Agreement Log #: KIF-10-017

Time-Critical Concurrence

Area:

Emory River, Segment "Above Segment 5", Dredge Areas D-100 to D-104

Agreement:

Eliminate planned dredging of dredge grid areas D-100 to D-104.

Based on absence of ash data from immediately downstream in Segment 5, the vibracore sampling was extended upstream in the dredge grids along the south shore. The vibracore samples were spaced to take a sample within each grid and reported zero ash until D-105,

The resulting data indicates that the native sediments extend further into the channel than the bathymetry predicted and that there is no recoverable ash in these grids.

Attachments: jwp Figure 5, Ash Remaining to Pre-Spill Surface Above Segment 5, dated 3/3/10
Figure 1, Ash Remaining to Pre-Spill Surface Above Segment 5, dated 4/13/10
Figure 2, Vibracore Concurrence Sampling Results with Eliminated Grids
Vibecore Sampling Logs and Photos

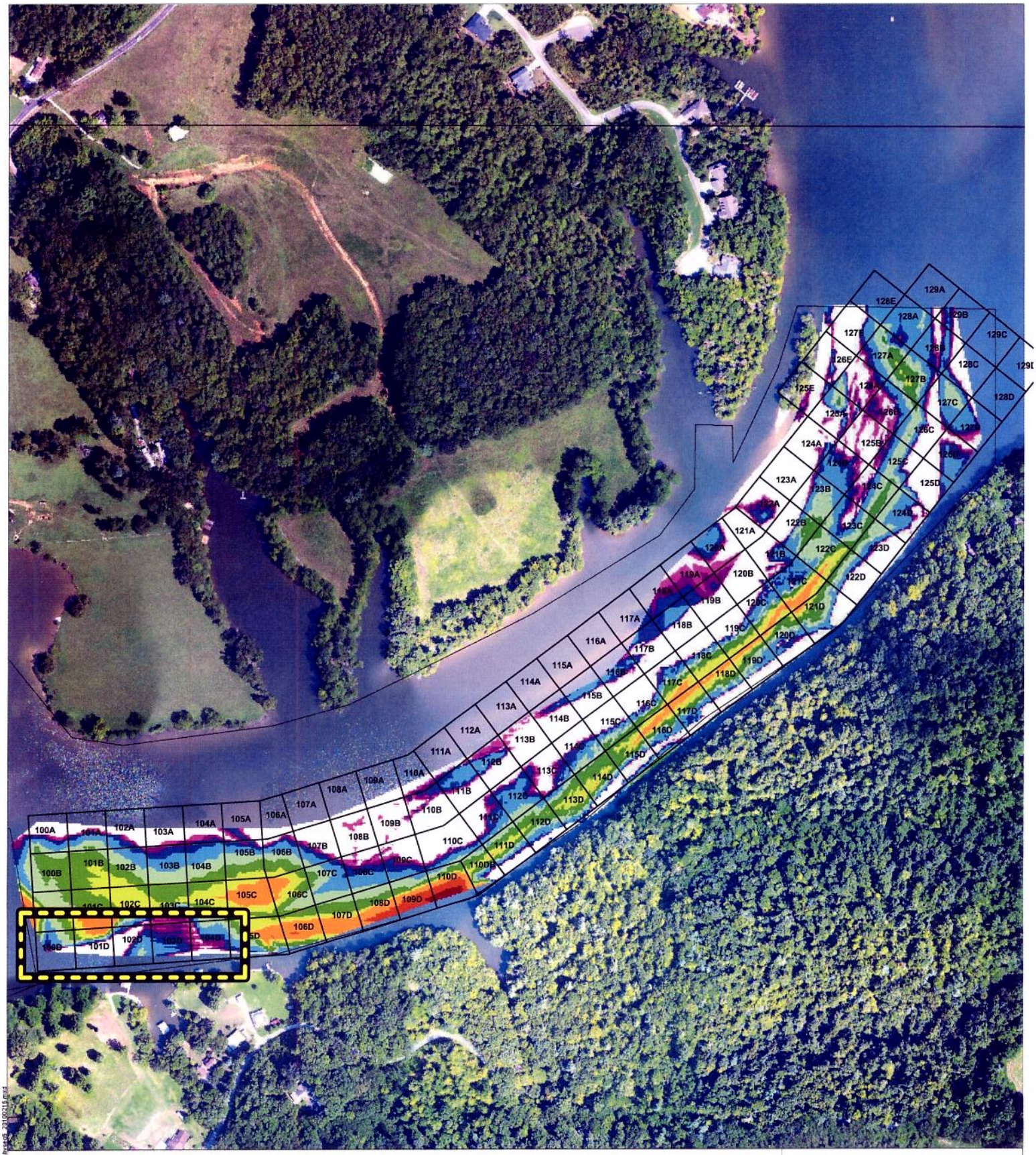
Concurrence Comments:

