



## **Oil spill clean-up facts and recommendations for respiratory protection**

### **What's actually in oil that could be hazardous to health?**

Oil contains a mixture of chemicals. The main ingredients are various hydrocarbons, some of which can cause cancer (such as the PAHs or polycyclic aromatic hydrocarbons); other hydrocarbons can cause skin and airway irritation. There are also certain volatile hydrocarbons called **VOCs (Volatile Organic Compounds)** which can cause cancer, and neurologic and reproductive harm. Oil also contains traces of heavy metals such as mercury, arsenic and lead.

### **How can these chemicals get into our bodies?**

VOCs and some of the other hydrocarbons can be inhaled, causing lung problems and other health effects. Skin contact causes irritation and rashes.

### **What are the acute health effects from exposure to the oil?**

Inhalation of oil vapors or aerosolized particles (from wind-blown waves) can cause headaches, dizziness, nausea, vomiting, irritation of the eyes and throat and difficulty breathing. People with asthma or other lung diseases could have serious exacerbations. High-dose inhalation (if people are very close to the vapors) may cause a chemical pneumonia known as "hydrocarbon pneumonia," which can require hospital care. Direct skin contact can cause various kinds of rashes, including generalized skin irritation, or something known as "folliculitis" from oil-clogged skin pores.

### **Are there any health concerns associated with dispersants?**

The dispersant that is primarily being used contains petroleum products, sulfonic acid salts and propylene glycol. It is somewhat volatile and will enter the air. Chemicals in dispersants share some of the same toxic properties as chemicals in the oil itself. Therefore it is critical for clean-up workers and volunteers to wear personal protective equipment at all times when either applying the dispersant or working where it has been applied.

#### **Sundstrom Safety Inc**

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**What about the fishermen and volunteers who are working to clean up the oil and rescue wildlife?**

They are getting the highest exposures and they need adequate protection, both from the oil spill itself and **chemical dispersants** that are being applied to break up the oil.

**What kind of protective equipment do I need?**

A half face mask or full face mask equipped with Organic Vapor Cartridge and P100 Particulate Filter, rubber boots, and butyl rubber gloves are the minimum equipment needed if you will be in the oil-contaminated zone. Skin protection could also include Tyvek arm protectors, or a full Tyvek suit. For proper protection, it is recommended that you be fit-tested for the respirator to make sure it is adequately protecting you. **A disposable paper respirator mask and thin latex gloves will not protect you from the oil or dispersant fumes.**

**Sundstrom Safety Inc respirator recommendation:**

- SR 90-2 half mask with SR 218-6 OV cartridge (Organic Vapor), SR 510 (P100) mechanical particulate filter and pre-filter SR 221.
- SR 100 half mask with SR 218-6 OV cartridge (Organic Vapor), SR 510 (P100) mechanical particulate filter and pre-filter SR 221.
- SR 200 full face mask with SR 218-6 OV cartridge (Organic Vapor), SR 510 (P100) mechanical particulate filter and pre-filter SR 221.

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