KINGSTON FOSSIL PLANT
REPLACE KENNEDY WEIR
TOTAL PROJECT ESTIMATE

Estimate Number	05290	**Option:** 0	**PCN Number:**	KIF531
Plant:	KIF	**Revision:** 0	**Estimate Type:**	Detailed
Cost Engineer:	C. l. TONEY	**Unit #:**	**Estimate Accuracy:**	+/- 10%
Requesting Engr:	S. M. Haber	**Phase:** 3	**Estimate Issue Date**	03/02/2005

	Hours	Dollars
Phase I		
Engineering		$0
Partner (Non-Manual)		
Other / Sunk Cost		$29,457
Total Phase I		***$29,457***
Phase II		
Engineering		$0
Long Lead Procurement		$0
Partner (Non-Manual)		
Other / Other Organizations		$0
Total Phase II		***$0***
Phase III		
Construction (Partner)		
Permanent Material		$112,375
Labor (T&L)	6,325.37	$175,607
Labor (Non-Manual)	760.00	$38,000
Equipment		$64,767
Subcontracts		$5,000
Partner Fee		$10,680
Partner Insurance		$6,408
Escalation		$0
Construction Risk Dollars		$0
Other		$11,010
Total Construction Cost		$423,847
Engineering		$19,008
Direct plant support + TVA Other Costs		$0
Project Risk Dollars		$17,688
Other / Plant Support		$10,000
Total Phase III		***$470,543***
All Phases		
Construction Partner	7,085.37	$423,847
Long Lead Procurement		$0
Engineering		$19,008
Other / Sunk Cost		$29,457
Other / Plant Support		$10,000
Total Risk Dollars		$17,688
Total Project Costs	**7,085.37**	**$500,000**
For Information only Total Environmental		**$0**
For Information only Total Demolition Costs		**$0**

03/01/2005 10:22:31 AM

KINGSTON FOSSIL PLANT
REPLACE KENNEDY WEIR
TOTAL PROJECT ESTIMATE

Project name	KIF/05290/REPLACE WEIRS
Engineer	Stan Haber
Estimator	C. I. TONEY
Labor rate table	KIF 40 2005
Equipment rate table	TVA Equipment
Project	Sitework
Plant	KIF
Estimate #	05290
PCN #	KIF531
Requesting Engr	S. M. Haber
Option	0
Revision	0
Phase	3
Estimate Type	Detailed
Estimate Accuracy	+/- 10%
Est. Issue Date	03/02/2005
Funding Type	Capital
Outage(Y/N)	N

Notes

Basis of Estimate

Scope of work based on preliminary TVA design drawings (10W425-24, 70, 77, 78, 79, and 80) and conversations with Dan Smith, Parsons E & C. Construction quantities are based on provided drawings and quantities sheet provided by engineering.

Project Work Schedule

*All work based on a forty hour week. Overtime is not included in this estimate.
*Construction activities: 4 x 10's
*Anticipated project duration: 36 workable shifts

Note

1. Additional cost shall be incurred by others if excavation encounters solid rock and cannot be removed by conventional means.
2. Approval will be required by engineering for plugging existing weirs. Plug material/grout is based drawing notes, but notes do not detail exact material.
3. Construction drawings should include more detailed dimensions of weir elevations (including existing), dike locations, and weir location.
4. The allowance for the turbidity curtain is based on a standard 200' curtain. Additional cost may be incurred by others if specialized material is required.

Report format	Sorted by 'Location/Activity'
	'Detail' summary

Location	Activity	Description	Takeoff Quantity	Labor Productivity	Labor Quantity	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount
1												
	Erosion Controls		300.00 lf	0.069	20.57 mh	519	148	-	93	-	2.53	760
		Erect Silt Fence			20.57 hrs	519	148		93			760
		Erosion Controls			*20.57 hrs*	*519*	*148*		*93*			*760*
		01										
2												
	Kennedy Weir Replace											
		Grout Seal Existing Drains From Kennedy Weir	35.00 cy	4.114	144.00 mh	3,797	2,640	-	1,084	-	214.91	7,522
		Ash Fill (Dike)	10,500.00 cy	910.000	11.54 cd	32,824	-	-	22,847	-	5.30	55,671
		Dewatering (2 each)	1.00 ls	50.000	50.00 cd	21,460	-	-	6,250	-	27,710.00	27,710
		Cut For 36" Diameter RCP And Weirs	1,237.00 cy	0.200	247.40 mh	6,189	-	-	3,093	-	7.50	9,282
		Bedding For 36" RCP Storm Drain Pipe	165.00 ton	0.500	82.50 mh	2,064	1,518	-	275	-	23.38	3,857
		Fill For 36" Diameter RCP Storm Drain Pipe	415.00 cy	0.320	132.80 mh	3,322	-	-	3,222	-	15.77	6,544
		Standard TVA Weir Structures	5.00 ea	254.105	1,270.52 mh	33,840	35,000	-	5,500	-	14,868.03	74,340
		36" Diameter RCP Storm Drain Pipe	700.00 lf	0.889	622.22 mh	15,770	35,031	-	3,743	-	77.92	54,544
		Concrete Anti Seep Collar With Water Stop	5.00 ea	3.125	15.63 mh	437	588	-	40	-	212.93	1,065
		Balloons For 36" Diameter Pipe Installation	5.00 ea	4.800	24.00 mh	573	13,500	-	95	-	2,833.54	14,168
		Pipe Bollards, 6" Dia Concrete Filled (Embedded In 4' x 1.5' Concrete)	2.00 ea	6.000	12.00 mh	300	500	-	100	-	450.10	900
		5/8" Eye Bolts With Nut And Washer	2.00 ea		-	-	20	-	-	-	10.00	20
		Steel Pipe Supports (Galvanized Angle 3x3x1/4@5' length)	58.00 ea	1.103	64.00 mh	2,052	725	-	230	-	51.84	3,007
		1/2" U-Bolts With Nut And Washer	58.00 ea		-	-	174	-	-	-	3.00	174
		4" Dia Steel Pipe Galvanized	595.00 lf	1.231	732.45 mh	25,257	7,438	-	6,639	-	66.11	39,333
		Pipe Insulation (For Both Steel & HDPE Pipe)	680.00 lf	0.200	136.00 mh	4,690	5,460	-	1,233	-	16.74	11,383
		4" Dia HDPE IPS DR 11 (Solid Wall)	85.00 lf	0.308	26.16 mh	902	1,063	-	237	-	25.90	2,202
		4" Dia HDPE IPS DR 11 Sparger Pipe	80.00 lf	0.410	32.83 mh	1,132	1,000	-	298	-	30.37	2,429
		4" Dia Steel & HDPE Flanges	2.00 ea	5.500	11.00 mh	379	60	-	100	-	269.51	539
		Install Galvanized Grade 80 Alloy Steel Chain	145.00 lf	0.014	2.00 mh	43	1,220	-	-	-	8.71	1,263
		Install Galvanized Alloy Steel Pipe Clamps	14.00 ea	1.000	14.00 mh	483	140	-	63	-	49.02	686
		Ash Cut (Dike)	2,333.00 cy	910.000	2.56 cd	5,309	-	-	2,218	-	3.23	7,527
		Install Turbidity Curtain	1,000.00 sf	1,000.000	1.00 cd	1,622	2,023	-	655	-	4.30	4,300
		(Nonwoven) Geotextile (Installed Underwater)	400.00 sy	0.040	16.00 mh	396	528	-	40	-	2.41	964
		D50 6" Riprap To Armor The New Ash Dike	360.00 tn	0.320	115.20 mh	2,990	3,600	-	1,818	-	23.36	8,409
		Remove 2 Section Of Wooden Walkway W/4' Rail On Each Side	120.00 sf	0.150	18.00 mh	457	-	-	194	-	5.43	651
		QA/QC For Construction Disposal	1.00 ls		-	-	-	5,000	-	-	5,000.00	5,000
		Kennedy Weir Replace			**5,987.80 hrs**	**166,288**	**112,227**	**5,000**	**59,973**			**343,489**
		02			*5,987.80 hrs*	*166,288*	*112,227*	*5,000*	*59,973*			*343,489*
xCONST FACILITY												
	Construct Facilities											
		Mobilize, Drug Test, Miscellaneous Other, & Demobilize	1.00 ls	317.003	317.00 mh	8,800	-	-	4,700	-	13,500.00	13,500
		Construct Facilities			**317.00 hrs**	**8,800**			**4,700**			**13,500**
		xCONST FACILITY			*317.00 hrs*	*8,800*			*4,700*			*13,500*
zNON MANUAL												
	Field General Expens											
		Phase 3 Non Manual	1.00 ls	760.000	760.00 mh	38,000	-	-	-	-	38,000.00	38,000
		Field General Expens			**760.00 hrs**	**38,000**						**38,000**
		zNON MANUAL			*760.00 hrs*	*38,000*						*38,000*

Estimate Totals

Labor	213,607		7,085.375	hrs		
Material	112,375					
Subcontract	5,000					
Equipment	64,767		2,923.113	hrs		
	395,749	395,749				
Small Tools Expense	2,846		0.450	$/hr	H	
Consumables & Expendables	7,024		4.000	%	C	
Office Supplies & Expense	1,140		3.000	%	C	
	11,010	406,759				
Partner Insurance (FY04)	6,408		3.000	%	C	
Partner Award Fee (FY04)	10,680		5.000	%	C	
	17,088	423,847				
FPG Proj Engr - Phase 3	2,520		0.847	% @ 42.00	A	60
FPG Civil Engr - Phase 3	2,100		0.706	% @ 42.00	A	50
Parsons Engr - Phase 3	10,800		2.117	% @ 72.00	A	150
FPG Proj Cntrl Cost - Phase 3	1,008		0.339	% @ 42.00	A	24
FPG Proj Cntrl Sched - Phase 3	1,008		0.339	% @ 42.00	A	24
FPG Engr Records - Phase 3	672		0.226	% @ 42.00	A	16
CAD Dwg Support - Phase 3	900		0.085	% @ ####	A	6
	19,008	442,855				
Phase 1 Other/Sunk Cost	29,457				L	
	29,457	472,312				
Phase 3 Other/Plant Support	10,000				L	
	10,000	482,312				
Project Risk	17,688				L	
	17,688	500,000				
	Total	*500,000*				

05290

Toney, Calvin L.

From: Haber, Stanley M.

Sent: Tuesday, March 01, 2005 8:11 AM

To: Baugh, James S.

Cc: Davis, Michael D; Lankford, Brian S.; Waldrep, Roger T.; Harless, J. Larry; Toney, Calvin L.; Smith, H. Michael; Franklin, Thomas; Lundy, Dennis L.; Long, S. Scott; Palmer, Patricia A.; Ward, Jeffrey L.

Subject: RE: Needs for KIF Projects Review Meeting: March 16, 2005

Steve,

Sorry about leaving you off of the distribution of my earlier email - my mistake.

As we discussed last Thursday, the project package for the Kennedy Weir needs to be revised and presented at this project review meeting due to the increase in project cost. Scott Long alludes to the revision requirements within the trailing email. The following items need to be completed:

1. A new cost estimate and summary sheet needs to be coordinated with Cost Estimating (Calvin Toney/Larry Harless).
2. The current CPJ needs to be revised to reflect the new cost estimate and level of estimate accuracy. Because this package was a minor project, some special steps need to be taken to ensure that we maintain the project history on this document. Trisch Palmer and Scott Long can provide you guidance on doing this on this.
3. The monthly cash flow forecast for FY05 needs to be revised once the cost estimate summary is complete (Tom Franklin will be able to help you with this).
4. The project schedule needs to be revised; your input on the phase 3 durations for installation need to be provided to Mike Smith. We will need your initials on a copy of the revised schedule for inclusion in the project package.
5. We can get Tom Franklin to generate a PA cover sheet once we complete items 1 through 4.
6. Once the PA cover sheet is completed, you can attach the remaining project package documents (the completed CEC and the Project Review Reformance Impact Checklist) and the package will be ready for signatures.

After we complete items 1 through 6, we will be ready for the project review meeting.

Sorry again about leaving you off of the earlier distribution. Please let me know if you have any other questions.

Stan

-----Original Message-----
From: Baugh, James S.
Sent: Tuesday, March 01, 2005 6:30 AM
To: Haber, Stanley M.
Subject: FW: Confirmation: KIF Projects Review Meeting: March 16, 2005

Stan,

What do you need from me and my group to support this meeting?

Thanks,

Steve

-----Original Message-----
From: Davis, Michael D
Sent: Monday, February 28, 2005 3:22 PM
To: Ward, Jeffrey L.; Baugh, James S.; Lankford, Brian S.
Subject: FW: Confirmation: KIF Projects Review Meeting: March 16, 2005

FYI

Michael D. Davis
Manager Yard Operations - Projects & Engineering
Office (423) 751 - 7864
Mobile (423) 240 - 7909
FAX (423) 751 -6701

-----Original Message-----
From: Haber, Stanley M.
Sent: Monday, February 28, 2005 12:31 PM
To: Deskins, Earl L; Knight, Patricia F.; Cowser, Daniel J.; Rehberg, Robert L.; Hilton, Susan O.; Tolliver, Sherry D.; Nale, Leslie W.; Nelson, Gary R.; Coffman, Lewis A.
Cc: Halicks, David R.; Marcum, Mark T.; Waldrep, Roger T.; Lundy, Dennis L.; Long, Theresa L.; Waldrep, Roger T.; Davis, Michael D; Ward, Jeffrey L.; Preslar, Jacky D.; Long, S. Scott
Subject: Confirmation: KIF Projects Review Meeting: March 16, 2005

Team,

Per the trailing email, our request for a meeting on March 16, 2005 in Chattanooga to review our projects has been confirmed. Please note the starting time of 3:30 pm.

