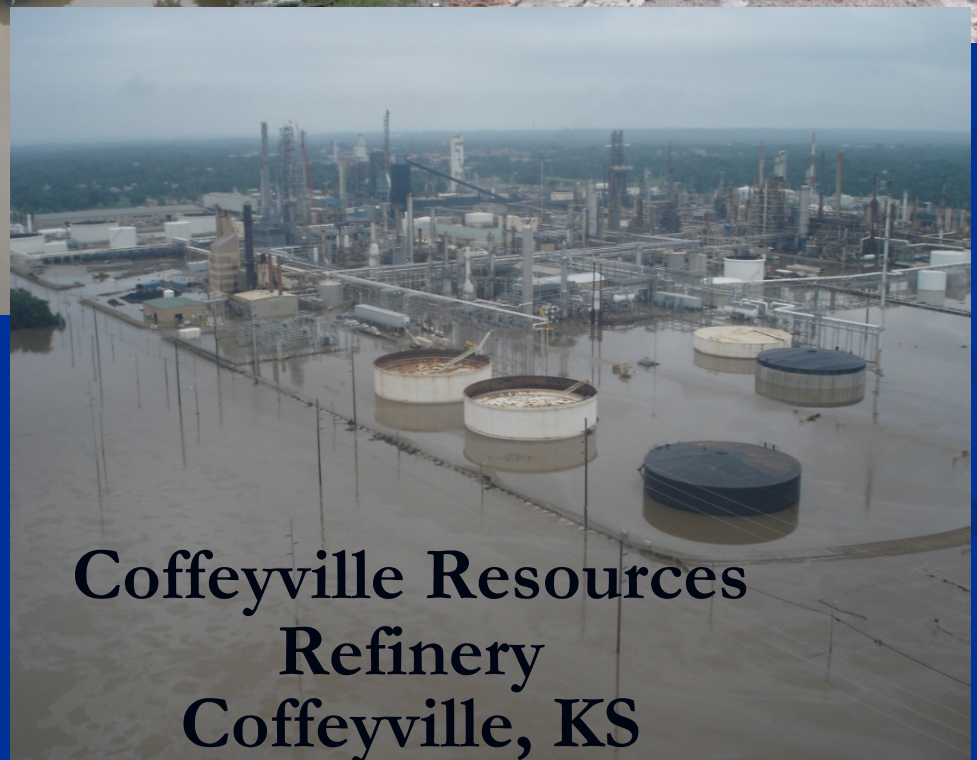
KANSAS/OKLAHOMA FLOODING
and the
COFFEYVILLE OIL SPILL RESPONSE
(EPA Regions 6/7)

