

From Ambient Air Monitoring to Enforcement

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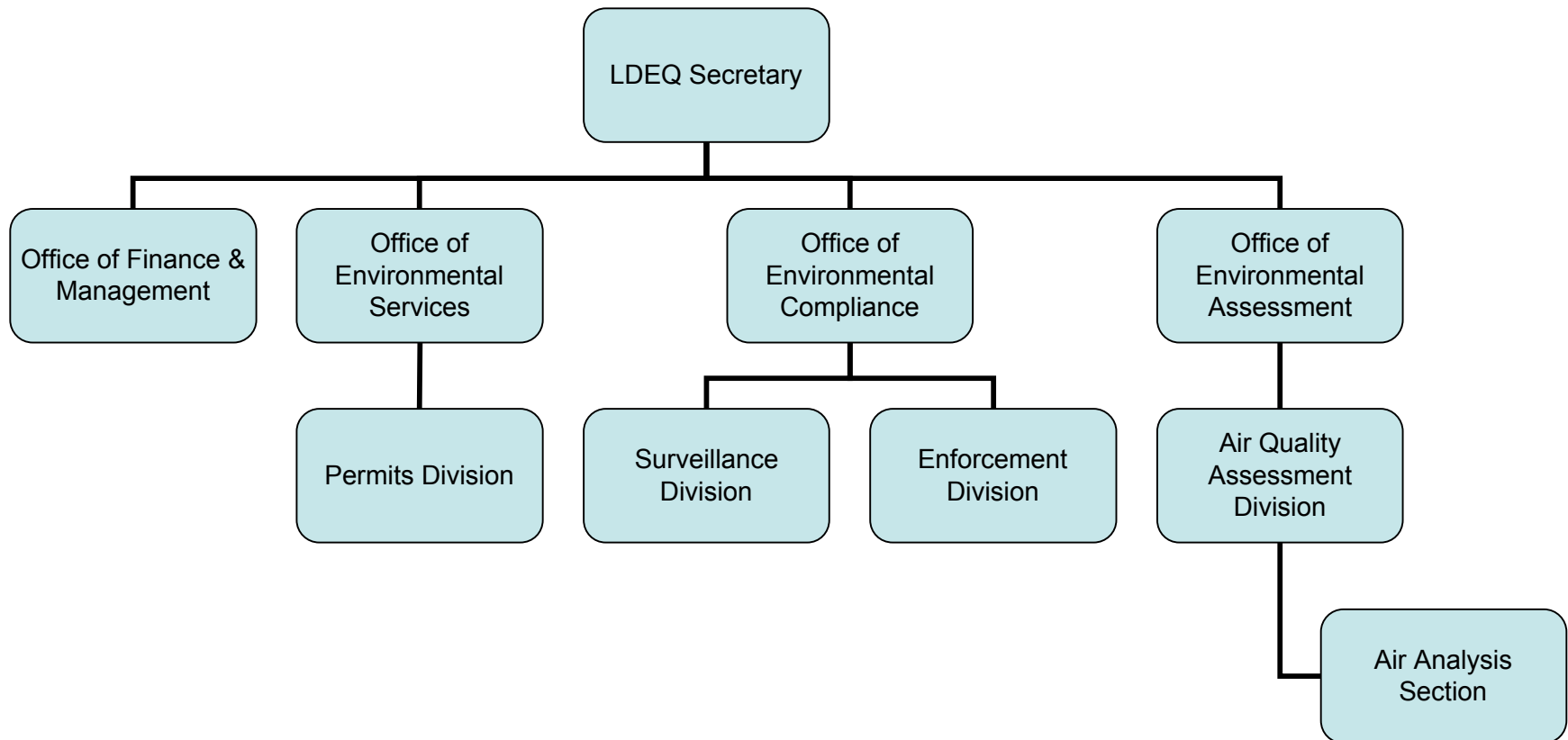