Stan
-----Original Message-----
From: Long, S. Scott
Sent: Monday, February 28, 2005 11:52 AM
To: Haber, Stanley M.
Subject: FW: KIF Projects Review Meeting: Requested Date for Meeting

OK to make it happen.....please note that by waiting until the 16th, please ensure that all components of the project packages are ready for this review meeting on the 16th so there will be no delay in processing if they are approved. I expect to have all the FPG approved projects rolled up by the 17th. Thanks.

Scott Long
Mgr., Project Development
Fossil Power Group
LP 2G-C
751-7282

-----Original Message-----
From: Smith, Deborah J.
Sent: Monday, February 28, 2005 10:59 AM
To: Long, S. Scott
Subject: RE: KIF Projects Review Meeting: Requested Date for Meeting

Masoud said that would be fine. Just schedule it to start about 3:30 p.m. when the FY06 Performance Plan is finished.

-----Original Message-----
From: Long, S. Scott
Sent: Monday, February 28, 2005 9:57 AM
To: Smith, Deborah J.
Cc: Haber, Stanley M.
Subject: FW: KIF Projects Review Meeting: Requested Date for Meeting

Debbie, please ask Masoud is this KIF request would be acceptable.

When PAF mentioned before the meeting on cyclones last Friday that they would like to discuss the FY07 projects also, he commented that the FY07 project reviews should be done at the site instead of Chatt.

Scott Long
Mgr., Project Development
Fossil Power Group
LP 2G-C
751-7282

-----Original Message-----
From: Haber, Stanley M.
Sent: Monday, February 28, 2005 8:12 AM
To: Long, S. Scott
Cc: Waldrep, Roger T.; Palmer, Patricia A.; Knight, Patricia F.; Deskins, Earl L; Cowser, Daniel J.; Tolliver, Sherry D.; Lundy, Dennis L.; Harless, J. Larry; Halicks, David R.; Rehberg, Robert L.
Subject: KIF Projects Review Meeting: Requested Date for Meeting

Scott,

Kingston has requested to have their follow-up meeting to finalize their FY07 projects review on 3/16/05 in Chattanooga . This would be after their meeting that is scheduled for that day with the SVP/Operations at 1:00 pm (the FPG Performance Plan Internal Review/FY2006). Please let me know if this will work.

Thanks.

Stan

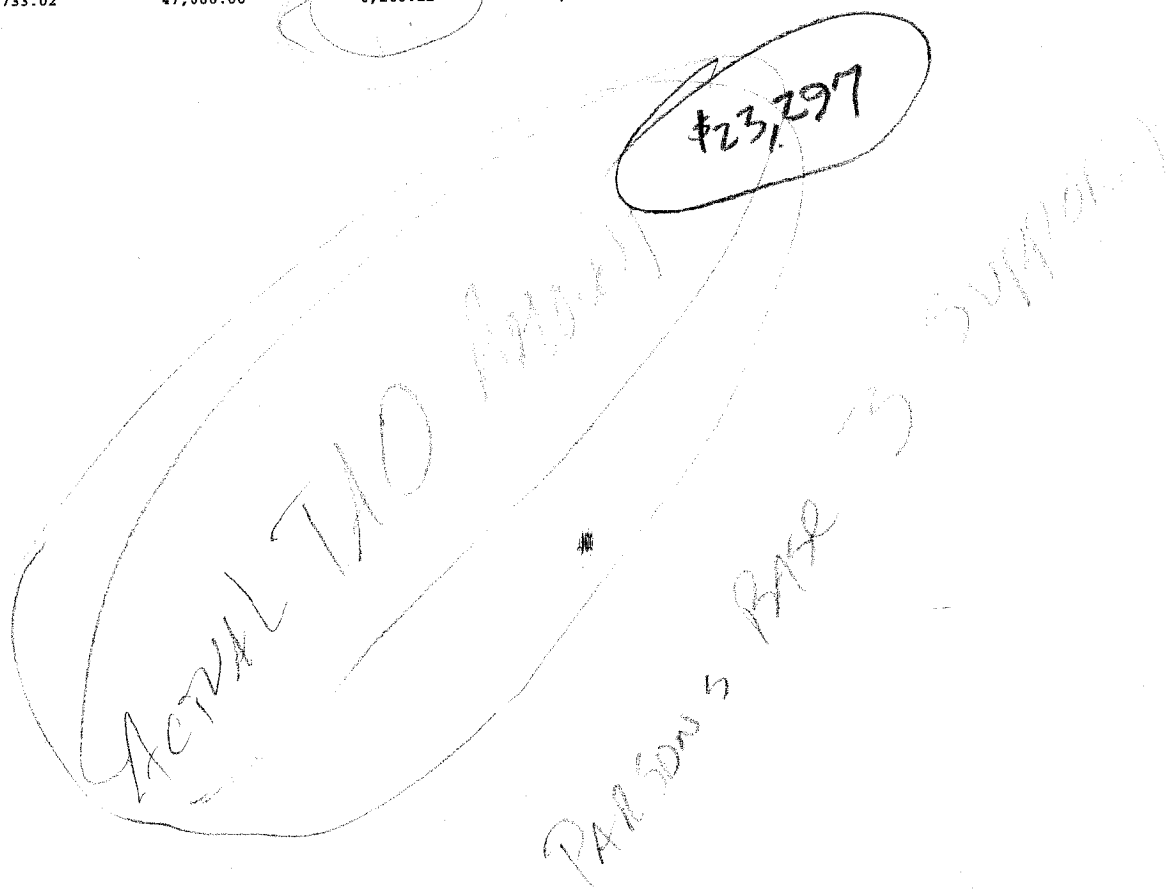
Tennessee Valley Authority

FOSSIL POWER
CAPITAL PROJECTS

ACTUALS

Period Name: FEB-05 Budget: FY05 REV BUDGET ANN. BUS. PLAN: FY05 ANN BUS PN

	* MONTH TO DATE $ *		********** YEAR TO DATE $ **********		PROJECT TO DATE $
	Actual	Rev. Budget	Actual	Variance	Actual
KIF531 KIF--REPLACE KENNEDY WEIR					
KIF531A KIF-REPLACE KENNEDY WEIR PH A					
KIF531A-01 FES	2,660.91	5,000.00	3,900.51	-1,099.49	3,900.51
KIF531A-02 PLANT SUPPORT	0.00	1,000.00	0.00	-1,000.00	0.00
KIF531A-03 PARSONS	2,072.11	19,000.00	2,072.11	-16,927.89	2,072.11
Total KIF531A KIF-REPLACE KENNEDY WEIR PH A	4,733.02	25,000.00	5,972.62	-19,027.38	5,972.62
KIF531B KIF-REPLACE KENNEDY WEIR PHB					
KIF531B-01 FES	0.00	8,000.00	0.00	-8,000.00	0.00
KIF531B-02 PLANT SUPPORT	0.00	2,000.00	0.00	-2,000.00	0.00
KIF531B-04 HED ESTIMATE	0.00	0.00	187.50	187.50	187.50
KIF531B-05 PARSONS	0.00	12,000.00	0.00	-12,000.00	0.00
Total KIF531B KIF-REPLACE KENNEDY WEIR PHB	0.00	22,000.00	187.50	-21,812.50	187.50
Total KIF531 KIF--REPLACE KENNEDY WEIR	4,733.02	47,000.00	6,160.12	-40,839.88	6,160.12
Total Report	4,733.02	47,000.00	6,160.12	-40,839.88	6,160.12



KINGSTON FOSSIL PLANT
Replace Kennedy Weir
PCN: KIF531
Current Approved Phase: 1

FUNCTIONAL ACCOUNT **EC0681**
RESPONSIBLE UNIT 18953
LOCATION 450Y

	SHORT CODE		CURRENT BUDGET FPEP APPVD PH1 ON 10/14/04.			ACTUAL TO-DATE AS OF 3/01/05			FORECAST		
			PY	FY05	TOTAL	PY	FY05	TOTAL	PY	FY05	TOTAL
PHASE 1											
KIF531A-01	001DN47	FE & Project Control	0	5	5	0	4	4	0	5	5
KIF531A-02	001DN49	Plant Support	0	1	1	0	0	0	0	1	1
KIF531A-03	001DN4B	Parsons	0	19	19	0	2	2	0	19	19
		Total Final Engg	0	25	25	0	6	6	0	25	25
PHASE 2											
KIF531B-01	001DN4C	FE & Project Control	0	13	13	0	0	0	0	13	13
KIF531B-02	001DN4D	Plant Support	0	5	5	0	0	0	0	5	5
KIF531B-03	001DN4F	LL Materials	0	20	20	0	0	0	0	20	20
KIF531B-04	001DN4H	HED Estimate	0	5	5	0	0	0	0	5	5
KIF531B-05	001DN4J	Parsons	0	82	82	0	0	0	0	82	82
		Total Final Engg	0	125	125	0	0	0	0	125	125
PHASE 3											
KIF531C-01	001DN4K	FE & Project Control	0	8	8	0	0	0	0	8	8
KIF531C-02	001DN4L	Plant Support	0	5	5	0	0	0	0	5	5
KIF531C-03	001DN4M	HED	0	77	77	0	0	0	0	77	77
KIF531C-04	001DN4N	Parsons	0	10	10	0	0	0	0	10	10
		Total Implementation	0	100	100	0	0	0	0	100	100
TOTAL PROJECT			0	250	250	0	6	6	0	250	250

KIF\KIF531 REPLACE KENNEDY WEIR.xls
03/01/2005 6:57 AM

Toney, Calvin L.

From: Smith, Daniel R [Daniel.R.Smith@worleyparsons.com]
Sent: Thursday, February 24, 2005 4:20 PM
To: Hughes, Michael
Cc: Petty, Harold L.; Toney, Calvin L.; Knox, Robert
Subject: FW: KIF - Weir Replacement

Mike, Gary relayed to me some additional comments brought up by Stuart Harris (possibly). We didn't initially include any riprap, because of low velocities. Erosion typically can occur on these ash dikes, but I'm not as concerned about the velocitites. However, if everyone concurs that riprap is needed, here are some quantities that can be added to the estimate (although that flies in the face of cost reduction).

Dan

-----Original Message-----
From: Melton, Gary
Sent: Thursday, February 24, 2005 4:15 PM
To: Smith, Daniel R
Subject: KIF - Weir Replacement

Dan,
Follow up from today's meeting:

1. Calvin: Add 400 square yards of geotextile (T-1 spec 571 class C) (non-woven needle punched, installed underwater) and 360 tons of 6" D50 riprap to armor the new ash dikes.
2. A detail can be added to the drawing showing the geotextile and riprap.
3. Dan and I discussed the precast manhole sections versus pipe sections for the new weirs and Dan's response is that it is Lynn's decision. It also would be a simple adjustment to the drawing.

Thank You,
Gary Melton
WorleyParsons
423-757-9974

Toney, Calvin L.

From: Smith, Daniel R [Daniel.R.Smith@worleyparsons.com]
Sent: Saturday, February 26, 2005 2:38 PM
To: Hughes, Michael
Cc: Melton, Gary; Toney, Calvin L.; Knox, Robert; Petty, Harold L.
Subject: FW: Drawings (DCA's) For Kennedy Weir replacement at KIF, plus turbidity curtain location/draft specification

Mike, I haven't heard any feedback from last weeks meeting regarding adjustments to the cost estimate. If they decide to install the turbidity curtain, Roy Quinn has estimated about $4300 (see below). This is higher than the roughly $3K in the estimate.

Depending on the outcome of the review, this adjustment should be made.

Dan

-----Original Message-----
From: Melton, Gary
Sent: Friday, February 25, 2005 8:55 PM
To: Smith, Daniel R
Subject: RE: Drawings (DCA's) For Kennedy Weir replacement at KIF, plus turbidity curtain location/draft specification

Dan,
According to Calvin, to install 1,000 sf of turbidity curtain will cost $3,139.
Gary
-----Original Message-----
From: Smith, Daniel R
Sent: Friday, February 25, 2005 5:05 PM
To: Melton, Gary; 'Hughes, Mike'
Subject: FW: Drawings (DCA's) For Kennedy Weir replacement at KIF, plus turbidity curtain location/draft specification

Gary, can you compare the cost that Roy Quinn Estimated for the turbidity curtain at KIF to what is in the cost estimate?

Roy estimates $4300. I can't remember what HED/Calvin had. We will want to be sure to revise if the cost estimate currently has a lower cost than what Roy Quinn has, especially since Roy will install.

Thanks

Dan

-----Original Message-----
From: Quinn, James R. [mailto:jrquinn@tva.gov]
Sent: Friday, February 25, 2005 4:15 PM
To: Smith, Daniel R
Cc: Hughes, Michael; Petty, Harold L.
Subject: RE: Drawings (DCA's) For Kennedy Weir replacement at KIF, plus turbidity curtain location/draft specification

Attached is our estimate. We will have hardware (cable, clamps, etc.) left from the installation we are doing in the ash stilling pond at KIF. Note that I am buying the curtain a little long to ensure ample coverage.

-----Original Message-----
From: Smith, Daniel R [mailto:Daniel.R.Smith@worleyparsons.com]
Sent: Friday, February 25, 2005 3:38 PM

To: Quinn, James R.
Cc: Hughes, Michael; Petty, Harold L.
Subject: RE: Drawings (DCA's) For Kennedy Weir replacement at KIF, plus turbidity curtain location/draft specification

I think stainless is better than galvanized, especially in the alkaline environment typically found in these ponds.