R6 Incident Dates: July 2, 2007 to August 30, 2007

Jhana Enders/OSC
Oklahoma Response
U.S. EPA Region 6/Dallas, Texas

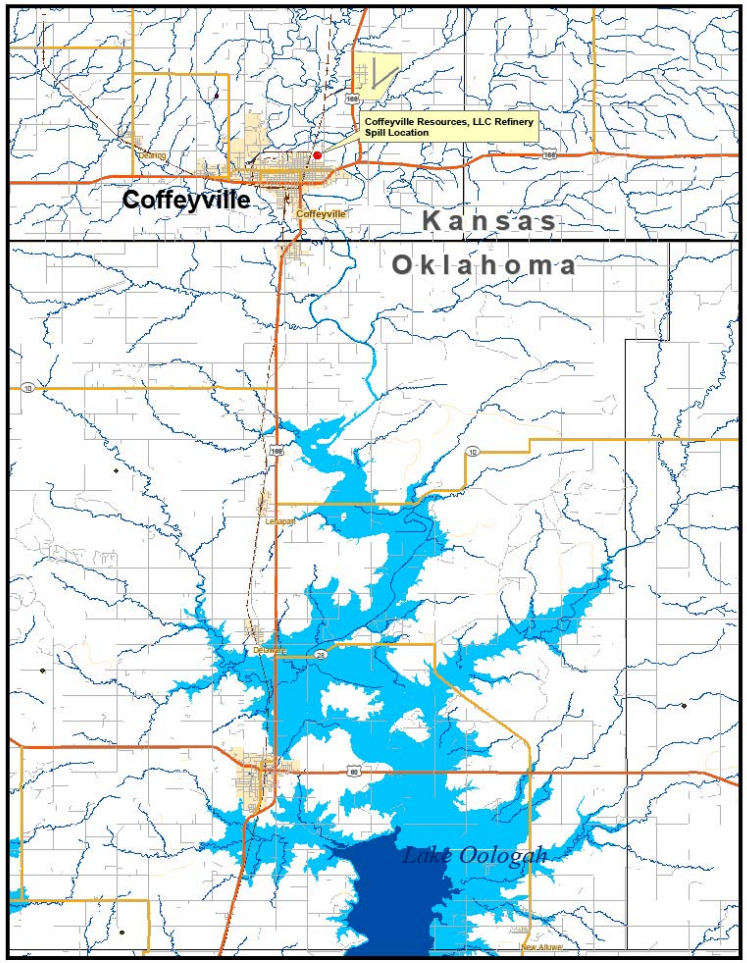
EPA – Region 7

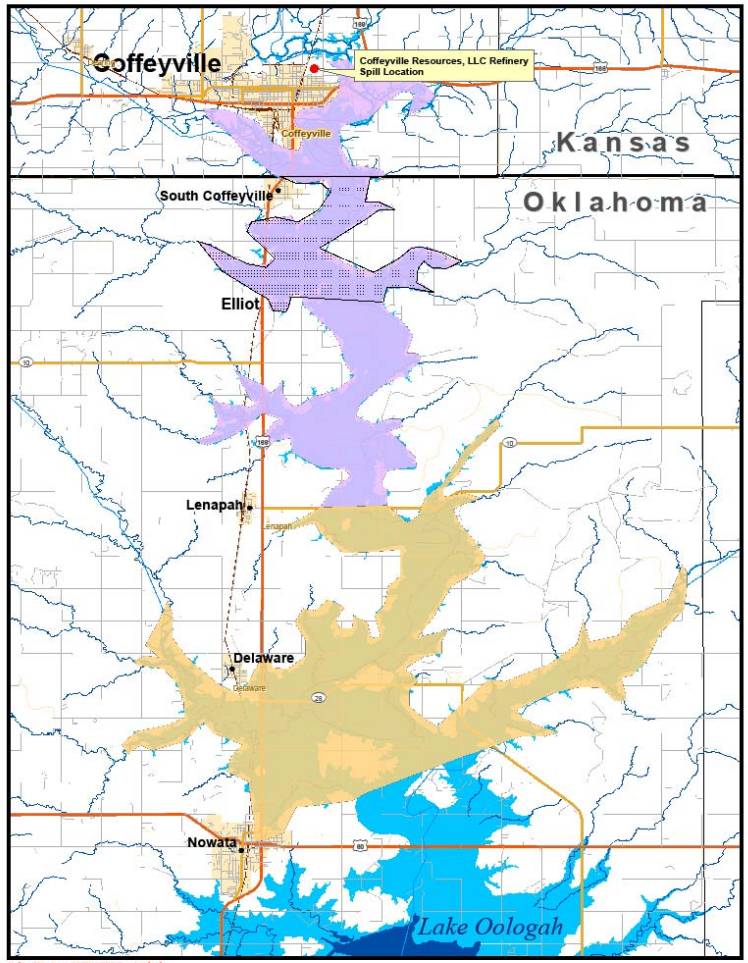
Multiple Issues



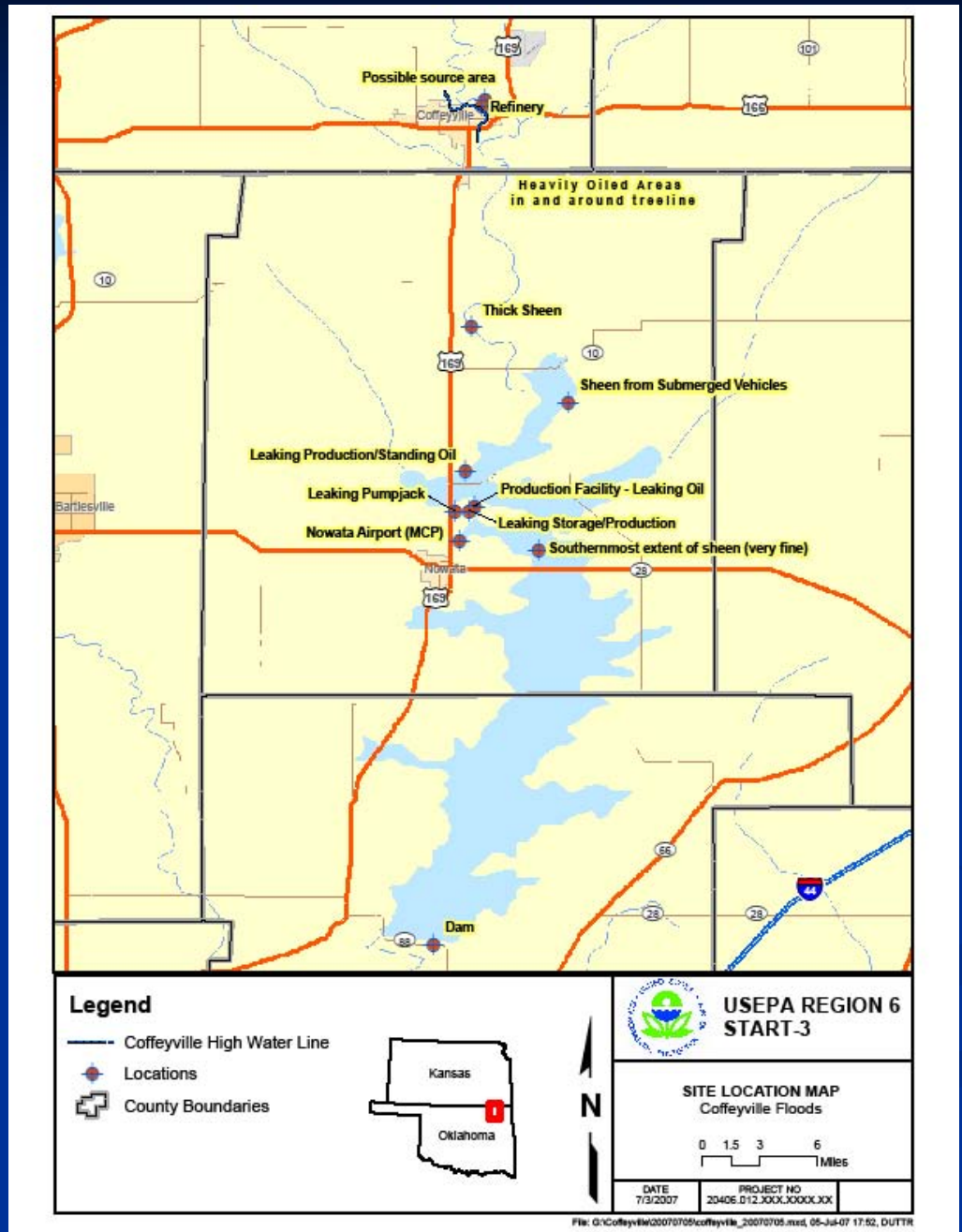
Initial Oklahoma Response

Oklahoma - Flooding





Private Well Releases



Potential Facilities of Concern

South Coffeyville, OK

- Waste Water Treatment Plant
- Oiled Homes /Indoor Air
- Community Support
- Distribution of Information

Water Sampling/DW Intakes

- Lenapah
- Delaware
- Nowata
- Lake Oolagah

Oklahoma

OK/KS Border

ESF-10?

- Household Hazardous Waste
- Orphan Containers
- Other?

July 1, 2007: Initial Notification

- R6 EPA notified by ODEQ of flood status and Coffeyville Oil Spill

July 2, 2007: EPA R6 Mobilization

- Jim Mullins/Oil Section Chief
  Mobilized to Coffeyville, KS per request by R7

- OSC Enders/MCP mobilized to Oklahoma

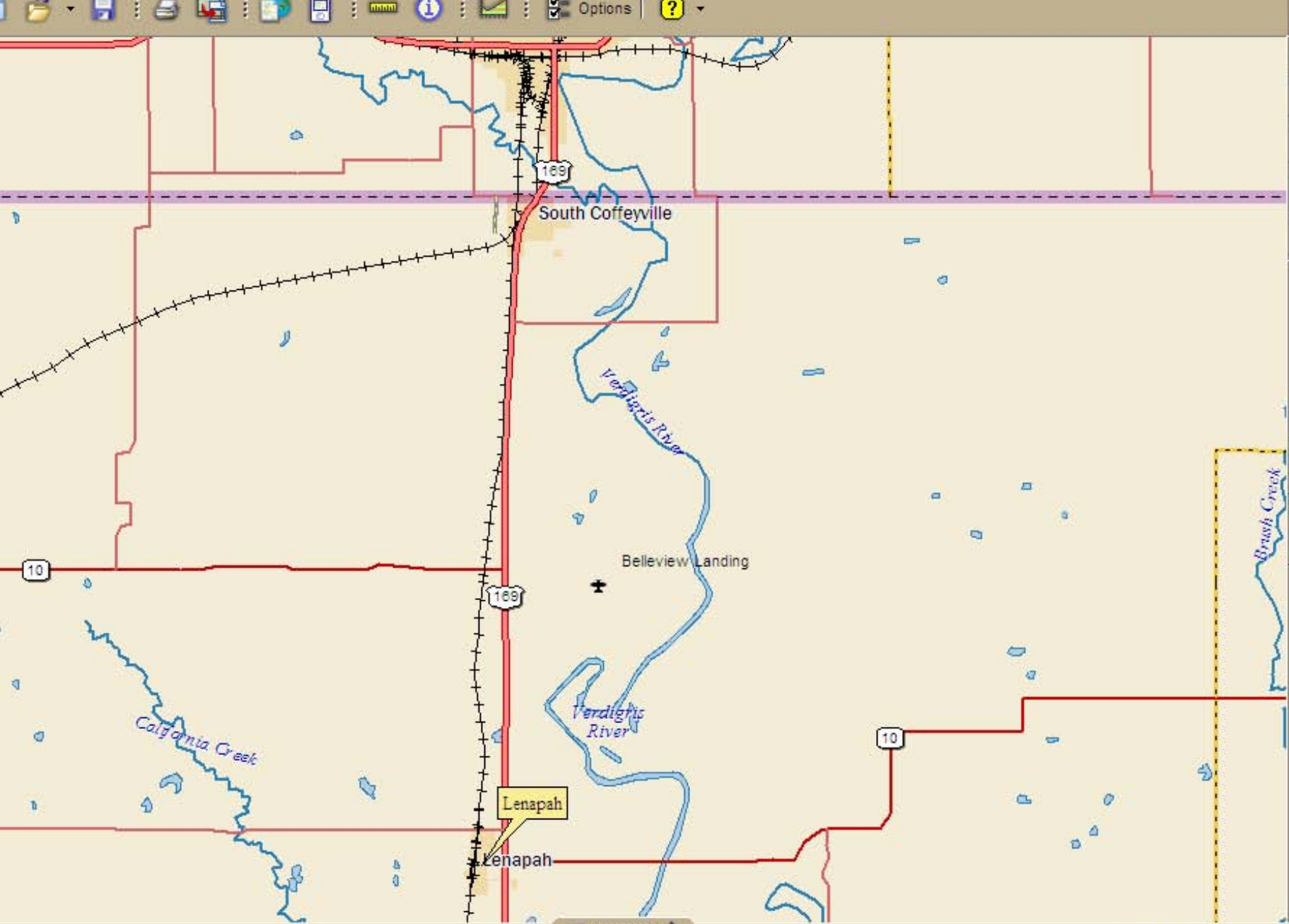
Region 6 MCP – Nowata, OK

July 3, 2007: ODEQ Requests Assistance

- ODEQ requests assistance from R6 EPA for water sampling in Lake Oologah and the Verdigris River