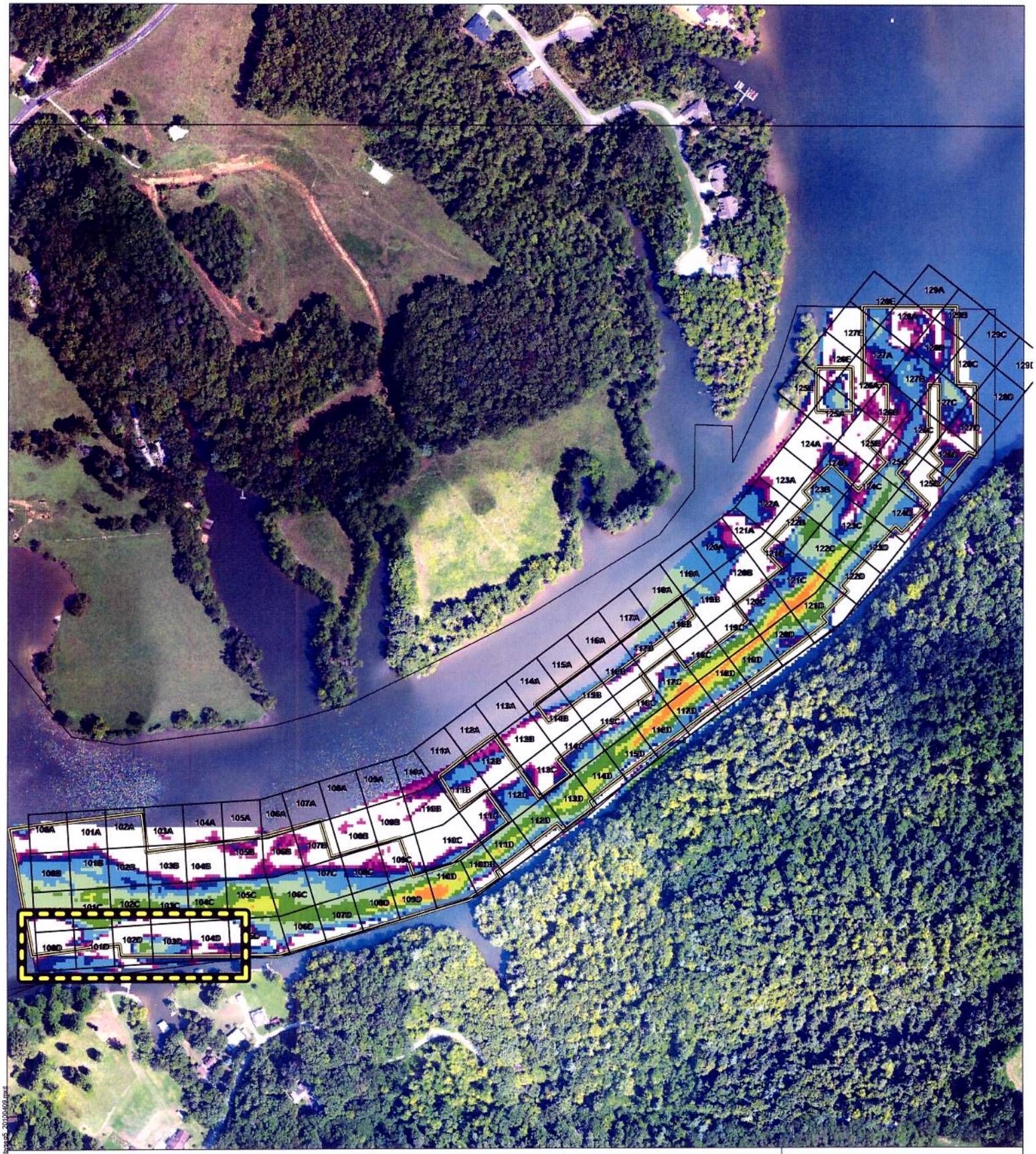
Julie L Phillips — Jacobs Project Manager — 4/20/10 — Date