If you can put together a cost estimate for materials and installation, and forward to us, we could compare that with what we have in our construction estimate.

-----Original Message-----
From: Quinn, James R. [mailto:jrquinn@tva.gov]
Sent: Friday, February 25, 2005 2:11 PM
To: Smith, Daniel R
Cc: Hughes, Michael; Petty, Harold L.
Subject: RE: Drawings (DCA's) For Kennedy Weir replacement at KIF, plus turbidity curtain location/draft specification

Dan,
Attached is the manufacturer spec. on the materials that we usually install. We use the type II, 22oz vinyl coated curtains for most applications. These DO meet the specs as you required in the performance specs. I am awaiting pricing info from the distributor so we can ensure we fall within you budget target. Our typical installation will include vinyl coated stainless cable and stainless clamps, hardware, etc. You spec vinyl coated galvanized. Is the stainless OK?

http://www.aerflo.com/index.php?option=content&task=view&id=6&Itemid=26

Thanks,
Roy

-----Original Message-----
From: Smith, Daniel R [mailto:Daniel.R.Smith@worleyparsons.com]

Sent: Wednesday, February 23, 2005 3:14 PM
To: Quinn, James R.
Cc: Hughes, Michael; Petty, Harold L.
Subject: Drawings (DCA's) For Kennedy Weir replacement at KIF, plus turbidity curtain location/draft specification

<html>
*** WorleyParsons Group

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</html>

KIF531
KENNEDY WEIR

PROJECT PACKAGE WAS $250 K

PH1 + PH2 COMBINED ± $35,000 RIGHT NOW (SUNK COST). NOT INCLUDED IN ESTIMATE.

48"Ø MANHOLE RISERS VS 48"Ø PIPE WILL SAVE APPROX $10.00/LF.

WATER AQUADAM (TEMPORARY COFFERDAM) 5' TALL X 12' WIDE ~ $30.00/FT.

BRIAN Lowery ~~MIKE DAVIS~~ - LOOK FOR CONSTRUCTION SAVINGS.

STAN HABER - CHECK ON USE OF MANHOLE RISERS

STEVE, MIKE, + BRIAN - WILL FIND THE MONEY.

- ADD SUNK COST PLUS RIPRAP TO OUTSIDE SLOPE OF DIKE. ✓

- ADD 400 SY of (NON WOVEN) GEOTEXTILE (INSTALLED UNDERWATER) ✓
- ADD 360 TN of 6" D50 RIPRAP TO ARMOR THE NEW ASH DIKES ✓
- INCREASE COST OF TURBIDITY CURTAIN $4,300 VS $3,139. ✓

1.5D 356
2,154,508
0.65 / 15%
130

.814
2.10
.328
.129

68%
10%

$ 166,807 $27.76/MH 6,008 MHS

$ 60,067 $22.16/EIL 2,711 EHS

6,325

$ 8,800 ÷ 27.76 = 317.00288

lb 4,702 ÷ 22.16 = 212.09386

KINGSTON FOSSIL PLANT
KENNEDY WEIR
TOTAL PROJECT ESTIMATE

Estimate Number	05229	**Option:** 0	**PCN Number:**	KIF531	
Plant:	KIF	**Revision:** 0	**Estimate Type:**	Preliminary	
Cost Engineer:	C. I. TONEY	**Unit #:**	**Estimate Accuracy:**	+/- 20%	
Requesting Engr:	S. M. Haber	**Phase:** 2	**Estimate Issue Date**	02/15/2005	

	Hours	Dollars
Phase I		$0
Engineering		
Partner (Non-Manual)		$0
Other / Other Organizations		***$0***
Total Phase I		
Phase II		$0
Engineering		$0
Long Lead Procurement		
Partner (Non-Manual)		$0
Other / Other Organizations		***$0***
Total Phase II		
Phase III		
Construction (Partner)		$101,123
Permanent Material	6,150.71	$171,110
Labor (T&L)	738.00	$36,900
Labor (Non-Manual)		$62,381
Equipment		$5,000
Subcontracts		$10,401
Partner Fee		$6,240
Partner Insurance		$0
Escalation		$0
Construction Risk Dollars		$10,719
Other		$403,874
Total Construction Cost		
		$19,008
Engineering		$0
Direct plant support + TVA Other Costs		$118
Project Rounding Dollars		$10,000
Other / Plant Support		***$433,000***
Total Phase III		
All Phases	6,888.71	$403,874
Construction Partner		$0
Long Lead Procurement		$19,008
Engineering		$10,000
Other / Plant Support		$118
Total Rounding Dollars		
Total Project Costs	**6,888.71**	**$433,000**
For Information only Total Environmental		**$0**
For Information only Total Demolition Costs		**$0**

02/15/2005 3:08:13 PM

'mate Company

Spreadsheet Report

KIF/05229/WEIRS

KINGSTON FOSSIL PLANT
KENNEDY WEIR
TOTAL PROJECT ESTIMATE

Project name	KIF/05229/WEIRS
Engineer	Stan Haber
Estimator	C. I. TONEY
Labor rate table	KIF 40 2005
Equipment rate table	TVA Equipment
Project	Sitework
Plant	KIF
Estimate #	05229
PCN #	KIF531
Requesting Engr	S. M. Haber
Option	0
Revision	0
Phase	2
Estimate Type	Preliminary
Estimate Accuracy	+/- 20%
Est. Issue Date	02/14/2005
Funding Type	Capital
Outage(Y/N)	N
Report format	Sorted by 'Location/Activity' 'Detail' summary

Location	Activity	Description	Takeoff Quantity	Labor Productivity	Labor Quantity	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount
	Erosion Controls											
		Erect Silt Fence	300.00 lf	0.069	20.57 mh	519	148	-	93	-	2.53	760
		Erosion Controls			**20.57 hrs**	**519**	**148**		**93**			**760**
		01			***20.57 hrs***	***519***	***148***		***93***			***760***
2												
	Kennedy Weir Replace											
		Grout Seal Existing Drains From Kennedy Weir	35.00 cy	4.114	144.00 mh	3,797	2,640	-	1,084	-	214.91	7,522
		Ash Fill (Dike)	10,500.00 cy	910.000	11.54 cd	32,824	-	-	22,847	-	5.30	55,671
		Dewatering (2 each)	1.00 ls	50.000	50.00 cd	21,460	-	-	6,250	-	27,710.00	27,710
		Cut For 36" Diameter RCP And Weirs	1,237.00 cy	0.200	247.40 mh	6,189	-	-	3,093	-	7.50	9,282
		Bedding For 36" RCP Storm Drain Pipe	165.00 ton	0.500	82.50 mh	2,064	1,518	-	275	-	23.36	3,857
		Fill For 36" Diameter RCP Storm Drain Pipe	415.00 cy	0.320	132.80 mh	3,322	-	-	3,222	-	15.77	6,544
		Standard TVA Weir Structures	5.00 ea	254.105	1,270.52 mh	33,840	35,000	-	5,500	-	14,868.03	74,340
		36" Diameter RCP Storm Drain Pipe	700.00 lf	0.889	622.22 mh	15,770	27,930	-	3,743	-	67.76	47,444
		Concrete Anti Seep Collar With Water Stop	5.00 ea	3.125	15.63 mh	437	588	-	40	-	212.93	1,065
		Balloons For 36" Diameter Pipe Installation	5.00 ea	4.800	24.00 mh	573	13,500	-	95	-	2,833.54	14,168
		Pipe Bollards, 6" Dia Concrete Filled (Embedded In 4' x 1.5' Concrete)	2.00 ea	6.000	12.00 mh	300	500	-	100	-	450.10	900
		5/8" Eye Bolts With Nut And Washer	2.00 ea		-	-	20	-	-	-	10.00	20
		Steel Pipe Supports (Galvanized Angle 3x3x1/4@5' length)	58.00 ea	1.103	64.00 mh	2,052	725	-	230	-	51.84	3,007
		1/2" U-Bolts With Nut And Washer	58.00 ea		-	-	174	-	-	-	3.00	174
		4" Dia Steel Pipe Galvanized	595.00 lf	1.231	732.45 mh	25,257	7,438	-	6,639	-	66.11	39,333
		Pipe Insulation (For Both Steel & HDPE Pipe)	680.00 lf	0.200	136.00 mh	4,690	5,460	-	1,233	-	16.74	11,383
		4" Dia HDPE IPS DR 11 (Solid Wall)	85.00 lf	0.308	26.18 mh	902	1,063	-	237	-	25.90	2,202
		4" Dia HDPE IPS DR 11 Sparger Pipe	80.00 lf	0.410	32.83 mh	1,132	1,000	-	298	-	30.37	2,429
		4" Dia Steel & HDPE Flanges	2.00 ea	5.500	11.00 mh	379	60	-	100	-	269.51	539
		Install Galvanized Grade 80 Alloy Steel Chain	145.00 lf	0.014	2.00 mh	43	1,220	-	-	-	8.71	1,263
		install Galvanized Alloy Steel Pipe Clamps	14.00 ea	1.000	14.00 mh	483	140	-	63	-	49.02	686
		Ash Cut (Dike)	2,333.00 cy	910.000	2.56 cd	5,309	-	-	2,218	-	3.23	7,527
		Install Turbidity Curtain	1,000.00 sf	2.000.000	0.50 cd	811	2,000	-	328	-	3.14	3,139
		Remove 2 Section Of Wooden Walkway W/4' Rail On Each Side	120.00 sf	0.150	18.00 mh	457	-	-	194	-	5.43	651
		QA/QC For Construction Disposal	1.00 ls		-	-	-	5,000	-	-	5,000.00	5,000
		Kennedy Weir Replace			**5,824.60 hrs**	**162,091**	**100,975**	**5,000**	**57,788**			**325,854**
		02			***5,824.60 hrs***	***162,091***	***100,975***	***5,000***	***57,788***			***325,854***
	xCONST FACILITY											
	Construct Facilities											
		Mobilize, Drug Test, Miscellaneous Other, & Demobilize	1.00 ls	305.536	305.54 mh	8,500	-	-	4,500	-	13,000.00	13,000
		Construct Facilities			**305.54 hrs**	**8,500**			**4,500**			**13,000**
		xCONST FACILITY			***305.54 hrs***	***8,500***			***4,500***			***13,000***
	zNON MANUAL											
	Field General Expens											
		Phase 3 Non Manual	1.00 ls	738.000	738.00 mh	36,900	-	-	-	-	36,900.00	36,900
		Field General Expens			**738.00 hrs**	**36,900**						**36,900**
		zNON MANUAL			***738.00 hrs***	***36,900***						***36,900***

Estimate Totals

Labor	208,010		6,888.708	hrs			
Material	101,123						
Subcontract	5,000		2,877.784	hrs			
Equipment	62,381						
	376,514	376,514					
Small Tools Expense	2,768		0.450	$/hr		H	
Consumables & Expendables	6,844		4.000	%		C	
Office Supplies & Expense	1,107		3.000	%		C	
	10,719	387,233					
Partner Insurance (FY04)	6,240		3.000	%		C	
Partner Award Fee (FY04)	10,401		5.000	%		C	
	16,641	403,874					
FPG Proj Engr - Phase 3	2,520		0.871	% @	42.00	A	60
FPG Civil Engr - Phase 3	2,100		0.726	% @	42.00	A	50
Parsons Engr - Phase 3	10,800		2.177	% @	72.00	A	150
FPG Proj Cntrl Cost - Phase 3	1,008		0.348	% @	42.00	A	24
FPG Proj Cntrl Sched - Phase 3	1,008		0.348	% @	42.00	A	24
FPG Engr Records - Phase 3	672		0.232	% @	42.00	A	16
CAD Dwg Support - Phase 3	900		0.087	% @	####	A	6
	19,008	422,882					
Phase 3 Other/Plant Support	10,000					L	
	10,000	432,882					
Rounding	118					L	
	118	433,000					
	Total	*433,000*					

- HED will perform pre-job briefings each morning and at anytime changes occur in the daily work scope. A post-job briefing will be performed at the completion of the construction project.

Project Work Schedule

- All work based on a forty hour week. Overtime is not included in this estimate.
- Construction activities: 4 x 10's
- Anticipated project duration: 36 workable shifts

Cost

Total Estimated Cost: **$374,000**

Thank you for the opportunity to look at your project.
Submitted: 2/18/05

Note
1. Additional cost shall be incurred by others if excavation encounters solid rock and cannot be removed by conventional means.
2. Approval will be required by engineering for plugging existing weirs. Plug material/grout is based drawing notes, but notes do not detail exact material.
3. Construction drawings should include more detailed dimensions of weir elevations (including existing), dike locations, and weir location.
4. The allowance for the turbidity curtain is based on a standard 200' curtain. Additional cost may be incurred by others if specialized material is required.

Kingston Fossil Plant
Cost Estimate by Heavy Equipment Division
For
Kennedy Weir Replacement

Basis of Estimate

Scope of work based on preliminary TVA design drawings (10W425-24, 70, 77, 78, 79, and 80) and conversations with Dan Smith, Parsons E & C. Construction quantities are based on provided drawings and quantities sheet provided by engineering.