Helicopter Over flights Begin
(Coffeyville Refinery Border to Lake Oologah Spillway)


Sedan City
Sedan
Independence Muni
Coffeyville Muni
Oswego
Oswego Muni
Columbus
Coffeyville, KS
Coff 65.39 mi
Caney
Chetopa
Baxter Springs
Pichei
Hog Pen Public Access
Turkey Creek Point Public Use Area
Commerce
Miami Muni
Miami
Dewey
Bartlesville Muni
Bartlesville
Nowata Muni
Nowata
Twin Bridges State Park
Vinita
Vinita Muni
Grand Lake O' the Cherokees
Grove Muni
Grove
Barnsdall
Chelsea
Oologah Lake
Spencer Creek Cove Public Use Area
Craig County South Grand Lake
Oologah, OK
65.39 mi
Dam Site West Public Use Area
Dam Site East Public
Jay
Spavinaw State Park
Skiatook
Skiatook Muni
Collinsville
Lake Eucha State Park
Claremore
Data Zoom
8-0
N
W
S
0° (N)
Latitude
N36° 45.0'
Longitude
W95° 26.9'
Elevation
Interval
250 feet
0 mi
Map Data
GIS
Print
Find
Phone
Info
NetLink
ImageReg
Draw
Profile
3-D
Route
GPS
Voice
Handheld Export
Slide 10 of 52
Default Design


Options
Data Zoom
169
South Coffeyville
Verdigris River
Belleview Landing
10
169
Brush Creek
California Creek
Verdigris River
10
Lenapah
Lenapah
0° (N)
Latitude
N36° 56.
Longitud
W95° 35
Elevation
Interval
100 feet
0 mi
Map Data
GIS
Print
Find
Phone
Info
NetLink
ImageReg
Draw
Profile
3-D
Route
GPS
Voice
Handheld Expor

Over flight Video

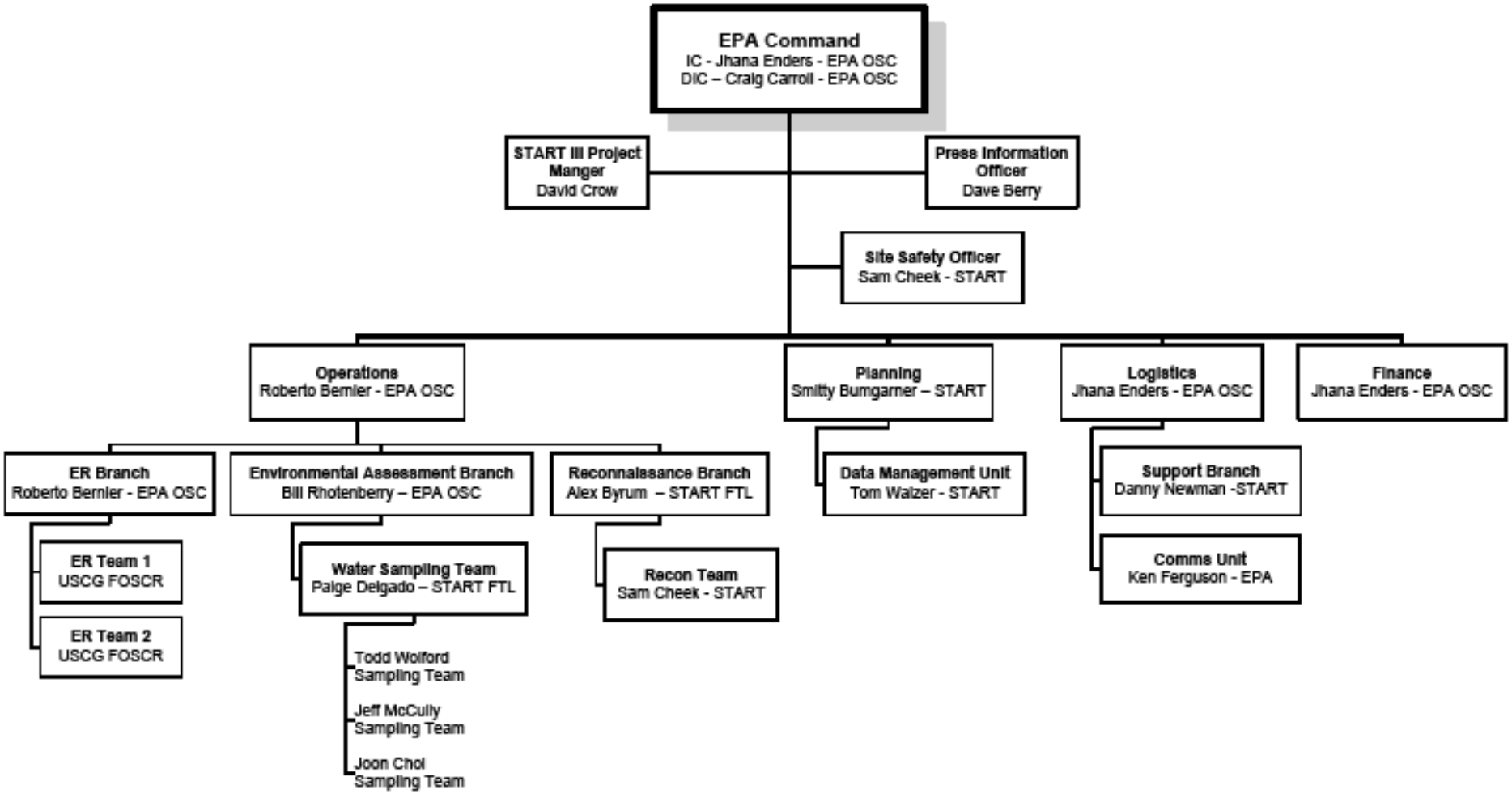
July 4, 2007: South Coffeyville, OK

- R6 EPA and ODEQ meet with City Officials
- Helicopter Over flights

July 5, 2007:

- Continued overflights
- R6 ICS implementation in the field
- 6 OSCs, 12 START, 6 USCG, 13 ERRs, ODEQ US Fish and Wildlife, USACE
- 4,000 feet of hard boom to the site and deployed 900 feet of boom at the Highway 60 bridge

Verdigris River Flooding
ICS 207 Organization



Unified Command?

(RP Order not signed until July 10, 2007)

R6 EPA/ODEQ/USCG

1) Oversight of R6/R7 water operations including;
   Onion Creek (KS/OK); Opossum Creek (OK); Vinegar Creek (OK). (July 5-August 27)

2) Water sampling
   Drinking Water Intakes in the Verdigris River (OK) and Lake Oologah (July 5 – Aug 21)

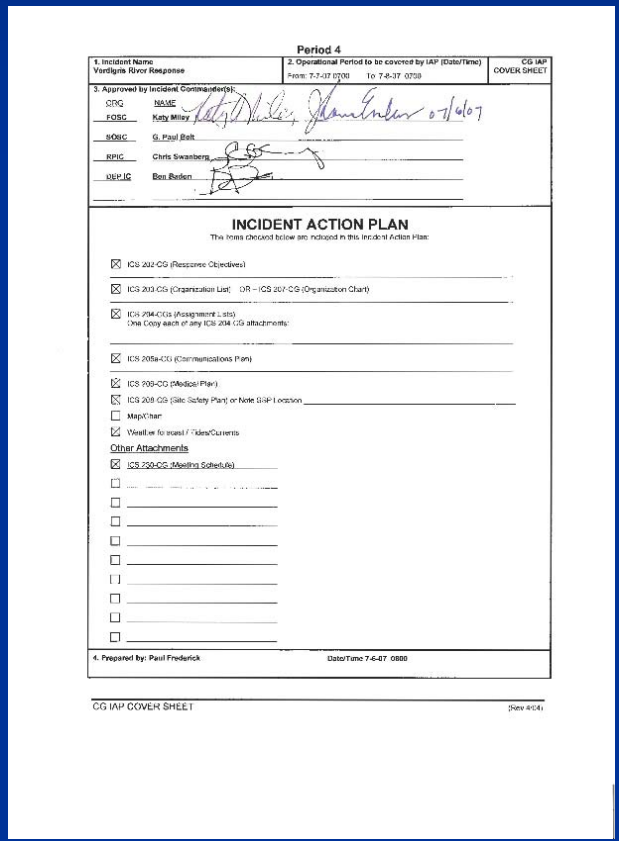
3) South Coffeyville, OK
   Recon of houses initially identified as having external oil contamination and final inspection; Cleanup of oil at the SCV Waste Water Treatment Plant; Town Meetings; Liaison with fire department and EM officials; Address fish kills/Ag Issues

