San Jacinto River Waste Pits Superfund Site

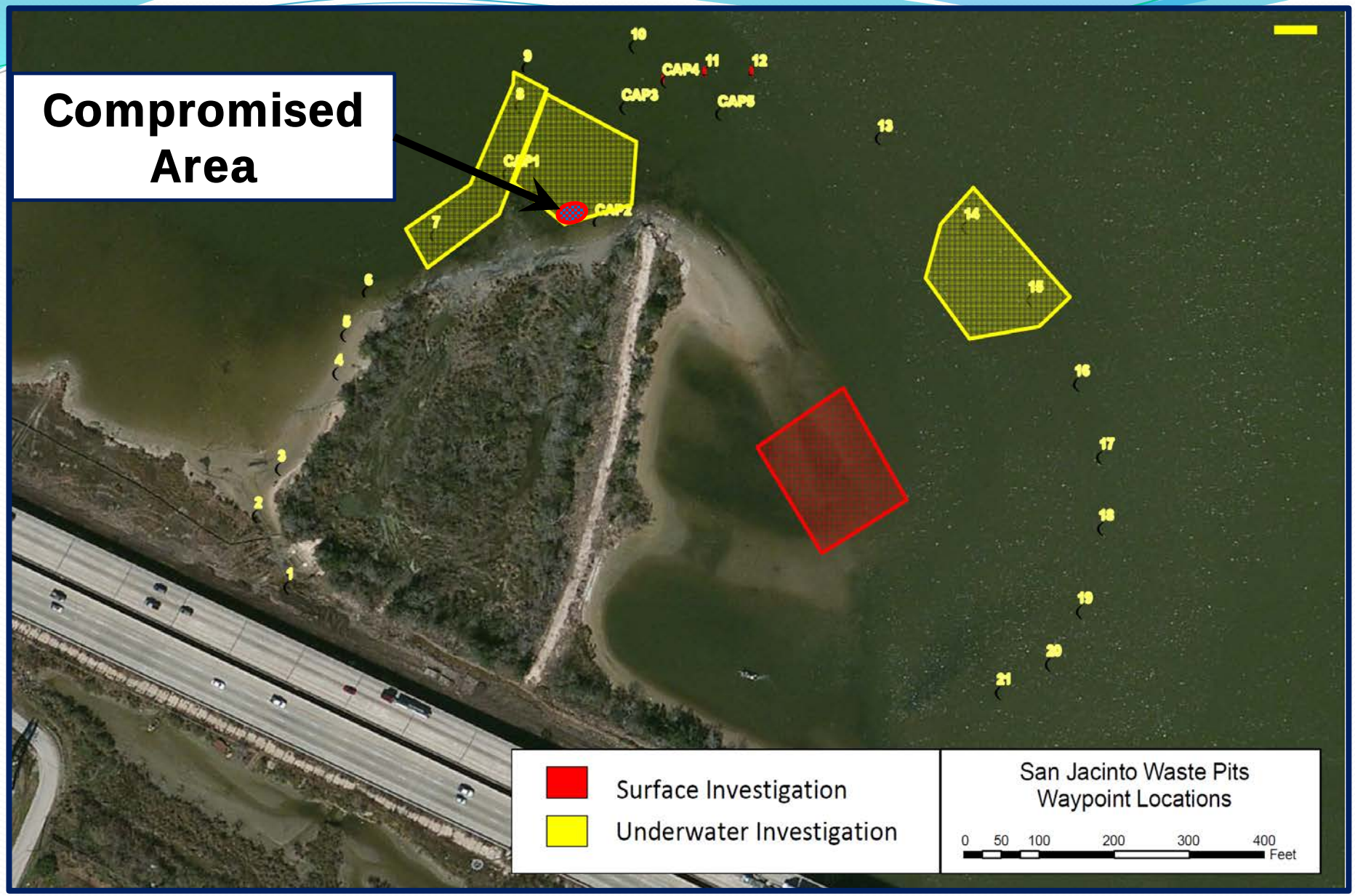
9644868

United States Environmental Protection Agency

Cap Construction Completed July 2011

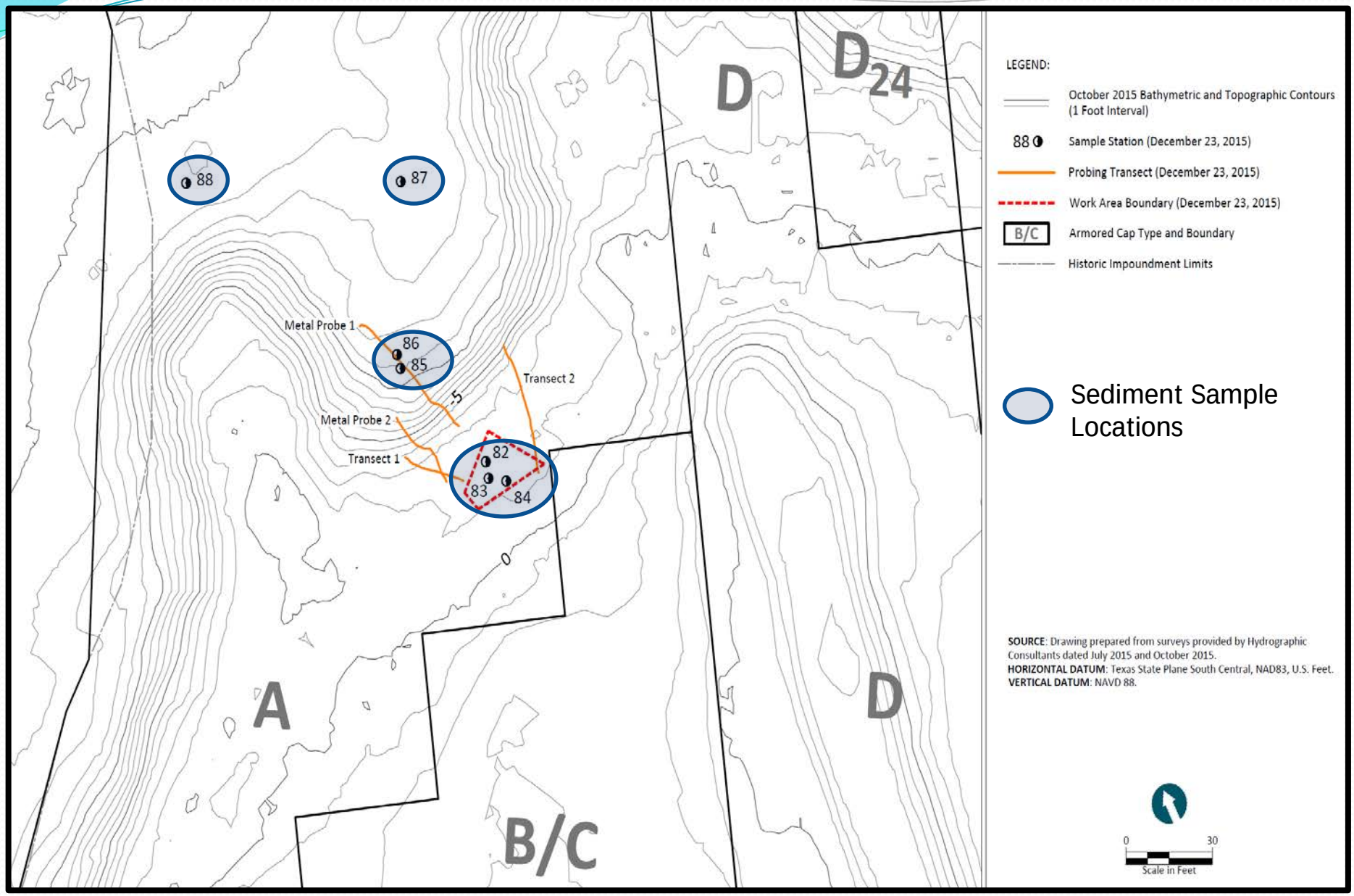
Cap Investigation & Repair

EPA Dive Team inspection - Dec 2015



Areas investigated by EPA Dive Team - Dec 2015

Probing to define damaged rock area - Dec 2015


D
D24
A
B/C
D
88
87
86
85
82
83
84
Metal Probe 1
Metal Probe 2
Transect 1
Transect 2
-5
0
LEGEND:
October 2015 Bathymetric and Topographic Contours (1 Foot Interval)
88
Sample Station (December 23, 2015)
Probing Transect (December 23, 2015)
Work Area Boundary (December 23, 2015)
B/C
Armored Cap Type and Boundary
Historic Impoundment Limits
Sediment Sample Locations
SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated July 2015 and October 2015.
HORIZONTAL DATUM: Texas State Plane South Central, NAD83, U.S. Feet.
VERTICAL DATUM: NAVD 88.
0
30
Scale in Feet