Scope of Work

- Any permits, including environmental permits, will be provided to HED prior to construction.
- Mobilization of equipment, personnel, and materials.
- Provide and install erosion control devices as specified on drawings. HED will follow all BMP's during construction activities.
- Install and maintain silt fence at the downstream end of the new weir drains during construction activities.
- Construct bottom ash/fly ash coffer dike as shown on drawings. (10,500 cy)
- Dewater area contained within coffer dike and remove existing fly ash to reach stabilized base for construction of new weirs.
- Stabilize cell base to assure proper support for new weirs.
- Provide and install new weirs, including concrete drain pipe and skimmers, as specified on drawings. Construct concrete anti-seep collars around drain pipe as specified on drawings.
- Bed and backfill around new concrete drain pipe.
- Grade and compact earthen dike to match existing dike.
- Fill dewatered weir area with water to equalize both sides of the coffer dike.
- Remove 140' keyway to allow flow into the new weirs.
- Install a 2' turbidity curtain along the front of the keyway. An allowance has been made for the curtain, but no specifications were provided.
- Install a new slurry pipe from the existing weir area to the new weir keyway. Provide bollards and chains to support the submerged section of perforated pipe. The abandoned 4" pipeline will be used if possible or otherwise removed.
- Plug existing weir with Volclay Bentogrout. A deflated balloon will be placed in the inlet end of the weir and fed through till it reaches a point approx. 100 ft from the discharge end. The balloon will be blown up to block water flow. A metal plate, with a pipe coupling, will be welded to the discharge end the pipe. The pipe coupling will be used to push grout into the pipe, plugging the last 100' of the discharge pipe. The same process will be followed for each existing weir. Engineering approval will be required for this process.
- Demobilization of equipment and personnel. Demobilization includes placing seed and straw on all disturbed areas according to plant environmental guidelines.

- HED will perform pre-job briefings each morning and at anytime changes occur in the daily work scope. A post-job briefing will be performed at the completion of the construction project.

Project Work Schedule

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Kingston Fossil Plant
KIF531 (Kennedy Weir)

717-
Catlett x 2661

path forward

modification to existing permit? (Check on friday)

PL revised by Systems

1. Calculation (Bowers)
2. location map
3: Cross section

CEC (Lyn Petty)

USDS Dan Smith

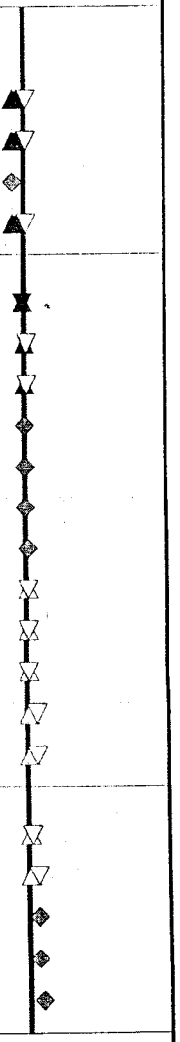
+45 days
(option - phone call)

milestones (forecast) : leave project targets as-is

✓ revise CRI	14 Jan to 20 Jan 05	
✓ Complete fiscal drags	2 Feb 05	
Bowers 45 days	—	Carry to Check
✓ Bill of material	2 Feb 05	
✓ initiate CEC	31 Jan 05	
✓ fiscal / CEC approved	10 Feb 05	
pipe delivery	16 Mar 05	
NA platform delivery	15 Apr 05	
begin construction	14 Feb 05	
finish construction	31 ~~Feb~~ Mar 05	
cost estimate	10 Feb 05	
✓ const estimate	~~10~~ Feb 05	
✓ Eng input to cost est	7 Feb 05	
FPEP Approval	11 Feb 05	
~~construction~~	~~14 Feb 05~~	
✓ DCA issue	11 Feb 05	

VA 11030 (WM-7-93)

PSTA	SEC	Activity ID	Activity Description	Forecast Start	Forecast Finish	Finish Target	Total Float	Resp Engr	Prin Engr	RE	Res ID	Bdgt Mhrs	Frcst Mhrs	Actual Mhrs
KIF531 REPLACE KENNEDY WEIR														
Preliminary Engg (Phase 1)														
A	35	GFKA153101	Replace Kennedy Weir - Parsons Oversite	25OCT04A	02MAR05		119	MSH	HLP	HLP	FDCEA,	140.00	151.00	10.00
A	30	GFKA1531PE	Phase 1 Project Engineer Support	25OCT04A	02MAR05		120	SMH	SMH	HLP	FDPE	20.00	20.00	16.00
A	30	GFKA1531PA	FPEP Phase 1 Authorization	29OCT04A				SMH	SMH	HLP		0.00	0.00	0.00
A	11	GFKA1531PC	Phase 1 Project Controls Support	05NOV04A	02MAR05		120	HMS	DJG	HLP	TS2PC,	28.00	28.00	12.00
Final Engineering (Phase 2)														
D	35	GFKBK531PJ	Revise CPJ	19JAN05A	20JAN05A			MSH	HLP	HLP		0.00	0.00	0.00
D	35	GFKBK531CC	Initiate and Obtain CEC Approval	31JAN05A	28FEB05		242	MSH	HLP	HLP		0.00	0.00	0.00
D	35	GFKBK531DC	Issue DCN KIF-05-1074	02FEB05A	28FEB05		296	MSH	HLP	HLP		0.00	0.00	0.00
D	35	GFKBK531BM	Complete Bills-Of-Materail		02FEB05A			MSH	HLP	HLP		0.00	0.00	0.00
D	35	GFKBK531FD	Complete Final Dwgs (DCA)		02FEB05A			MSH	HLP	HLP		0.00	0.00	0.00
D	35	GFKBK531CT	Obtain Construction Estimate		11FEB05A			SMH	SMH	HLP		0.00	0.00	0.00
D	35	GFKBK531DI	DCN KIF-05-1074 Issued		28FEB05		299	MSH	HLP	HLP		0.00	0.00	0.00
D	11	GFKBK531CE	Complete Cost Estimate for Kennedy Weir	01MAR05*	02MAR05		297	JLS	JLH	HLP		0.00	0.00	0.00
A	T2	GFKBK531ER	ERU Assemble & Issue DCN KIF-05-1074	01MAR05	03MAR05		296	DLL	DLL	RJS	TS2RU	16.00	16.00	0.00
D	30	GFKB1531PA	FPEP Phase 2/3 Authorization	03MAR05	03MAR05*		119	SMH	SMH	HLP		0.00	0.00	0.00
D	11	GFKB1531PC	Phase 2/3 Project Controls Support	04MAR05*	01MAY05		239	HMS	DJG	HLP	TS2PC,	40.00	40.00	0.00
D	30	GFKB1531PE	Phase 2/3 Project Engineer Support	04MAR05*	01MAY05		239	SMH	HLP	HLP	FDPE	40.00	40.00	0.00
Implementation (Phase 3)														
A	T2	GFFCK477RU	ERU Assemble Closure Pkg - DCN KIF-005-1074	04MAR05	05MAR05		296	DLL		RJS	TS2RU	16.00	0.00	0.00
D	35	GFKC153101	Replace Kennedy Weir - Phase 3 Oversite	04MAR05	01MAY05		119	HLP	HLP	HLP	FDCEA,	60.00	120.00	0.00
D	35	GFKC1531PT	Project Turnover		01MAY05	29JUL05	119	HLP	HLP	HLP		0.00	0.00	0.00
D	35	GFKCK531CD	DCN KIF-05-1074 Closed		01MAY05		239	MSH	HLP	HLP		0.00	0.00	0.00
D	35	GFKC1531VB	Verify Benefits & Close Project		31MAY05	28OCT05	209	HLP	HLP	HLP		0.00	0.00	0.00



Start Date 01JAN89
Finish Date 02AUG13
Data Date 13FEB05
Run Date 16FEB05 09:57

Early Bar
Progress Bar
Critical Activity

FHEM

TENNESSEE VALLEY AUTHORITY

Layout 70

Toney, Calvin L.

Subject: KIF531 (Kennedy Weir): Discuss HED Estimate and Project Cost
Location: LP 2S 904

Start: Thu 02/24/2005 1:00 PM
End: Thu 02/24/2005 1:30 PM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Required Attendees: Haber, Stanley M.; Baugh, James S.; Davis, Michael D; Lankford, Brian S.; Petty, Harold L.; Toney, Calvin L.; Waldrep, Roger T.; Purkey, Ronald E.; Hedgecoth, Melissa A.; Ward, Jeffrey L.

This meeting is to briefly discuss the HED cost estimate for implementation and to discuss options for proceeding with the project.

Stanley Haber has invited you to a MeetingPlace e-Conference (Mtg ID **3838**) on **FEB, 24 2005** at **1:00 PM** **America/New_York**. If provided, use the following password:

To attend from your PC:

1) Launch the "Click to Attend" web link below, or browse to http://latitude.cha.tva.gov & enter Mtg ID **3838**. A MeetingPlace web page appears.

2) Click Join Voice & enter your phone number

3) Click Join Web Conference

Alternatively, call **423-751-2428.** Enter Mtg ID **3838** when prompted.

For more information about this MeetingPlace e-Conference, contact: Stanley Haber,

Click to Attend:
http://latitude/attend/FeEkfPmBpDgKjoCbfcNjJlIbNmEhkDbKelfioaJnCfKaoKnPldeDkOlEgEk

---

KENNEDY WEIR
ASH DIKE FILL

EXCAVATE BY TRACKHOE, LOAD TRUCKS, HAUL, DUMP, SPREAD & COMPACT
1 MILE ROUNDTRIP (5,280 FT)

1 EA 3-½ cy TRACKHOE (CLASS Z26P) ASSUMED OUTPUT = 130 cy/HR
NO. OF TRUCKS 14 cy (CLASS Z31M)

SPOTTING (INCL. WAITING TIME)	= 2.00 MIN
LOADING 130 cy/HR ÷ 60 MIN/HR = 2.167 cy/MIN	
TIME TO LOAD 14 cy TRUCK ÷ 2.167 cy/MIN	= 6.46 MIN
UNLOAD, TURN AND DUMP	= 2.00 MIN
TRAVEL: HAUL 2,640 FT @ 10 MPH	= 3.00 MIN
RETURN 2,640 FT @ 15 MPH	= 2.00 MIN
	15.46 MIN

$\frac{50 \text{ MIN. HR}}{15.46 \text{ MIN}} = 3.23 \text{ TRIPS/HR} \times 14 \text{ cy/TRIP} = 45.28 \text{ cy/HR/TRUCK}$

$\frac{130 \text{ cy/HR}}{45.28 \text{ cy/HR/TRUCK}} = 2.87 \text{ TRUCKS use 3 TRUCKS REQUIRED}$

LABOR CREW	EQUIPMENT
1 OEF4	1 (Z20N) D8 DOZER
4 OEA4	1 (Z24L) GRADER
1 OED4	1 (Z25L) COMPACTOR
3 TM3A	1 (Z26P) TRACKHOE ✓ 4 pcs
4 L2C4	3 (Z31M) DUMP TRUCKS ✓
13 MEN	7 pcs EQPT

DAILY OUTPUT 130 cy x 7 HRS/DAY = 910 cy/DAY

LABOR = 104 MH/DAY / 910 cy/DAY = 0.11429 MH/cy ; EQPT = 56 EH/DAY / 910 cy/DAY = 0.06154 EH/cy

GROUT SEAL STORM DRAIN 24"ϕ ~35 cy

4 Lac4
1 Laf4
1 oea4
1 oed4
---
7 MEN

1 z26L
1 z29A

1 MH/cy x 35 = 35 MHs
.2857 EH/cy = 10 EHs
MAT'L ASSUME $60/cy = 2,100

SEAL WELD 1/4" THICK A-36 STEEL PLATE

2 Iwj4
oea4
---
z26L
z85h

EA $50/EA x 6 EA = $300.00
MH 4 MH/EA x 6 EA = 24 MHs
EH 2.67 EH/EA x 6 EA = 16 EHs

<COMBINE> (GROUT 100'OF EACH OF (3) 24"ϕ CMP DRAIN PIPE)

GROUT SEAL EXISTING DRAINS FROM Kennedy Weir - 35 cy

Reference OSC930

MAT'L use $2,400 TOTAL
LABOR use 1.70 MH/cy
EQPT use ~~0.75 EH/cy~~ 0.567

(Crew)
~~1 Laf4~~
2 Iwj4
4 Lac4
~~1 oea4~~
1 oed4
---

1 z26L
1 z29A
z85h
---
3 pcs

Toney, Calvin L.

From: Smith, Daniel R [Daniel.R.Smith@worleyparsons.com]
Sent: Friday, February 11, 2005 11:50 AM
To: Knox, Robert; Toney, Calvin L.
Cc: Petty, Harold L.; Hughes, Michael; Melton, Gary
Subject: FW: KIF - Kennedy Weir

See below. Maybe (if its not too late), we should add this to the quantity takeoffs. The height of the turbidity curtain is about 6 ft (from 754 to 760), and about 160 ft long, for a total of about 1000 sq ft. The turbidity curtains usually are some type of fabric, with a weight at the bottom (usually a chain), and floats a the top. It is secured by a cable at the top, tied to the sides of the ash dike. It will be hung on the upstream side of the opening cut into the dike.

If we have time, lets add this to the cost estimate. If Lynn want it added to the drawing, we can do that later.

Dan

-----Original Message-----
From: Johnson, Lindy P. [mailto:lpjohnson@tva.gov]
Sent: Friday, February 11, 2005 11:23 AM
To: Smith, Daniel R; Campbell, Linda F.; Catlett, James H; Petty, Harold L.; Beasley, Don R.
Cc: Haber, Stanley M.; Bowers, Larry C; Johnson, Lindy P.
Subject: RE: KIF - Kennedy Weir

Lynn & Dan:

Don B asked about getting a turbidity curtain permanently installed outside of the proposed new limestone sparger line to be located between the dikes. This would help us from introducing cenospheres into the stilling pond.