4) Booming in Oklahoma at key bridges

The Work Begins…

July 5, 2007

July 8, 2007
Boom Transitioned to RP



Period 4

1. Incident Name Verdigris River Response	2. Operational Period to be covered by IAP (Date/Time) From: 7-7-07 0700 To: 7-8-07 0700	CG IAP COVER SHEET

3. Approved by Incident Commander(s):

ORG	NAME	
FOSC	Katy Miley	07/6/07
SOSC	G. Paul Bolt	
RPIC	Chris Swanberg	
DEP IC	Ben Baden	

INCIDENT ACTION PLAN

The items checked below are included in this Incident Action Plan:

- ☒ ICS 202-CG (Response Objectives)
- ☒ ICS 203-CG (Organization List) OR – ICS 207-CG (Organization Chart)
- ☒ ICS 204-CGs (Assignment Lists)
  One Copy each of any ICS 204-CG attachments:
- ☒ ICS 205a-CG (Communications Plan)
- ☒ ICS 206-CG (Medical Plan)
- ☒ ICS 208-CG (Site Safety Plan) or Note SSP Location
- ☐ Map/Chart
- ☒ Weather forecast / Tides/Currents

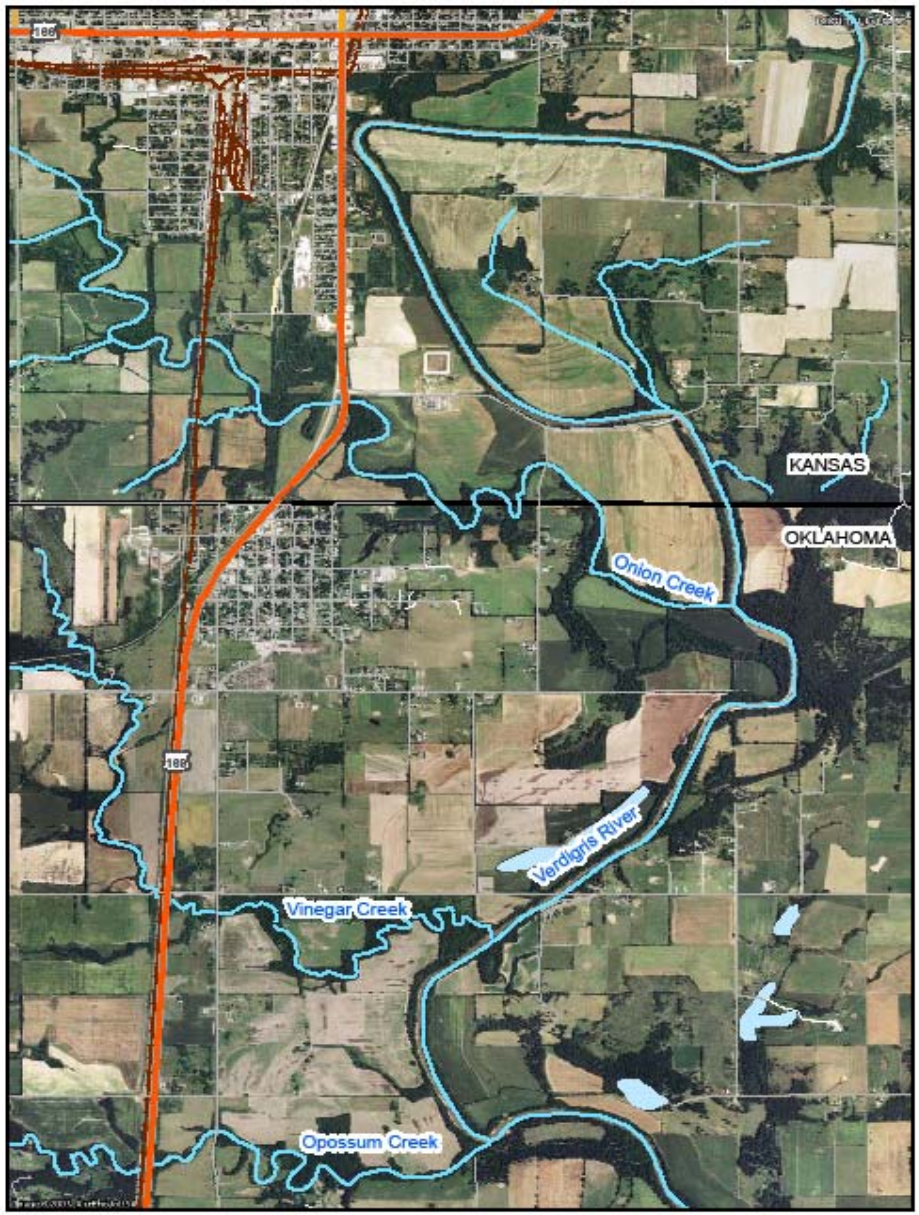
Other Attachments

- ☒ ICS 230-CG (Meeting Schedule)
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

4. Prepared by: Paul Frederick — Date/Time 7-6-07 0800

CG IAP COVER SHEET (Rev 4/04)

Special Instructions
Includes booming water intakes and environmentally sensitive areas in the Lake Oologah area. Command and control of the Highway 60 operations have been transitioned from Regulatory Agency to the command and control of the Responsible Party with oversight from EPA. Management of the boom attached to the Highway 60 bridge by EPA Region 6 has been taken over by the Responsible Party. Boom operations will be based upon safety observations agreed upon by both the EPA and the Responsible Party. Mutually agreeable compensation will be delivered to the Regulatory Agency.


KANSAS
OKLAHOMA
Onion Creek
Verdigris River
Vinegar Creek
Opossum Creek
169
169

Onion Creek

(KS/OK Border)