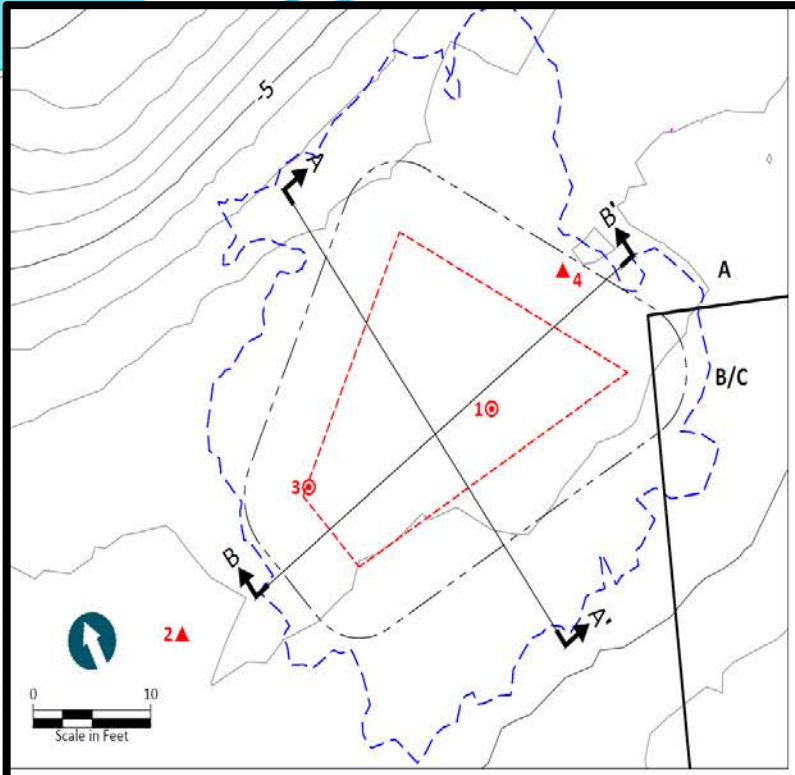
Shallow sample from damaged cap area

Placing geotextile over repair area - Dec 2015

Placing rock over geotextile in repair area - Dec 2015

Rock addition to cover geotextile - Jan 2016

Repair completed at low tide - Jan 2016

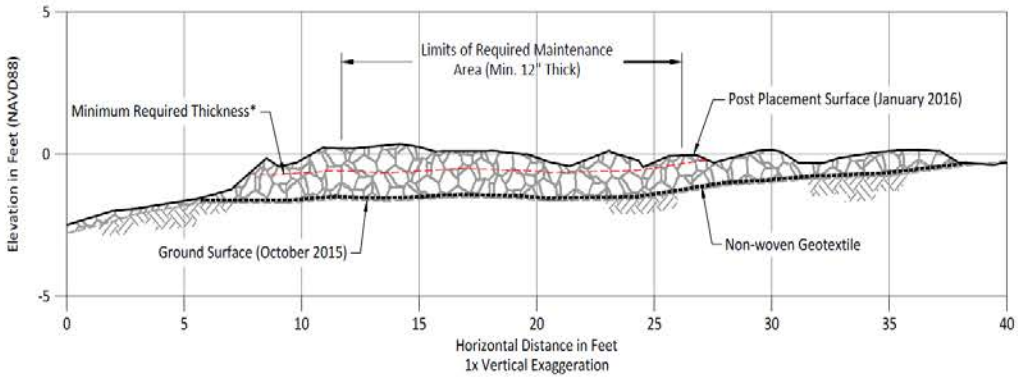


SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated July 2015 and October 2015.
HORIZONTAL DATUM: Texas State Plane South Central, NAD83, U.S. Feet.
VERTICAL DATUM: NAVD 88.

LEGEND:

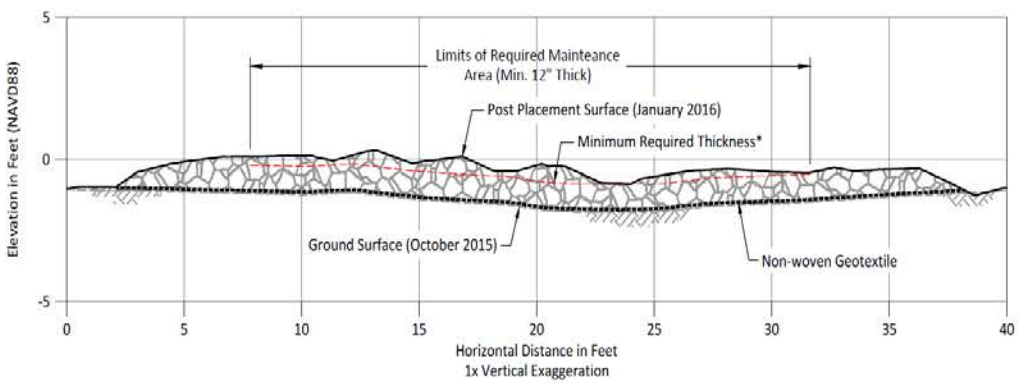
- October 2015 Bathymetric and Topographic Contours (1 Foot Interval)
- Limits of Delineated Area (December 2015)
- Limits of Required Maintenance Area (December 2015)
- Toe of Actual Armor Rock Placement (December 2015)
- 4▲ USEPA Probe Location (December 2015), Rock
- 1⊙ USEPA Probe Location (December 2015), Sediment
- B/C Armored Cap Type and Boundary

