During the Fall of 2007, San Luis Obispo County Public Health Department investigated an outbreak of Valley Fever (*coccidioides immitis*) in construction workers in the North County region of the County. The California Department of Public Health participated in the investigation, and the following recommendations were issued to limit exposure to Valley Fever. Certain words were removed from the recommendations, to make the location of the outbreak more generic in order to protect confidentiality.

As you know, the California Department of Public Health has been conducting an epidemiological investigation of the outbreak of Valley Fever among a construction crew October 2007. Although this investigation is ongoing, we are writing to recommend interim measures to control worker exposure to species of Coccidioides (cocci), the fungal agent that causes Valley Fever. These recommendations are based on scientific information from the published literature.

Cocci is spread in the environment through dust that contains spores of the fungus. Geographic areas that are more likely to contain cocci spores in the soil (endemic areas) include the deserts of California, Nevada, Arizona, New Mexico, and Texas, as well as Mexico. The spores are small enough to be inhaled deep into the lung, where they can cause infection (Coccidioidomycosis or Valley Fever). Construction workers have been found to be at increased risk of Valley Fever compared to agricultural and other workers. In particular, pipeline, highway, and utility construction often involves work in remote areas where the soil has not been disturbed and where pockets of cocci may exist. When these pockets are disturbed, the dust raised can have a high concentration of spores. These pockets cannot be reliably predicted, but preventive measures, notably dust control, can be effective in reducing the rate of infection and the seriousness of epidemics.

Based on the most recent incident and on past incidents, we know that San Luis Obispo County is an endemic area for cocci. Workers exposed to dust may be considered at risk for developing Valley Fever. We recommend that you implement the following control measures to reduce the possibility of worker illness:

1. Reevaluate and update your Injury and Illness Prevention Program (IIPP, as required by Title 8, Section 3203), and ensure that safeguards to prevent Valley Fever are included.
2. Train all employees on the following issues:
    - The soil in San Luis Obispo County may contain cocci spores, especially in the North County region;
    - Inhaling cocci spores may cause Valley fever;
    - How to recognize symptoms of Valley Fever; these symptoms resemble common viral infections, and may include fatigue, cough, chest pain, fever, rash, headache, and body and joint ache;
    - Work with a medical professional with expertise in cocci as you develop this training. More information about cocci infection is available from the following websites

- http://www.lungusa.org/site/pp.asp?c=dvLUK9O0E&b=845369
- http://www.vfce.arizona.edu/VFIH-home.htm
- Workers must promptly report suspected symptoms of work-related Valley Fever to a supervisor;
- Workers are entitled to receive prompt medical care if they suspect symptoms of work-related Valley Fever; workers should inform the health care provider that they may have been exposed to cocci;
- To protect themselves, workers should use control measure as outlined in this document.

3. Control dust exposure:
   - Consult with local Air Pollution Control District Compliance Assistance programs and with California Occupational Safety and Health Administration (Cal/OSHA) Compliance program regarding meeting the requirements of Dust Control Plans and for specific methods of dust control. These methods may include wetting the soil while ensuring that the wetting process does not raise dust or adversely affect the construction process;
   - Provide HEP-filtered air-conditioned enclosed cabs on heavy equipment. Train workers on proper use of cabs, such as turning on air conditioning prior to using the equipment.
   - Provide communication methods, such as 2-way radios, for use in enclosed cabs;
   - Provide National Institute for Occupational Safety and Health (NIOSH)-approved respirators for workers without a prior history of Valley Fever.
   - Half-face respirators equipped with N-100 or P-100 filters should be used during digging. Employees should wear respirators when working near earth moving machinery.
   - Employees should be medically evaluated, fit-tested, and properly trained on the use of the respirators, and a full respiratory protection program in accordance with the applicable Cal/OSHA Respiratory Protection Standard (8 CCR 5144) should be in place;
   - Prohibit eating and smoking at the worksite, and provide separate, clean eating areas with hand-washing facilities;
   - Avoid outdoor construction operations during unusually windy conditions;
   - Consider limiting outdoor construction during the Fall to essential jobs only, as the risk of cocci infection is higher during this season.

4. Prevent transport of cocci outside endemic areas:
   - Thoroughly clean equipment, vehicles, and other items before they are moved off-site to other work locations;
   - Provide workers with coveralls daily, lockers (or other system for keeping work and street clothing and shoes separate), daily changing and showering facilities.
   - Clothing should be changed after work everyday, preferably at the work site;
   - Train workers to recognize that cocci may be transported offsite on contaminated equipment, clothing, and shoes; alternatively, consider installing boot-washing stations;

- Post warnings onsite and consider limiting access to visitors, especially those without adequate training and respiratory protection.

5. Improve medical surveillance for employees:

- Employees should have prompt access to medical care, including suspected work-related illnesses and injuries;
- Work with a medical professional to develop a protocol to medically evaluate employees who have symptoms of Valley Fever;
- Consider preferentially contracting with 1-2 clinics in the area and communicate with the health care providers in those clinics to ensure that providers are aware that Valley Fever has been reported in San Luis Obispo County, and especially the North County region. This will increase the likelihood that ill workers will receive prompt, proper and consistent medical care;
- Respirator Clearance should include medical evaluation for all new employees, annual re-evaluation for changes in medical status, and annual training, and fit-testing;
- Please note that skin testing is not recommended for evaluation of Valley Fever;
- If an employee is diagnosed with Valley Fever, a physician must determine if the employee should be taken off work, when they may return to work, and what type of work activities they may perform.