

Time-Critical Concurrence

Area: Emory River, Segment East of Dike 2, Grids 29C1, 29D1, 29E1, 30C1, and 30D1
Agreement: <p>Ash removal activities have been completed in Segment East of Dike 2, Grids 29C1, 29D1, 29E1, 30C1, and 30D1.</p> <p>These grids were aligned along the berms bounding the clean water ditch that was installed to allow runoff drainage to the Emory river without transporting additional ash to the river. Hydraulic ash removal of the berms and underlying ash to native sediment was initiated by the Addison on June 4th and completed on June 12, 2010. The bathymetric survey completed on June 17 2010 indicates that there was significant removal of recoverable ash, but shows ash remaining to the Pre-Spill surface averaging 1.5 foot in depth.</p> <p>A review of the Addison dredge control screen prints indicates that dredging to the dredge to surface was achieved (representative logs attached). However because the bathymetric survey indicated material was left behind above the dredge-to surface, vibecore samples were taken. The vibecore samples confirmed the bathymetric results.</p> <p>The Addison eTrack equipment accuracy of detecting cut elevations was calibrated and confirmed by determining the water elevation with the cutterhead position. The equipment is accurately reading elevations.</p> <p>Estimation of the ash left behind in these grids is 2,300 cy. The ash is most likely a result of re-suspension from removing the berms. The yardage is less than 10% of that dredged, meeting the intent of the time critical dredge plan. Additional re-suspension is possible during non-time critical removal actions. This area will be re-characterized after the next phase. Discussions among the three agencies reached agreement to leave this small amount of ash behind.</p>
Attachments: Figure 1, Pre-Spill Surface, dated 6/07/10 Figure 2, Ash Remaining through Severson 06-20 Survey, dated 6/21/10 Figure 3, VibeCore Concurrence Sampling Results – Segment East of Dike 2, dated 6/28/10 Vibecore Sediment Sampling: Data Summary, Logs, and Photos Daily Dredge Logs and eTrack Control Screen Prints, Addison shifts: 6/05/10 Night, 6/06/10 Night, 6/08/10 Night, 6/09/10 Day & 6/11/10 Night
Concurrence Comments:

Julia L. Puff
Jacobs Project Manager

6/29/10
Date

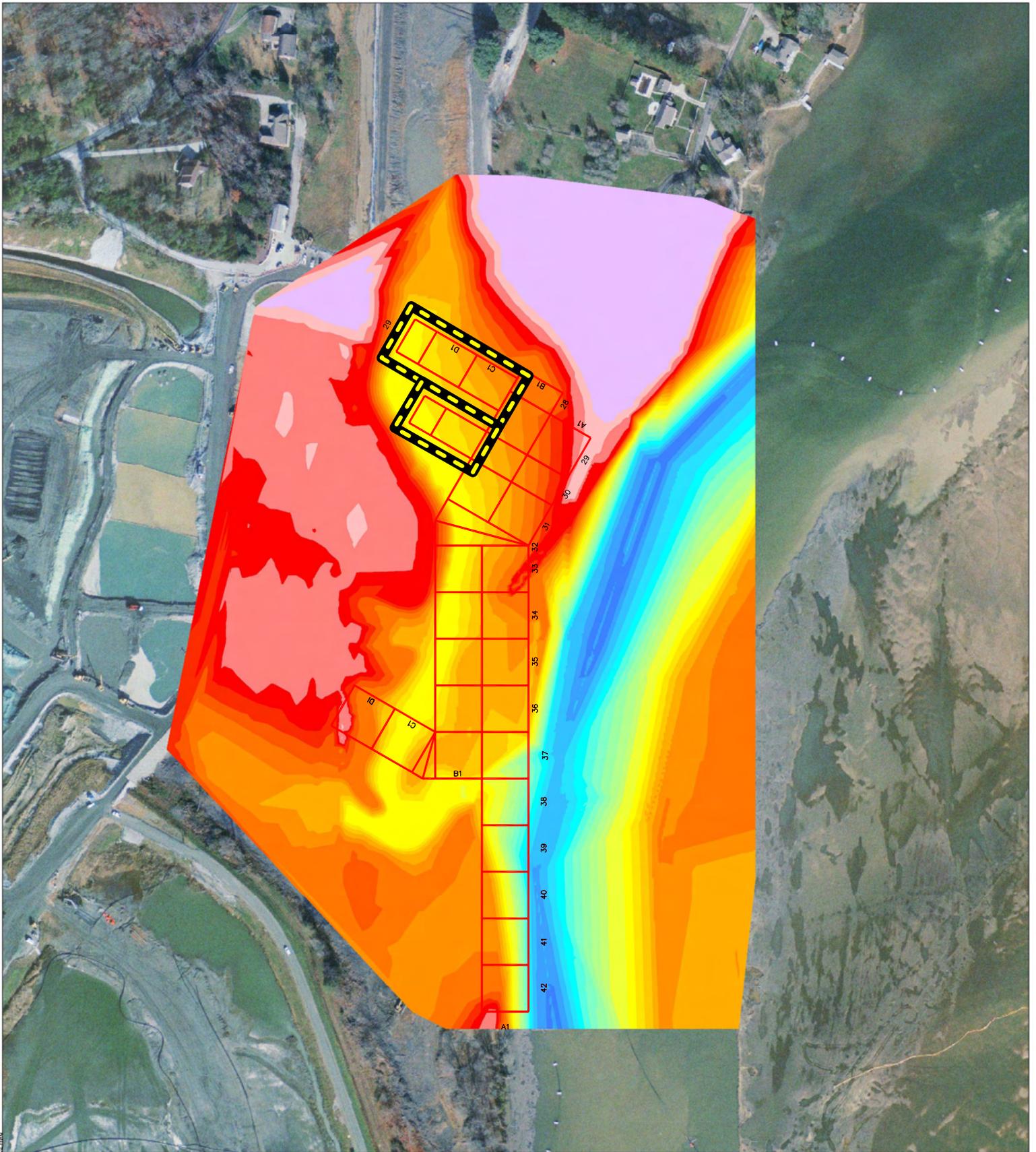
Kathryn Nash
Tennessee Valley Authority

6/30/10
Date

Leo F. ...
U. S. Environmental Protection Agency

6/30/10
Date

consulted w/ TDEC



Y:\TVA\Bawad\2010\40070100627\Acad\555embayment_etrac2.mxd

Legend

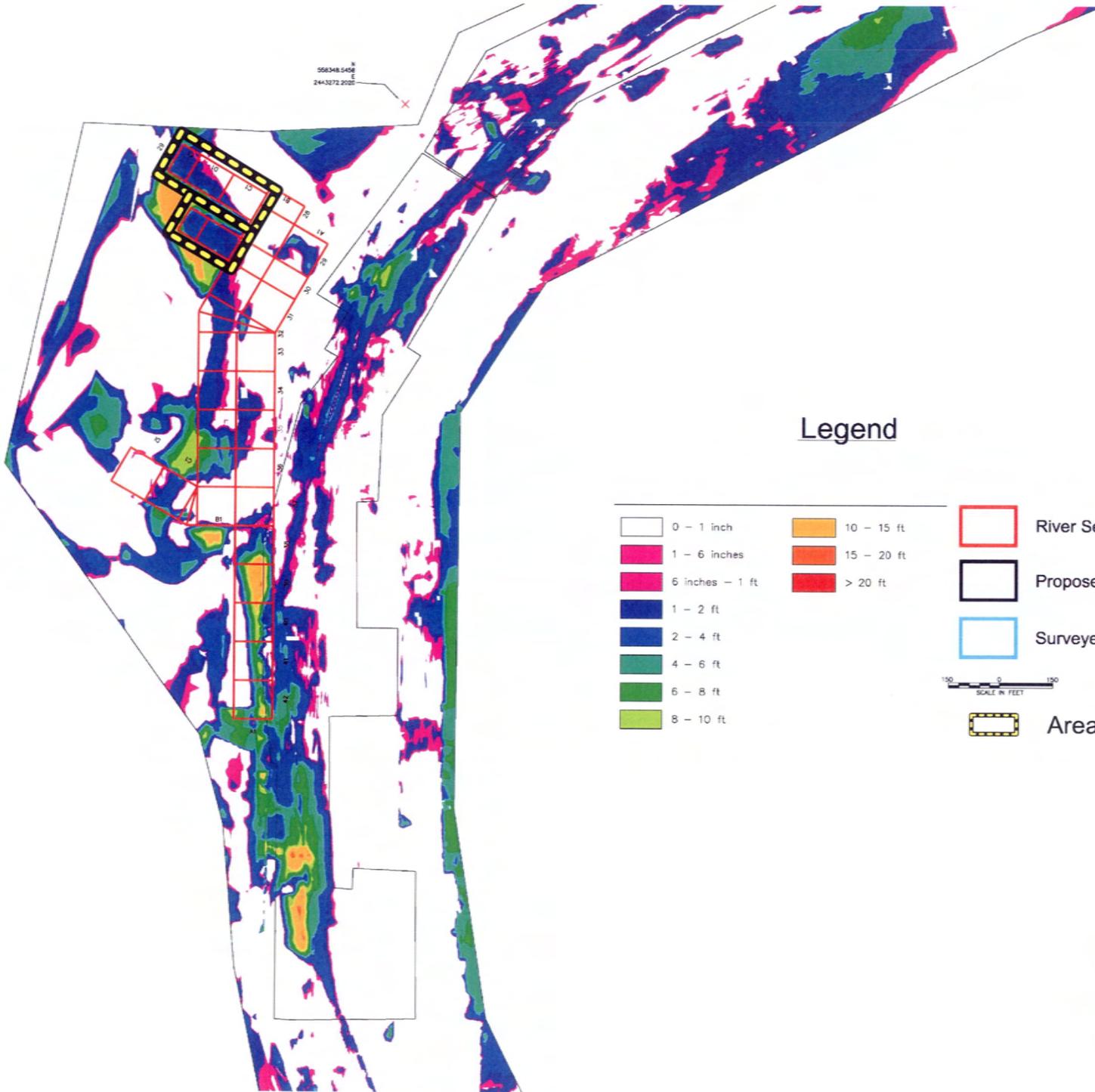
Pre-Spill Elevation Feet (ft)	728 - 728	702 - 704	Dredge Grid for Segments 1,2,3 & 5
746 - 746	724 - 726	700 - 702	Dredge Grid for Embayment Area
744 - 744	722 - 724		
742 - 744	720 - 722		
740 - 742	718 - 720		
738 - 740	716 - 718		
736 - 738	714 - 716		
734 - 736	712 - 714		
732 - 734	710 - 712		
730 - 732	708 - 710		
728 - 730	706 - 708		
	704 - 706		

Area of Interest



ETRAC/Pre-Spill Surface

NAME: crosbie DATE: 08/07/2010	Figure 1
-----------------------------------	----------