Thanks.

Spreadsheet Report
KIF/05229/WEIRS

KINGSTON FOSSIL PLANT
KENNEDY WEIR
TOTAL PROJECT ESTIMATE

Project name	KIF/05229/WEIRS
Engineer	Stan Haber
Estimator	C. I. TONEY
Labor rate table	KIF 40 2005
Equipment rate table	TVA Equipment
Project	Sitework
Plant	KIF
Estimate #	05229
PCN #	KIF531
Requesting Engr	S. M. Haber
Option	0
Revision	0
Phase	2
Estimate Type	Preliminary
Estimate Accuracy	+/- 20%
Est. Issue Date	02/14/2005
Funding Type	Capital
Outage(Y/N)	N
Report format	Sorted by 'Location/Activity' 'Detail' summary

Per Stan Haber

P3 # Plant
P3 15 Parson 50 Lynn
P3 60 Project
P3 PC Cost 24
PC Sch 24
Eng Record 16
CAD Drwg 6 Drwgs

Location	Activity	Description	Takeoff Quantity	Labor Productivity	Labor Quantity	Labor Amount	Material Amount	Sub Amount	Equip Amount	Other Amount	Total Cost/Unit	Total Amount
1												
	Erosion Controls											
		Erect Silt Fence	300.00 lf	0.069	20.57 mh	519	148	-	93	-	2.53	760
		Erosion Controls			**20.57 hrs**	**519**	**148**		**93**			**760**
		01			***20.57 hrs***	***519***	***148***		***93***			***760***
2												
	Kennedy Weir Replace											
		Grout Seal Existing Drains From Kennedy Weir	35.00 cy	4.114	144.00 mh	3,797	2,640	-	1,084	-	214.91	7,522
		Ash Fill (Dike)	10,500.00 cy	910.000	11.54 cd	32,824	-	-	22,847	-	5.30	55,671
		Dewatering (2 each)	1.00 ls	50.000	50.00 cd	21,460	-	-	6,250	-	27,710.00	27,710
		Cut For 36" Diameter RCP And Weirs	1,237.00 cy	0.200	247.40 mh	6,189	-	-	3,093	-	7.50	9,282
		Bedding For 36" RCP Storm Drain Pipe	165.00 ton	0.500	82.50 mh	2,064	1,518	-	275	-	23.36	3,857
		Fill For 36" Diameter RCP Storm Drain Pipe	415.00 cy	0.320	132.80 mh	3,322	-	-	3,222	-	15.77	6,544
		Standard TVA Weir Structures	5.00 ea	254.105	1,270.52 mh	33,840	35,000	-	5,500	-	14,868.03	74,340
		36" Diameter RCP Storm Drain Pipe	700.00 lf	0.889	622.22 mh	15,770	27,930	-	3,743	-	67.78	47,444
		Concrete Anti Seep Collar With Water Stop	5.00 ea	3.125	15.63 mh	437	588	-	40	-	212.93	1,065
		Balloons For 36" Diameter Pipe Installation	5.00 ea	4.800	24.00 mh	573	13,500	-	95	-	2,833.54	14,168
		Pipe Bollards, 6" Dia Concrete Filled (Embedded In 4' x 1.5' Concrete)	2.00 ea	6.000	12.00 mh	300	500	-	100	-	450.10	900
		5/8" Eye Bolts With Nut And Washer	2.00 ea		-	-	20	-	-	-	10.00	20
		Steel Pipe Supports (Galvanized Angle 3x3x1/4@5' length)	58.00 ea	1.103	64.00 mh	2,052	725	-	230	-	51.84	3,007
		1/2" U-Bolts With Nut And Washer	58.00 ea		-	-	174	-	-	-	3.00	174
		4" Dia Steel Pipe Galvanized	595.00 lf	1.231	732.45 mh	25,257	7,438	-	6,639	-	66.11	39,333
		Pipe Insulation (For Both Steel & HDPE Pipe)	680.00 lf	0.200	136.00 mh	4,690	5,460	-	1,233	-	16.74	11,383
		4" Dia HDPE IPS DR 11 (Solid Wall)	85.00 lf	0.308	26.16 mh	902	1,063	-	237	-	25.90	2,202
		4" Dia HDPE IPS DR 11 Sparger Pipe	80.00 lf	0.410	32.83 mh	1,132	1,000	-	298	-	30.37	2,429
		4" Dia Steel & HDPE Flanges	2.00 ea	5.500	11.00 mh	379	60	-	100	-	269.51	539
		Install Galvanized Grade 80 Alloy Steel Chain	145.00 lf	0.014	2.00 mh	43	1,220	-	-	-	8.71	1,263
		Install Galvanized Alloy Steel Pipe Clamps	14.00 ea	1.000	14.00 mh	483	140	-	63	-	49.02	686
		Ash Cut (Dike)	2,333.00 cy	910.000	2.56 cd	5,309	-	-	2,218	-	3.23	7,527
		Install Turbidity Curtain	1,000.00 sf	2,000.000	0.50 cd	811	2,000	-	328	-	3.14	3,139
		Remove 2 Section Of Wooden Walkway W/4' Rail On Each Side	120.00 sf	0.150	18.00 mh	457	-	-	194	-	5.43	651
		QA/QC For Construction Disposal	1.00 ls		-	-	-	5,000	-	-	5,000.00	5,000
		Kennedy Weir Replace			**5,824.60 hrs**	**162,091**	**100,975**	**5,000**	**57,788**			**325,854**
		02			***5,824.60 hrs***	***162,091***	***100,975***	***5,000***	***57,788***			***325,854***
xCONST FACILITY												
	Construct Facilities											
		Mobilize, Drug Test, Miscellaneous Other, & Demobilize	1.00 ls	305.536	305.54 mh	8,500	-	-	4,500	-	13,000.00	13,000
		Construct Facilities			**305.54 hrs**	**8,500**			**4,500**			**13,000**
		xCONST FACILITY			***305.54 hrs***	***8,500***			***4,500***			***13,000***
zNON MANUAL												
	Field General Expens											
		Phase 3 Non Manual	1.00 ls	738.000	738.00 mh	36,900	-	-	-	-	36,900.00	36,900
		Field General Expens			**738.00 hrs**	**36,900**						**36,900**
		zNON MANUAL			***738.00 hrs***	***36,900***						***36,900***

Estimate Totals

Labor	208,010		6,888.708	hrs			
Material	101,123						
Subcontract	5,000						
Equipment	62,361		2,877.784	hrs			
	376,514	376,514					
Engineered Materials - Ph 2			100.000	%	C		
Adjustment - Engr Materials			(100.000)	%	C		
		376,514					
Environmental Costs			100.000	%	C		
Adjustment Environmental			(100.000)	%	C		
		376,514					
Demolition Costs			100.000	%	C		
Adjustment Demolition			(100.000)	%	C		
		376,514					
Small Tools Expense	2,768		0.450	$/hr	H		
Consumables & Expendables	6,844		4.000	%	C		
Office Supplies & Expense	1,107		3.000	%	C		
Subcontract Fee					C		
	10,719	387,233					
Partner Insurance (FY04)	6,240		3.000	%	C		
Partner Award Fee (FY04)	10,401		5.000	%	C		
	16,641	403,874					
FPG Proj Engr - Phase 1	1		0.000	% @	42.00	A	0
FPG Mech Engr - Phase 1	1		0.000	% @	42.00	A	0
FPG Elec Engr - Phase 1	1		0.000	% @	42.00	A	0
FPG Civil Engr - Phase 1	1		0.000	% @	42.00	A	0
FPG Syst Engr - Phase 1	1		0.000	% @	42.00	A	0
Non-TVA Engr - Phase 1	1		0.000	% @	72.00	A	0
FPG Proj Cntrl Cost - Phase 1	1		0.000	% @	42.00	A	0
FPG Proj Cntrl Sched - Phase 1	1		0.000	% @	42.00	A	0
FPG Cost Estimating - Phase 1	1		0.000	% @	42.00	A	0
Phase 1 Other/Other Org						L	
	9	403,883					
FPG Proj Engr - Phase 2	1		0.000	% @	42.00	A	0
FPG Mech Engr - Phase 2	1		0.000	% @	42.00	A	0
FPG Elec Engr - Phase 2	1		0.000	% @	42.00	A	0
FPG Civil Engr - Phase 2	1		0.000	% @	42.00	A	0
FPG Syst Engr - Phase 2	1		0.000	% @	42.00	A	0
Non-TVA Engr - Phase 2	1		0.000	% @	72.00	A	0
FPG Proj Cntrl Cost - Phase 2	1		0.000	% @	42.00	A	0
FPG Proj Cntrl Sched - Phase 2	1		0.000	% @	42.00	A	0
FPG Cost Estimating - Phase 2	1		0.000	% @	42.00	A	0
FPG Engr Records - Phase 2	1		0.000	% @	42.00	A	0
Phase 2 Other/Other Org						L	
	10	403,893					
FPG Proj Engr - Phase 3	1		0.000	% @	42.00	A	0
FPG Mech Engr - Phase 3	1		0.000	% @	42.00	A	0
FPG Elec Engr - Phase 3	1		0.000	% @	42.00	A	0
FPG Civil Engr - Phase 3	1		0.000	% @	42.00	A	0
FPG Syst Engr - Phase 3	1		0.000	% @	42.00	A	0
Non-TVA Engr - Phase 3	1		0.000	% @	72.00	A	0
FPG Proj Cntrl Cost - Phase 3	1		0.000	% @	42.00	A	0
FPG Proj Cntrl Sched - Phase 3	1		0.000	% @	42.00	A	0
FPG Engr Records - Phase 3	1		0.000	% @	42.00	A	0
CAD Dwg Support - Phase 3	1		0.000	% @	####	A	0
Phase 3 Other/Other Org						L	
	10	403,903					
Rounding						L	
		403,903					
	Total	***403,903***					

Toney, Calvin L.

From: Smith, Daniel R [Daniel.R.Smith@worleyparsons.com]
Sent: Tuesday, February 08, 2005 7:29 AM
To: Hughes, Michael
Cc: Petty, Harold L.; Toney, Calvin L.; Bowers, Larry C
Subject: Draft permit drawings, QTO, and DCN for Kennedy Weir

Attached please find the draft permit drawings, quantity takeoffs, and DCN for Kennedy Weir replacement. The permit drawings are rather detailed, because they serve a dual purpose due to the berevity of the schedule. Once I receive any comments, the comments will be incorporated into the permit drawings and then placed on a DCA titleblock.

I think a review with the plant is critical due to the short schedule. We presented a number of options and emailed sketches to the team. I received feedback from Lindy, and we worked out what is on these drawings.

The DCN is prepared in pdf format. I am including some additional attachments in Word format, in case they are needed. The engineering form B did not have any yes boxes checked, so I did not include the form B's for the plant, but these are included if determined later to be needed.

Please contact me if you have any questions or comments. I am scheduled to be at ALF on Thursday.


10W425-24.pdf (713 KB)


10W425-70.pdf (290 KB)


10W425-77.pdf (686 KB)


10W425-78.pdf (202 KB)


10W425-79.pdf (268 KB)


10W425-80.pdf (166 KB)


DCN 5-1047_dft_020805.


KIF-05-1074_FORM B Fos Ops.doc...


KIF-05-1074_FORM B Fos Plt Mai...


KIF-05-1074_FORM B Plt Sys Eng...


011805Kennedy Weir .xls (25 KB...

