

RPT PERSONNEL DECONTAMINATION CHECKLIST

PREPARATION FOR ARRIVAL OF CONTAMINATED PERSON

- Contact another RPT member and ES&H Section RCT.
 - Notify ES&H Section Associate Head for Radiation Protection.
 - Verify that response personnel have not received a nuclear medicine test within the past month.
 - Complete appropriate sections of R.P. Form # 34, Initial Response to a Radiological
 - Call the Comm. Center (x0, x4251) to verify that Area RSO has been contacted and, if necessary, ask security to provide a person of the same sex as the contaminated person.
 - Post the "Decontamination in Progress" sign on the outside door.
- Conduct the following survey instrument checks:
- Calibration due dates
 - Battery checks
 - Source checks
 - Set meters to x1 scale
 - Record background rates on R.P. Form # 30
 - Don 2 pairs of gloves, Tyvek lab coat, shoe covers, goggles, other ppe as necessary. Change outer pair of gloves as necessary to prevent cross contamination.

ARRIVAL OF CONTAMINATED PERSON

- Instruct contaminated person to avoid touching his/her face, eyes, mouth, nose, ears, and hair.
- Instruct driver of transport vehicle to remain at Site 39 until vehicle has been surveyed.
- Instruct the RCT to survey transport vehicle and decontaminate to < 50 cpm over background.
- Ask the individual if he/she has received a nuclear medicine test within the past month.**

REMOVAL OF CONTAMINATED CLOTHING

- Instruct the contaminated person to go into the rest room and don a fresh pair of gloves.
- Assist person in removal of protective clothing. Do not shake clothing; roll away in outward direction. Place clothing in rad waste container. Change outer gloves.
- Assist person in removing his/her personal belongings and place them in plastic bags. Separate contaminated items from non-contaminated items. Refer to Appendix A.
- Instruct the contaminated person to hold out their hands. A RPT member should carefully remove the individual's gloves and put them in the rad waste container.

SURVEYING TO DETERMINE THE EXTENT OF CONTAMINATION

- ❑ Survey the person with the frisker. Conduct a cursory survey to locate obvious areas of contamination.
- ❑ Conduct a whole body survey at a rate of 1 inch/second. Don't touch probe to the person's skin or clothing. Start at the person's head and end with bottoms of person's feet.
- ❑ If you hear an increase in count rate, hold probe in that area for 5-10 seconds.
- ❑ A person is contaminated if frisker reads ≥ 100 cpm over background; clothing is contaminated if results are ≥ 50 cpm over background.
- ❑ Use alpha meter to determine if contamination is an alpha-emitter.
- ❑ Explain survey results to contaminated person. Record data on R.P. Form # 30, Personnel Decontamination Report and R.P. Form # 72, Radiological Incident Body Chart Record.
- ❑ If contamination is on clothing, instruct person to don a fresh pair of gloves. A person of the same sex should assist contaminated person in removing his/her clothing by rolling it away from his/her body.
- ❑ Survey the person's underwear and skin to determine the extent of contamination. After survey, provide the person fresh protective clothing to cover parts of his/her body that are not contaminated.
- ❑ After decontamination is complete, provide the person with clothing from the supply cabinet.

