

JOB SAFETY ANALYSIS

Safety Information for the University of California, Berkeley

ENVIRONMENT, HEALTH & SAFETY – EMERGENCY RESPONSE CLEANING UP MATERIAL RELEASED TO SOIL OR PAVEMENT

TASK	HAZARDS	CONTROLS
<p>1. Confirm the incident by interviewing the person who reported the incident or who caused the release. Obtain as much detail as needed to plan response. Report to site of release to assess the situation and to get a more accurate idea of how to respond.</p>	<p>Exposure to the material released which may lead to adverse health effects.</p>	<p>Assess the situation from a distance. To avoid exposure, do not step on material.</p> <p>If it is required to step on released material while assessing the release, wear appropriate foot protection and other PPE. Go to Task 2 if required to enter release area.</p> <p>Post warning signs and place barriers around the contaminated or release area to keep the public from stepping on and tracking the material.</p>
	<p>Injury due to encounter with physical hazards at the site of release.</p>	<p>If physical hazards are present at site of release, go to Task 2 before approaching the release site for assessment.</p> <p>If possible, work around physical hazards during the assessment phase; take your time to avoid injury.</p>
	<p>Slipping and falling.</p>	<p>Make sure footing is secure during assessment of the release area; avoid unusual movements and maneuvers to prevent injury.</p>

		Exposure of the public and increase of area of contamination by tracking the material released.	Post the release area with warning signs and place barriers around the release area to keep the public from exposure and prevent tracking of material.
		Environmental harm if material is not neutralized and/or collected, contained and disposed of, and if material travels to nearby waterway and/or to ground water.	Respond as soon as possible in order to minimize or prevent travel of contaminant to ground water or nearby waterway, prevent public exposure and/or tracking of material to other locations increasing possibility of more exposure.
	2. Select and don the appropriate PPE.	Inadequate protection from selected PPE.	Discuss what PPE to use with a "buddy" and confirm adequacy with an expert.
		Donning of a failed PPE (presence of tears, holes, etc.).	Before donning, thoroughly check the integrity of selected PPE.
		Slipping and falling while donning selected PPE.	Don selected PPE while seated to avoid falling or slipping. Don PPE with the help of a "buddy."
	3. Sample material to determine its identity and/or concentration.	Exposure to material leading to adverse health effect.	Obtain sample without contact with material, such as use of a sample bottle attached to a string or use of a spatula. Wear appropriate PPE, or assume that material is a contact hazard and wear the corresponding PPE.
		Slipping and falling due to presence of physical hazards and/or unsteady footing at the sample site.	Work carefully around physical hazards present at the sampling site and make sure footing is steady before starting to sample material.
	4. Neutralize and/or collect material if released on pavement; collect and contain contaminated soil.	Exposure to material released resulting in adverse health effects.	Wear appropriate PPE and make sure that selected PPE is free from defects. Change into fresh or new PPE if original PPE is torn or damaged.

		Injury due to mishandling of response equipment.	Respond only if knowledgeable in how to properly handle response equipment. To prevent injury, make sure there is enough room to maneuver response equipment.
		Injury due to repetitive motion during collection and containment of contaminated material or generated waste.	Take rest periods long enough to recover from effects of repetitive motions executed during response.
	5. Contain generated waste, neutralized material or contaminated soil in appropriate containers and bring to a secure collection site such as the HMF.	Exposure to hazardous material/waste.	Continue wearing appropriate PPE and change to fresh PPE when necessary. Avoid contact of bare skin with generated waste or contaminated soil.
		Physical injury due to bulk and weight of containers.	Handle/move containers only if familiar with correct technique. Handle and maneuver bulky and heavy containers with a "buddy." Move/maneuver bulky and heavy containers with appropriate equipment, such a forklift.
		Release of hazardous waste due to failure of container or its lid or cover.	Before using a container, ensure that it is free of defects. Secure lid or cover of container filled with generated waste, neutralized or contaminated material.
	6. Transportation of wastes.	Inadequate controls.	Refer to JSA for transportation of hazardous materials.
	Required Training: 1. Training 1. Sampling techniques for outside releases to soil or pavement. 2. Training 2. Proper technique in the use of response equipment to releases to soil and pavement. 3. Training 3. Proper technique in handling bulky and heavy containers.	Required Personal Protective Equipment (PPE) 1. Double gloves appropriate for the material released, with outer pair slip-resistant and with gauntlet. 2. Safety glasses with side shields, or goggles. 3. Outer clothing impervious to material released and appropriate for operation. 4. Minimum of safety shoes with steel toes; add shanks if needed.	
Other Information: Contributors:	See JSA for transportation of hazardous materials Environment, Health & Safety		

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