Please note new email address: Daniel.R.Smith@worleyparsons.com
Daniel R. (Dan) Smith, P.E.
Parsons E & C
633 Chestnut St, Suite 400
Chattanooga, TN 37450
Phone: (423) 757-8088
Fax: (423) 266-0922
Cell: (423) 364-1679
Email: Daniel.R.Smith@parsonsec.com

011805Kennedy Weir .xls

Kennedy Weir

02/08/2005

KIF - Kennedy Weir - PHASE 1 QUANTITIES

ITEM	DESCRIPTION	UNITS	QUANTITY	T-1 Spec	Assumptions/Comments
1.000	**Erosion Controls**				c
1.001	Erect silt fence	lf	300	571	c - For the installation of TVA weirs and drain pipe
2.000	**Kennedy Weir Replacement**				
2.001	Grout seal existing drains from Kennedy Weir	cy	35		c - Grout 100' of each of (3) 24" dia CMP drain pipes
2.002	Ash fill (dike)	cy	10500	125	c - Assuming 40% increase to ash due underwater placement & consolidation
2.003	Dewatering	ea	2		c - (2) 4" slurry pumps during construction
2.004	Cut for 36" RCP and Weirs	cy	1237		c
2.005	Bedding for 36" RCP Storm Drain Pipe	ton	165		c - #1032 crushed stone
2.006	Fill for 36" RCP Storm Drain Pipe	cy	415		c
2.007	Standard TVA Weir Structures	ea	5		c
2.008	36" RCP Storm Drain Pipe	lf	700		c - Between Dredge Cell and Stilling Pond
2.009	Concrete Anti Seep Collar with water stop	ea	5		c - Install on the 36" dia storm drain pipes (.5 cubic yards of f'c = 3000 psi concrete for each collar) (50' of Akqu stop manufactured by CETCO)
2.010	Balloons for 36" dia pipe installation	ea	5		c - For temporary plug of 36" dia pipe
2.011	Pipe Bollards	ea	2		c - Typical Bollard with 6" STD WT pipe filled with concrete embedded in 4' x1.5' concrete section. Total length of 6" dia pipe for each bollard is 7'. Total amount of concrete in each bollard is .3 cubic yards
2.012	5/8" Eye Bolts	ea	2		c - With washers and nuts for anchoring chain to the pipe bollard
2.013	Steel Pipe Supports (Galvanized)	ea	58	290 LF	c - L - 3"x 3"x 1/4" (Assumed Average Length 5') ASTM A36 Steel section
2.014	1/2" U-Bolts	ea	58		c - With washers and nuts attach to pipe supports
2.015	4" dia Steel Pipe (Galvanized)	lf	595		c - Butt weld to existing (or weld flanges and bolt) Assuming tying into existing lime injection pipe
2.016	**Pipe insulation (length of pipe)**	**lf**	**680**		**c - Insulation for 4" steel and solid wall HDPE pipe**
2.017	4" dia HDPE IPS DR 11	lf	85		c - Solid wall pipe

(256) 762-6401 Kenny Lowery

Kennedy Weir

)11805Kennedy Weir .xls

2.018	4" dia HDPE IPS DR 11 Sparger Pipe	lf	80		c - With .5" holes on 1.25' centers with end cap butt fusion welded
2.019	Galvanized Grade 80 Alloy Steel Chain	lf	145		c - $7.65 per lf (3/8" minimum size, McMaster Carr)
2.020	Galvanized Alloy Steel Pipe Clamps	ea	14		c - Located on 6' centers on the Sparger HDPE
2.021	Ash Cut (dike)	cy	2333	125	c - North bottom ash dike to allow water to new weirs
2.022	QA/QC for construction of disposal facility	ls	5000		c - Quality control of ash dike construction
2.023					

Assumptions
(1) All ash quantities are in bank cubic yards (bcy) - no shrink or swell factors applied
(2) Phase 3 Engineering $10,000 (Inc. TVA over sight and subcontracts).
(3) Bottom Ash dike construction will be dipped and hauled from Dredge Cell (equipment - trackhoe, trucks, bulldozer, and compactor).

~~ADD FOR BREACHING DIKE~~
✓ ADD TURBIDITY CURTAIN
✓ Remove 2 sections of Walkway 6' x 20' wood with 4' Rail [illegible]
✓ See Detail G 80 Flange Detail (Steel + HDPE)

$ 8,500 / 27.82 = 305.53
$ 4,500 / 21.68 = 207.56

$ 162,610 $27.82/hr 5,845 hrs
57,881 $21.68/hr 2670 hrs

6,151 hrs

Toney, Calvin L.

From: Haber, Stanley M.
Sent: Monday, February 14, 2005 3:07 PM
To: Toney, Calvin L.
Cc: Petty, Harold L.; Catlett, James H; Smith, Daniel R.; Lowery, Kenny R.; Knox, Robert; Radford, Larry D.
Subject: KIF531: Kennedy Weir (Insulation Testing - Limestone Slurry Piping)

Calvin,

For your information and use in the cost estimate.

Stan

-----Original Message-----
From: Campbell, Linda F.
Sent: Monday, February 14, 2005 2:13 PM
To: Haber, Stanley M.
Subject: Kennedy Weir

Stan,
One of our asbestos workers has tested the insulation of the lime pipe in the past. It is not asbestos, it is fiberglass.
Please pass this along to anyone who needs it.
Thanks,
Linda

TVA 488 (EN DES-3-77) SHEET ______ OF ______

KIF531 (Kenney Weir)
Meeting 1-19-05 COMPUTED ______ DATE ______
(PH2/PH3 Deliverable) CHECKED ______ DATE ______

Phil Catlett
Linda Campbell } Plant
Missy Hedgecoth

Only weir in system - non standard TVA design.
(Free Water Volume Issue)

- Risk of failure due to life of corrugated pipe.

- Action Item -

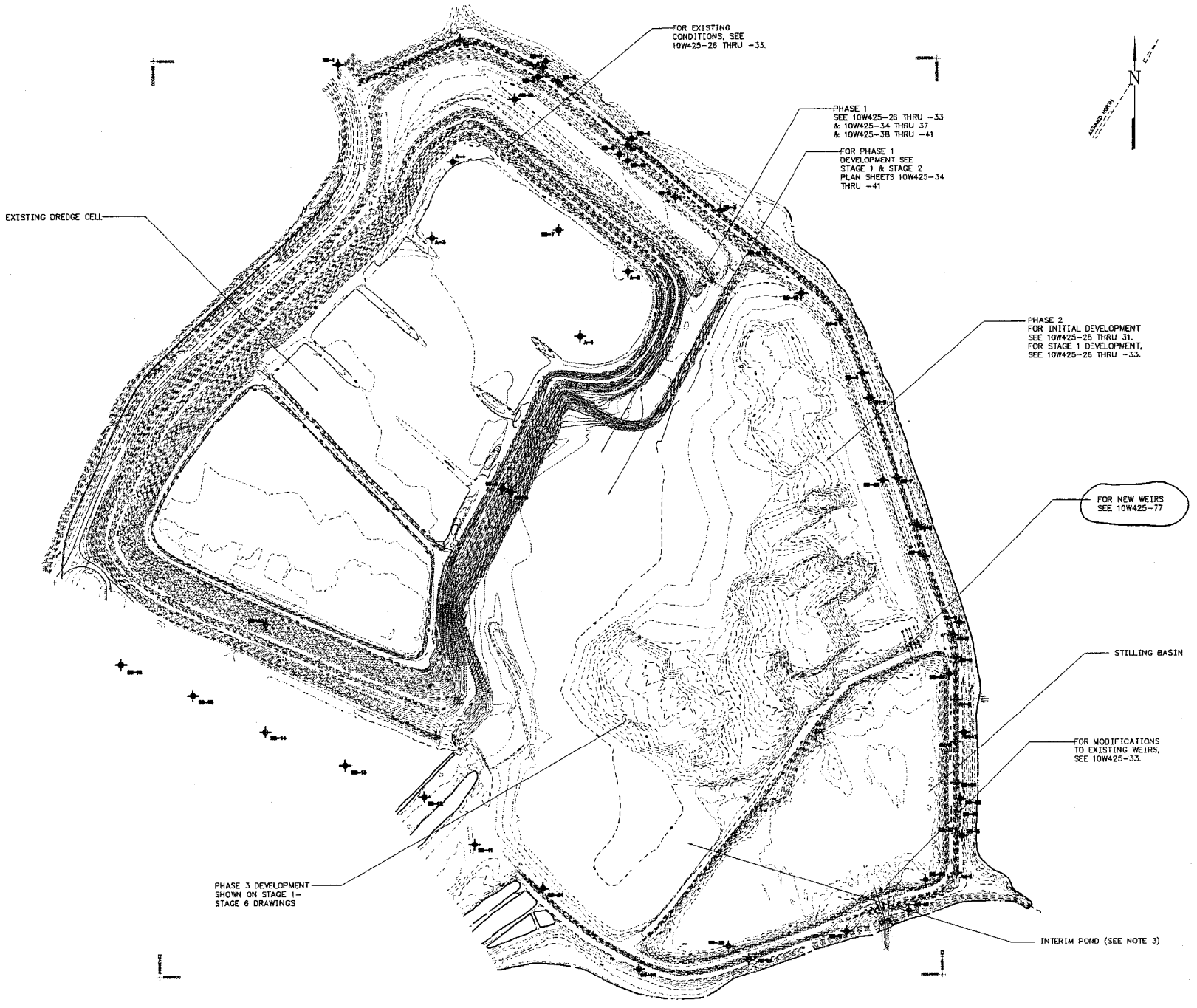
Construction will be done by the end of March

RJ revised ASAP.

Will cofferdams will be required?
During this installation?
Built out of rock

Cost Estimate Due Feb 10, 2005

TVA-00029036



NOTES:

1. FOR DRAWING INDEX AND LEGEND, SEE DRAWING 10W425-20.
2. DRAWINGS 10W425-24 AND -25 DEPICT PHASED CONSTRUCTION INFORMATION. INITIAL CONSTRUCTION DRAWINGS BEGIN WITH 10W425-26.
3. FOR INTERIM POND DEVELOPMENT, SEE NOTE 3 ON 10W425-28.

PRELIMINARY

DATE: 02/7/05

R 1	DRS	JMB	CDM	HLP	REL	DLL	
REVISED WEIR DRAWING REFERENCE							
R 0	DRS	RSB	WPT	HLP	REP	JCA	
REVISED FOR DREDGE CELL EXPANSION							

SCALE: 1"=200' EXCEPT AS NOTED

YARD

PHASE 1 DREDGE CELL
LATERAL EXPANSION
DEVELOPMENT PLAN SHEET 1

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	TRACED BY:
D.E. SMITH	B.S. DUNT	W.P. TAYLOR	H.L. PETTY	R.E. PURDEY	J.G. ADAIR	

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

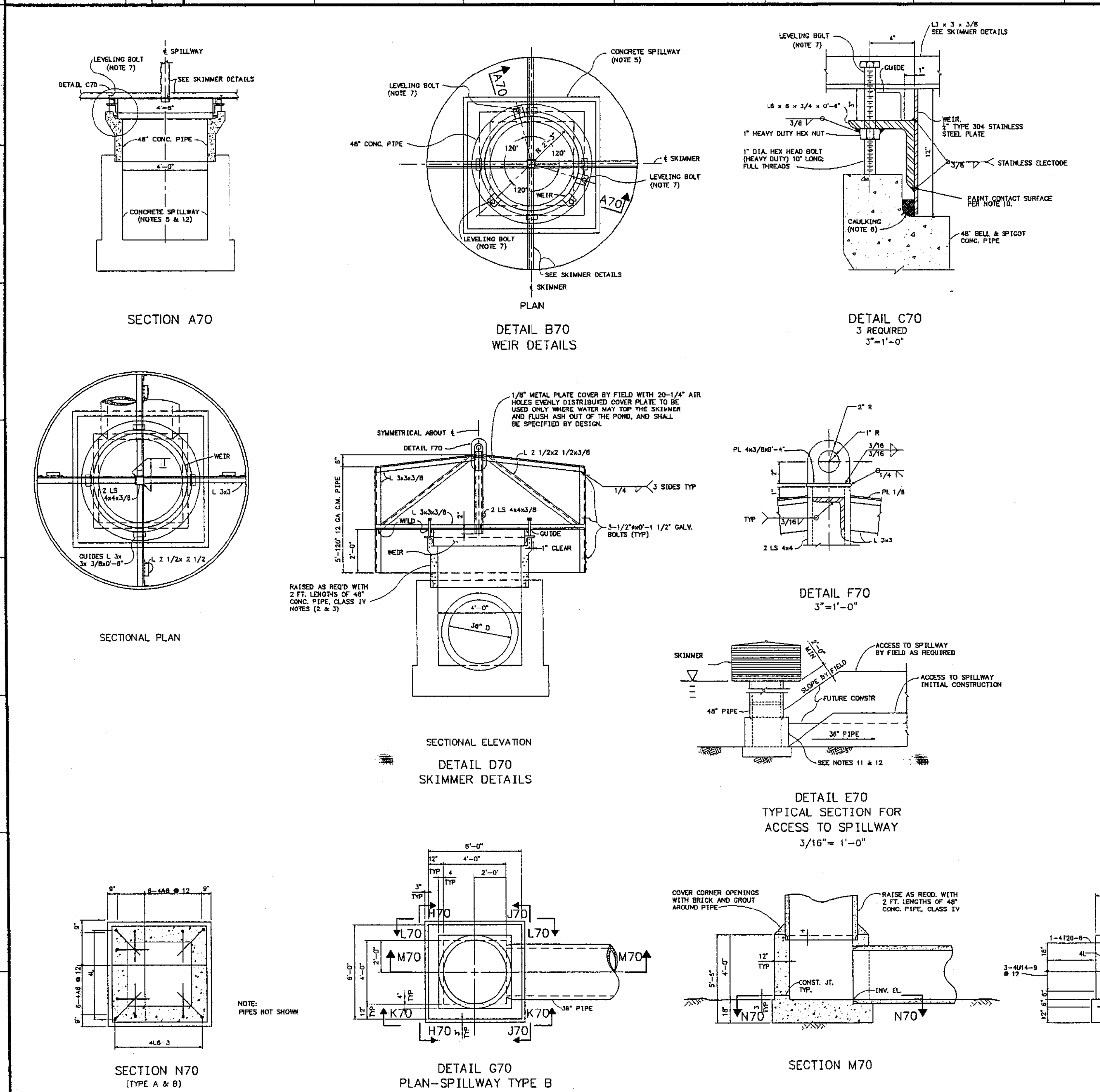
AUTOCAD R14	DATE	36	C	10W425-24	R 0

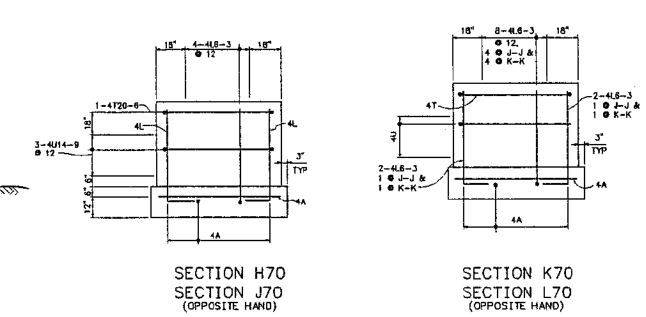
PARSONS	0
TASK COMPLETED BY:	REV NO.

