Questions and Answers about Testing Soil/Mud at Montecito Locations

Has mud or soil has been tested in the Montecito flood area?
Samples of mud/soil were taken from ten locations in Montecito affected by the mud and debris flows. The purpose of the testing was to determine if there were potentially hazardous elements, such as metals and oils, in the soil. The results of the tests showed that the amount of metals and oil/petroleum products in the samples were within acceptable non-hazardous levels.

Based on those test results, should I test soil at my location?
Based on the test results at the ten locations, we do not see a need to test automatically at other locations. There are some situations when testing is recommended.

When is testing the soil recommended?
You are encouraged to proceed with sampling and testing when:

- A release of hazardous materials has been confirmed and/or suspected. For instance, if diesel or gasoline odors are noted during mud removal or damaged fuel tanks are encountered.
- It is a location of a sensitive population, such as a school, day care, or elder care facility, and the location is adjacent to sediment receiving site or an area where hazardous materials are confirmed or suspected.

Where can I get more advice about the testing?
You may contact the Environmental Health Services informational "warm line" at 805-346-8489 for further guidance about testing.

Who is responsible for the testing?
If a property owner decides to pursue voluntary testing of soil at a residential property, testing is to be performed by the property owner.

How do you recommend private land owners proceed with testing?
We recommend you work with professionals who have expertise in this area. Hire a qualified California licensed professional geologist or civil engineer. Send your samples to a California ELAP certified lab (ELAP = Environmental Laboratory Accreditation Program).

What tests are recommended?
The California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control and Industrial Hygienist recommends developing a sampling plan that may include the following tests:

- Total Petroleum Hydrocarbons as Gasoline (TPHg), Diesel fuel (TPHd) and oil (TPHo)
- California Assessment Manual (CAM) 17 Metals
- Polychlorinated biphenyls as aroclors or congeners. This is highly technical and costs and detection rates differ. Recommendations may include preliminary tests with aroclors (less costly) before proceeding with tests for congeners.

Are there concerns about bacteria in the mud and soil?
All mud and sediment resulting from the storm event should be treated as contaminated with bacteria. Bacterial contamination may not represent a long term environmental risk but is a threat to workers and residents engaged in mud removal and property clean up.

How can I protect myself or my workers from bacteria in the mud?

- Anyone participating in cleanup should wear long-sleeved shirts, pants, rubber boots, and nitrile or waterproof gloves. If there is potential for eye exposure, then goggles should be worn.
- Remove excess mud from footgear prior to entering a vehicle or a building.
- Remove shoes with mud before entering homes.
- Wash hands thoroughly with soap and water after contact with mud.
- Avoid touching face, mouth, eyes, nose, genitalia, or open sores and cuts while working.
- Wash hands before you eat, drink, or smoke, and before and after using the bathroom.
- Eat in designated areas away from mud-handling activities.
- Do not smoke or chew tobacco or gum while working with mud.
- Keep wounds covered with clean, dry bandages.
- Thoroughly but gently flush eyes with water if mud contact eyes.
- Change into clean work clothing on a daily basis. Keep footgear for use at worksite only.
- Do not wear work clothes home or outside the work environment.
- Where the mud has dried out and is now creating dust, workers who should be given, at a minimum an N-95 mask.

For additional guidance about personal protective equipment:
http://cosb.countyofsb.org/uploadedFiles/phd/EHS/18STM1%20Clean%20Up%20Safely%20After%20a%20Disaster%20(CDC).pdf