DECONTAMINATION OF THE MOUTH

- ❑ Instruct the contaminated person to don a fresh pair of gloves.
- ❑ Instruct the contaminated person to stand at the sink and rinse his/her mouth with drinking water. Instruct the person to not swallow the water.
- ❑ Provide the person with a container and instruct him/her to spit the water into the container.
- ❑ Transfer liquid to bottle and label with person's name, ID number, date and time of collection. Complete R.P. Forms # 32 and # 33 and submit sample to the RAF.
- ❑ Wipe a cotton swab around the inside of the person's mouth, then survey the swab.
- ❑ If contamination is present, explain survey results and explain that further samples are needed.
- ❑ Repeat above steps until results show levels < 100 cpm above background.
- ❑ Contact the Associate Head for Radiation Protection for concurrence regarding bioassay and whole body counting.
- ❑ For urine bioassay, provide person with Argonne Lab urine bioassay kit. Explain sample collection (fill until bottle is 90% full), then seal, and return to Dosimetry Program Manager.
- ❑ Complete R.P. Form # 40, Bioassay Sample Chain of Custody, and R.P. Form # 9, Argonne Whole Body Counting Information Sheet. Contact Dosimetry Manager to make arrangements.
- ❑ If decontamination is unsuccessful, consult with Fermilab Fire or Medical Dept.
- ❑ Record final survey results on R.P. Form # 30, Personnel Decontamination Report.

DECONTAMINATION OF THE NOSE AND/OR EARS

- Instruct individual to don a fresh pair of gloves.
- Provide a wet cotton swab for each ear/nostril.
- Instruct the individual to roll the swab gently inside his/her ear/nostril without pushing the contamination further inside the ear/nose. For nasal contamination, instruct the person to gently blow his/her nose before using the swab.
- Survey the cotton swab using a frisker. If contamination is present, explain survey results and explain that further samples are needed.
- Put swab samples in sample container labeled with the person's name, ID number, time, and date of sample collection. Complete R.P. Forms # 32 and # 33. Submit samples to the RAF.
- Repeat above steps until results show levels < 100 cpm above background.
- Contact the Associate Head for Radiation Protection for concurrence regarding bioassay and whole body counting.
- For urine bioassay, provide person with Argonne Lab urine bioassay kit. Explain sample collection (fill until bottle is 90% full), then seal, and return to Dosimetry Program Manager.
- Complete R.P. Form # 40, Bioassay Sample Chain of Custody, and R.P. Form # 9, Argonne Whole Body Counting Information Sheet. Contact Dosimetry Manager to make arrangements.
- If decontamination is unsuccessful, consult with Fermilab Fire or Medical Dept.
- Record final survey results on R.P. Form # 30, Personnel Decontamination Report.

DECONTAMINATION OF THE HAIR

- Instruct the contaminated person to don a fresh pair of gloves.
- Adjust shower water temperature to lukewarm.
- Assist the individual in donning coveralls to avoid getting wet.
- Wrap a towel across the individual's neck and instruct the person to hold another towel over his/her face.
- Instruct person to sit or stand in shower, then shampoo and rinse hair.
- Towel-dry hair and conduct a survey with the frisker.
- Survey the individual's face and neck.
- Provide the person with a fresh towel to cover his/her face and repeat above steps until results show levels < 100 cpm above background.
- Contact the Associate Head for Radiation Protection for concurrence regarding bioassay and whole body counting.
- For urine bioassay, provide person with Argonne Lab urine bioassay kit. Explain sample collection (fill until bottle is 90% full), then seal, and return to Dosimetry Program Manager.

- ❑ Complete R.P. Form # 40, Bioassay Sample Chain of Custody, and R.P. Form # 9, Argonne Whole Body Counting Information Sheet. Contact Dosimetry Manager to make arrangements.
- ❑ If decontamination is unsuccessful, consult with Fermilab Fire or Medical Dept.
- ❑ Record final survey results on R.P. Form # 30, Personnel Decontamination Report.

