Oil Spill Response ,Prevention and Preparedness

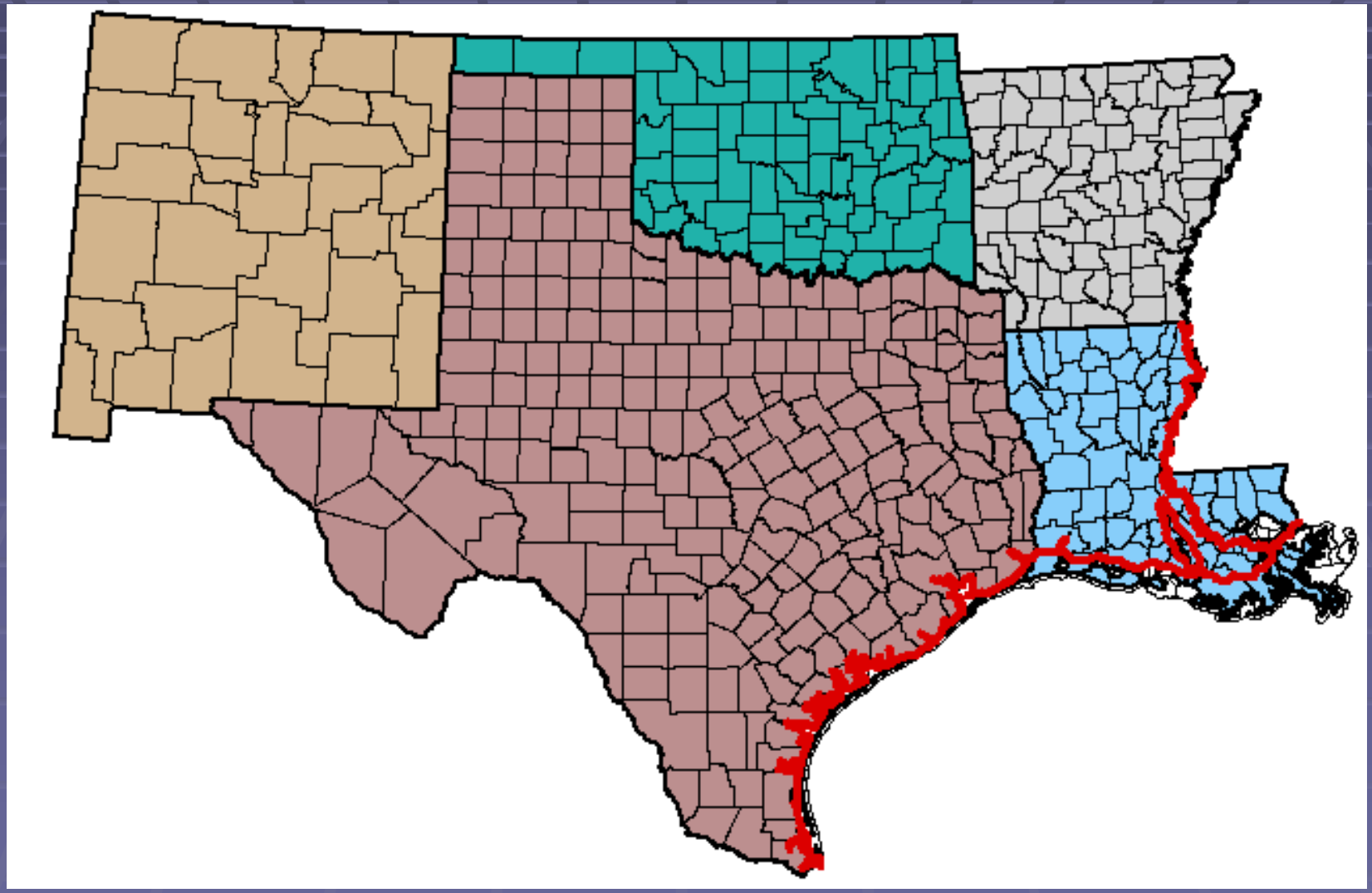
“A Regional Perspective”

American Petroleum Institute
Donald P. Smith
Senior On Scene Coordinator
US Environmental Protection Agency