A-A'

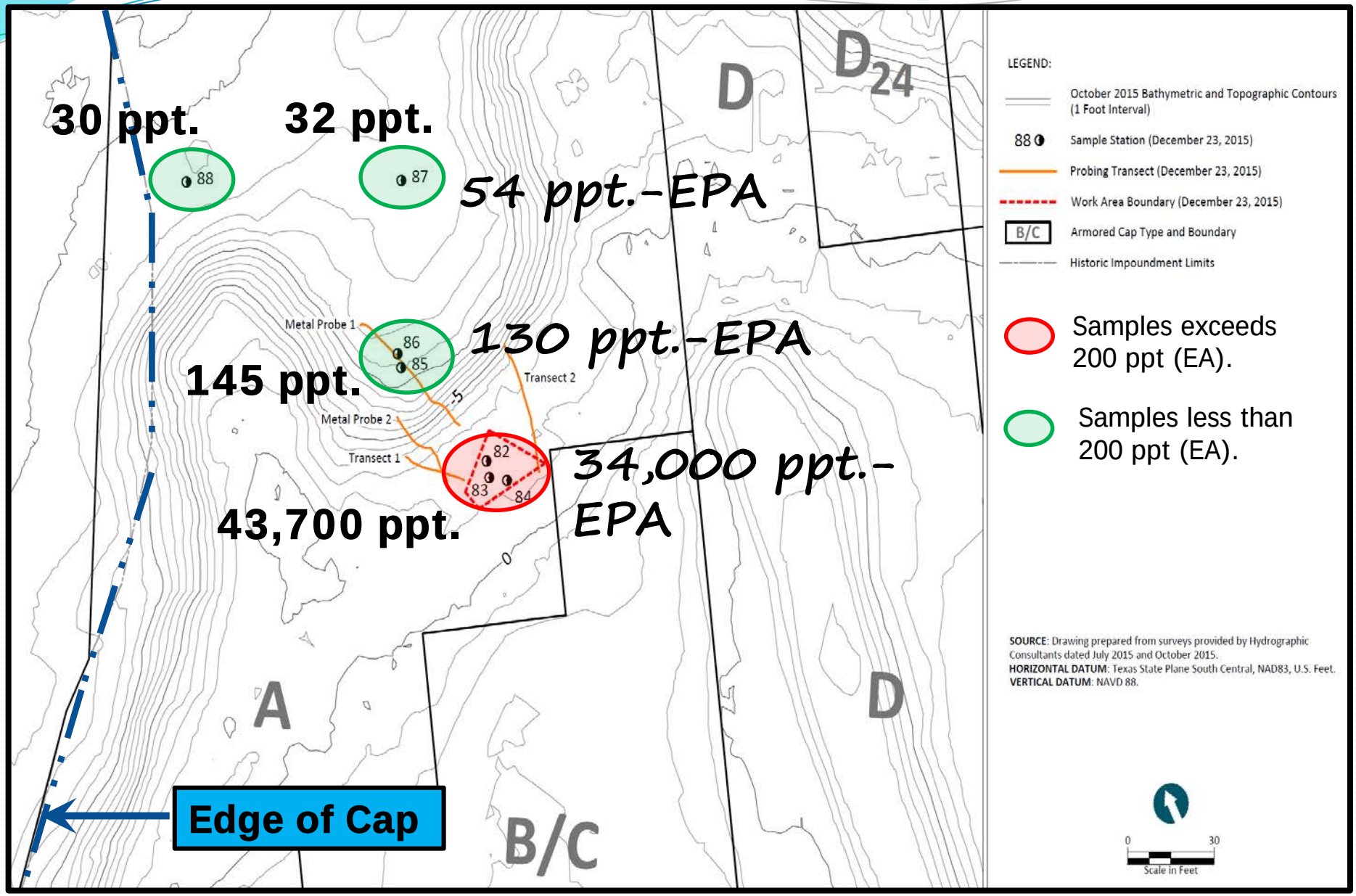


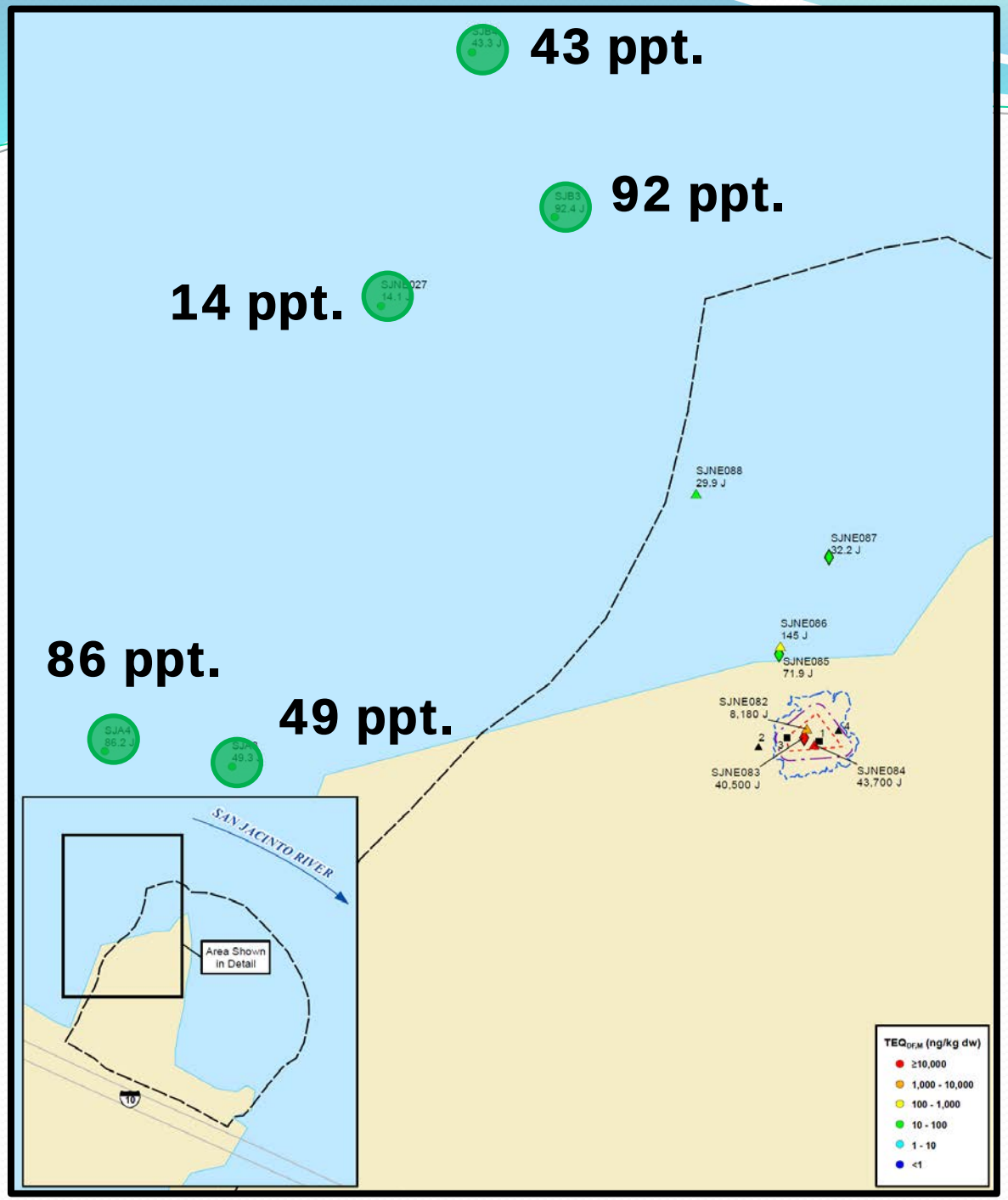
* Minimum thickness was field verified by probing.