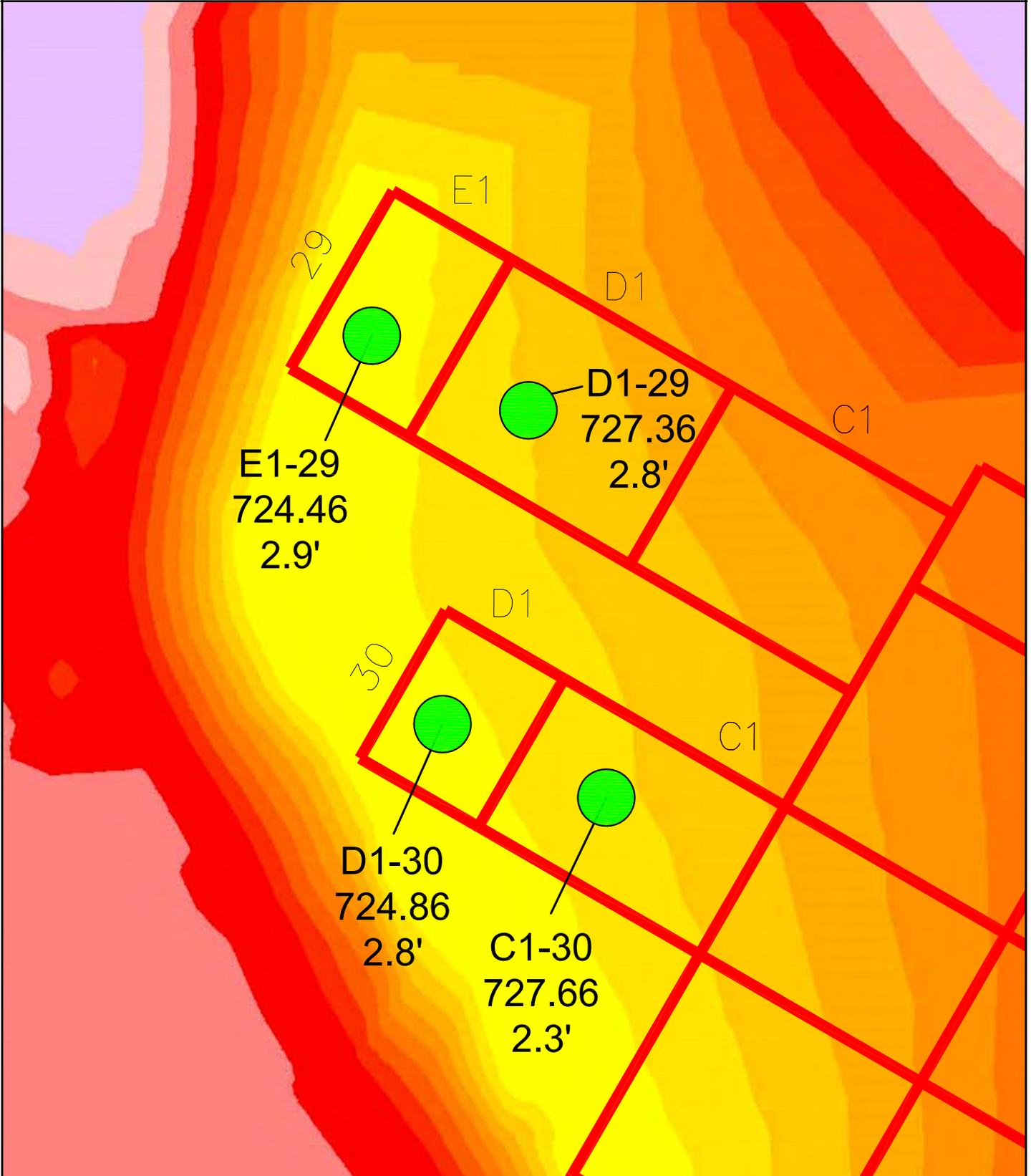


Legend

- | | | |
|-----------------|------------|-----------------------|
| 0 - 1 inch | 10 - 15 ft | River Segments |
| 1 - 6 inches | 15 - 20 ft | Proposed Dredge Areas |
| 6 inches - 1 ft | > 20 ft | Surveyed Areas |
| 1 - 2 ft | | |
| 2 - 4 ft | | |
| 4 - 6 ft | | |
| 6 - 8 ft | | |
| 8 - 10 ft | | |
| | | SCALE IN FEET |
| | | Area of Interest |

ASH REMAINING THROUGH SEVENSON 06-20 SURVEY	
TVA DREDGING OF THE EMORY RIVER AND ASH PROCESSING HARRIMAN, TN	
SEVENSON ENVIRONMENTAL SERVICES, INC.	
DRAWING	DATE: 06/21/10
Figure 2	DRAWN BY: CM
	CHECKED BY:
	CAD FILE: volume remaining_0620_N
	SCALE: 1:400

VibeCore Concurrence Sampling Results - East of Dike 2



-  Ash Recovered
-  No Ash Present

VibeCore Label Format:
Core Number
Sediment Elevation
Ash Thickness (ft)



JACOBSTM

06/28/10

Figure 3



Vibecore Documentation

Date: 06/23/2010 Weather: Sunny High Temp around 96 degrees Location: Inside D 2 Embayment
 River Flow: 161 cfs River Elevation: 740.76'
 Crew: Mark Greer, Greg Schwartz, Tom Touzeau

Core #	Photo #	Tube Type	Core Coordinates	River Depth	Time	Core Description	Interval (ft)
C1-30	R0010665	Acrylic	N: 557960.65' E: 2442721.48'	10.8'	11:36	Ash >50%	0-2.3
Deviations encountered: Refusal met.						Slag mixed with Ash mixing with sediment >50%	2.3-2.6
						Total Depth	2.6'
D1-30	R0010666	Acrylic	N: 557992.91' E: 2442649.61'	13.1'	11:56	Ash >50%	0-2.6
Deviations encountered: Refusal met.						Silty Clay fines with fine sands Grey in color <20% Ash	2.6-3.5
						Total Depth	3.5'
D1-29	R0010667	Acrylic	N: 558130.58' E: 2442687.3'	10.6'	12:06	Ash >50% with varying consistency	0-2.8
Deviations encountered: Refusal met.						Brown Sandy clay - no ash	2.8-3.3
						Total Depth	3.3'
E1-29	None	Acrylic	N: 558163.34' E: 2442618.63'	13.4'	12:16	Ash >50%	0-2.9
Deviations encountered: Refusal met.						Brown/Red fines with large chunks of Organic Materials	2.9-3.2
						Total Depth	3.2'

Vibecore Sampling Photos

Segment East of Dike 2 Dredge Areas C1-30,D1-29/30,E1-29



Core C1-30

Total core depth = 2.6'

Ash thickness = 2.3'

Water depth = 10.8'



Core D1-30

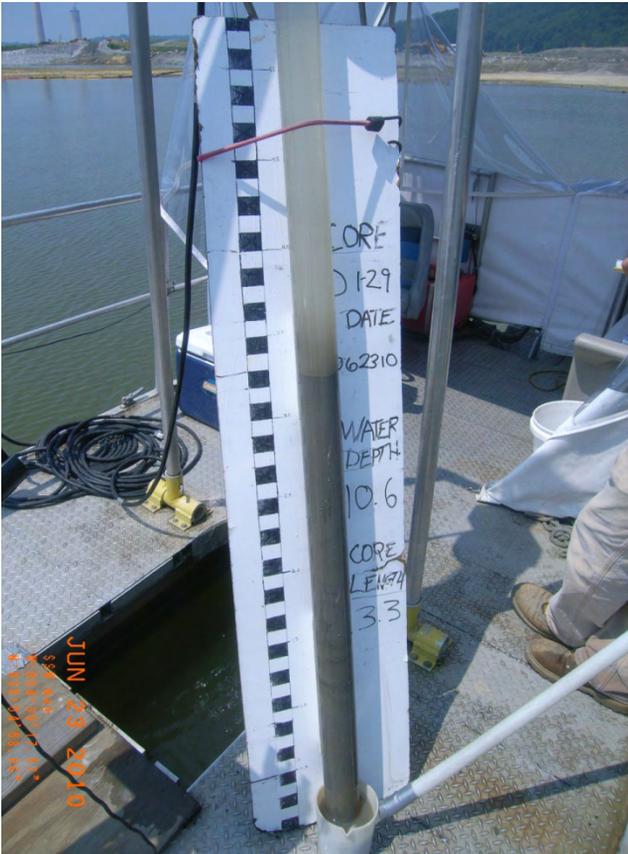
Total core depth = 3.5'

