Spill Response at NASA Langley

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On August 1st of this year, all westbound travel lanes on Interstate 64 in Newport News were blocked for seven hours while crews worked to clean up an asphalt sealer spill on the roadway. According to the Virginia Department of Transportation, a tanker truck overturned at J. Clyde Morris Boulevard (Exit 258-B), and the impact of the crash ruptured the tank, causing it to leak 1,000 gallons of the liquid, hot-mix asphalt sealer onto the road. Aside from the headaches of snarled traffic and travel delays, incidents like these remind us of the need for contingency plans for emergency response to chemical and hazardous material spills. Contingency plans for emergency response to chemical and hazardous material spills are not confined to large industrial complexes; they are also necessary for public roads and facilities like LaRC as well. Although LaRC does not have massive chemical storage tanks like a large industrial

complex, there are plenty of opportunities for spills on Center. Immediate response to spills is essential to protecting employee safety and minimizing the damage done to the environment. If spills can be kept from entering the storm sewer system and the ground, then damage to the environment is significantly diminished. Numerous chemicals and hazardous materials are stored and used throughout the laboratories and shop areas on Center. In addition, over 400,000 gallons of oil is stored in various containers such as aboveground and underground storage tanks, mobile tank trucks, hydraulic/lube oil reservoirs and tanks, oil-filled electrical equipment, and drums. LaRC is also considered a large quantity generator of hazardous waste, which means that the Center has the potential to generate over 2,200 pounds of hazardous waste per month. Looking at the Center from this perspective shows that the potential for spills at LaRC is ever present. As required by several major regulations, LaRC has an Integrated Spill Contingency Plan (ISCP) that contains emergency procedures to be followed in the event of a spill or release of hazardous materials or oil to the environment. The plan contains steps necessary for responders to initiate, conduct, and terminate a spill response action. The plan also contains a facility diagram which shows the location, contents, and capacity of the regulated oil containers at the Center.

Spill Response

If you discover a chemical or oil spill at LaRC that poses a danger to human health or is released to the environment, immediately notify the NASA LaRC Emergency Dispatcher at 911 (from a land line phone on Center) or at 864-2222 (cell phone) or 864-5500 (business number).

ISCP

The Integrated Spill and Contingency Plan can also be found in the LMS system as LPR 8715.12.

Ask for Help

If you need help with a spill, ask for it. Notify the LaRC Emergency Dispatcher if spill response is needed. Don't try to tackle a spill that you can't handle.

Copies of the ISCP are maintained by the LaRC Standard Practice and Environmental Engineering Branch (SPEEB), the LaRC Fire Department, the LaRC Duty Officer, and the LaRC Hazardous Waste Storage Facility. The ISCP can also be found in the LMS system as LPR 8715.12.

Wherever chemicals, fuels, or other hazardous materials are stored, processed, or consumed, there is a risk of release to the environment. In the event of a spill or release, it is critical that the emergency responders have all the information they need to safely control the release and to prevent injuries to the public and damage to the environment. It is crucial that the first person to discover a spill knows what he/she can do and whom to contact. The key to a fast response is a fast notification.

What to do if you discover a spill

If an employee discovers a chemical or oil spill at LaRC that poses a danger to human health or is released to the environment, they should warn others in the area and immediately notify the NASA LaRC Emergency Dispatcher at 911 (from a land line phone on Center) or at 864-2222 (cell phone) or 864-5500 (business number). The dispatcher will initiate emergency response action with the LaRC Fire Department. The LaRC Fire Department provides initial HAZMAT response to Center emergencies. In addition, the Center has an on-site contractor that provides spill response and cleanup services. For large spills or releases, the Center has agreements in place with the local HAZMAT response team, as well as a prominent spill response and cleanup contractor to provide prompt response to Center emergency situations. Spill responders will try to minimize the impact of the spill utilizing a variety of containment and clean up techniques

including spill berms, storm inlet protection, absorbent pads, granular absorbents, and vacuum equipment.

What about minor spills that don't pose a risk to human health?

Small spills that do not present a danger to human health and are not released into the environment can be cleaned up by facility personnel. These are typically spills of nontoxic chemicals or small quantities of oils. If a small spill occurs in your building, and it is safe to do so, try to contain the spill to prevent it from entering floor drains, sump pits, or other avenues of escape to the environment. Make sure to wear proper personal protective equipment (PPE) if cleaning up a spill. To contain spills, use absorbent materials such as pads, booms, or socks. Barriers such as silicone drain covers can be used to prevent spilled materials from entering a drain. Quick response to a spill makes clean-up easier and minimizes spill impact. If you have liquid hazardous materials (oils, paints, solvents, lab chemicals, fuels, etc.) in your building or work area, then you should also have spill kits nearby. Spill kits should be sized and selected for the appropriate chemicals and risks that the chemicals in your building present. For example, there are specific spill kits made for acids, bases, and oils. Spill kits should be readily available and accessible.

Always remember – if you need help with a spill, ask for it. Notify the LaRC Emergency Dispatcher if spill response is needed. Don't try to tackle a spill that you can't handle.