South Coffeyville, OK

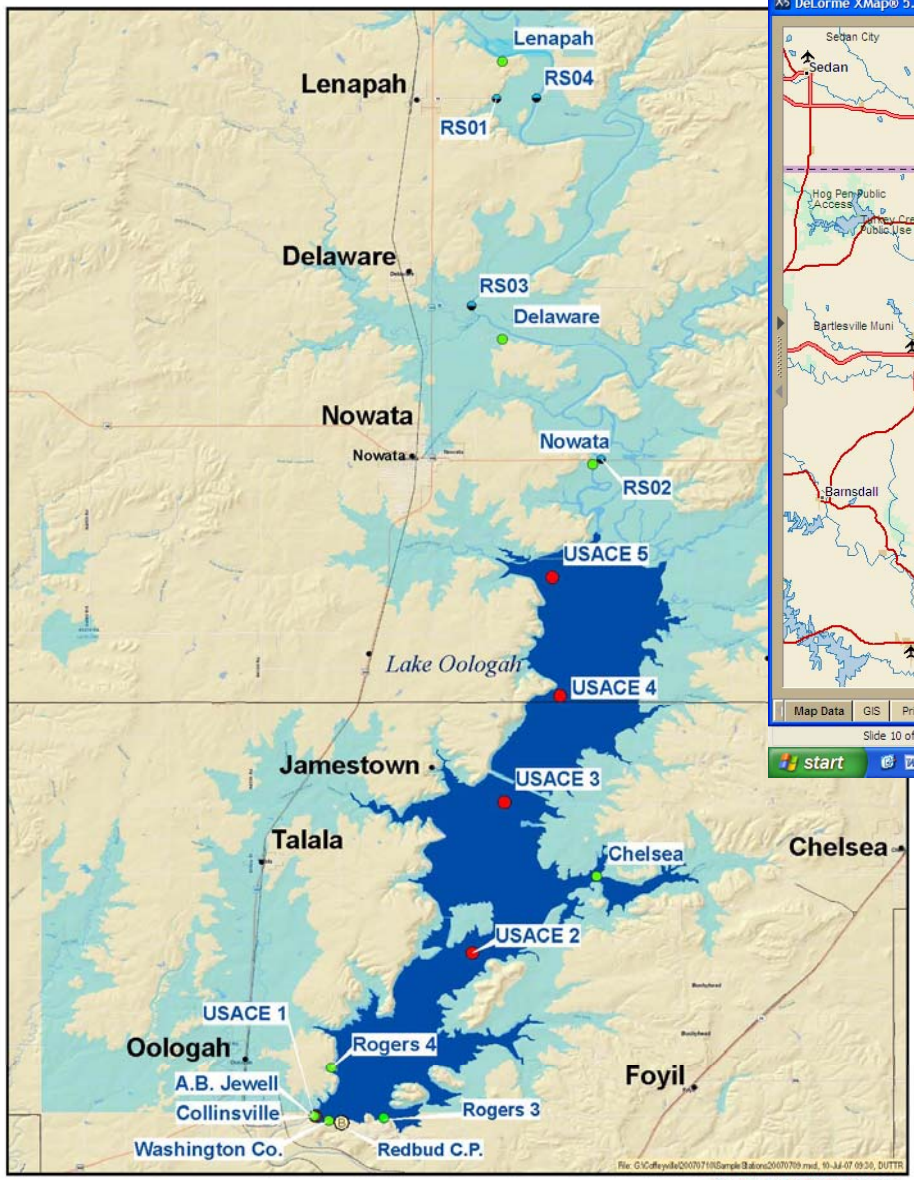
Opossum Creek

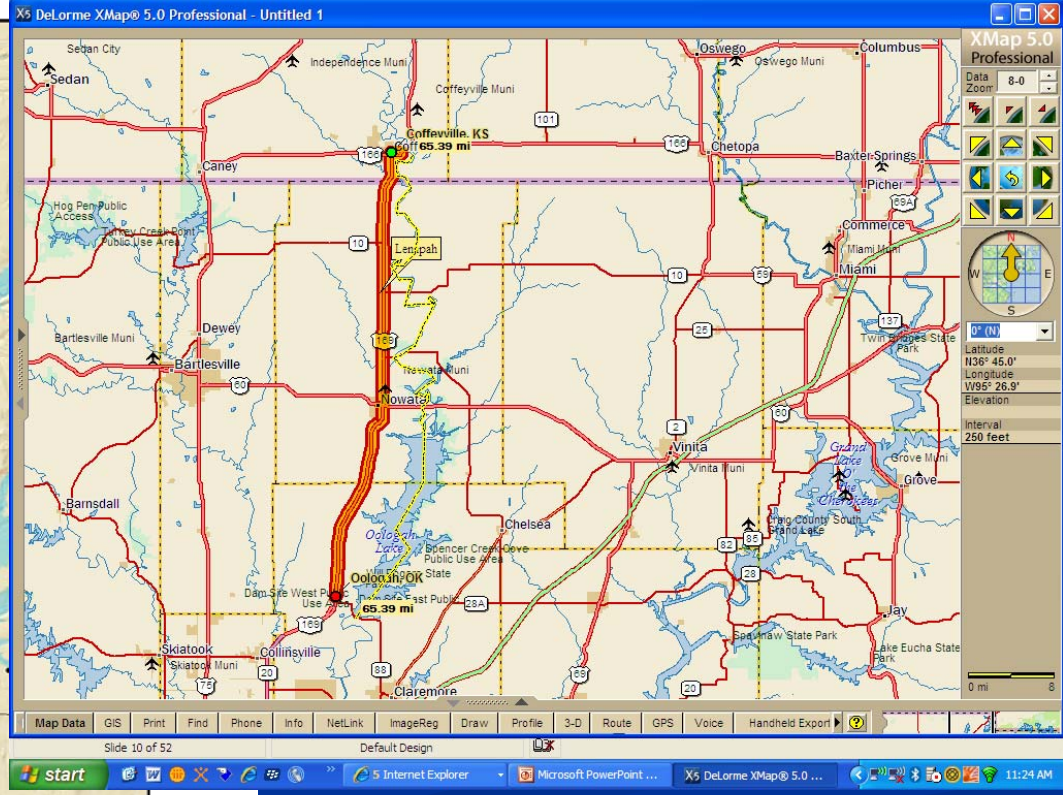
Vinegar Creek

Water Sampling
July 5, 2007 to July 21, 2007

- Population served by drinking water intakes sampled: 426,000

- Over 100 water samples were taken by EPA R6 and the Coffeyville Resources contractor (CTEH) to ensure drinking water supplies were safe for public consumption





Legend

- Surface Water Sample
- Water Intake Location
- Command Post
- USACE Water Quality Location
- Estimated Flood Extent (7/3/07)
- Lakes and Rivers (Normal Levels)

0 1 2 4 6 8 Miles

EPA Region 6 Sampling Locations July 10, 2007

Note: This is an ESTIMATED flood extent that is based off the USGS Water Gaging Stations on the Verdigris River at Coffeyville, KS and Lenapah, OK on 7/3/07.

N

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPA
REGION-SIX
EMERGENCY RESPONSE TEAM


SDR
SDR


FLOW

July 10, 2007

R7 Signs AOC with Coffeyville Resources

IT IS SO AGREED

BY COFFEYVILLE RESOURCES REFINING & MARKETING, LLC

July 9, 2007

Keith D. Osborn
Executive Vice President and Refinery General Manager
Coffeyville Resources Refining & Marketing, LLC