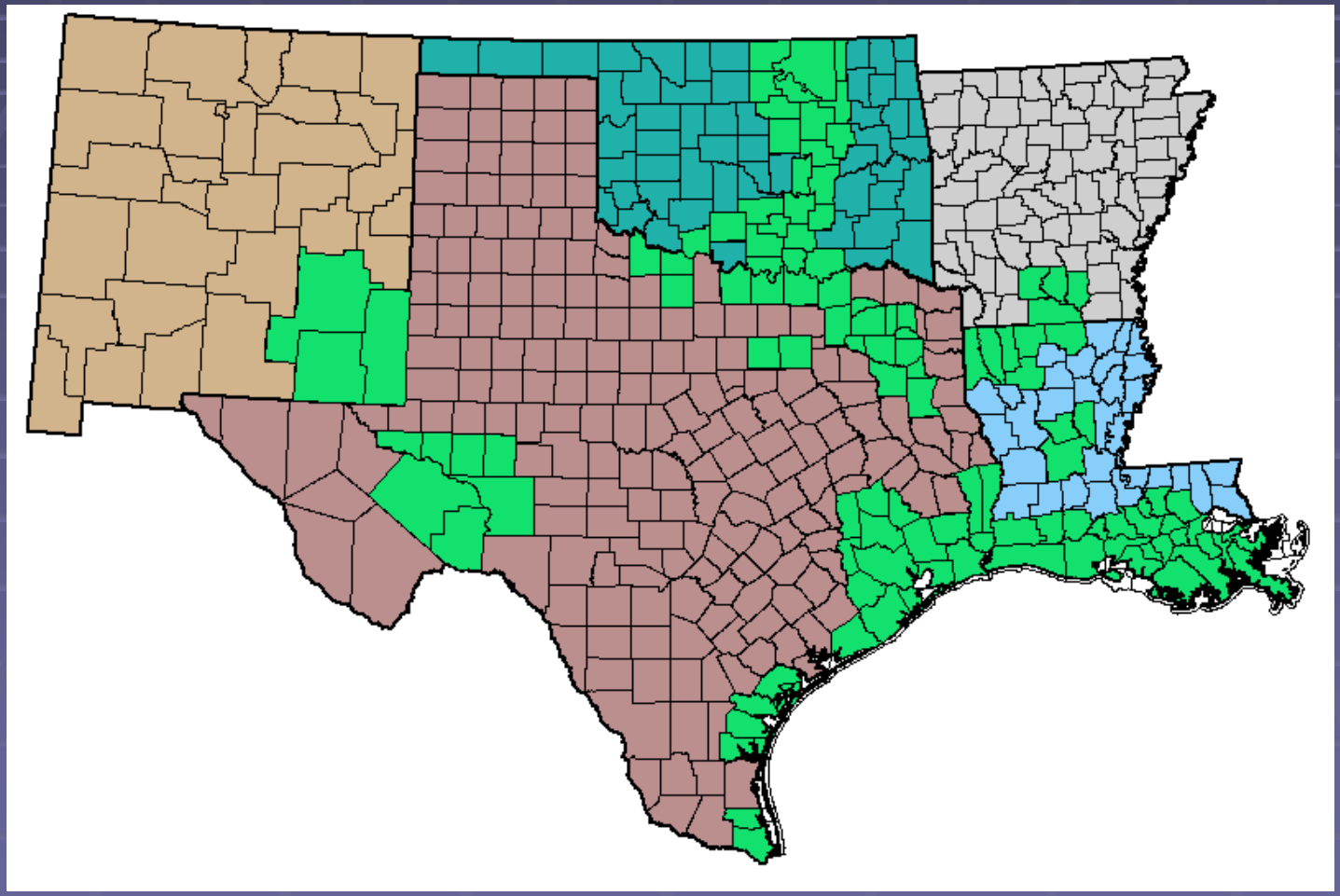
The On Scene Coordinator

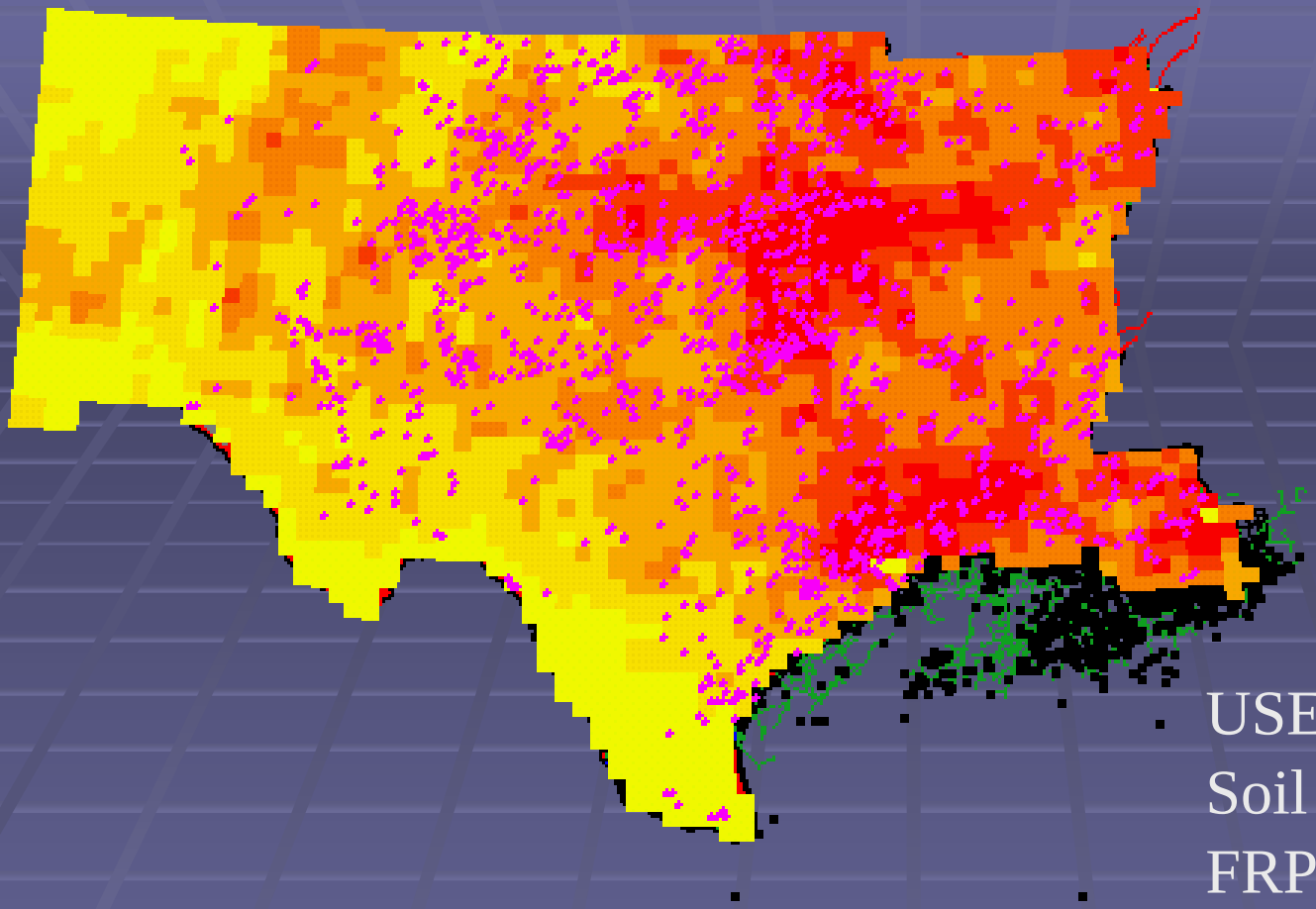
- The term OSC is mentioned 64 times within the National Contingency Plan (NCP)
- Twenty-one times (21) the title of OSC is followed by the word “Shall” *(as in The OSC Shall . . .)*
- One (1) time that the OSC *Must . . .*
- Four times the OSC *Should* do something . . .
- Finally, there only five (5) times that the OSC *May . . .*