PLOT FACTOR:1200
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

10W425-70 | 36





WEIR DISCHARGE * IN CUBIC FEET PER SECOND

HEAD IN FEET	0.0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	.0	.04	.11	.21	.35	.52	.72	.95	1.20	1.34
0.1	1.54	1.75	1.97	2.20	2.44	2.70	2.96	3.24	3.52	3.81
0.2	4.11	4.41	4.72	5.04	5.36	5.69	6.04	6.38	6.73	7.10
0.3	7.47	7.85	8.23	8.62	9.00	9.41	9.82	10.20	10.60	11.10
0.4	11.50	11.90	12.40	12.80	13.30	13.70	14.20	14.70	15.10	15.60
0.5	16.10	16.60	17.10	17.60	18.10	18.60	19.10	19.60	20.10	20.70
0.6	21.20	21.70	22.30	22.80	23.40	23.90	24.50	25.00	25.60	26.20
0.7	26.70	27.30	27.90	28.50	29.10	29.70	30.30	30.90	31.50	32.10
0.8	32.70	33.40	34.00	34.60	35.20	35.90	36.50	37.20	37.80	38.50
0.9	39.10	39.80	40.40	41.10	41.80	42.50	43.10	43.80	44.50	45.20
1.0	45.90									

* 4'-6" DIAMETER

BILL OF MATERIAL

ITEM	DESCRIPTION	NO. SPLWYS.	PER SPLWY.	TOTAL REQ'D.
	WEIR			
ANGLE 28.7#/FT	6 x 6 x 3/4 x 0'-6"		3	43.05 lbs @ $0.60/LB = $26.00
BOLT	1"ϕx0'-10" HEAVY DUTY (FULL THREADS) WITH NUT		3	
PL 10.2#/FT	1/4x12 x 14'-2" TYPE 430 STAINLESS		1	1,736 LBS @ $2.80/LB = 4,861.00
CAULKING	BY FIELD			
	SKIMMER			
660	120"x12 GAGE CORRUGATED METAL PIPE (NOTE 4)		5 FT.	@ $75/FT = 375.00
BOLT	1/2"ϕx0'-1 1/2 GALVANIZED		12	
PL	1/8" METAL COVER (BY FIELD SEE DETAILS)		1	
ANGLE	2 1/2 x 2 1/2 x 3/8		23 FT.	
ANGLE 7.2#/FT	3 x 3 x 3/8 — 32.58/20' pc x 4 pcs		64 FT.	461 LBS @ $1.20/LB = 553.00
ANGLE 9.8#/FT	4 x 4 x 3/8 — 47.03/20' pc		8 FT.	@ $1.20/LB = 95.00

BILL OF MATERIAL

ITEM	DESCRIPTION	NO. OF SPLWYS	PER SPLWY	TOTAL REQD
402	CLASS X CONCRETE		5 CU. YD.	$90/CY = 450
418	REINFORCING STEEL		170 LB.	$0.85/LB = 145
	18" D REINFORCED CONCRETE PIPE-CLASS II			
	36" D REINFORCED CONCRETE PIPE-CLASS III			
603	48" D REINFORCED CONCRETE PIPE-CLASS IV			$3/SF = 657
	FORMWORK			

{ $1,202.00

BENT BAR LIST

BAR MARK	NO REQD	a	b	c	e
4L6-3	10	4-4	EX		
4T20-6	1	5-0	5-0		
4U14-9	1	5-0	5-0	EX	
4L2-8	4	1-3	EX		

TYPE A SPILLWAYS

BENT BAR LIST

BAR MARK	NO REQD	a	b	c	e
4L6-3	16	4-4	EX		
4T20-6	1	5-0	5-0		
4U14-9	3	5-0	5-0	EX	

TYPE B SPILLWAYS

NOTES:

1. A SECTION OF 120" DIA. CORRUGATED METAL PIPE, FULLY COATED, SHALL BE USED FOR THE SKIMMER DEVICE. ALL SEAMS AND JOINTS SHALL BE RIVETED. FABRICATION OF THE PIPE SHALL BE COMPLETE PRIOR TO COATING.
2. ONE SECTION OF 48" PIPE SHALL BE INSTALLED DURING INITIAL CONSTRUCTION.
3. AS ADDITIONAL SECTIONS OF 48" PIPE ARE ADDED, GROUT THE JOINT TO FORM A STABLE AND WATER TIGHT CONNECTION.
4. ALL CONNECTIONS TO BE WELDED.
5. FOR SPILLWAY DETAILS SEE STD. DWG. SD-C11.1.
6. CAULKING SHALL EXTEND COMPLETELY AROUND THE WEIR AND FORM A WATER TIGHT SEAL.
7. WHEN THE WEIR IS INSTALLED THE TOP SHALL BE LEVELED WITH THE USE OF LEVELING BOLTS.
8. ALL WELDS BY TVA FIELD SHALL BE MADE AND INSPECTED IN ACCORDANCE WITH TVA CONSTRUCTION SPECIFICATION G29C.
9. ALL WELDS BY TVA TO HAVE VISUAL INSPECTION.
10. ALL SURFACES OF FABRICATED STEEL ITEMS SHALL BE PAINTED IN ACCORDANCE WITH CONSTRUCTION SPECIFICATION G14, PART XIX.
11. DEWATER AREA WHERE WEIRS ARE TO BE INSTALLED BY CONSTRUCTING ASH DIKES OR INSTALLING SHEET PILE, AND REMOVING WATER FROM THE INSTALLATION AREA. DESIGN OF ASH DIKES AND/OR SHEET PILE BY TVA FES.
12. PROVIDE ADEQUATE FIRM BASE FOR INSTALLATION OF CONCRETE SPILLWAY BY INSTALLING ROCK BASE OR TENSAR GEOGRID. SELECTION OF TENSAR GEOGRID. SELECTION OF TENSAR GEOGRID BY TVA FES.

NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE T-1 SPECIFICATIONS, UNLESS OTHERWISE NOTED.
2. ALL CONCRETE SHALL BE CLASS "X" IN ACCORDANCE WITH SECTION 400.
3. ALL REINFORCEMENT SHALL CONFORM TO ASTM SPECIFICATION A615 GRADE 60, DEFORMED.
4. DIMENSIONS SHOWN ARE TO THE CENTERLINE OF REINFORCING BARS, UNLESS OTHERWISE NOTED.
5. CONCRETE CLEAR COVER DIMENSIONS ARE AS FOLLOWS:
   3 INCHES FOR FACES CAST AGAINST EARTH OR ROCK;
   2 INCHES FOR ALL OTHER FACES.

PRELIMINARY

DATE: 02/7/05

R 0 | DRS | JLM | WPT | HLP | REP | JGA

ISSUED FOR DREDGE CELL EXPANSION

SCALE: 1/2"=1'-0" EXCEPT AS NOTED

YARD

ASH DISPOSAL AREA LATERAL EXPANSION
WEIR & SKIMMER DETAILS

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
D.R. SMITH	J.L. MILES	W.P. TAYLOR	H.L. PETTY	R.E. PURKEY	J.G. ADAIR	

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R14 | DATE | 36 | C | 10W425-70 | R 0

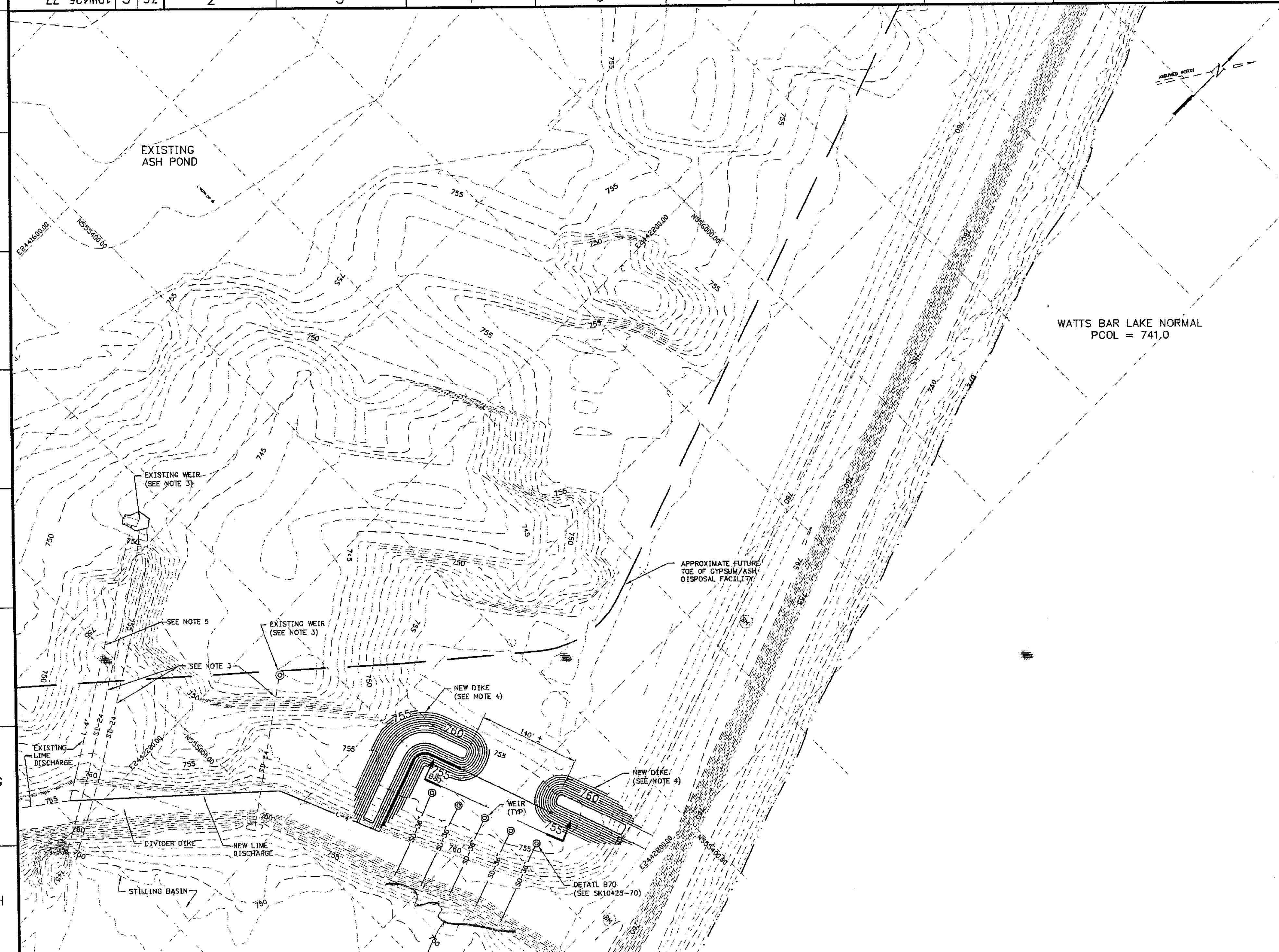
PLOT FACTOR:1
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PARSONS | 0
TASK COMPLETED BY: | REV NO.

FORMWORK - BASE 26 LF x 1.5 FT = 39.0 SF
FORMWORK - OUTER WALL 24 LF x 4.5 FT = 108.0 SF
FORMWORK - INSIDE WALL 16 LF x 4.5 FT = 72.0 SF
219.0 SF/BOX

36 C 10W425-77



RALLON ENDS

WEIR REPLACEMENT GENERAL NOTES:

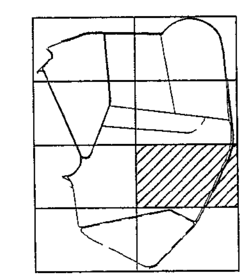
1. FOR DRAWING INDEX & LEGEND SEE 10W425-20

2. FOR GENERAL NOTES SEE 10W426-26.

3. AFTER INSTALLATION OF NEW WEIRS, DISCONNECT STORM DRAIN FROM WEIR AT LOCATION NEAR DIVIDE DIKE, TREMIE GROUT STORM DRAINS CONNECTED TO EXISTING WEIRS. GROUT SHALL CONSIST OF VOLCLAY GROUT OR VOLCLAY GRANULAR GROUT, AS MANUFACTURED BY CETCO. MIX AND PLACE GROUT RECOMMENDED BY THE MANUFACTURER. VOLCLAY GRANULAR GROUT MAY BE MIXED WITH FLY ASH IN LIEU OF SILICA SAND. MIXTURE SHALL BE PUMPABLE, YET STIFF ENOUGH TO INSTALL UNDERWATER. INSTALL TREMIE PIPE & VERIFY FULL PENETRATION TO OUTLET END OF STORM DRAIN. SEAL WELD 1/4" THICK A36 STEEL PLATE TO END OF STORMDRAIN TO PREVENT FLOWING WATER. PUMP GROUT MIXTURE INTO PIPE AND GRADUALLY WITHDRAW TREMIE PIPE DURING FILLING. MAINTAIN TREMIE PIPE WITHIN GROUT TO PREVENT THE FORMATION OF AIR POCKETS OR HONEYCOMB AREAS.

