

SITE DISCOVERY PROGRAM

In PUERTO RICO

Overview

- EPAs approach to site discovery program in Puerto Rico
- Highlight Inter-Agency work coordination during the discovery program
- How discovery initiative led to an NPL listing

How it Started

- Request from Puerto Rico Environmental Quality Board (EQB) to investigate several contaminated drinking water wells
- Wells contaminated with VOCs
- Wells used on an off during emergencies (i.e., drought conditions)

Initial Coordination Activities

- EPA meeting with EQB
 - Selected areas for potential investigation
- Conducted an environmental database search for potential sources within the selected areas (i.e., Envirofacts, RCRIS)

Initial Coordination Activities (cont.)

- EPA/EOB organized a multi-program file search
- EOB facilitated the State file information exchange
- State Multi-program file search
 - Land Pollution Control Area (RCRA)
 - Water Quality Area (UIC)
 - Underground Storage Tank (UST)
 - Water Planning Program
 - Non-Point Source Program

Other Sources of Information

- EPA meeting with Puerto Rico Department of Health (PRDOH)
 - Information available on contaminated wells
 - Documentation ordering well closures
- Meeting with Puerto Rico Sewer and Water Authority (PRASA)
 - Historical well testing results

Other Sources of Information (cont.)

- Meeting with Puerto Rico Industrial Development Corporation (PRIDCO)
 - Environmental review investigation files
- Meeting with U.S. Geological Service (USGS)
 - Geology (i.e., aquifer description) and hydrology information

Site Visits

- Selected Areas Reconnaissance
- Interviews with Local Agencies and Residents
 - Civil Defense
 - Fire Department
 - Police Department

Discovery Initiative Locations

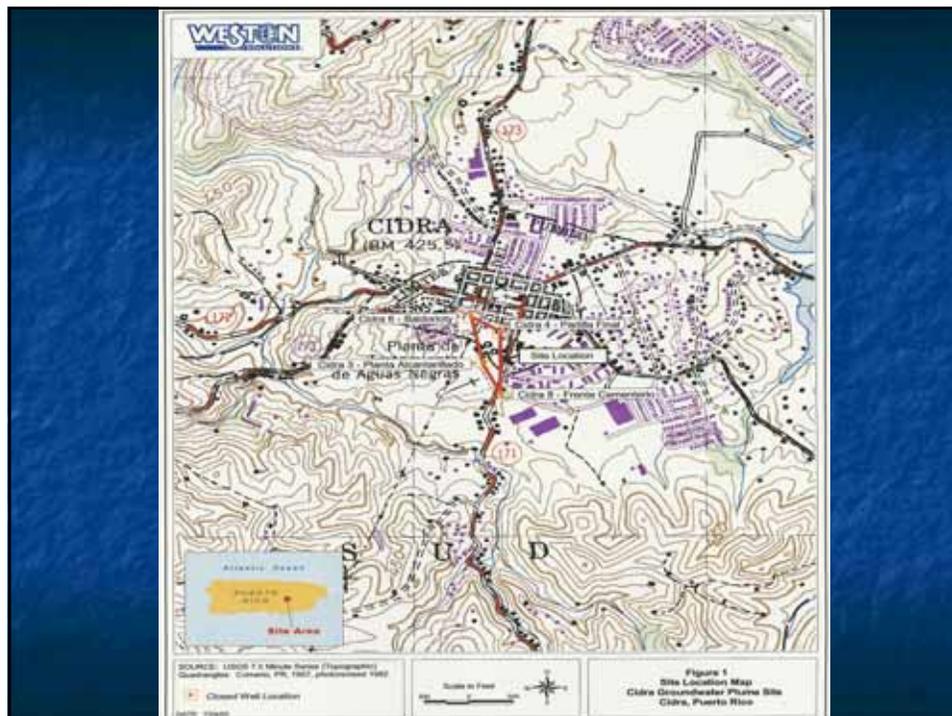


Cidra - Quick Facts

- Population = 42,000 residents
- Town located approx. 25 miles from San Juan
- Located in the Central Mountain Region of Puerto Rico.
- Municipality area = 36 sq. miles

