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## CASE STUDY HIGHLIGHT: PRELIMINARY REMEDIATION PROJECT USING BAGASSE

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The Corrective Action Plan for C&H Service Station, AI 74457, was implemented in July 2010. The site is located at 811 West First Street in DeRidder, Beauregard Parish, Louisiana. UST closure activities in 1999 indicated elevated concentrations of BTEX, MTBE, TPH-G, and TPH-D. The site is classified as a Groundwater 2. The



Figure 1. Photo Credit Chrissie Gubancsik

Northwest corner of the site routinely had between two and five feet of free product. Multiple vacuum events were conducted at the site, and were unsuccessful in removal of the product. The Response Action Contractor (RAC), KourCo Environmental, then used a multi-technology approach for cleanup of the site. The excavated area was 75'x45'x15'. After sloping of the area, the total amount of excavated soil was 2,401 cubic yards. The soil was then run through a Terra XTREME soil pulverizer, owned and operated by Jones Brothers, LLC. The mill-head on the Terra XTREME blends, pulverizes, and aerates the material. As the pulverized soil was discharged by the Terra XTREME, it was sprayed

with Regenox oxidizing compound, which produces a rapid and sustained oxidation of target compounds. Safety precautions were required to be taken due to the volatilization of the soil from the Terra XTREME.

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The soil was then mixed with 400 yards of ammoniated bagasse, which is the fibrous residue remaining after sugarcane stalks are crushed to extract their juice. The cellulose, which is the primary component of bagasse, has been shown to be capable of absorbing large amounts of oil and water. Increasing the nitrogen content of the bagasse promotes the microbial decomposition of soil needed for successful microbial remediation. The bagasse was mixed using a 1:6 ratio of bagasse to soil. The mixing had to be done following treatment of the soil through the Terra XTREME due to the lightness and moisture contained within the bagasse. These factors did not allow for easy flow of the soil and bagasse combined through the hopper of the Terra XTREME.

Confirmation samples were collected from the floor and sidewalls of the excavated area, as well as stockpile samples from the treated soil.



Analytical from the soil stockpile indicated that the treated soil sample results were below the RECAP standards within approximately five days of treatment. Treatment conditions, including moisture content, soil content, and weather conditions affect the timing of the treatment, but was generally found to produce positive results within one to five days. Following treatment, the stockpile was then used to backfill the excavation area. Monitoring wells were recently reinstalled to monitor the groundwater at the site.

## UST OPERATOR TRAINING PROGRAM UPDATES

LDEQ has been sponsoring UST Operator Training seminars and the program is being administered by Louisiana Compliance Services, LLC (LCS), a subsidiary of the Louisiana Oil Marketers and Convenience



Store Association (LOMCSA). LCS has contracted Williams and Company Consulting, Inc. to perform the training. There have been seven seminars conducted so far and attendance has been better than expected. Seminars were conducted in Shreveport, Monroe, Marksville, Houma, and Kenner, and two were in Baton Rouge. Approximately 350 class A and B UST operators have been trained so far.

*Figure 2. Photo Credit Laurence U. Carter*

Evaluations filled out by the seminar attendees have been very favorable and encouraging.

Eleven seminars are currently scheduled and will be conducted in various parts of the state: three in November 2010, four in January 2011, and four in March 2011. Please continue to check the schedule at [www.petroclassroom.com](http://www.petroclassroom.com) or [www.lomcsa.com](http://www.lomcsa.com), as more seminars will be scheduled for 2011 soon.

Facilities that have been inspected after February 20, 2010 are required to have their class A and B UST operators trained within nine months of their inspection date. DEQ understands that due to the scheduling and availability of the Operator Training seminars, there may not be a seminar in your area within nine months of your last inspection date or the seminars in your area may be full to capacity. There will be seminars conducted periodically in all areas of Louisiana, so continue to check the schedule at [www.petroclassroom.com](http://www.petroclassroom.com) or [www.lomcsa.com](http://www.lomcsa.com) for upcoming seminars in your area. If you have been inspected after February 20, 2010 and you have not been able to have your class A and B UST operators trained within nine months, please contact Samuel Broussard by phone (337-262-5744) or email ([samuel.broussard@la.gov](mailto:samuel.broussard@la.gov)).