Ash thickness = 2.6'

Water depth = 13.1'

Vibecore Sampling Photos

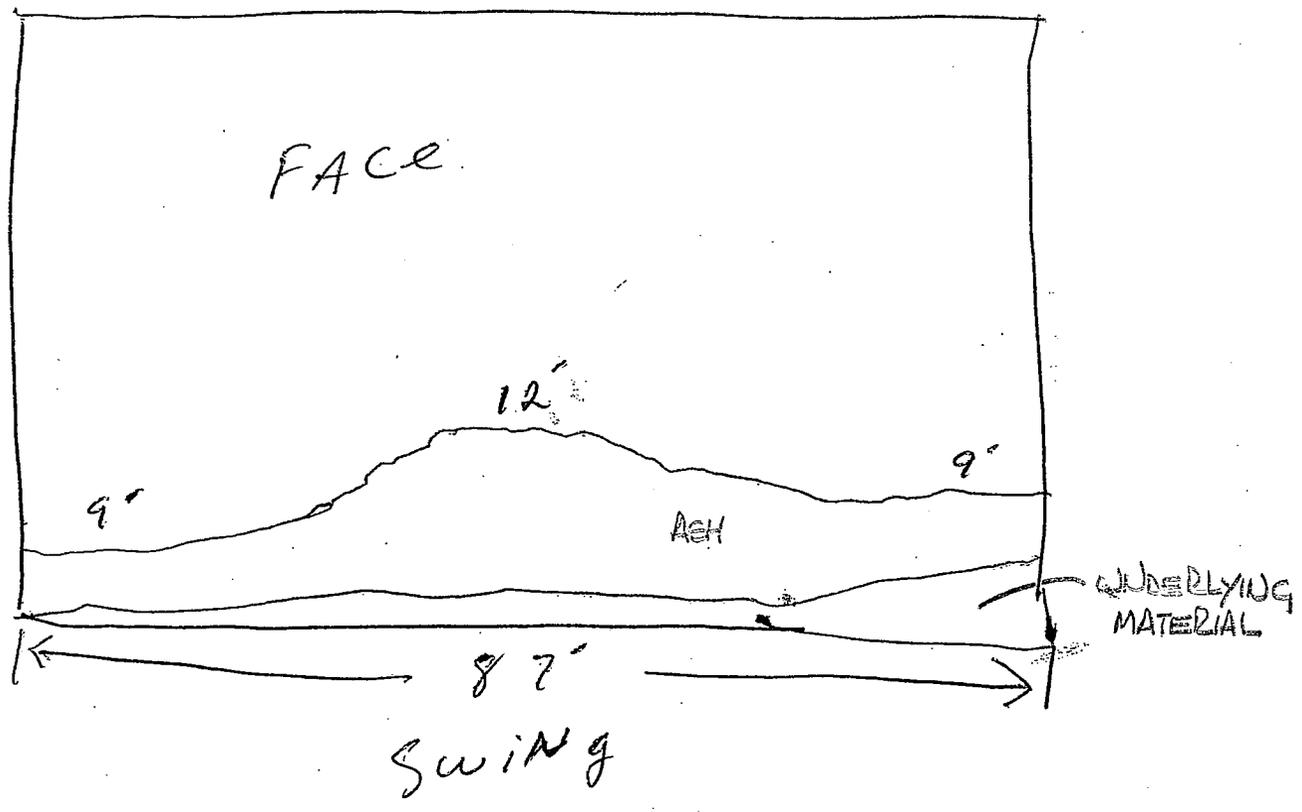
Segment East of Dike 2 Dredge Areas C1-30,D1-29/30,E1-29