EPA Region Response Zone



Targeting Facilities for Inspection Based Upon Risk





Risk and Prevention Profiling

USEPA Region 6

Soil Corrosivity

FRPs

Pipelines

Oil Well Heads

Geologic Fault Lines

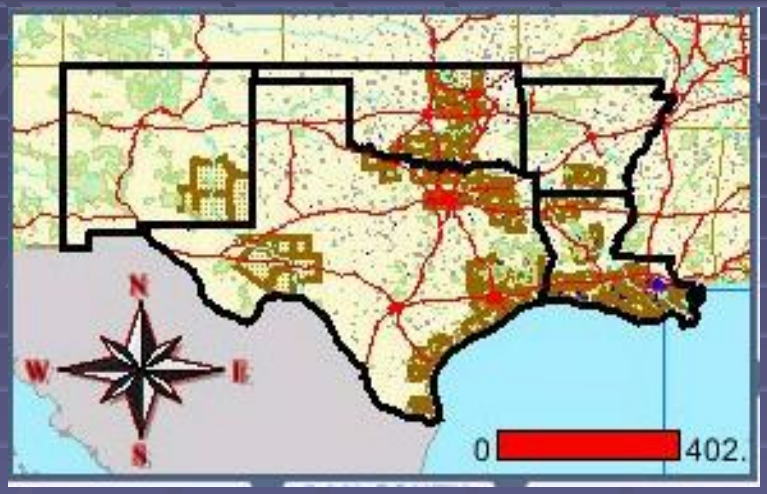