Michael T Scott — Tennessee Valley Authority — 4/22/10 — Date

Leo Francis — U. S. Environmental Protection Agency — 4/28/10 — Date

consulted w/ TDEC


Legend
Ash Remaining: ~184,467 cy
0 - 1 inch; ~23 cy
1 - 6 inches; ~903 cy
6 inches - 1 ft; ~2,432 cy
1 - 2 ft; ~7,804 cy
2 - 4 ft; ~25,576 cy
4 - 6 ft; ~34,111 cy
6 - 8 ft; ~41,299 cy
8 - 10 ft; ~34,748 cy
10 - 15 ft; ~28,775 cy
15 - 20 ft; ~6,673 cy
>20 ft; 2,123 cy
Area of Interest
DRAFT
0 200 400
Feet
1:1,200
N
JACOBS
Ash Remaining to Pre-Spill Surface Above Segment 5
NAME: croberts DATE: 03/03/2010
Figure 5



Legend

Ash Remaining as of 04/09/10: ~114,274 cy

- 0 - 1 inch
- 1 - 6 inches
- 6 inches - 1 ft
- 1 - 2 ft
- 2 - 4 ft
- 4 - 6 ft
- 6 - 8 ft
- 8 - 10 ft
- 10 - 15 ft
- 15 - 20 ft
- > 20 ft

Proposed Dredge Area

Area of Interest

Note: The depiction of volume remaining on this figure is based off of limited bathymetry data. For blocks A100-A102, B111-B112, B114-B118, C112, and D100-D104, the volume shown in these grids was not added to the volume total because vibecore sampling resulted in no ash present in these areas.