IT IS SO AGREED AND ORDERED

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

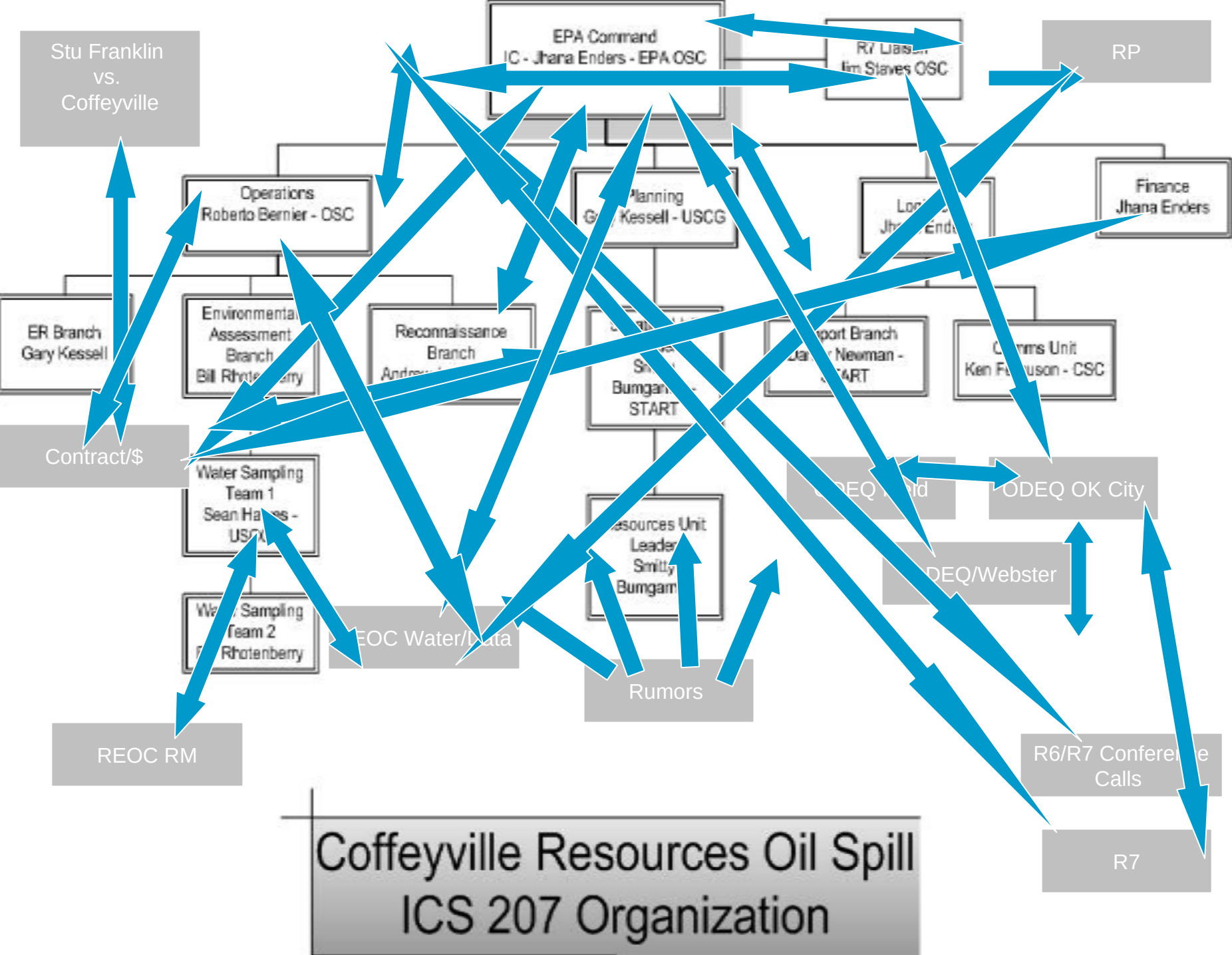
July 10, 2007

John B. Askew
Regional Administrator
U.S. Environmental Protection Agency, Region VII

July 11, 2007

Information flow becomes more…

complicated?