Earthquakes

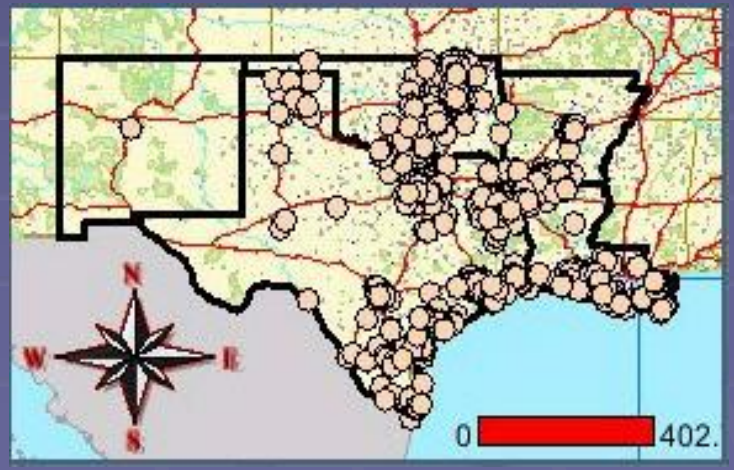
Lightning Flash Density

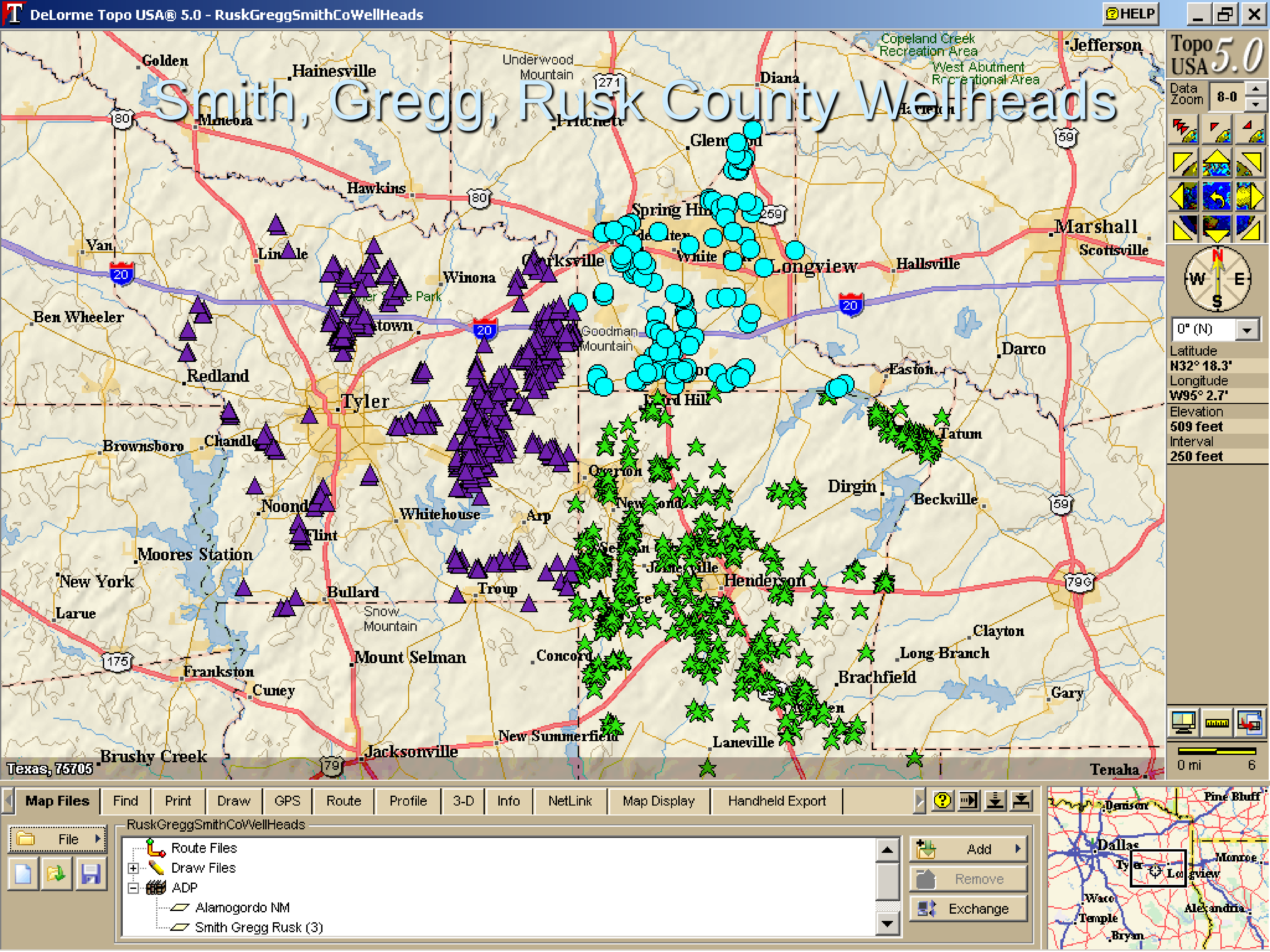
Tornadoes

Geographical Perspective

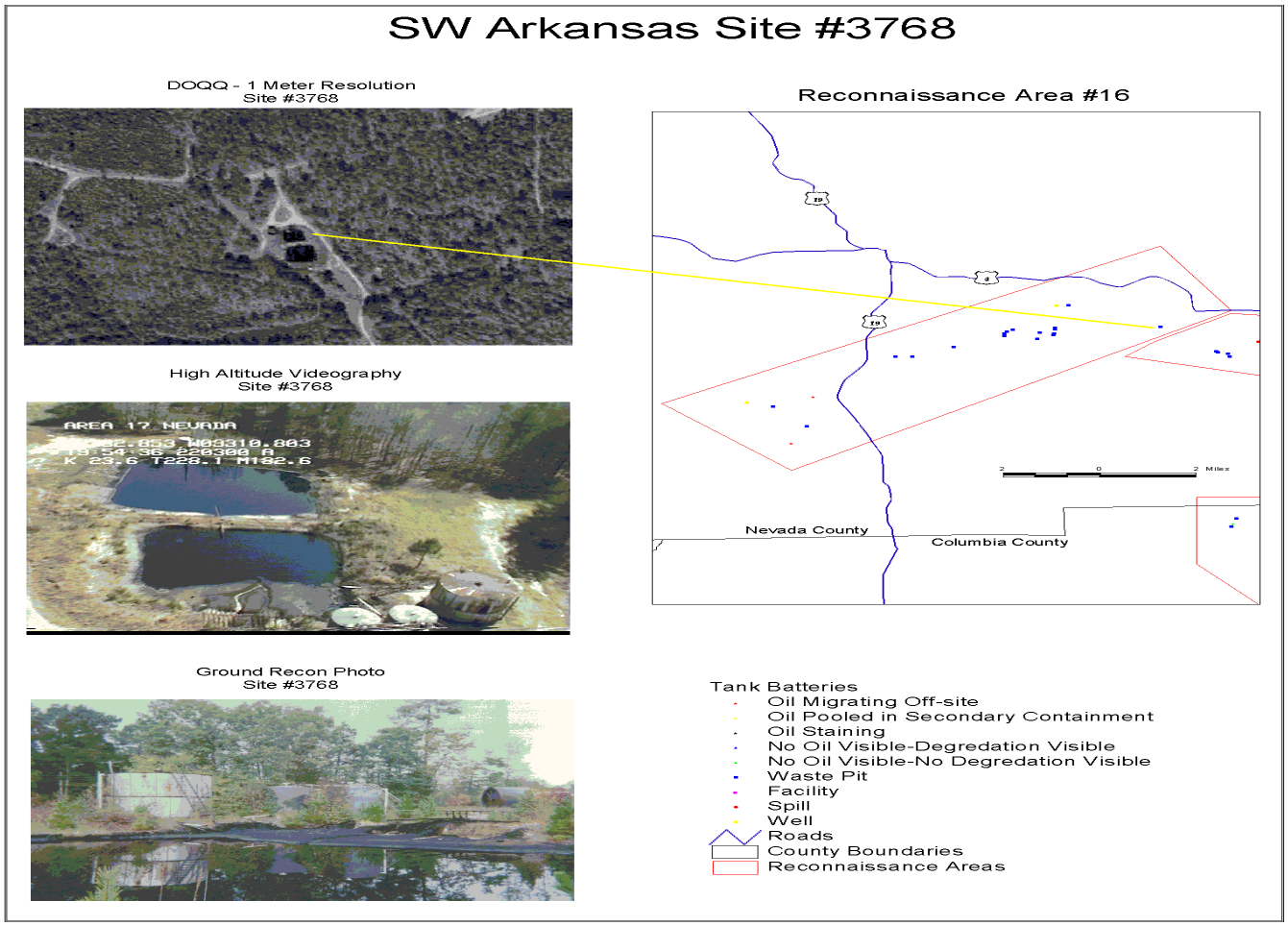
Site Assessment Recon Tracking System (SARTS)