DRAFT

0 200 400 Feet

N

1:1,200

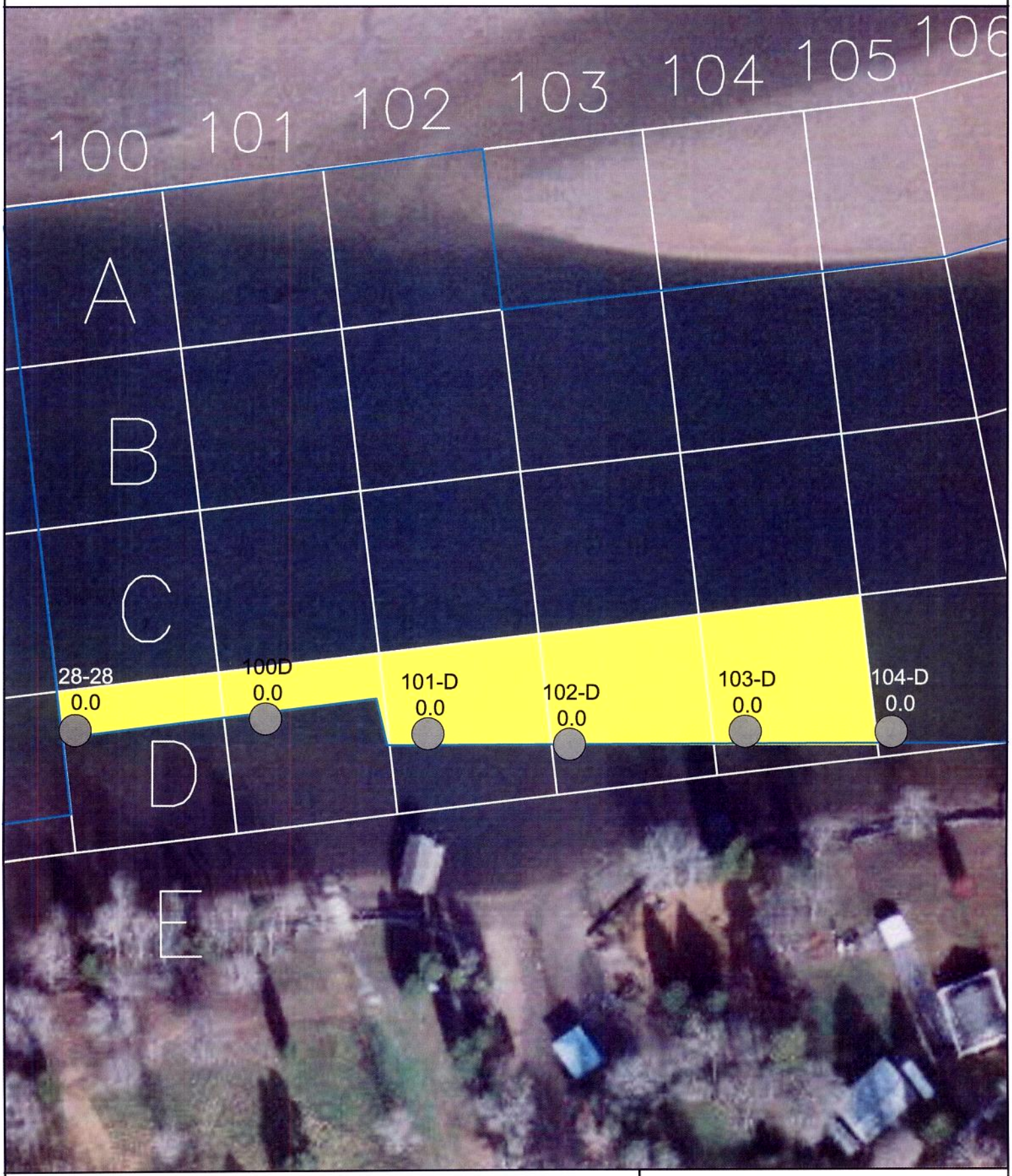
JACOBS

Ash Remaining to Pre-Spill Surface Above Segment 5

NAME: croberts DATE: 04/13/2010

Figure 1

VibeCore Concurrence Sampling Results - Above Segment 5



Ash Recovered
No Ash Present
Removed From Plan
Phase 2 Dredging Path

VibeCore Label Format:
Core Number
Ash Thickness (ft)

0 65 130 260
SCALE IN FEET

N

JACOBS™

04/19/10

Figure 2

TVA JACOBS

Vibecore Documentation

Date: 04/01/2010 Weather: Sunny. Highs around 80. Light winds, SW < 10 mph in the afternoon. Location: Above Segment 5
River Flow: 1860 cfs River Elevation: 738.1'
Crew: David Mathis, Eddie Arnold, Steve Bunkley

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
118A-B	R0010434	6' Acrylic	N: 560132.3' E: 2448313.2'	15.'	8:55

Deviations encountered:

Core Description	Interval (ft)
Coarse and medium grained brown sands, with some native fines. Organic mat at refusal.	0-0.7
Total Depth	.7'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
117A-B	R0010435	6' Acrylic	N: 559993.73' E: 2448186.95'	24.8'	9:17

Deviations encountered:

Core Description	Interval (ft)
Light brown medium and coarse grained sand.	0-0.8
Brown medium and fine grained sand with native fines.	0.8-3.9
Total Depth	3.9'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
116A-B	R0010436	6' Acrylic	N: 559939.16' E: 2448053.03'	14.7'	9:34

Deviations encountered:

Core Description	Interval (ft)
Mixed sands, light brown with many coal pieces.	0-1.4
This portion of the core fell out of the tube upon retreival. No description.	1.4-2.2
Total Depth	2.2

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
114A-B	R0010437	6' Acrylic	N: 559883.27' E: 2447937.66'	7.7'	10:16

Deviations encountered:

Core Description	Interval (ft)
Brown medium and coarse grained sand.	0-1.0
Orange sandy clay.	1.0-3.6
Total Depth	3.6'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
112B	R0010438	6' Acrylic	N: 559852.53' E: 2447797.53'	0.8'	10:39

Deviations encountered:

Core Description	Interval (ft)
Light brown medium and coarse grained sand.	0-0.7
Brown fine grained sand mixed with brown native fines.	0.7-4.6
Brown silt and clay.	4.6-5.2
Total Depth	5.2'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
112C	R0010439	6' Acrylic	N: 559736.29' E: 2447802.96'	20.3'	11:02

Deviations encountered:

Core Description	Interval (ft)
Light brown medium and coarse grained sand.	0-0.3
Medium and fine grained sand, brown, mixed with brown native fines.	0.3-5.6
Total Depth	5.6'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
111B	R0010440	6' Acrylic	N: 559758.28' E: 2447675.48'	1.5'	11:23

Deviations encountered:

Core Description	Interval (ft)
Brown medium grained sand.	0-0.7
Medium and fine grained sand with native fines and clay. Orange/brown.	0.7-4.9
Total Depth	4.9'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
100D	R0010441	6' Acrylic	N: 559136.98' E: 2446447.26'	6.8'	13:30