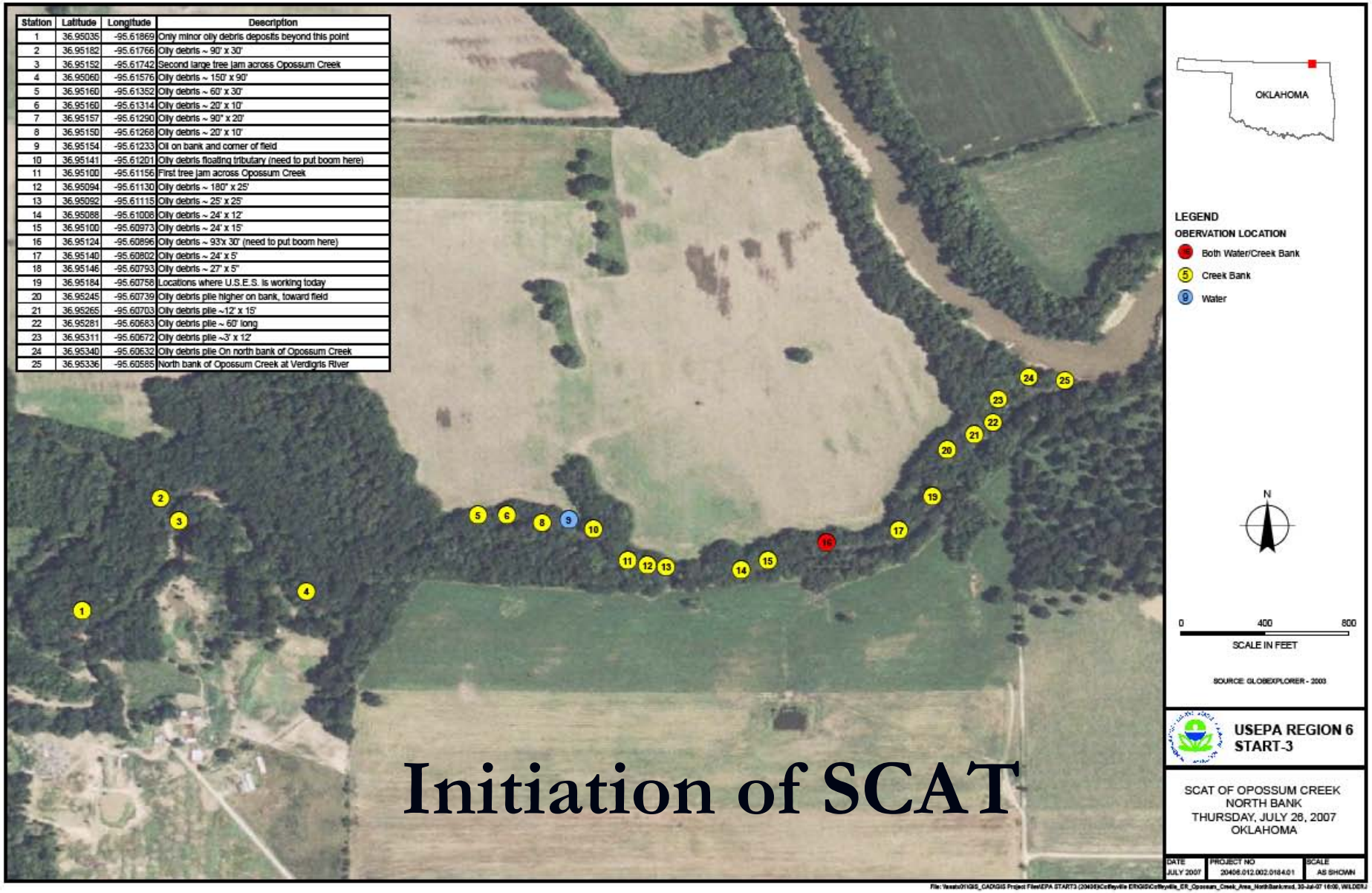


Coffeyville Resources Oil Spill
ICS 207 Organization

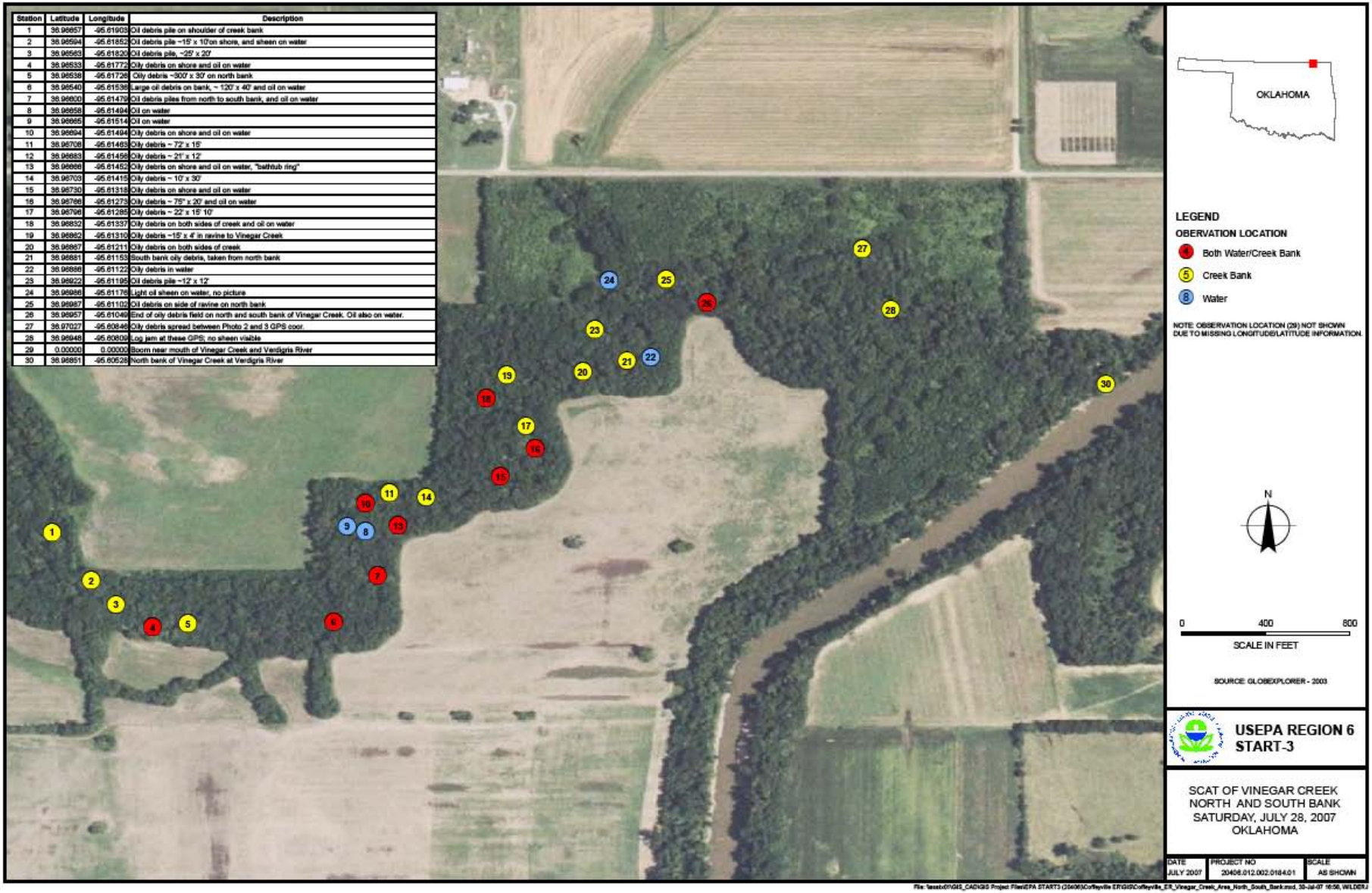
Field vs. Non-Field

Initiation of R6 SCAT

(Completed 7/26/07)



Initiation of SCAT


Station | Latitude | Longitude | Description
1 | 36.96857 | -95.61903 | Oil debris pile on shoulder of creek bank
2 | 36.96594 | -95.61852 | Oil debris pile ~15' x 10'on shore, and sheen on water
3 | 36.96563 | -95.61820 | Oil debris pile, ~25' x 20'
4 | 36.96533 | -95.61772 | Oily debris on shore and oil on water
5 | 36.96538 | -95.61726 | Oily debris ~300' x 30' on north bank
6 | 36.96540 | -95.61536 | Large oil debris on bank, ~ 120' x 40' and oil on water
7 | 36.96600 | -95.61479 | Oil debris piles from north to south bank, and oil on water
8 | 36.96658 | -95.61494 | Oil on water
9 | 36.96665 | -95.61514 | Oil on water
10 | 36.96694 | -95.61494 | Oily debris on shore and oil on water
11 | 36.96708 | -95.61463 | Oily debris ~ 72' x 15'
12 | 36.96683 | -95.61456 | Oily debris ~ 21' x 12'
13 | 36.96666 | -95.61452 | Oily debris on shore and oil on water, "bathtub ring"
14 | 36.96709 | -95.61415 | Oily debris ~ 10' x 30'
15 | 36.96736 | -95.61318 | Oily debris on shore and oil on water
16 | 36.96766 | -95.61273 | Oily debris ~ 75" x 20' and oil on water
17 | 36.96796 | -95.61285 | Oily debris ~ 22' x 15' 10'
18 | 36.96852 | -95.61337 | Oily debris on both sides of creek and oil on water
19 | 36.96862 | -95.61310 | Oily debris ~15' x 4' in ravine to Vinegar Creek
20 | 36.96867 | -95.61211 | Oily debris on both sides of creek
21 | 36.96881 | -95.61153 | South bank oily debris, taken from north bank
22 | 36.96886 | -95.61122 | Oily debris in water
23 | 36.96922 | -95.61195 | Oil debris pile ~12' x 12'
24 | 36.96966 | -95.61176 | Light oil sheen on water, no picture
25 | 36.96987 | -95.61102 | Oil debris on side of ravine on north bank
26 | 36.96957 | -95.61049 | End of oily debris field on north and south bank of Vinegar Creek. Oil also on water.
27 | 36.97027 | -95.60846 | Oily debris spread between Photo 2 and 3 GPS coor.
28 | 36.96948 | -95.60809 | Log jam at these GPS; no sheen visible
29 | 0.00000 | 0.00000 | Boom near mouth of Vinegar Creek and Verdigris River
30 | 36.96851 | -95.60628 | North bank of Vinegar Creek at Verdigris River
OKLAHOMA
LEGEND
OBERVATION LOCATION
4 Both Water/Creek Bank
5 Creek Bank
8 Water
NOTE: OBSERVATION LOCATION (29) NOT SHOWN DUE TO MISSING LONGITUDE/LATITUDE INFORMATION.
N
0
400
800
SCALE IN FEET
SOURCE: GLOBEXPLORER - 2003
USEPA REGION 6
START-3
SCAT OF VINEGAR CREEK
NORTH AND SOUTH BANK
SATURDAY, JULY 28, 2007
OKLAHOMA
DATE
JULY 2007
PROJECT NO
20406.012.002.0184.01
SCALE
AS SHOWN

August 7, 2007

RP begins SCAT…

Included: EPA R6/R7, RP and States (OK/KS), USCG

Cleanup Endpoints and Methods

Verdigris River Response - Coffeyville, Kansas

Conduct all cleanup operations with minimal damage to environmental and public resources and private land.

The SCAT will evaluate historic, special environmental and high-public access areas to provide more detailed and additional cleanup requirements wherever necessary.

Habitat Type	Cleanup Endpoint	Cleanup
Surface Water	No recoverable oil. No oiled material on surface, other than oiled leaves with sporadic distribution, which can sheen and release oil to water surface.	Remove recoverable oil and oiled debris from water surface. Do not remove oiled leaves from water surface or attached over-hanging oiled branches or leaves from trees.
Mud Shoreline	No recoverable oil on shoreline substrate which can potentially be mobilized. Oil does not rub off substrate on contact. No more than oil coat on tree trunks, branches and leaves.	Remove recoverable oil and oiled debris. Do not remove oiled trees, oil on tree trunks or attached tree branches or leaves. Do not remove scattered oiled leaves on shoreline or un-oiled vegetation and other un-oiled materials.
Lowland Hardwoods	No recoverable surface oil within 50 ft. of any waterway (river, named creek or un-named drainage containing water) shore. No more than oil coat on standing live or dead vegetation or oiled debris. No visibly oiled soil.	Within 50 ft of waterway shore, remove recoverable surface oil and visibly oiled soil. Remove man-made oiled debris and remove oiled wood up to 3 inches in diameter. Remove oil greater than coat from wood over 3 inches in diameter using standard sorbent materials and leave wood in place.
Upland Hardwoods	No recoverable surface oil within 50 ft. of any waterway (river, named creek or un-named drainage containing water) shore. No more than oil coat on standing live or dead vegetation or oiled debris. No visibly oiled soil.	Within 50 ft of waterway shore, remove recoverable surface oil and visibly oiled soil. Remove man-made oiled debris and remove oiled wood up to 3 inches in diameter. Remove oil greater than coat from wood over 3 inches in diameter using standard sorbent materials and leave wood in place.
Wetland	Oil on vegetation does not wipe off on contact. No recoverable or potentially mobile oil in accessible areas.	Cleanup to be determined on site-specific basis by SCAT. Cleanup access will be identified by SCAT.