For those UST operators who have attended one of the seminars and haven't done so already, please contact Samuel Broussard at LDEQ by phone (337-262-5744) or email ([samuel.broussard@la.gov](mailto:samuel.broussard@la.gov)) and provide a list of all of the facilities that you are an operator for.

Also, remember to provide a list of your class C operators that have received training to LCS in



order to receive their class C certificates. The names of the class C person trained, the date of the training, and the UST owner that they work for must be either emailed to [lomcsa@lomcsa.com](mailto:lomcsa@lomcsa.com) or mailed to:

*Louisiana Compliance Services, LLC*  
*P.O. Box 80357*  
*Baton Rouge, LA 70898-0357*

## PETRO CLASSROOM

Petroleum Storage Tank Training consists of training for Class A, B, or C Operator Certification Training, as required by the Energy Policy Act of 2005. To check for current and upcoming seminars available in Louisiana, Petro Classroom is available on the web at: [http://www.petroclassroom.com/state\\_choice.php?state=Louisiana](http://www.petroclassroom.com/state_choice.php?state=Louisiana)

## UST CLOSURE/CHANGE-IN-SERVICE GUIDANCE DOCUMENT

The Louisiana Department of Environmental Quality, Underground Storage Tank Division has revised the LDEQ Underground Storage Tank Closure/Change-in-Service Guidance Document. The effective date of this revision was **May 1, 2010**. LDEQ UST Division made an effort to create a new closure guidance document that incorporated current UST closure practices and site-closing technology while keeping closure costs at or below their current cost. LDEQ UST Division provided training on the new document to all certified closure contractors, but not all certified closure contractors attended. It is still the responsibility of the UST

owner that UST closures are performed according to the regulations and new closure guidance document requirements. When selecting a closure contractor, please verify that they will be performing the closure according to these new requirements.

In addition, LDEQ UST Division has revised the Notification of Intent to Perform a Closure or Change-in-Service to an Underground Storage Tank System Form (UST-SURV-01) and the Underground Storage Tank Closure/Assessment Form (UST-SURV-02). As of May 1, 2010, LDEQ UST Division will no longer accept the old (multi-page carbon or carbonless) forms. The new forms are available on the LDEQ UST Division webpage, under the headings UST Program Information; UST Forms.

For more information, see the LDEQ UST Division website at [www.deq.louisiana.gov](http://www.deq.louisiana.gov) or contact Samuel Broussard at 337-262-5744.

### HELPFUL DOCUMENT LINKS:

- [Final Version of Closure Guidance Document](#)
- [Closure Guidance Document Memo](#)



### UST CERTIFIED WORKER EXAM SCHEDULE 2010

DATE AND TIME	REGION	LOCATION
Nov 4 Installation/Repair 8:30AM Closure 1:30PM	SWRO	LA. DEQ ( <a href="#">Map</a> ) 1301 Gadwall Street Lake Charles, LA 70615

### OPERATOR TRAINING SCHEDULE 2010

DATE AND TIME	LOCATION
November 10 8:00AM - 3:00PM	L'Auberge du lac Casino 777 Avenue L'Auberge Lake Charles, LA 70601 <a href="#">Map</a>
November 11 8:00AM - 3:00PM	Holiday Inn Lafayette 2032 NE Evangeline Throughway Lafayette, LA 70501 <a href="#">Map</a>

*\*For more information: [www.petroclassroom.com](http://www.petroclassroom.com)*

### XP SCHOOL SCHEDULE 2010

DATE AND TIME	REGION	LOCATION
October 13 8:00AM - 12:00PM	ARO/SWRO	LA Technical College ( <a href="#">Map</a> )- Acadian Campus - Crowley
November 10 8:00AM - 12:00PM	NERO	LA Technical College ( <a href="#">Map</a> ) Alexandria Campus - Alexandria