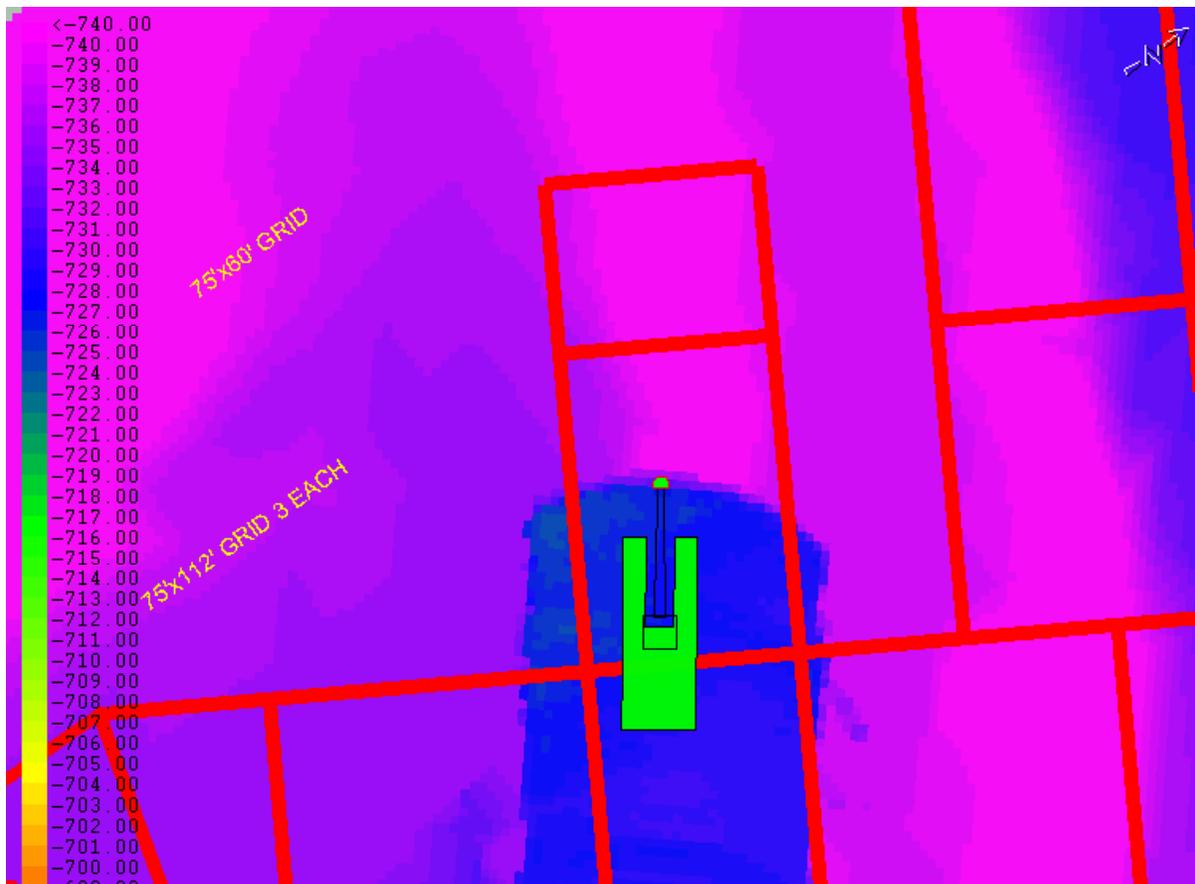
NO PHOTO

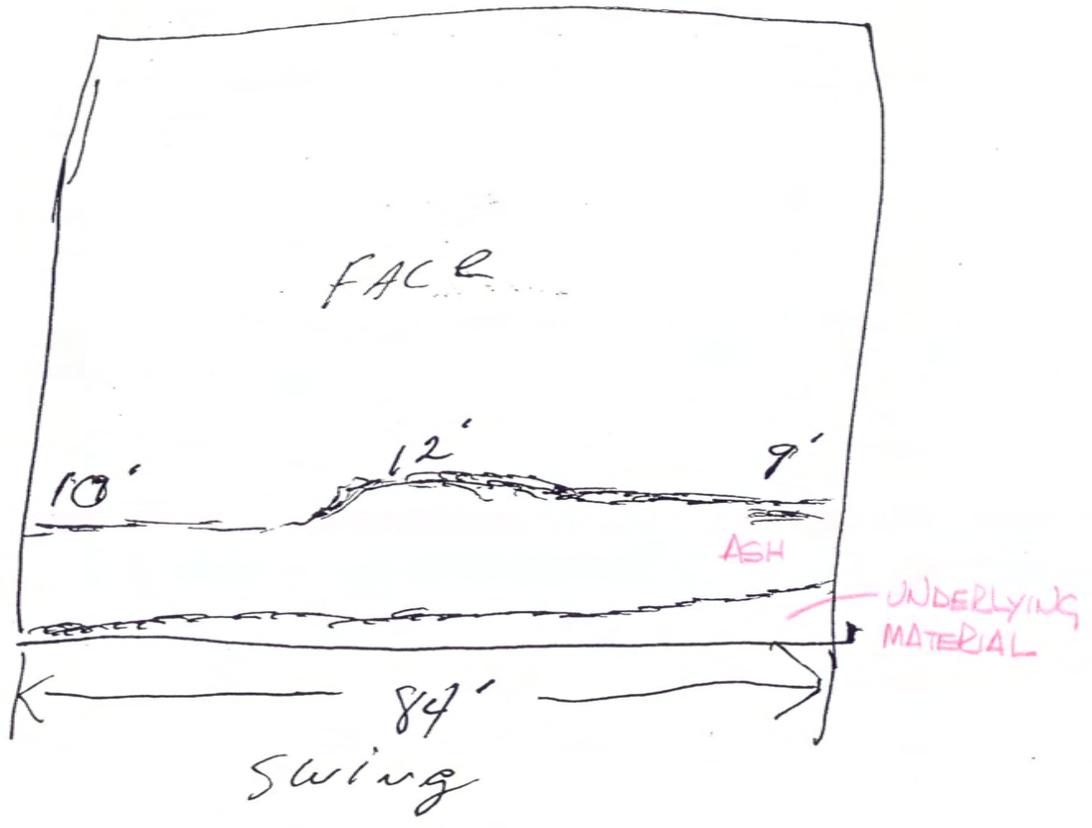
Core D1-29
Total core depth = 3.3'
Ash thickness = 2.8'
Water depth = 10.6'

Core E1-29
Total core depth = 3.2'
Ash thickness = 2.9'
Water depth = 13.4'