DeLorme Topo USA® 5.0 - RuskGreggSmithCoWellHeads
Smith, Gregg, Rusk County Wellheads
Golden
Hainesville
Underwood Mountain
Copeland Creek Recreation Area
West Abutment Recreational Area
Jefferson
Diana
Mineola
Pritchett
Glenwood
Hawkins
Spring Hill
Marshall
Scottsville
Van
Lindale
Clarksville
White Oak
Longview
Hallsville
Winona
Ben Wheeler
Goodman Mountain
Darco
Easton
Redland
Tyler
Tatum
Brownsboro
Chandler
Overton
Dirgin
Beckville
Noonday
Whitehouse
Arp
New London
Flint
Moores Station
Henderson
New York
Bullard
Troup
Snow Mountain
Larue
Clayton
Long Branch
Mount Selman
Concord
Brachfield
Frankston
Cuney
Gary
New Summerfield
Laneville
Brushy Creek
Jacksonville
Tenaha
Texas, 75705
Topo USA 5.0
Data Zoom 8-0
0° (N)
Latitude N32° 18.3'
Longitude W95° 2.7'
Elevation 509 feet
Interval 250 feet
0 mi 6
Map Files
Find
Print
Draw
GPS
Route
Profile
3-D
Info
NetLink
Map Display
Handheld Export
File
RuskGreggSmithCoWellHeads
Route Files
Draw Files
ADP
Alamogordo NM
Smith Gregg Rusk (3)
Add
Remove
Exchange
Denison
Pine Bluff
Dallas
Tyler
Longview
Monroe
Waco
Temple
Alexandria
Bryan

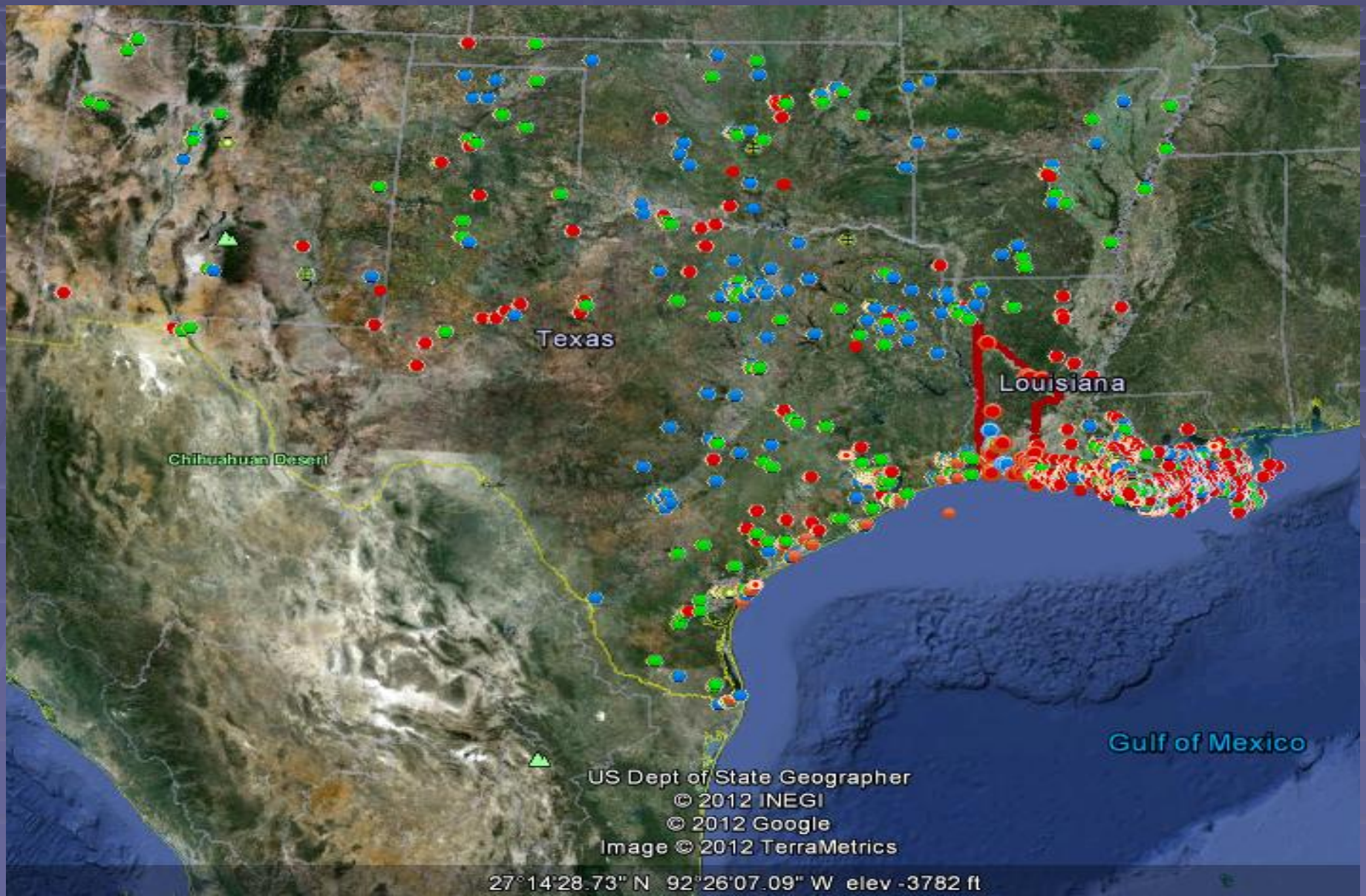
Over Flights and Ground Truth of Information