**EPA/STATE and LOCAL Tenth ANNUAL
AIR INSPECTOR WORKSHOP**



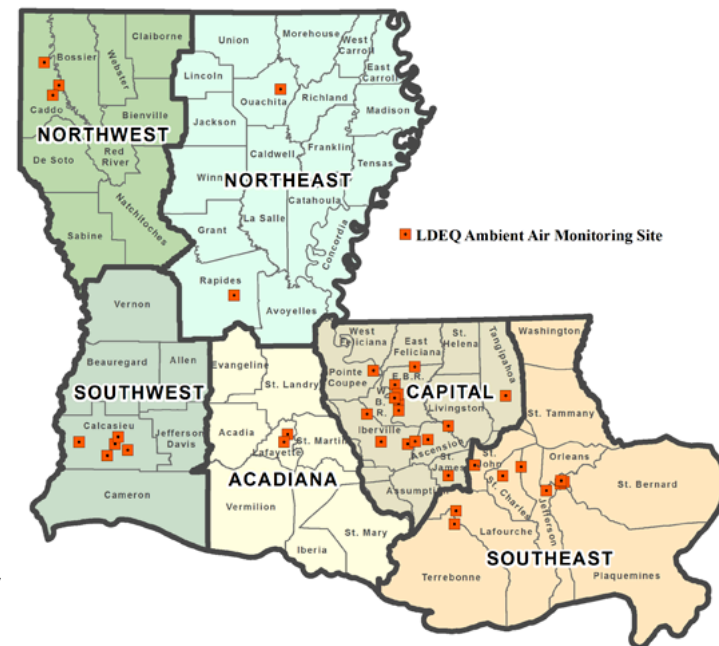
**April 17-19, 2007
Galveston, Texas**

LDEQ Organization



LDEQ Ambient Air Monitoring Sites

- Operated by Office of Environmental Assessment, Air Quality Assessment Division, Air Analysis Section
- Determine compliance with National Ambient Air Quality Standards (NAAQS) – levels set by EPA to provide adequate margin of safety to protect the public (PM₁₀, SO₂, CO, Ozone, NO₂, Lead)
 - Primary Standards (protect public health)
 - Secondary Standards (protect public well-being)
- Determine compliance with Ambient Air Standards for Toxic Air Pollutants (TAPS) regulated by LAC 33:III.5109.
- Track trends in Air Quality



Ambient Air Sites in SWRO

- 5 sites in Southwest Region, all located in Calcasieu Parish



Westlake Ambient Air Site

- 24-hr canister sample taken every 6th day
- Continuous sampler (TNMOC) that triggers a 24-min canister sample if >1.0 ppm for 10 consecutive minutes
- Canisters are analyzed using EPA Method TO-15 (toxics) and PAMS method (ozone precursors)



Westlake Ambient Site





Westlake Ambient Site Data

- In early 2004, increased EDC (1,2-dichloroethane) readings had been detected at the Westlake ambient monitoring site:
 - 3/28/04 9.53 ppb 24-hr sample
 - 4/15/04 7.28 ppb 24-hr sample
 - 4/20/04 8.38 ppb episodic sample at 12:00
 - 4/21/04 4.64 ppb 24-hr sample
 - 5/9/04 7.84 ppb 24-hr sample
- EDC is classified as a Class II TAP (toxic air pollutant) – suspected human carcinogen & known or suspected human reproductive toxins.
- LA DEQ has established TAP ambient air standards. EDC has a standard of 0.97 ppb (annual average)



Inquiring Minds Want to Know

- June 2004 E-mail from Jim Hazlett, Environmental Scientist with Air Quality Assessment to Jennifer Mouton, Air Quality Assessment:
- Current annual average for EDC was 0.91 ppb
- EDC standard (annual avg: 0.97 ppb)
- Wanted to know the cause of the increased EDC. Had potential to reach the ambient standard.



Communication

- Call from Jennifer Mouton, Air Quality Assessment to SWRO Surveillance Division about EDC in ambient air samples
 - TEMPO review of reported incidents for nearby VC plant
 - No direct correlation observed from incidents
- EPA called to schedule inspection Sept. 2004 so decision made to address at that time
 - Question of EDC readings for March-May 2004 period was posed to company officials
 - Acknowledged that tank cleanout project occurred during that time period



VC Plant Tank Cleanout Project

- Wastewater tanks develop a sludge level over years of use.
- Eventually the capacity is compromised and tanks must be cleaned
- For this company, wastewater tanks must be cleaned approx. every 10 years
- Contracted to ABC Cleaning Company since a similar project had been performed by this company at a sister facility to VC Plant in another part of Louisiana.