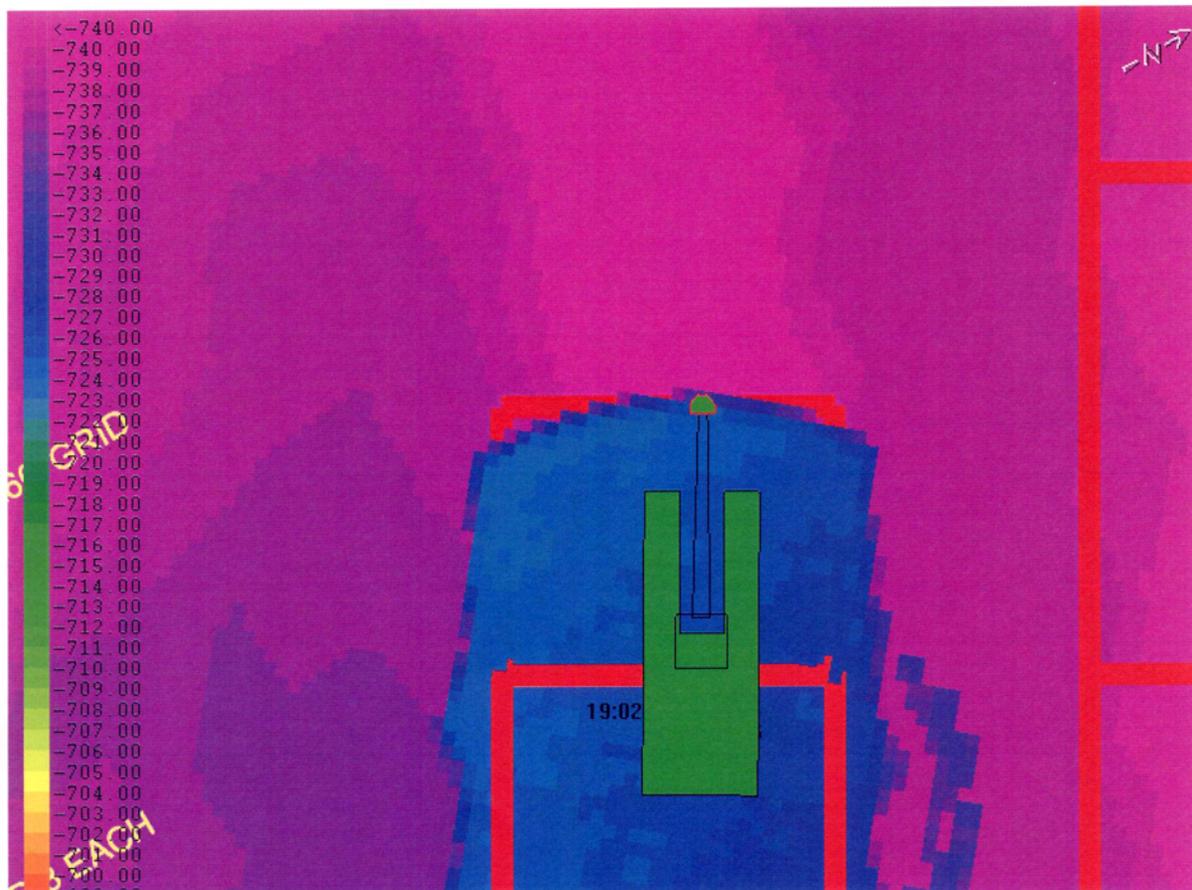


Addison eTrack Day Shift 6/05/10





Addison eTrack Night Shift 6/06/10





DAILY DREDGE LOG - TVA ASH REMOVAL

Dredge Addison #5

Day Tuesday

Date 6-8-10

Dredge Shift: nights

Hours: 1399

RAFAEL - Buddy

Start Time	Stop Time	Hours Dredge	Misc	Mech Down	Avg RPM	Avg Pressure	Operator	Reason for Stopping/Downtime
1900	1900	0-	100					Service Dredge
2000	2040	40	5					SHIFTED PORT ANCHOR
2045	2115	30	10					SHIFTED SHIFTED STB ANCHOR
2125	0435	7.10	.10					MOVE DOZER ON STRBD S/A
0445	0535	50	.05					MOVE PORT S/A
0540	0540 0545	05	15					Clean Cutter <Cable> 2" Steel Cable
0600	0610	10	15					EYE BROKE ON STRBD SPW @ DOZER
0625	0750	25	10					Washout - Clean pump <Rock>
		10 ⁰⁰	200					Total Hours

Conditions:

Initial Flyash Thickness _____ Ft

Vegetation Light Medium Heavy

Debris Light Medium Heavy

of Blockage Clears 2

Area Dredged: _____

Shift Start X 2592829 Shift End X 2442785

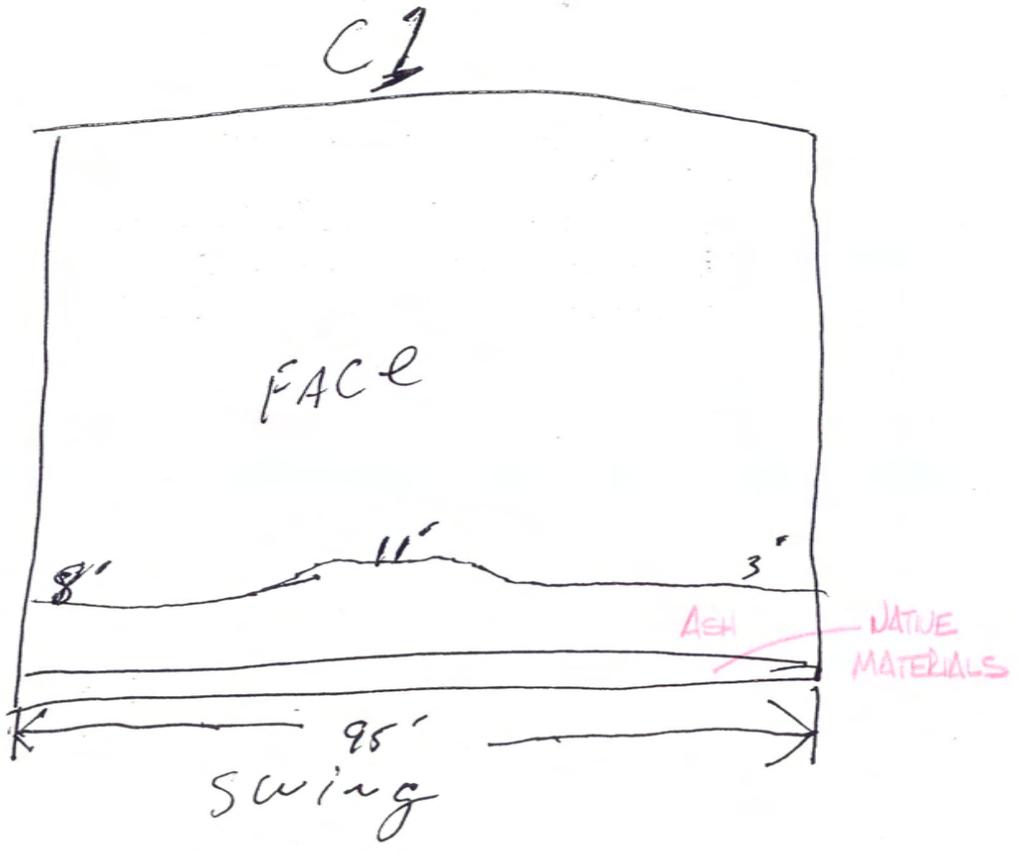
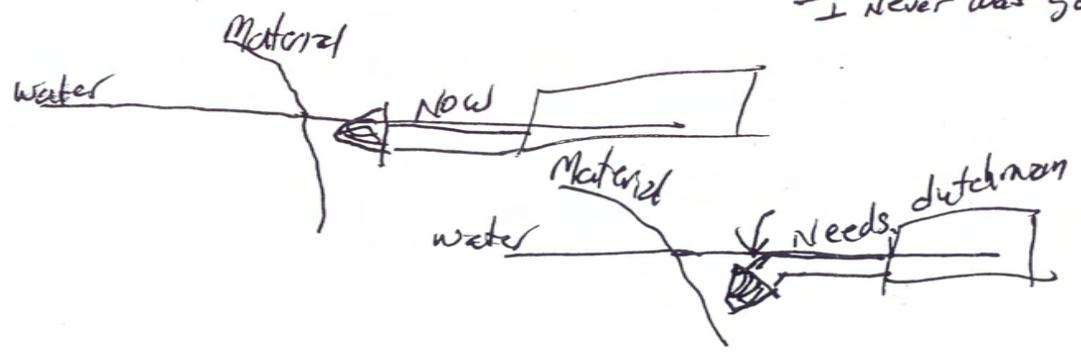
Y 558051 Y 558089