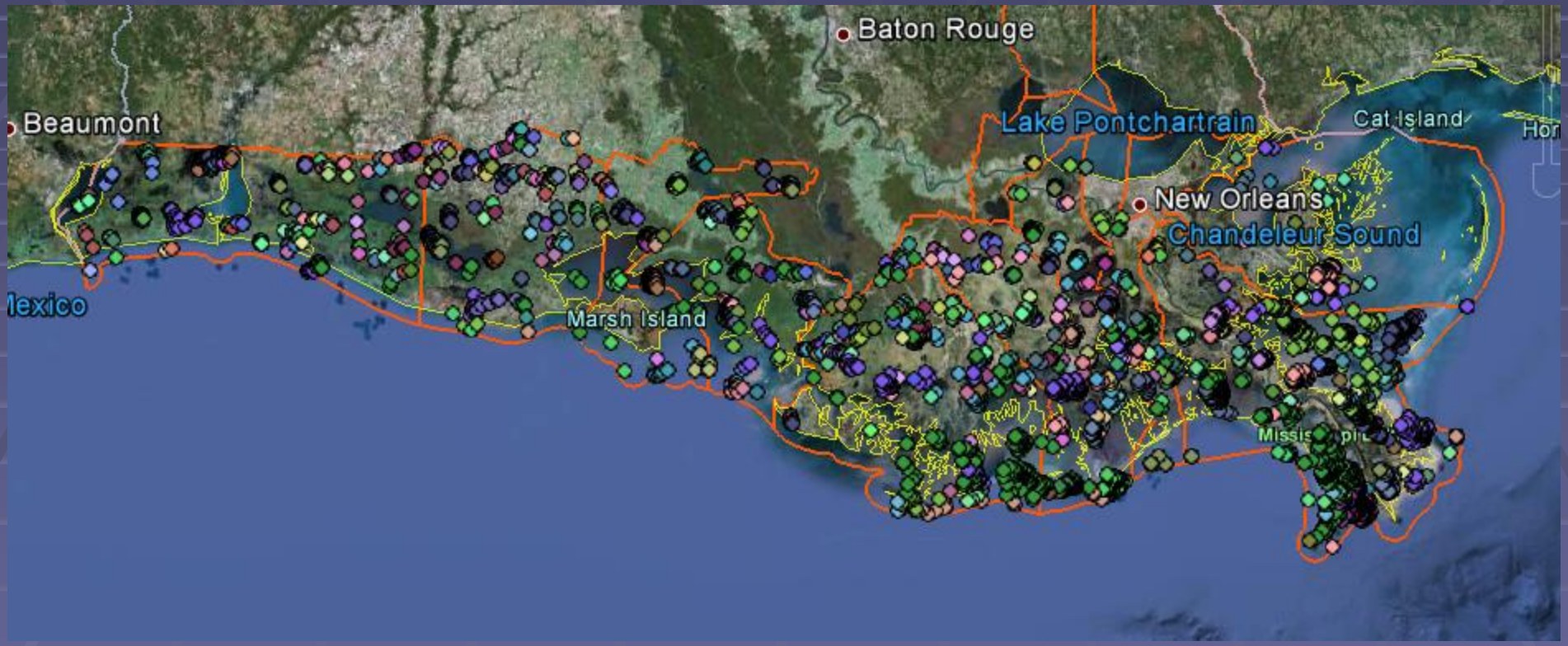
Inspection Targeting

"*EPA goes to the movies*"

