

# Utah Department of Environmental Quality Division of Solid and Hazardous Waste Fact Sheet



August 2005

## ENVIRONMENTAL CLEAN UP

### The Ensign Bickford Company, Spanish Fork, Utah

#### BACKGROUND

The Ensign-Bickford Company (EBCo) owns and operates an explosive manufacturing plant in Utah County near the communities of Mapleton and Spanish Fork. Past manufacturing operations have resulted in soil and ground water contamination. The primary contaminants are explosive compounds. The Division of Solid and Hazardous Waste (the Division) and EBCo entered into a Consent Agreement in December of 1995, which required the company to conduct a thorough investigation of 44 identified locations of contaminated soil at the plant. In June of 1999, the Division and EBCo agreed on a plan to investigate the extent of contamination. The comprehensive soil and ground water sampling effort has been completed. EBCo is now proposing a method to clean up the contaminated soil.

#### HOW WILL THE SOIL BE CLEANED UP?

Contaminated soil will be excavated and delivered to an on-site thermal treatment unit. The thermal treatment unit heats the soil in a rotating dryer to approximately 600° F – 700° F. Moisture is removed from the soil and clumps of soil break apart through the rotating action of the dryer. The high temperature breaks down the contaminants. The treated soil comes out the far end of the rotary dryer.

Gases generated in the primary treatment unit (which can contain some contaminants) are sent to a high-temperature (1,500° F) thermal oxidation unit for destruction. The gases leaving the thermal oxidation unit are cooled, filtered, and released to the atmosphere.

#### HOW LONG WILL CLEAN UP PROGRAM TAKE?

The thermal treatment unit is capable of processing about 15,000 tons of soil per month. EBCo estimates that the duration of the program will be about three to six months. An additional two months will be required prior to operations to set up equipment and conduct performance testing.

**IS THE TREATMENT PROCESS SAFE?** Thermal treatment can pose a risk to people if there are inadequate burning conditions and controls of air emissions. Prior to full-scale operations a two-day trial burn will be conducted to ensure optimum burning conditions are established. In addition, air emissions leaving the thermal treatment unit will be tested. During full-scale operations, careful monitoring of the operating parameters will make sure that the optimum burning conditions are maintained.

While Dioxins are often a concern with thermal treatment, they should not be of concern in the operation of this unit. Dioxins need chlorine to form and none of the contaminants have chlorine.

**HOW WILL DIVISION STAFF MONITOR THE COMPLIANCE OF THE TREATMENT OPERATIONS?**

Division staff will conduct regular on-site inspections of the thermal treatment unit. In addition, the Division will monitor key equipment operating parameters via real-time remote computer access. A weekly project update meeting will also be held during full-scale operations.

**WILL THE TREATED SOIL BE TESTED?**

During treatment operations, samples will be collected regularly from the treated soil for each daily batch of soil. An independent laboratory will test the samples. Stockpiles of treated soil that do not meet approved treatment goals will be retreated and retested.

**WHAT WILL BE DONE WITH THE TREATED SOIL?**

Treated soils will stay on EBCo property. After completion of treatment operations a decision will be made to return the treated soil to the original excavations or to consolidate the treated soil in one location on EBCo property.

**WILL ALL OF THE CONTAMINATED SOIL BE CLEANED UP?**

Some contaminated soil identified through the investigation process will not be treated. Where contamination is allowed to remain in place, EBCo must consider the risks to on-site workers and local residents. EBCo will address these residual impacts in a risk assessment that will be conducted after completion of treatment operations. The Division must approve any decisions to leave contaminated soil in place. The public will have an opportunity for participation in this future decision-making.

**WHAT IMPACT WILL THIS TREATMENT ACTIVITY HAVE ON NEIGHBORS? WHAT WILL I SEE?**

The process should not affect people who live in the area. Some dust associated with trucks and heavy equipment excavating, transporting, and preparing soil for treatment may be created. EBCo will be required to take actions to minimize the amount of dust generated during these operations. Steam from the treatment unit may be visible during certain weather conditions.

**WHAT PERMITS APPLY TO THESE ACTIVITIES?**

EBCo has submitted a clean up work plan called an Interim Measure Work Plan. Information supplied in the work plan will be used by the Division to develop a Corrective Action Order. The Corrective Action Order will be the permit that allows EBCo to operate the thermal treatment unit.

The contractor retained by EBCo to conduct soil excavation and soil treatment, Environmental Soil Management of New York, applied for and received an Approval Order from the Division of Air Quality. The Approval Order sets strict limits on air emissions from the thermal treatment unit to protect air quality.

**HOW CAN THE PUBLIC PARTICIPATE IN THE PROCESS FOR APPROVAL OF THIS TREATMENT METHOD?**

A public comment period for the aforementioned Interim Measure Work Plan and Corrective Action Order will start on Thursday, August 25, 2005 and will conclude at 5:00 p.m. on Friday, September 23, 2005. Starting on August 25, 2005, the Work Plan and the Corrective Action Order can be reviewed through the Utah Department of Environmental Quality website <http://www.deq.utah.gov/>. In addition, during normal business hours throughout the comment period, copies of the Work Plan and Corrective Action Order will be available for public review at the following locations:

Division of Solid and Hazardous Waste  
Utah Department of Environmental Quality  
288 North 1460 West, 4th floor  
Salt Lake City, Utah  
Phone: (801) 538-6170

Office of Mapleton City  
35 East Maple St.  
Mapleton, Utah  
Phone: (801) 489-5655

Spanish Fork Library  
49 South Main Street  
Spanish Fork, Utah  
Phone: (801) 798-5010

**During this public comment period, two public information meetings will be held as follows:**

September 13, 2005, 7:00-9:00 PM, Mapleton Memorial Hall, 90 East Maple Street, Mapleton City, Utah.

September 14, 2005, 3:30-5:30 PM, Utah Workforce Services Department, Spanish Fork Employment Center, 1185 North Chappel Drive, Spanish Fork, Utah.

**Written comments will be accepted until 5:00 p.m. on Friday, September 23, 2005, and should be submitted to:**

Dennis R. Downs, Executive Secretary  
Utah Solid and Hazardous Waste Control Board  
Department of Environmental Quality  
State of Utah  
288 North 1460 West, 4th floor  
Salt Lake City, Utah 84114-4880

**WHOM CAN I TALK TO IF I HAVE CONCERNS?**

If you have questions or concerns, or would like to get more detailed information regarding the proposed soil remediation, please contact:

Brad Maulding or Hao Zhu at (801) 538-6170 or Email: [bmaulding@utah.gov](mailto:bmaulding@utah.gov) or [hzhu@utah.gov](mailto:hzhu@utah.gov)

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**Mobile Thermal Treatment Unit**