Tons Start _____ Tons End _____

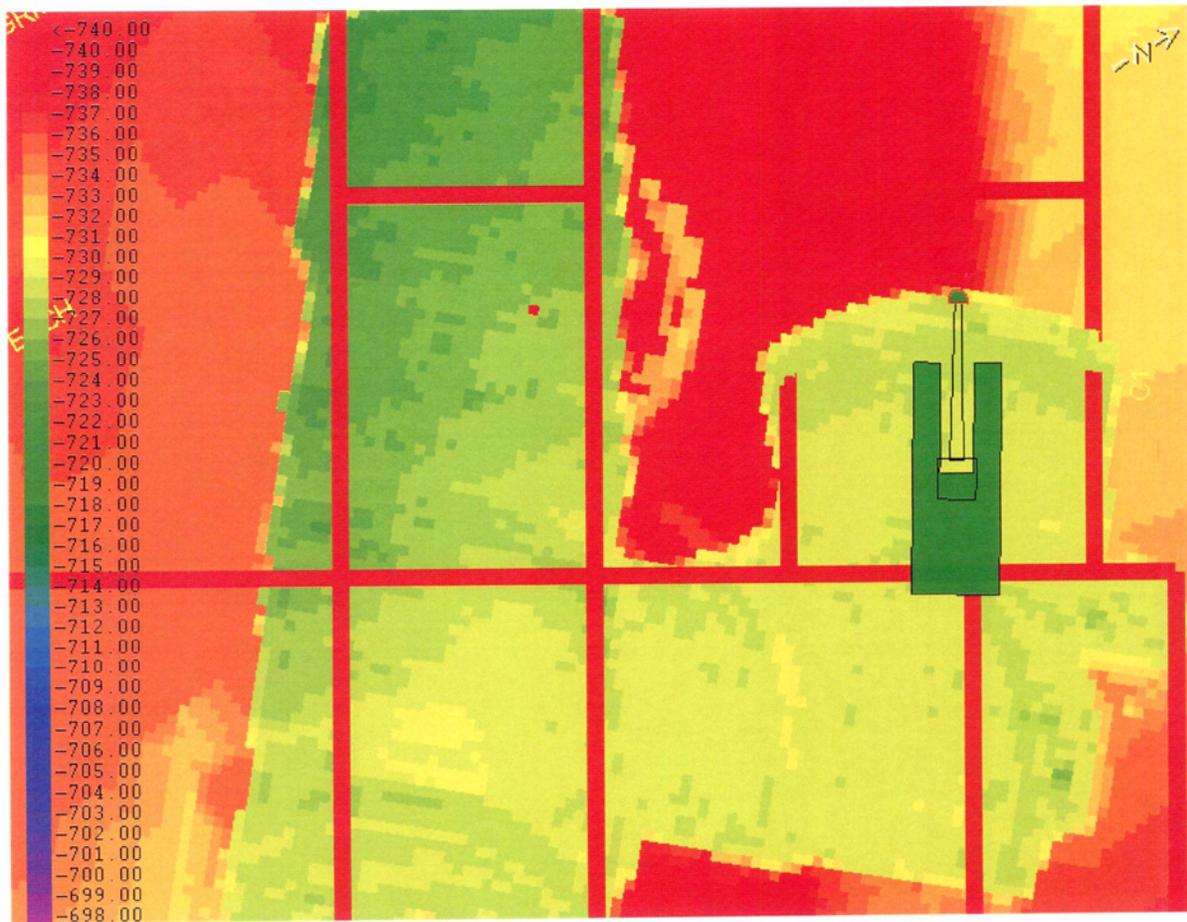
Comments: NOTE! FIRST 4' of material is extremely slow & difficult to cut for the following reason. From 1' above water surface to 4' below water surface the material is compacted clay from previous levy. Addisons ladder is straight with no Dutchman leaving only the back 1/3 of cutter try to dig clay (see reverse picture). For future reference - H&Eo material from surface to at least 8' needs a Dutchman for productive yardage! Buddy

[Signature] 06-21-10

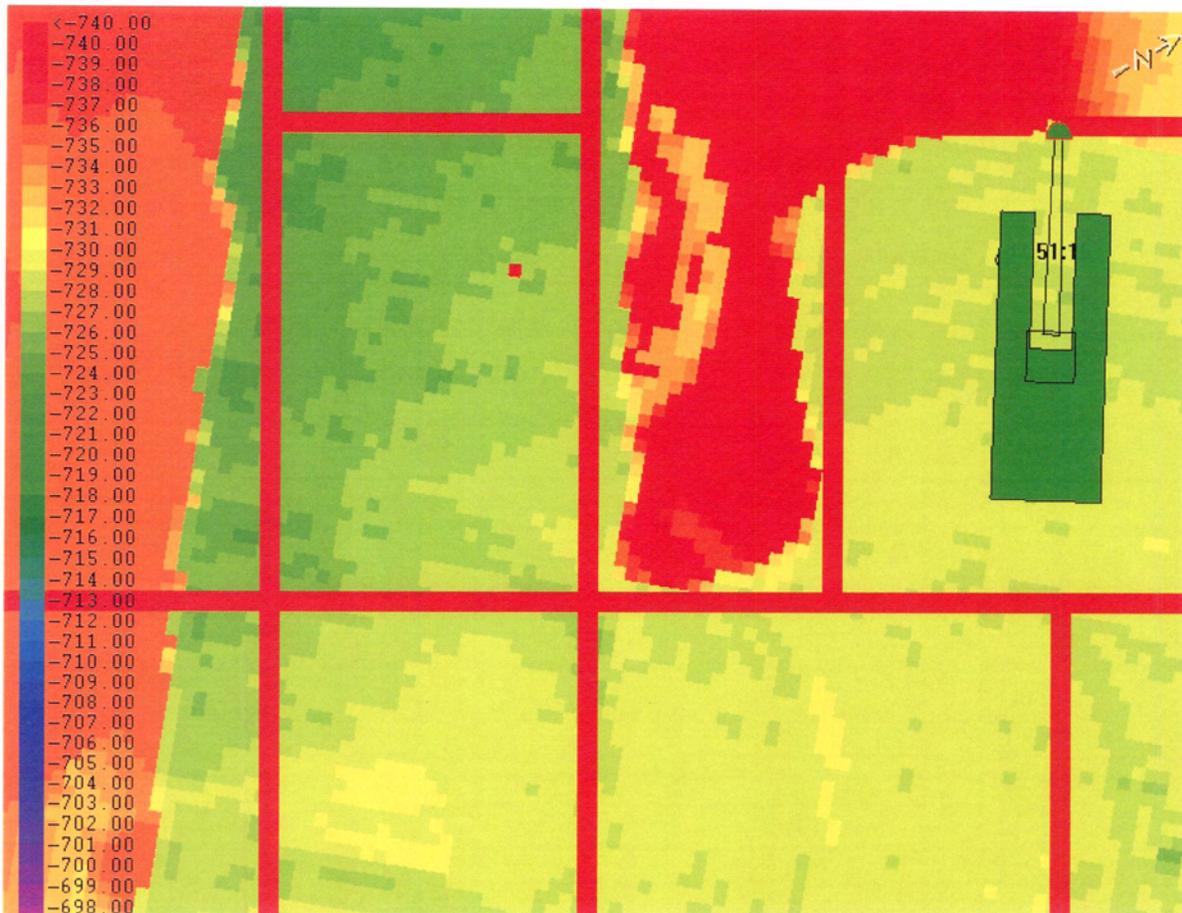
I never was good @ ART.

