ABC Fire extinguishers
*WIBGETi Heat Stress Monitor
*Radiological equipment specified in RWP

\*As Required

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**NOTE**

Sections 5.1 and 5.2 are to be performed each evolution of decontamination. The remaining sections will be used at the discretion and direction of the FWS. Steps within the sections shall be worked step-by-step unless otherwise noted.

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**5.0 WORK INSTRUCTIONS****5.1 WORK AREA INSPECTION**

- [ ] 5.1.1 **ENSURE** the ground has been inspected in the work area and/or prior to working on or around equipment

**5.2 EQUIPMENT SETUP**

- [ ] 5.2.1 **IF** decontamination is required on equipment,  
**THEN ENSURE** equipment is in a safe configuration (e.g, wheels chocked, parking brake applied).  
**AND ENSURE** an Equipment Inactivation Tag is hung on the equipment controls or battery disconnect switch.

**5.3 RADIOLOGICAL CONTAMINATION SURVEY**

- [ ] 5.3.1 Radcon **ENSURE** a radiological survey has been performed.

## 5.4 HEPA VACUUM DECONTAMINATION ACTIVITIES

- [ ] 5.4.1 **VACUUM** loose dust particles from equipment.

### WARNING

#### RADIOLOGICAL HAZARD

Do NOT open the compartment or break the seal where the HEPA filter bag is located due to radiological release

- [ ] 5.4.2 **IF** vacuum cleaner loses suction or appears to be clogged,  
**THEN** turn off AND unplug unit.
- [ ] 5.4.3 **IF** vacuum cleaner cannot be unclogged or malfunctions  
**THEN** Place unit out-of-service.

## 5.5 WIPING DECONTAMINATION ACTIVITIES

- [ ] 5.5.1 **WIPE** down equipment using a decontamination solution. Soaked rags and/or scrub wipes may be used.
- [ ] 5.5.2 **DISPOSE** of used rags/scrubs in radiological waste bags.

## 5.6 WATER SPRAY DECONTAMINATION ACTIVITIES

### CAUTION

Water should be only sprayed on body parts of the equipment and/or tires, water may cause electrical components to malfunction.

- [ ] 5.6.1 Using a sprayer (e.g., pump up, powered) ensure nozzle is adjusted to stream AND THEN **SPRAY** equipment at the direction of Radiological Control.

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**NOTE**

Section 5.7 is generally for equipment located in the High Contaminated Area (HCA) however equipment located in the Contaminated Area may require decontamination at any point surveys indicate activity levels requiring additional decontamination.

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**5.7 PROCESSING THROUGH DECONTAMINATION AREA**

- [ ] 5.7.1 RCT **PERFORM** Radiological survey and document contamination levels on survey map of equipment.
- [ ] 5.7.2 **IF** additional decontamination is required,  
**THEN ENSURE** an Inactivation Tag is hung,  
**AND RE-PERFORM** Sections 5.4, 5.5, or 5.6 as necessary until survey results are at designated levels.
- [ ] 5.7.3 RCT **LABEL** equipment with appropriate RAD levels.
- [ ] 5.7.4 **IF** Inactivation Tag is hung on equipment,  
**THEN** Qualified Operator **REQUEST** FWS to remove Inactivation Tag.  
**AND TRAM** equipment through decontamination processing area using a spotter for placement of equipment.



## 5.8 AREA DECONTAMINATION ACTIVITIES

- [ ] 5.8.1 Radcon **ENSURE** a radiological survey has been performed and contamination levels on survey map of area have been documented.

### WARNING

#### SHOCK HAZARD

Personnel may be exposed to a shock hazard if water inadvertently contacts electrical equipment.

- [ ] 5.8.2 **IF** decontamination is required near an electrical component (switches, power skids, etc.),  
**THEN ENSURE** electrical component(s) is covered.  
**IF** adequate coverage cannot be obtained,  
**THEN APPLY** hazardous energy control in accordance with WP 04-AD3011 and WP 10-AD3005.
- [ ] 5.8.3 The following will be done at the direction of the FWS with Radiological Control concurrence:
- Water washing area
    - Utilize water washing technique to minimize dust or to prevent re-suspension of contamination.
  - Installation of brattice cloth
    - Lay Yellow brattice cloth across the with or area/room to be covered
      - Secure brattice cloth to rib and/or ground
    - Areas requiring extensive use of equipment tramming over brattice should be prepared with the following at a minimum:
      - Covering the brattice cloth with approximately six to eight inches of mine salt
      - Watering of the mine salt (may take several applications)
      - Compacting of the mine salt using heavy equipment
  - Fixative/Paint application
    - Utilizing a powered sprayer, spray area(s) to fix contamination.

**5.9 POST / DECONTAMINATION MAINTENANCE ACTIVITIES**

[ ] 5.9.1 **IF** Radiological Waste is processed,

**THEN FWS ENSURE RCTs** affix the radiological survey label containing contact and 30cm dose rates measured in  $\mu\text{R/hr}$  scale range to the bag / container.

[ ] 5.9.1.1 Site derived waste generated will be placed in approved waste containers, sealed, and temporarily stored in designated areas. This process shall be performed in accordance with WP 05-WH1836 and WP 05-WH1811.