DECONTAMINATION OF LOCALIZED SKIN AREAS

BABY WIPE METHOD

- ❑ Use a baby wipe and begin at the outer area of contamination and wipe inward to bring contamination to the center. Discard wipes in the rad waste container.
- ❑ After cleaning, place paper tissue onto the area to blot dry. One tissue per blot. Repeat until the skin is dry. Discard tissues in the rad waste container.
- ❑ Survey and repeat above procedure until results show < 100 cpm above background with a frisker. Stop if skin irritation occurs.
- ❑ Explain survey results to the affected individual. Record survey data on Radiological Incident Body Chart Record, R.P. Form # 72.
- ❑ If indicated, contact the Associate Head for Radiation Protection for concurrence regarding bioassay and whole body counting.
- ❑ For urine bioassay, provide person with Argonne Lab urine bioassay kit. Explain sample collection (fill until bottle is 90% full), then seal, and return to Dosimetry Program Manager.
- ❑ Complete R.P. Form # 40, Bioassay Sample Chain of Custody, and R.P. Form # 9, Argonne Whole Body Counting Information Sheet. Contact Dosimetry Manager to make arrangements.
- ❑ If decontamination is unsuccessful, consult with Fermilab Fire or Medical Dept.
- ❑ Record final survey results on R.P. Form # 30, Personnel Decontamination Report.

SOAP AND WATER METHOD

- ❑ Clean the contaminated area with mild soap and lukewarm water in the sink. Protect clean areas of skin from splashes. Blot the area once per paper tissue. Repeat until skin is dry. Discard tissue in the radioactive waste container.
- ❑ A soft bristle brush may be used with soap and water if necessary. Use the brush to lightly rub the affected area a few times. Blot the area dry. Stop if skin irritation appears.
- ❑ Survey the area. Repeat until levels are < 100 cpm above background. Stop if skin irritation appears.
- ❑ Explain survey results to the affected individual. Record survey data on Radiological Incident Body Chart Record, R.P. Form # 72.
- ❑ If indicated, contact the Associate Head for Radiation Protection for concurrence regarding bioassay and whole body counting.
- ❑ For urine bioassay, provide person with Argonne Lab urine bioassay kit. Explain sample collection (fill until bottle is 90% full), then seal, and return to Dosimetry Program Manager.
- ❑ Complete R.P. Form # 40, Bioassay Sample Chain of Custody, and R.P. Form # 9, Argonne Whole Body Counting Information Sheet. Contact Dosimetry Manager to make arrangements.

- If decontamination is unsuccessful, consult with Fermilab Fire or Medical Dept.
- Record final survey results on R.P. Form # 30, Personnel Decontamination Report.

SWEAT METHOD

- If other methods are ineffective, use the sweat method. For areas other than hands, place a gauze bandage or other absorbent pad over the contaminated area. Then cover the area with a layer of plastic wrap and tape the area with medical tape.
- For hand contamination, put a cotton glove on the hand to absorb sweat. Then put a plastic glove over the cotton glove and use medical tape to seal the glove at the wrist.
- Leave in place for 15 - 30 minutes or until profuse sweating takes place. Remove plastic wrap/gloves and immediately wash the contaminated area with lukewarm water.
- Survey the area. Repeat until results are < 100 cpm above background.
- Explain survey results to the affected individual. Record survey data on Radiological Incident Body Chart Record, R.P. Form # 72.
- If indicated, contact the Associate Head for Radiation Protection for concurrence regarding bioassay and whole body counting.
- For urine bioassay, provide person with Argonne Lab urine bioassay kit. Explain sample collection (fill until bottle is 90% full), then seal, and return to Dosimetry Program Manager.
- Complete R.P. Form # 40, Bioassay Sample Chain of Custody, and R.P. Form # 9, Argonne Whole Body Counting Information Sheet. Contact Dosimetry Manager to make arrangements.
- If decontamination is unsuccessful, consult with Fermilab Fire or Medical Dept.
- Record final survey results on R.P. Form # 30, Personnel Decontamination Report.