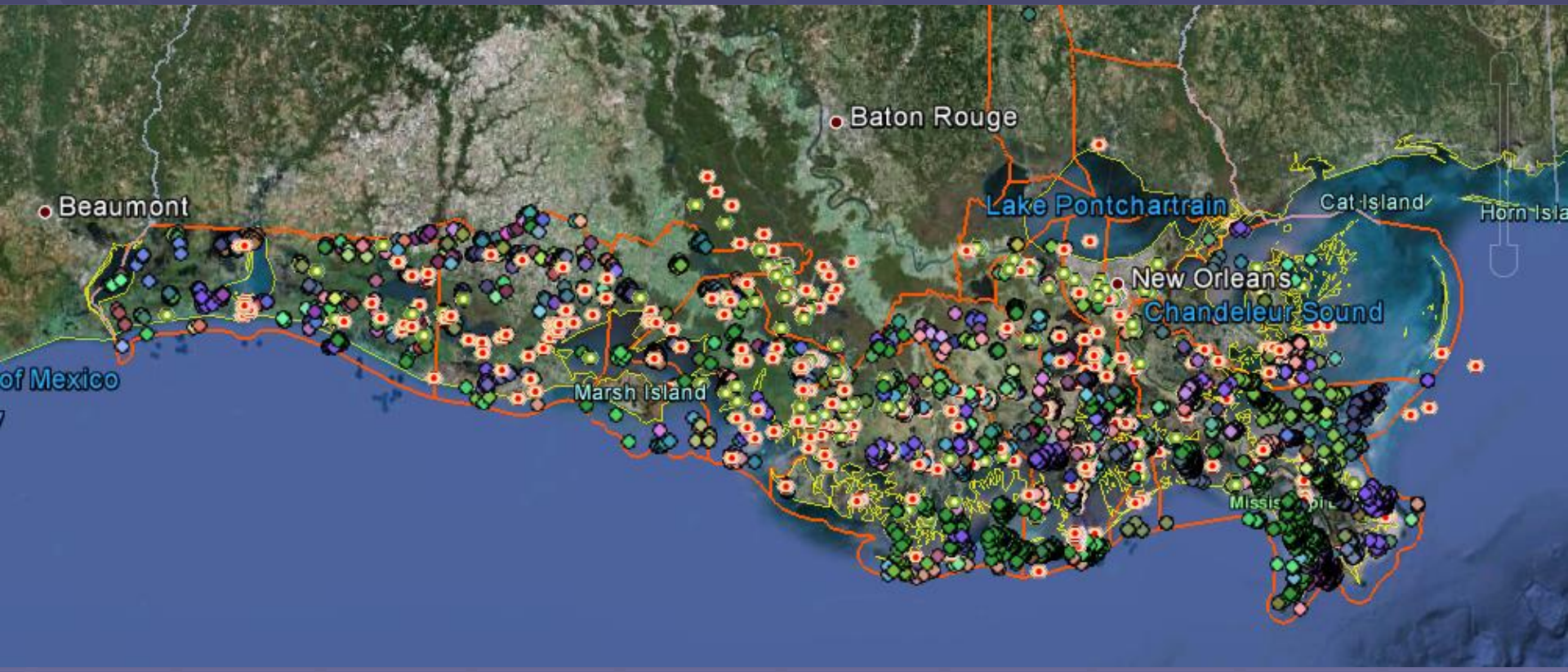
Areasw of Significant Interest



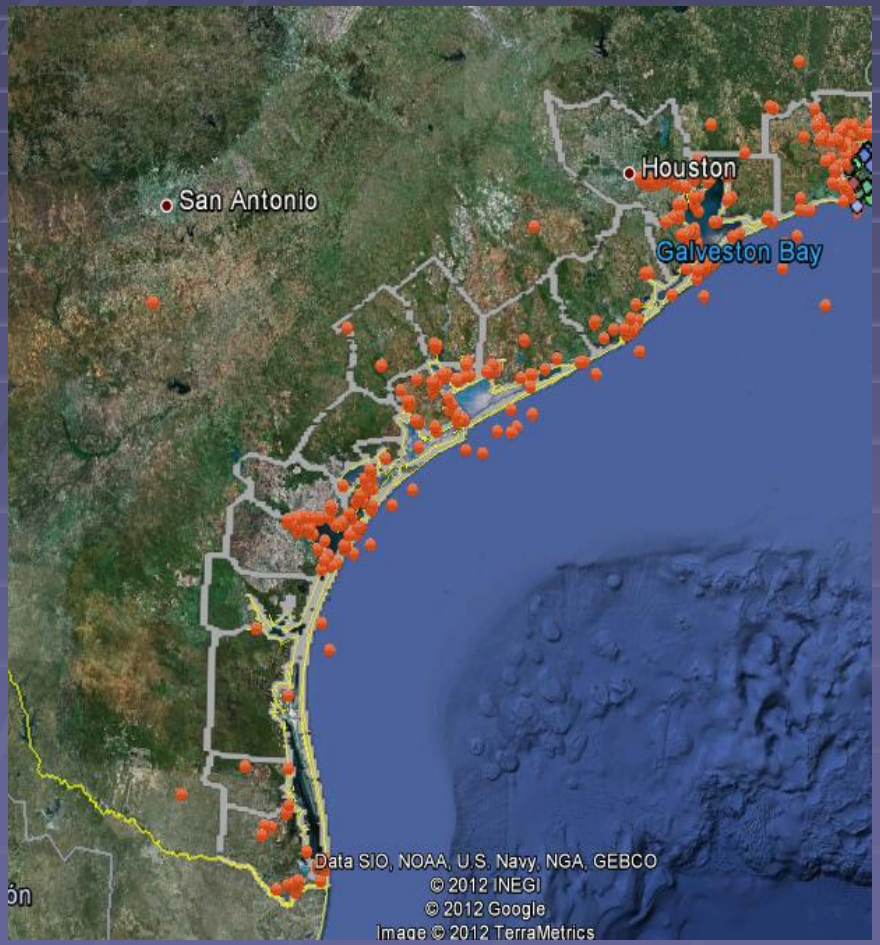
Wellheads in Louisiana



Louisiana areas continued …,



Texas Coastal Areas



Spill Prevention Control and Countermeasures (SPCC) Regulations

To prevent oil discharges from reaching the navigable waters of the U.S. or adjoining shorelines,

To ensure effective response to the discharge of oil, and

To ensure that “proactive” measures are used in response to an oil discharge.

Shop built vs. Field Constructed

Field Constructed Tanks

Tank Truck Loading/Unloading Rack

- Secondary Containment is required for a loading rack – always has been.
- Loading Rack (112.7(h)) requirement has specific size volume containment (volume of the single largest compartment)
- Physical barrier system, wheel chocks, warning signs, etc. required
- Examination of lowermost drains, outlets

Facility Response Plan Criteria

- The facility transfers oil over water to or from vessels and has a total storage
  capacity greater than or equal to 42,000 gallons; **or**

- The facility's total oil storage capacity is greater than or equal to 1 million gallons
  and one of the following is true:
- The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground storage tank within each storage area with freeboard for precipitation;
- The facility is located at a distance such that a discharge from the facility could cause injury to an environmentally sensitive area;
- The facility is located at a distance such that a discharge from the facility could shut down a public drinking-water intake; or
- The facility has had a reportable spill in an amount greater than or equal to 10,000 gallons within the last 5 years.

Common FRP Problems

General Information

- Name of protected waterway or environmentally sensitive area omitted
- Number of underground storage tanks (USTs), UST oil storage or drums/small container storage omitted
- Facility's status with respect to the significant and substantial harm criteria not stated

Common FRP Problems

Worst Case Discharge Planning

- Worksheet to Plan Volume of Response Resources for Worst Case Discharge not completed [40 CFR 112, Attachment E-1 / E-2]

Common FRP Problems

Introductory Materials

- Inadequate cross reference sheet and table of contents

Common FRP Problems
ERAP

- ERAP not provided as a separate section in the front of the Response Plan, or as a separate document accompanying the Plan
- Qualified individual's response training experience not described
- Notification list items missing
  - Wastewater treatment facility(s) name and phone number (recommended)
  - Factories/utilities with water intakes
  - Trustees of sensitive areas (recommended)
  - Wrong U.S. EPA region duty officer phone number

Common FRP Problems

Response Equipment

- Facility failed to have, or to document, the availability of 1,000 feet of boom, deployable within one hour
  - For example, facility relies on an Oil Spill Removal Organization (OSRO) for a boom, but OSRO response time is greater than one hour
- List of response equipment to be provided by an OSRO is not stated
- Response Equipment Testing and Deployment Drill Log is inadequate or incomplete

Common FRP Problems
Personnel

Inadequate or incomplete information:

- Emergency response personnel information
  - Type and date of response training
- Emergency response contractor information
  - Response time
  - Evidence of current contractual arrangements
- Facility response team information
  - Response time
  - Name of emergency response contractor, response time, phone/pager