B-B'



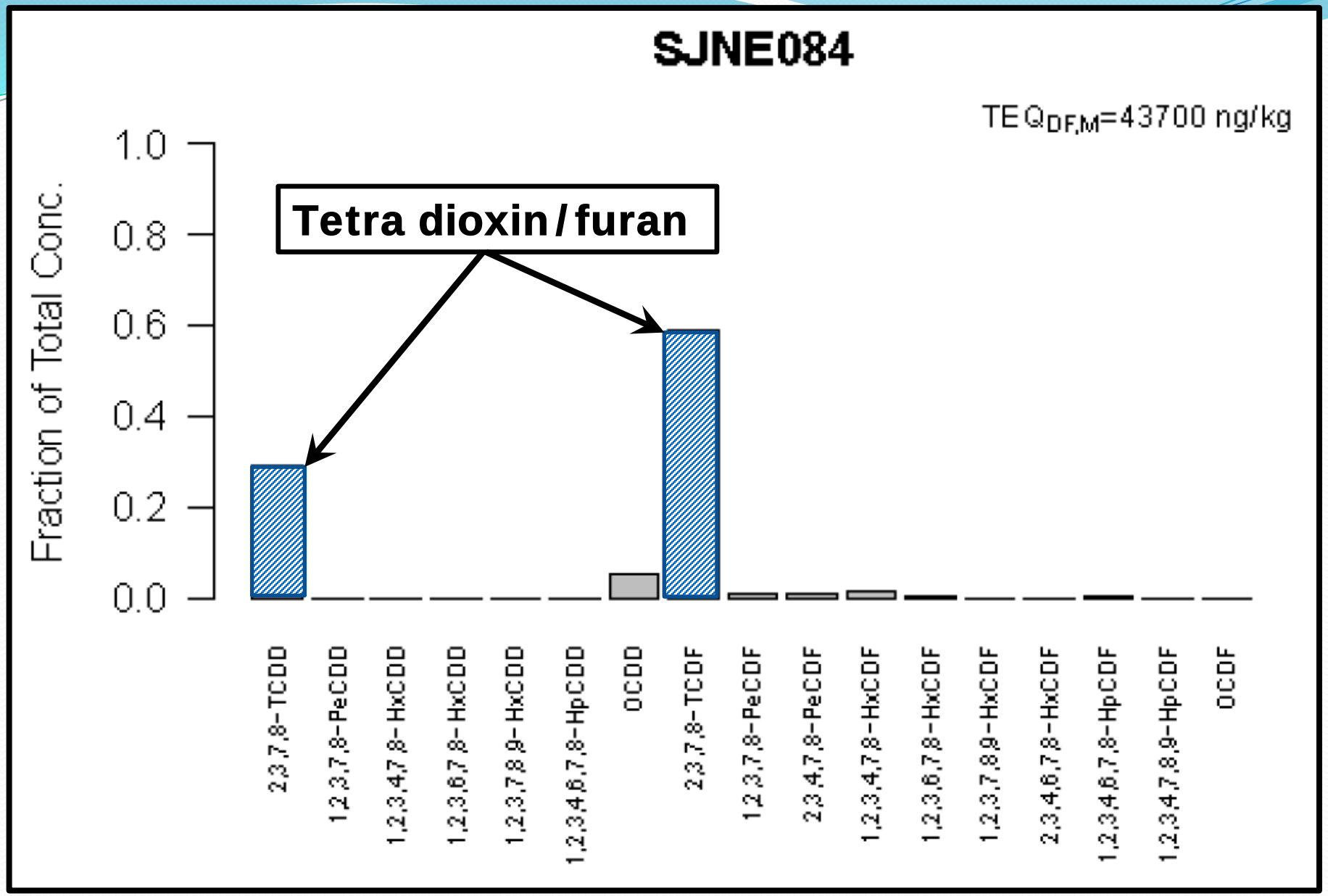
* Minimum thickness was field verified by probing.


30 ppt.
32 ppt.
88
87
54 ppt.-EPA
Metal Probe 1
86
85
130 ppt.-EPA
145 ppt.
Transect 2
Metal Probe 2
Transect 1
82
83
84
34,000 ppt.-EPA
43,700 ppt.
Edge of Cap
A
B/C
D
D24
D
LEGEND:
October 2015 Bathymetric and Topographic Contours (1 Foot Interval)
88
Sample Station (December 23, 2015)
Probing Transect (December 23, 2015)
Work Area Boundary (December 23, 2015)
B/C
Armored Cap Type and Boundary
Historic Impoundment Limits
Samples exceeds 200 ppt (EA).
Samples less than 200 ppt (EA).
SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated July 2015 and October 2015.
HORIZONTAL DATUM: Texas State Plane South Central, NAD83, U.S. Feet.
VERTICAL DATUM: NAVD 88.
0
30
Scale in Feet