CLEANUP APPROVAL
VERDIGRIS RIVER RESPONSE
COFFEYVILLE, KS – JULY 1, 2007

State: OK Work Order / Priority: OK-5

Segment ID: D3-OP Cleanup Points: CP-96, 13, RCP 7, 8

Description: Opossum creek east of old hwy 169 and west of Verdigris River.

Whether the responsible party or another party conducts or participates in the removal of pollution, the Unified Command, which may include the responsible party, state and federal agencies or third parties, determines removal completeness and authorizes the termination of response operations. Generally, for oil discharges, removal is "complete" when:

Agree	Disagree	
✓		There is no longer "detectable" or "collectible" oil, as determined by the Unified Command, present on the water, adjoining shorelines or places where it is likely to reach the water again; or
		Further removal operations would cause more environmental harm than the oil to be removed; or
		Additional cleanup operations would provide insignificant contributions to minimizing the threat to the public health or welfare, or the environment.

TJ Engstrom		10/25/07
Responsible Party Representative – Print Name	**Signature**	**Date**
KATY A. MILEY	Katy A. Miley	10/25/07
Environmental Protection Agency Representative – Print Name	**Signature**	**Date**
Kansas Department of Health & Environment Representative – Print Name	**Signature**	**Date**
RICK AUSTIN		10/25/07
Oklahoma Department of Environmental Quality Representative – Print Name	**Signature**	**Date**
Andrew Haver		10/25/07
Other – Name and Representative	**Signature**	**Date**

Challenges


07/15/2007 03:10

Agricultural Issues:

Ingestion of contaminated crops, consumption of potentially contaminated water by livestock, cleanup of cropland (burn/till/bioremediation). Process for handling potential agricultural issues.


1 2:13PM


1 2:39PM

R6 EPA/ODEQ/CG Oversight

- ***Approximate recovery per day: Over 5000 bags:***
  (Bag size approximately 8 lbs. due to geographic area)

- ***Approximately 100+ U.S.E.S. personnel with 16+ john boats***

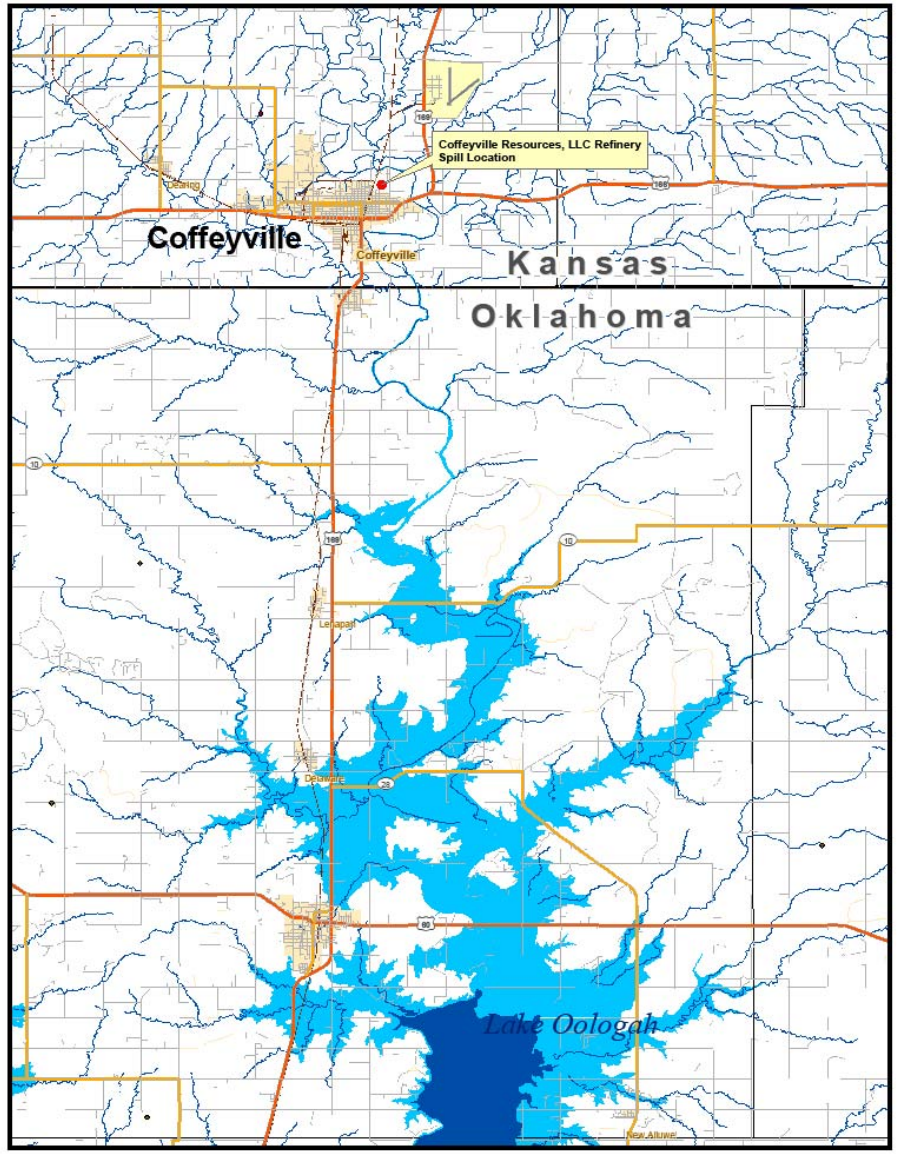
Water Cleanup Complete

Miles of shoreline affected by flood:

996.25

River miles addressed in cleanup actions:

59 plus 50 feet of shoreline on each side



Transition of Oklahoma Activities From EPA R6 to R7

August 30, 2007

(to ensure consistency with EPA R7 Administrative Order on Consent and per NCP 300.140)

Recommendations on more effective implementation of 40 CFR 300.140 using the National Incident Management System (NIMS)…

§ 300.140 Multi-regional responses.

(a) If a discharge or release moves from the area covered by one ACP or RCP into another area, the authority for response actions should likewise shift. If a discharge or release affects areas covered by two or more ACPs or RCPs, the response mechanisms of each applicable plan may be activated. In this response actions of all regions concerned shall be fully coordinated as detailed in the RCPs and ACPs. (b) There shall be only one OSC and/or RPM at any time during the course…of a response operation.

- *Unified Command/ICS Structure in a multi-regional response*
- *Participation in LEPC and Area Planning to better integrate with State and Local Plans*
- *Improve process for Integrating multiple agency EOCs into the planning cycle*
- *Need to work towards 'one' Unified Command IAP*
- *Improve process for* information requests *from other agencies when requested by UC (indoor air, agriculture, etc)*

“Challenges”

- Sampling/Information Management/Distribution
- Cleanup Standards when two states are involved
- Private Lease Contribution/Fingerprinting
- Availability of expertise for Indoor Air, Agriculture, etc.
- Ability of state personnel to cross borders
- Competing priorities for resources
- Highly visible sites bring increased political and media attention. Media: the good, the bad, the ugly.
- When to initiate 40 CFR 300.140
  - High Cost/Managing Funds
- Field vs. Non-Field
- OSC Authority
- RRTs

Overcoming Human Nature

How clean is clean?

“Positive”

- Successful Oil Cleanup
- Spill Management Team
- Coordination with Local Officials
- USCG
- RP Responsiveness
- Coordination between EPA Regions

Suggestions

- SCAT Started Sooner
- Helicopter Videos with Updates to Internet EPA Web Page

R6 EPA and Oklahoma Contacts:

U.S. Environmental Protection Agency (EPA)

Jhana Enders/Region 6 EPA
Federal On-Scene Coordinator (FOSC)
enders.jhana@epa.gov
(214) 665-6444

Oklahoma Department of Environmental Quality (ODEQ)

Monty Elder
monte.elder@deq.state.ok.us
Emergency Response Coordinator
(405) 702-9132

Questions?

www.epaosc.net/CoffeyvilleResourcesOilSpill