Surveillance Activities



- Researched EDMS documents for ABC Cleanout Company (permits, variances, ownership changes) and VC Plant
- Created timeline of known events and compiled a list of questions
- Met with both companies and LDEQ Surveillance (Air & HW) for full explanation of activities. Jennifer Mouton also participated – had knowledge of prior tank cleanout 10 years before --- with problems then.



ABC Cleanout Company

- **ABC Cleanout Company** purchased a Portable Thermal Dryer Unit previously owned by **XYZ Environmental Services**.

- Permit stated that if unit was to be moved to a new location, company must:
 - Obtain a new permit to relocate
 - Provide a laboratory analysis of the waste to be remediated (organic content with speciation, moisture content, sulfur content, chloride content, and NORM level).



ABC Cleanout's Temporary Variances

- 6/13/03 Approval to relocate portable unit
- 7/23/03 1st Temporary Variance
 - 12 day project to treat 1,099 tons EDC contaminated sludge.
 - Project not initiated.
- 2/4/04 2nd request to relocate portable unit.
 - States “all data from previous request would be applicable.”
- 2/19/04 2nd Temporary Variance
 - 12 day project to treat 1,099 tons EDC contaminated sludge.
 - Variance expires 4/30/04.
- 4/15/04 3rd request for portable unit.
- 4/22/04 3rd Temporary Variance:
 - 63 day project to treat 4,788 tons of EDC contaminated sludge.
 - Company to use wet scrubbers and Thermal Oxidizer.
 - Variance expires 6/30/04



ABC Cleanout Co. Requirements

- Monitor emissions from the carbon beds daily for VOC breakthrough using a portable VOC detector. (permitted VOC emissions in each Temporary Variance were stated as “mainly ethylene dichloride.”)
- Permittee shall cease treatment when breakthrough occurs and shall not use the system until the units have been regenerated or replaced.
- Keep log of all monitoring, including carbon canister changes
- Submit a report of all breakthroughs by 5/31/04



More Discovery

- Company was not really clear on project startup date.
- The 3rd variance included use of VC Plant's Thermal Oxidizer to save carbon changes. Statements made during meetings with the companies indicated that there were "a lot of carbon bed changes."
- Company only could locate monitoring logs for 3/17/04-4/12/04.
- A review of the monitoring log revealed many times that the carbon beds were changed but all monitoring indicated "0 ppm."
- Monitoring equipment
 - Company stated that a MiniRae Plus Classic with an 11.7 eV lamp was used, calibrated each shift to 100 ppm isobutylene. The company could not provide calibration gas certifications nor did they maintain logs of their calibrations.
 - DEQ discovered that ABC Cleanout Company rented their monitoring equipment. Initial equipment rented was a Thermo Environmental 580 PID with a 10.6 eV lamp.
 - Ionization potential for EDC is 11.04 eV, thus monitoring with Thermo Environmental PID **would not detect EDC**.
 - MiniRae was rented beginning 3/22/04 but company continued to rent the Thermo Environmental equipment until after the project completed.
 - Monitoring logs did not indicate what equipment was used for monitoring.



More Discovery (cont'd)

- Additional carbon beds were added by VC Plant after the carbon beds monitored by ABC Tank Cleanout Co.
 - VC Plant was concerned with quantity of carbon changes
 - No clear records of who was responsible for monitoring of the new carbon beds

Findings



- ABC Tank Cleanout Company did not obtain a permit modification before relocating the portable remediation unit.
- 12 operating days authorized by the 2/19/04 Temporary Variance was exceeded (self-reported).
- Company submitted report of carbon breakthroughs on 7/14/04 which was after the 5/31/04 deadline.
- Company did not include the number of breakthroughs in their final report.
- Company did not monitor with a photoionization detector (PID) capable of detecting breakthrough of EDC for the period 3/17/04 – 3/22/04.
- Company did not route the exhaust of the chiller system to VC Plant's Thermal Oxidizer as stated in the Temporary Variance.



Conclusion

- Recent Enforcement meeting
 - ABC Cleanout Company did not dispute DEQ findings.
 - Company faces financial penalties.

- Communication/cooperation between Offices at DEQ (Air Quality Assessment, Surveillance, Enforcement, Permits) was critical to unraveling the facts.

- Use all of the “tools” of your agency (Ambient air, EIS, or TRI data). Compliance issues can extend beyond permits and Title V reports from companies.



Questions?