Common FRP Problems

Hazard Evaluation

Items missing or inadequately addressed, e.g.:

- Information provided on surface impoundments
  - If a facility has no surface impoundments, it should be so stated
- Labeled schematic drawings
- Secondary containment volumes

Common FRP Problems

Vulnerability Analysis

Analysis of potential effects on the following resources is missing:

- Schools
- Medical facilities
- Residential areas
- Businesses
- Endangered flora & fauna
- Recreational areas
- Transportation routes
- Utilities






Murphy Oil, Meraux Refinery Oil Spill

Time line:

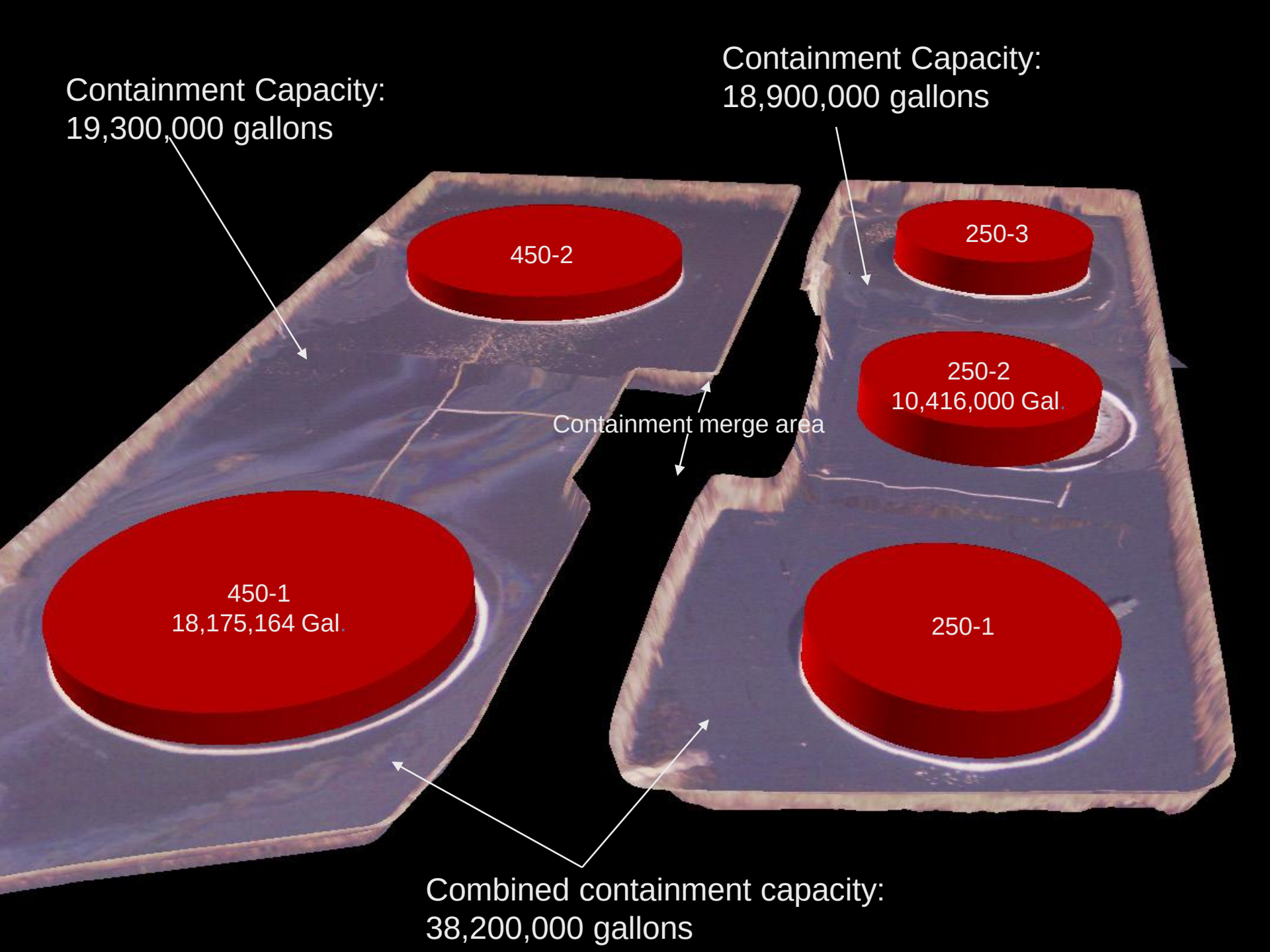
1. EPA fly-over ~1 day after Hurricane Katrina floods facility – No oil spill observed.
2. 2-3 days into Katrina – Murphy personnel discover oil spill.
3. 5-6 days into Katrina – USCG on site and no oil observed. Flood water over secondary containment.
4. Approximately 1 million gallons spilled

General Observations

- Facility had implemented best management practices;
  - Tank integrity/pipe testing.
  - Adequate secondary containment.
  - Tanks had been constructed in accordance with industry standards based upon the SPCC Plan review.

Issues of Concern

- Piping extending through secondary containment wall.
- QI activities.
- Management oversite.
- Improper description of security at facility.


Containment Capacity:
19,300,000 gallons
Containment Capacity:
18,900,000 gallons
450-2
250-3
250-2
10,416,000 Gal.
Containment merge area
450-1
18,175,164 Gal.
250-1
Combined containment capacity:
38,200,000 gallons


Tank 250-2


Tank 250-2

Wooden Tanks Still In Service

Oil & Saltwater Spills into Containment

Unacceptable container condition and construction material

Golf tees

Corrosion holes


I-0

Facilities In Flood Plain Area


AREA 6 UNION
N3310.065 W09240.782
18:12 010600 A
K 18.3 T275.2 M106.8


AREA 7 UNION
N3316.031 W092
20:12:42 010600 A
K 32.8 T204.5
86.1

Pits