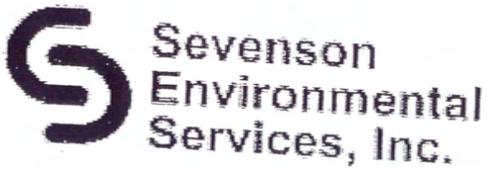


Addison eTrack Night Shift 6/08/10



Addison eTrack Day Shift 6/09/10





DAILY DREDGE LOG - TVA ASH REMOVAL

Dredge Addison #5

Day FRIDAY

Date 6-11-10

Dredge Shift: NIGHTS

Hours: 1460

RAFAEL

Start Time	Stop Time	Hours Dredge	Misc	Mech Down	Avg RPM	Avg Pressure	Operator	Reason for Stopping/Downtime
1900	1900	-0-	600					
2000	2140	140	10					service dredge.
2150	2250	100	15					Rock Box
2305	0030	125	10 ^{F3V}					Rock Box
0040	0400	320	20					Rock Box
0400	0435	-0-	10					Rock Box
445	500	15	25					move Anchors wire pulled out of stop wire
525	610	35 ^{2/15}	20					moving pipe for stacks
620	0700	40						Rock Box
								Shift change
								HEAVY LUMPY W/ MUD. INSIDE
								ANY OTHERS. DATE 6/11/10
		9:20	2:40					
							Total Hours	<u>12</u>

Conditions:

Initial Flyash Thickness 8 Ft

Vegetation Light

Medium Heavy

Debris Light

Medium Heavy

of Blockage Clears 5

Area Dredged: D-1

Shift Start X 2492627 Shift End X 2492601

Y 558182 Y 558194

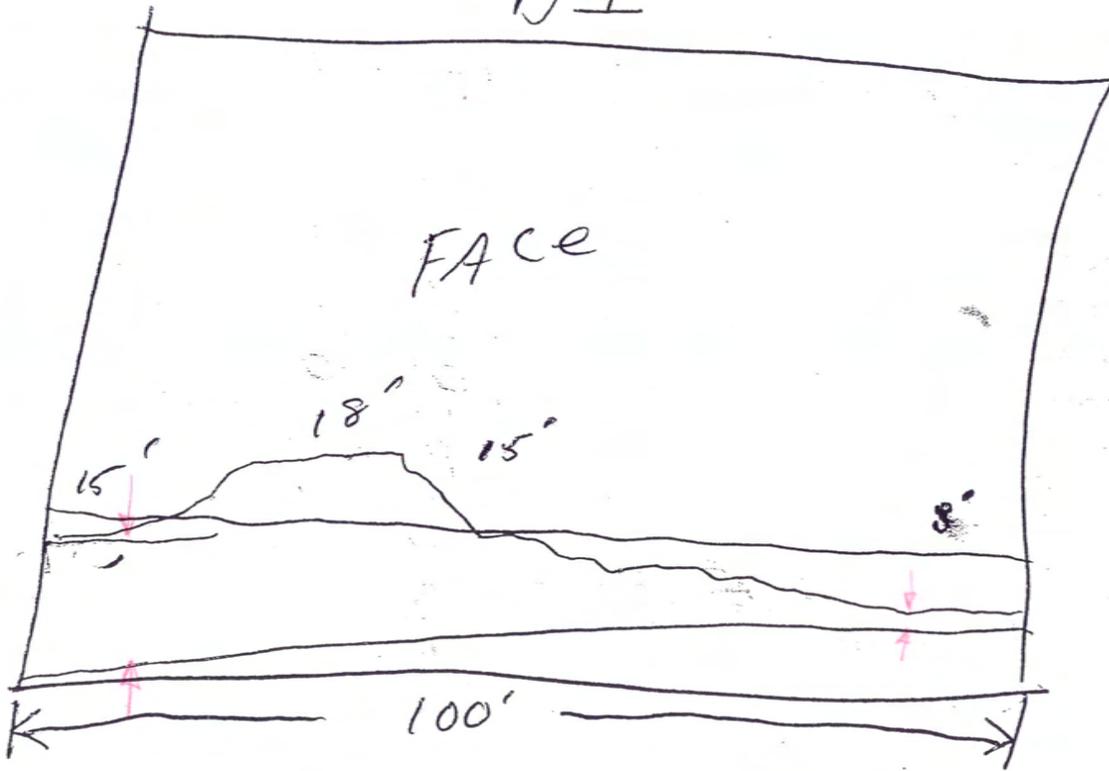
Tons Start _____ Tons End _____

Comments: Replaced 6 Teeth on cutler Head

6/4/10

Addison
Night Shift
Khan 6/14/10

01



Addison eTrack Night Shift 6/11/10