Deviations encountered:

Core Description	Interval (ft)
Medium and coarse grained orange sand.	0-2.7
Orange sandy clay.	2.7-3.6
Total Depth	3.6'

TVA JACOBS

Vibecore Documentation

Date: 04/05/2010 Weather: Mostly Sunny Location: Above Segment 5
River Flow: 961cfs River Elevation: 738.58'
Crew: E. Arnold, J. Mullins, S. Whittier

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
104-D	R0010442	6' Acrylic	N: 559126.99' E: 2446932.08'	5.4'	10:57

Deviations encountered:

Core Description	Interval (ft)
Orange sandy clay loam	0.0-2.0
Total Depth	2.'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
103-D	R0010443	6' Acrylic	N: 559128.21' E: 2446818.21'	5.8'	12:03

Deviations encountered:

Core Description	Interval (ft)
Orange sandy clay loam	0.0-2.2
Total Depth	2.2'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
102-D	R0010444	6' Acrylic	N: 559117.5' E: 2446682.29'	3.5'	12:21

Deviations encountered:

Core Description	Interval (ft)
Orange sandy clay	0.0-3.5
Total Depth	3.5'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
101-D	R0010445	6' Acrylic	N: 559125.31' E: 2446573.27'	11.8'	12:40

Deviations encountered:

Core Description	Interval (ft)
Orange coarse sand with trace cenospheres	0.0-0.1
Brown fine sand with fines	0.1-1.0
Coarse brown sand	1.0-3.4
Orange coarse sand	3.4-4.1
Total Depth	4.1'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
111B-1	R0010446	6'Acrylic	N: 559649.89' E: 2447633.95'	14.4'	13:35

Deviations encountered:

Core Description	Interval (ft)
Orange coarse sand	0.0-0.9
Brown fine sand with fines	0.9-5.1
Orange sandy clay	5.1-5.5
Total Depth	5.5'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
112C-1	R0010447	6' Acrylic	N: 559649.33' E: 2447814.1'	29.1'	14:05

Deviations encountered:

Core Description	Interval (ft)
Coarse brown sand	0.0-0.3
Sand with trace ash (<50%)	0.3-0.8
Brown mixed sand and fines	0.8-2.0
Total Depth	2.'

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time
117-C	R0010448	6' Acrylic	N: 560023.44' E: 2448305.86'	33.4'	14:40

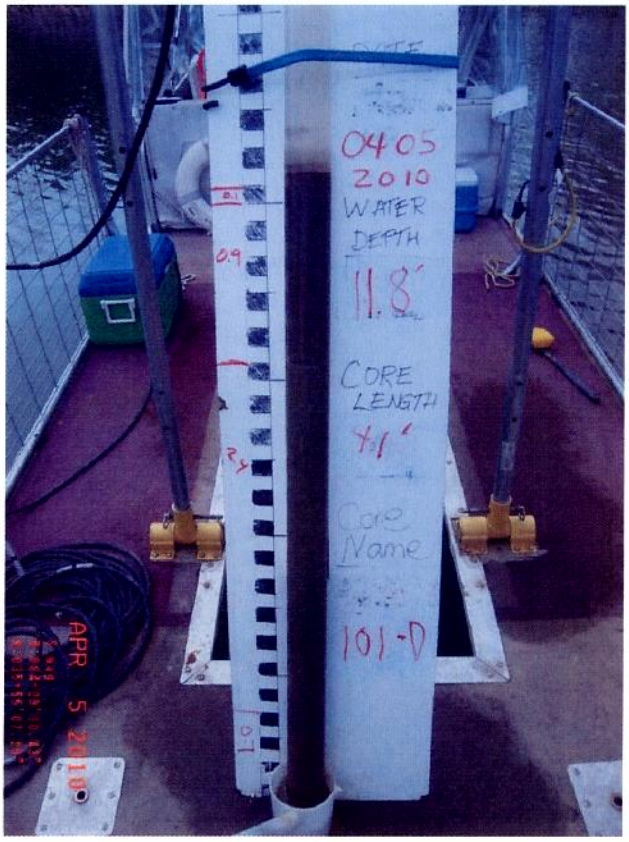
Deviations encountered:

Core Description	Interval (ft)
Ash (>50%)	0.0-3.5
Brown native fines	3.5-4.2
Total Depth	4.2'