DECONTAMINATION OF LARGE AND/OR MULTIPLE PORTIONS OF THE BODY

- A witness of the same sex as the contaminated person MUST be present.
- If required, decontaminate the affected person's hands first.
- Instruct the person to don gloves.
- Instruct the individual go into the rest room and remove all of his/her clothing by rolling it away from his/her body. A person of the same sex may assist as needed. Instruct the person to place his/her clothing in the radioactive waste container.
- Turn on the shower and adjust the temperature to lukewarm.
- Place soap, shampoo, and washcloth inside shower stall.
- Provide the individual with the following instructions:
While showering, DO NOT adjust the water temperature.
Concentrate on washing the areas of the body where contamination was found.
- All responders should step outside to allow the person privacy when entering the shower.
- While the person is showering, survey and decontaminate the rest room as necessary.
- Spread a clean towel on the floor below the shower curtain and have another towel, booties, clean set of underwear, and set of disposable coveralls ready for the person to put on when he/she exits the shower.

- ❑ When the individual is finished showering, provide the following instructions:
Turn off the water and dry yourself inside the shower stall by dabbing to prevent rubbing contamination into the skin.
Once you are dry, step onto the towel and put on the clothing provided.
- ❑ Resurvey the individual. If contamination levels > 100 cpm over background exist over large areas of the body, repeat the above steps up to three times. Explain the survey results to the individual.
- ❑ Record survey data on Radiological Incident Body Chart Record, R.P. Form # 72.
- ❑ If contamination remains only in small, localized areas, decontaminate accordingly.
- ❑ After decontamination is complete, provide the individual with appropriate clothing from the supply cabinet.
- ❑ If indicated, contact the Associate Head for Radiation Protection for concurrence regarding bioassay and whole body counting.
- ❑ For urine bioassay, provide person with Argonne Lab urine bioassay kit. Explain sample collection (fill until bottle is 90% full), then seal, and return to Dosimetry Program Manager.
- ❑ Complete R.P. Form # 40, Bioassay Sample Chain of Custody, and R.P. Form # 9, Argonne Whole Body Counting Information Sheet. Contact Dosimetry Manager to make arrangements.
- ❑ If decontamination is unsuccessful, consult with Fermilab Fire or Medical Dept.
- ❑ Record final survey results on R.P. Form # 30, Personnel Decontamination Report.

FINAL ACTIONS

- ❑ Contact the Associate Head for Radiation Protection to report decontamination results. Provide recommendations for bioassay, whole body counting, or transport to Delnor Community Hospital. If decontamination was successful, recommend that the individual be released.
- ❑ Verify with the RCT that the transport vehicle has been surveyed and decontaminated.
- ❑ Instruct the RCT to help decontaminate the individual's personal belongings. See Appendix A.
- ❑ Instruct the RCT to help decontaminate the facility.
- ❑ Ensure that all radioactive waste is in the radioactive waste container.
- ❑ Perform a frisk of all responders.
- ❑ Remove protective clothing. Remove gloves last.
- ❑ Frisk bare hands.
- ❑ Turn off all survey instruments.
- ❑ Remove the "Decontamination in Progress" sign from the outside of the door.
- ❑ Arrange for whole body counting or bioassay sample collection as necessary. Complete R.P. Forms # 9 and # 40.
- ❑ Arrange for emergency processing of dosimetry if indicated. Complete R.P. Form # 92.
- ❑ Document initial and final transport vehicle and facility survey.
- ❑ Complete Personnel Decontamination Report, R.P. Form # 30.
- ❑ Record survey data on Radiological Incident Body Chart Record, R.P. Form # 72.

- ❑ Complete RAF Work Request and Chain of Custody form for any samples to be analyzed.
- ❑ Complete personnel dosimeter information sheet if it is being sent to the vendor.
- ❑ Fill out Radioactive Waste Characterization Sheet (on waste drum).
- ❑ Perform a facility inventory and restock as needed, R.P. Form # 11.
- ❑ Send the original copy of the Personnel Decontamination Report to the ES&H Section Associate Head for Radiation Protection.
- ❑ Make arrangements with the Hazard Control Technology Team to drain the retention tank and to remove radioactive waste.
- ❑ If indicated, arrange for a dose assessment to be performed.
- ❑ Place copies of documentation in the Emergency Records file maintained by the Radiation Physics Team and when appropriate, in the individual's dosimetry file.