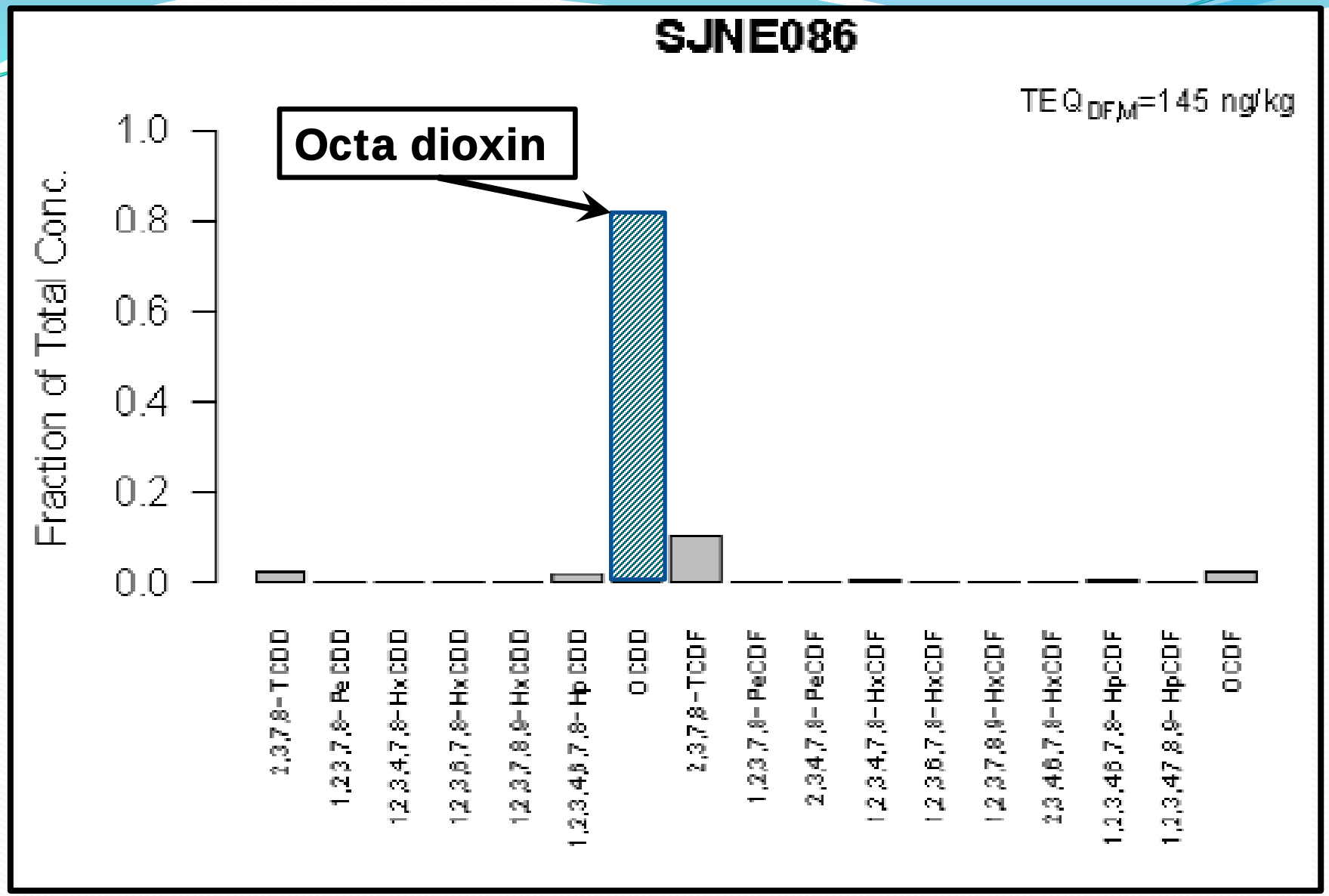


Previous Sediment Samples Outside of Cap (from Remedial Investigation)

- Surface Sediment Concentration – TEQ dioxin/furan



Fingerprint of sediment in damaged area



Fingerprint of sediment outside of damaged area

What does the data tell us?

- Waste exposed in damaged area similar to paper mill waste under cap.
- Samples outside the damaged area similar to surrounding river sediments indicating a minimal release.
- Defined area needing repair.
- All results will be considered in final remedy.

Cause of Cap Damage:

- Barge strike?
- Construction defect?
- Something else?

Next Steps

- Corps of Engineers Cap Assessment
- Add surveillance - Install 6 solar powered cameras with 24/7 monitoring – March 2016.
- Add warning buoys all the way around pits.
- Underwater inspection for rest of cap with EPA Dive Team oversight.
- Proceed with planned cap, sediment, surface water, and ground water sampling.