Cidra Discovery Initiative

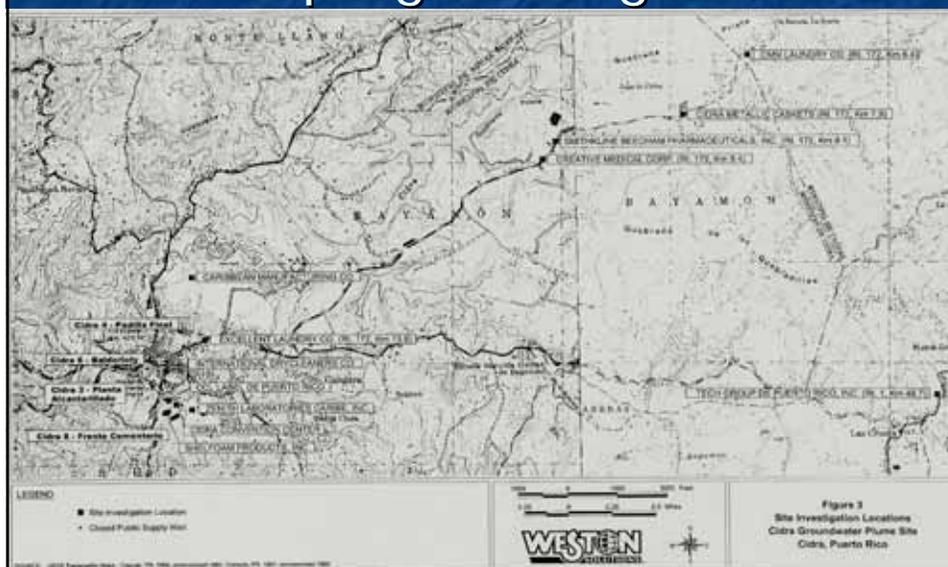
- Pre-CERCLIS screening started in 2000 - 2001
- Total of 31 sites surveyed
- Common Site/facility types
 - Printing Companies
 - Metal Fabrication
 - Dry Cleaners / Laundries
 - Paint Manufacturers



Surveyed Sites

- 20 out of 31 surveyed sites identified for further assessment under CERCLA
- 12 sites selected for Sampling Investigation
 - Selection criteria based on presence of VOC in site operation
- 8 sites undergoing Preliminary Assessments

Sampling Investigation



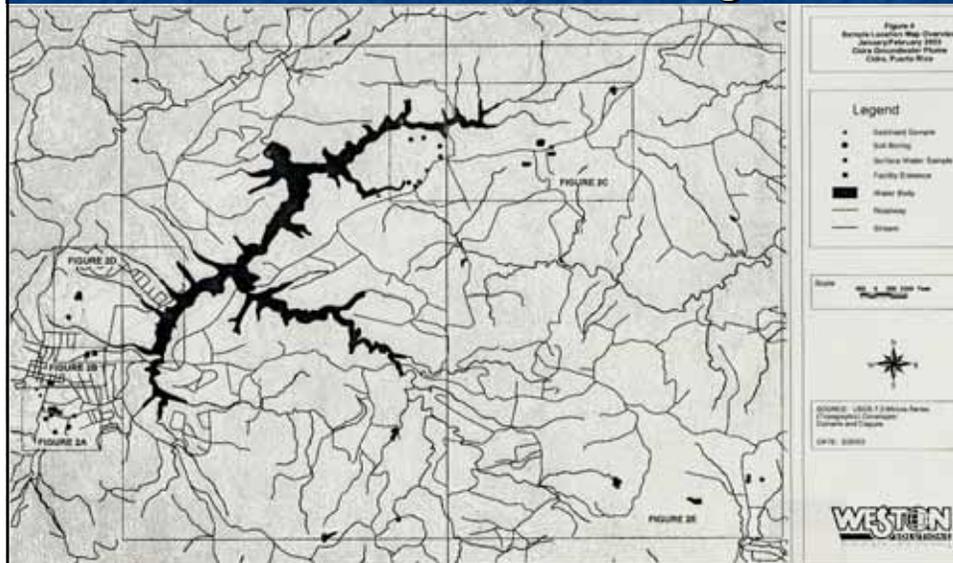
Well Sampling

- 23 domestic, municipal, and industrial wells sampled
- Domestic wells results showed no impact
- 4 municipal wells contaminated with VOCs above Maximum Contaminant Levels (MCL)
 - PCE above MCL
 - 1,2-DCE, 1,1-DCA, TCE

Well Sampling



Possible Sources Investigation



Possible Sources

- Cidra Convention Center
 - Former location of a printing company.
 - Alleged improper waste water disposal
- Shellfoam Products Inc
 - Styrofoam containers manufacturer
 - Use of degreasing agents to clean machinery
 - Large amount of wastewater generated

Possible Sources (cont.)