Vibecore Sampling Photos

Above Segment 5 Dredge Areas D-100 to D-104

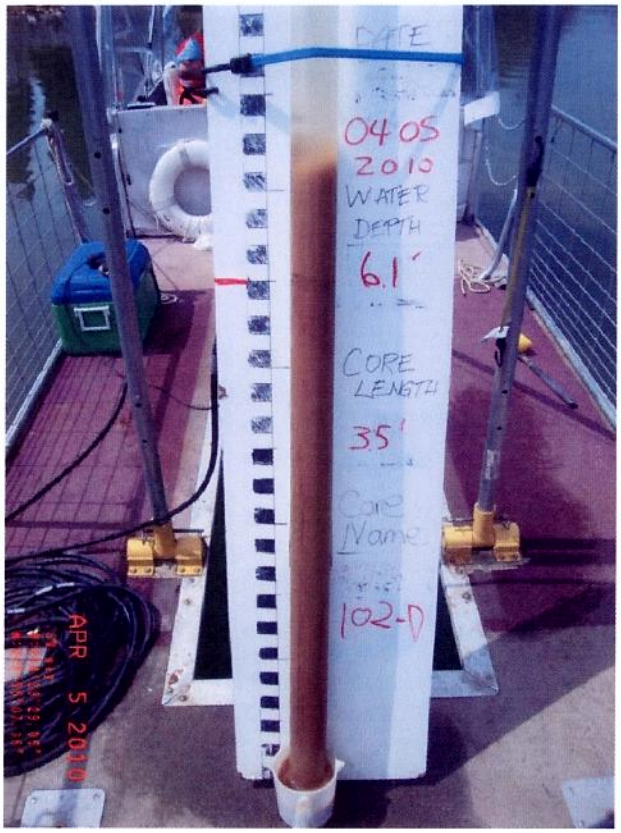
Core D-100
Total core depth =3.6'
Ash thickness = 0.0'
Water depth = 6.8'



Core D-101
Total core depth = 4.1'
Ash thickness = 0.0'
Water depth = 11.8'

Vibecore Sampling Photos

Above Segment 5 Dredge Areas D-100 to D-104

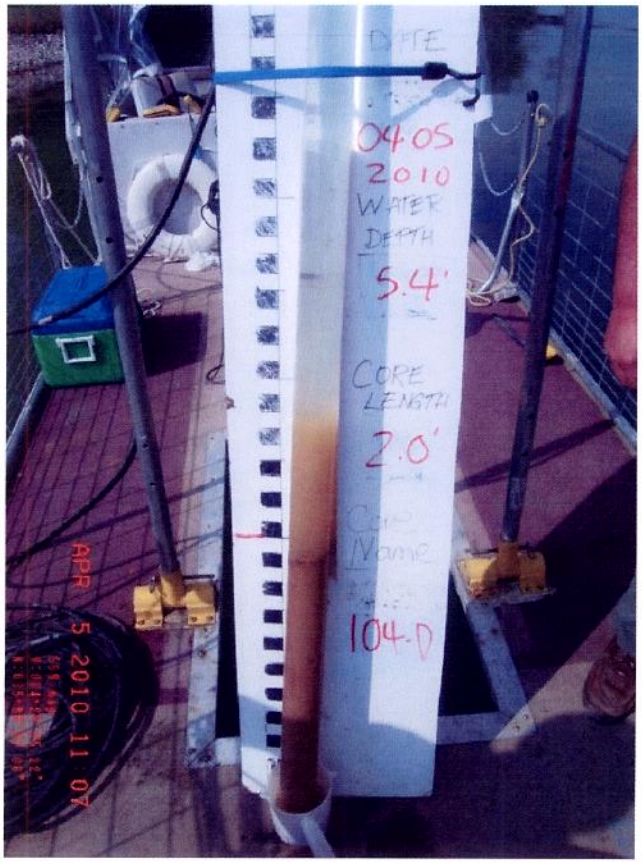


Core D-102
Total core depth =3.5'
Ash thickness = 0.0'
Water depth = 3.5'

Core D-103
Total core depth = 2.2'
Ash thickness = 0.0'
Water depth = 5.8'

Vibecore Sampling Photos

Above Segment 5 Dredge Areas D-100 to D-104



Core D-104
Total core depth =2.0'
Ash thickness = 0.0'
Water depth = 5.4'