U.S. Army Corps of Engineers Cap Assessment

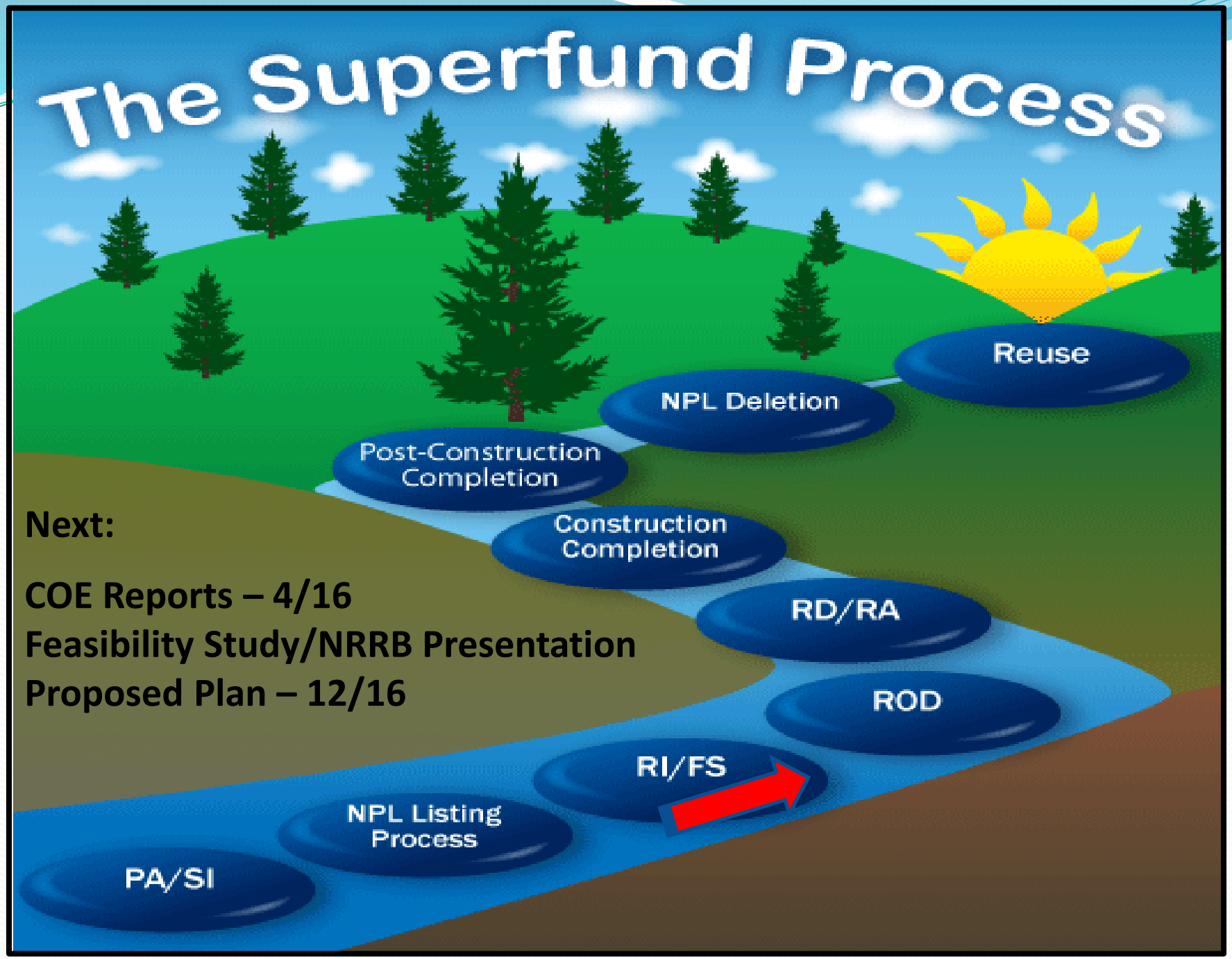
- What caused the damaged/compromised area in cap?
- Recommend additional cap inspection methods (current and future).
- Recommend actions to prevent future occurrences.

❖ Will direct PRPs to perform additional needed actions based on Corps findings.

Long Term Remedy

U.S. Army Corps of Engineers Remediation Alternatives Assessment

- Computer models.
- Cap design/construction.
- Reliability? (including performance of interim cap)
- Any migration through cap?
- Removal Best Management Practices.
- Water quality & fish impacts.



Next:

COE Reports – 4/16
Feasibility Study/NRRB Presentation
Proposed Plan – 12/16

San Jacinto River Waste Pits Superfund Site
For More Information:

U.S. EPA

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EPA United States Environmental Protection Agency