- CCL Label
 - Label printing/manufacturing, Disposal of waste water into on-site ditch by previous operator
- Zenith Laboratories Caribe
 - Previous operator manufactured chainsaws, RCRA large quantity generator, VOC used on site

Possible Sources (cont.)



Possible Sources (cont.)

- Excellent Laundry
 - Dry Cleaner, no record of off-site disposal
- International Dry Cleaners
 - Dry cleaner, PCE used in cleaning process, suspected leaking condenser equipment
- Caribbean Manufacturing
 - former plastic window manufacturing company, no record of off-site waste disposal

Possible Sources (cont.)



Possible Sources (cont.)



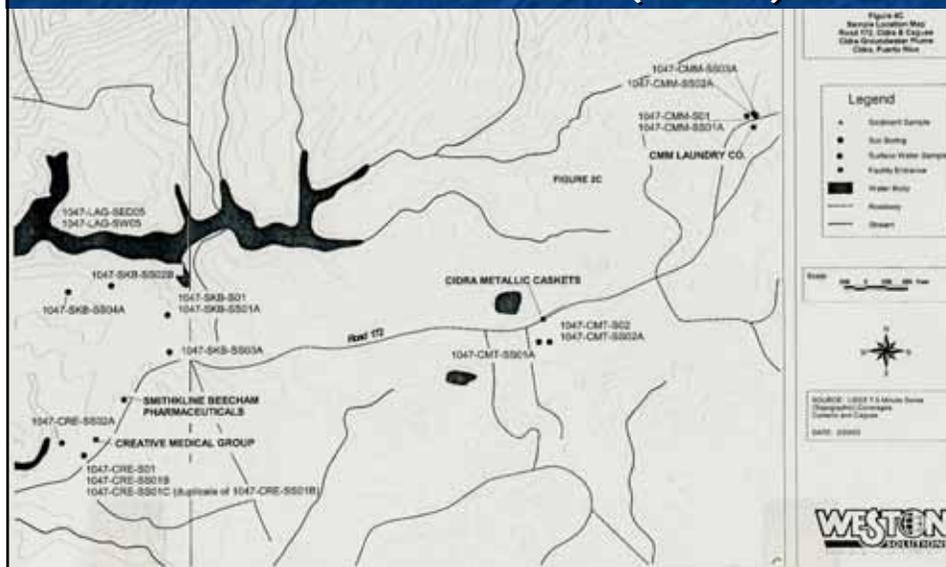
Possible Sources (cont.)

- Creative Medical – Former Knogo Caribe
 - Former electronic surveillance devices manufacturer, wastewaters treated/disposed off on-site
- SmithKline Pharmaceuticals
 - Prescription drugs manufacturer, degreasing agents used for cleaning, Poor material handling / housekeeping observed

Possible Sources (cont.)

- Cidra Metallic Caskets
 - Metal caskets manufacturer, degreasing agents used in site operation
- CMM Laundry
 - Dry cleaning business, PCE stored and used at the site, wastewater discharged to a cesspool on-site

Possible Sources (cont.)



Source Investigation

- Surface / subsurface sampling using direct push technology
- Subsurface screening up to 50' – 72' deep
- Soil cores screened using portable GC/MS
- Selected samples analyzed using CLP lab

Source Investigation (cont.)

- Over 240 soil samples screened
- 5 – 10 % confirmatory sampling (CLP lab)
- Good GC/MS – CLP results correlation
- PCE and TCE, and/or 1,2 DCE detected in detected several possible sources
- Site listed as a groundwater plume with suspected sources
- Site Proposed to NPL on March 2004

Conclusion

- Discovery program in conjunction with Pre-CERCLIS screenings can be an useful tool to prioritize sites for assessments
- Increase States and other local agencies involvement in prioritizing areas for investigations.

Questions?

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