4. NEW DIKE SHOWN IN FINAL CONFIGURATION. SEE DRAWING 10W425-78 FOR DIKE CONSTRUCTION

5. REMOVE EXISTING WALKWAY (NOT SHOWN) TO EXISTING WEIR. EXISTING WOODEN POLES SHALL BE LEFT IN PLACE AND NOT REMOVED.



KEY PLAN

PRELIMINARY
DATE: 02/7/05

REV. NO	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST
R 0		DRS	JMB	GDM	HLP	REP	DLL			

ISSUED FOR DREDGE CELL EXPANSION

SCALE: 1"=50' EXCEPT AS NOTED

YARD

DREDGE CELL
WEIR REPLACEMENT
OVERALL PLAN

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
D.R. SMITH	J. BLANKENSHIP	C.D. MELTON	H.L. PETTY	R. E. PURKEY	D.L. LUNDY	

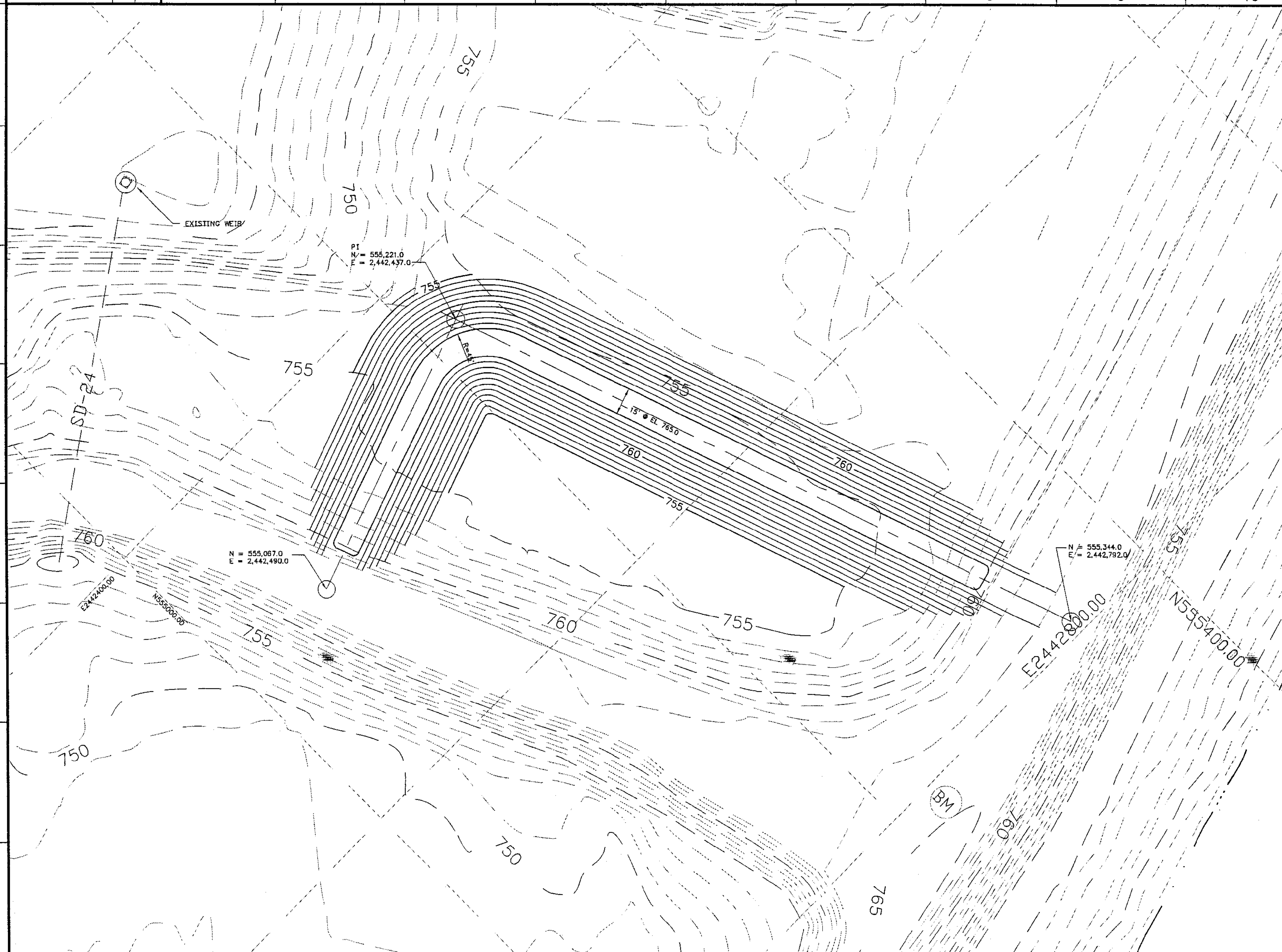
KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R14 | DATE | 36 | C | 10W425-77 | R 0

PLOT FACTOR:600
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PARSONS | 0
TASK COMPLETED BY: | REV NO.



NOTES:

1. FOR WEIR REPLACEMENT GENERAL NOTES, SEE 10W425-77

2. NEW DIKE SHALL BE CONSTRUCTED AS SHOWN TO ALLOW FOR DEWATERING OF THE CONSTRUCTION AREA. CONSTRUCT THE NEW DIKE IN CONFORMANCE WITH DETAILS SHOWN ON 10W425-6 AND 10W425-72, EXCEPT THAT UNDERDRAINS ARE NOT REQUIRED. ASH SHALL BE BOTTOM ASH OR A MIXTURE OF FLYASH AND BOTTOM ASH OBTAINED FROM THE DREDGE CELL. PLACE BOTTOM ASH NAD COMPACT TO ESTABLISH AN INITIAL WORKING BASE SUITABLE TO SUSTAIN EQUIPMENT LOADS. THEN PLACE ASH IN THIN LIFTS AND COMPACT.

3. TESTING FOR COMPACTED DIKES AS PRESCRIBED IN THE QA/QC PLAN IS NOT REQUIRED FOR THIS DIKE, BECAUSE IT IS NOT A LOAD-BEARING DIKE FOR ASH DISPOSAL. AFTER A FIRM BASE IS ESTABLISHED, PERFORM COMPACTION TESTING AT FOUR TESTS PER LIFT.

PRELIMINARY
DATE: 02/7/05

REV NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R 0		DRS	JMB	GDM	HLP	REP	DLL				D

ISSUED FOR DREDGE CELL EXPANSION

SCALE: 1"=20' EXCEPT AS NOTED

YARD

DREDGE CELL
WEIR REPLACEMENT
INITIAL DIKE LAYOUT

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
D.R. SMITH	J. BLANKENSHIP	G.D. MELTON	H.L. PETTY	R.E. PURKEY	D.L. LUNDY	

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R14 | DATE | 36 | C | 10W425-78 | R 0

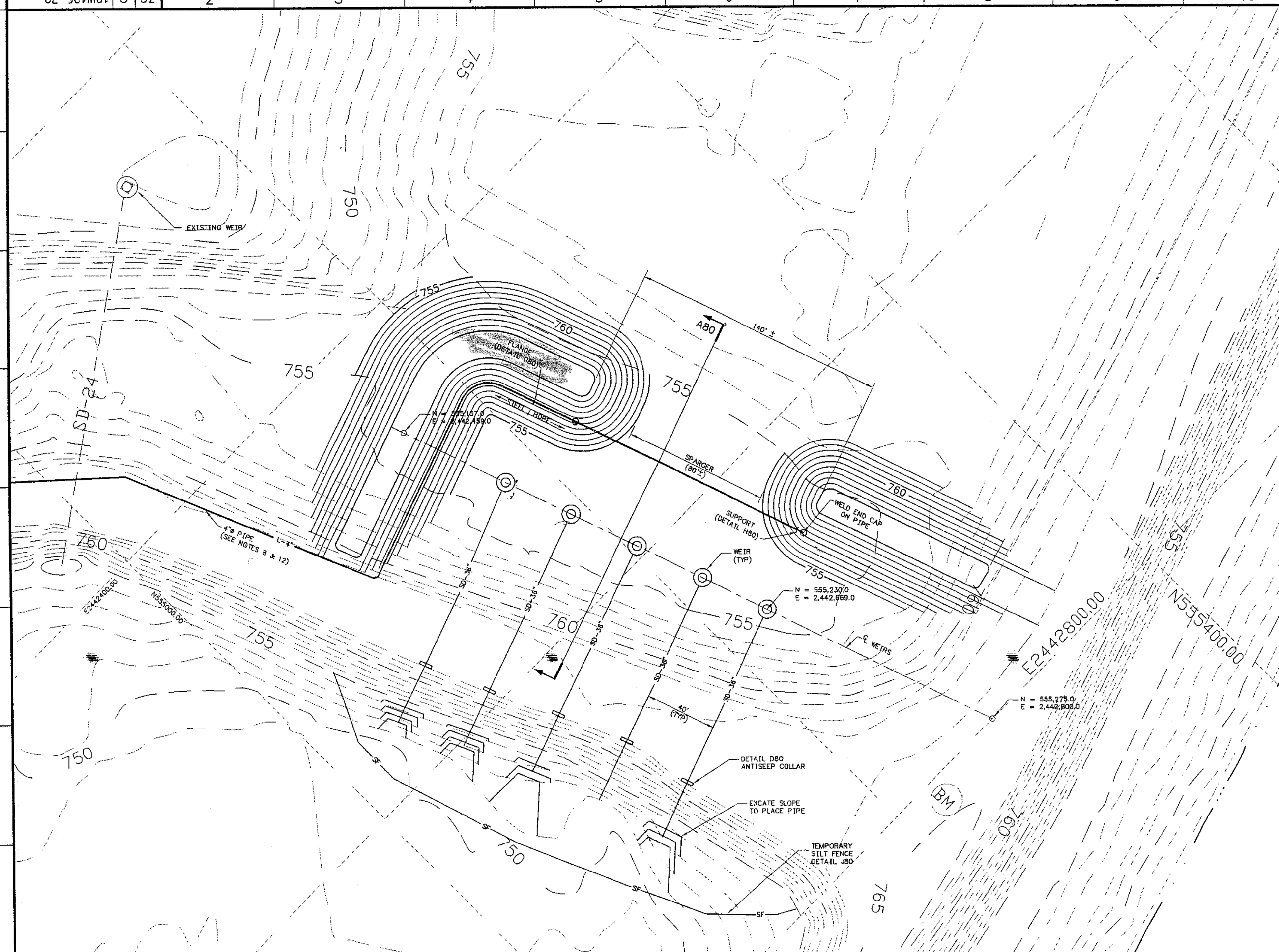
PLOT FACTOR:600
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PARSONS | 0
TASK COMPLETED BY: | REV NO.

36 C 10W425-78

TVA-00029040



NOTES:

1. FOR WEIR REPLACEMENT GENERAL NOTES, SEE 10W425-77.

2. REMOVE EXISTING LIME SLUDGE DISCHARGE LINE WHERE IT IS ROUTED FROM THE BANK TO THE EXISTING WEIR. PIPE MAY BE REUSED AT CONSTRUCTOR'S OPTION, OR A NEW PIPE USED TO REROUTE THE LIME SLUDGE DISCHARGE LINE TO THE NEW WEIRS. NEW PIPE SHALL BE STEEL PIPE TO MATCH DIAMETER AND WALL THICKNESS OF EXISTING. BUTT WELD OR USE FLANGE CONNECTION TO SPLICE THE PIPE TOGETHER WHERE IT IS REROUTED TO THE NEW WEIR. INSTALL LIME SLUDGE DISCHARGE LINE TO THE NEW WEIRS AS SHOWN.

3. WHERE DISCHARGE PIPE IS TO BE SUBMERGED, PIPING SHALL BE HDPE, SDR 11. WELD A STEEL FLANGE ADAPTOR TO THE FABRICATED AS A SPARGER. SEE DETAILS ON 10W425-80.

4. AFTER COMPLETION OF WEIR INSTALLATION, EXCAVATE THE CENTER SECTION FROM THE DIKE AS SHOWN, TO ALLOW THE ASH POND TO DISCHARGE TO THE STILLING BASIN.

5. REMOVE SECTIONS OF DISCHARGE FROM EXISTING WEIRS, AND TREMIE GROUT AS DISCUSSED IN NOTE 3 ON 10W425-77.

6. PIPE AND FITTING USED TO CONSTRUCT HDPE LIME SLUDGE DISCHARGE PIPING SHALL BE HIGH-DENSITY POLYTHYLENE (HDPE) PE 3408 PIPE. CELL CLASSIFICATIONS 345444C IN ACCORDANCE WITH ASTM D 3350. ALL PIPING AND FITTINGS SHALL BE NEW AND OF THE SAME MATERIAL AND HAVE A DIMENSION RATIO OF XX, IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

7. ALL HDPE PIPING AND FITTINGS SHALL BE JOINED BY BUTT FUSION WELDING, IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

8. PROVIDE MINIMUM 0.5% SLOPE ON LIME SLURRY PIPE.

9. INSTALL WEIR AT EL 760 AS SHOWN. WEIR WILL BE LOWERED TO EL 758 PRIOR TO GYPSUM/ASH DISPOSAL FACILITY CONSTRUCTION

10. PROTECT EXCAVATIONS BY SHORING, BRACING, SHEET PILING, OR OTHER METHODS AS REQUIRED TO PREVENT CAVE-IN OF LOOSE SOIL INTO EXCAVATION IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P - EXCAVATION.

11. PRIOR TO REMOVING INSULATION FROM EXISTING LIME SLURRY DISCHARGE PIPE, DETERMINE WHETHER INSULATION CONTAINS ASBESTOS. CONTACT KIF ENVIORNMENTAL PROGRAM ADMINISTRATOR PA(E) (LINDA CAMBPELL) PRIOR TO REMOVING INSULATION. REMOVE INSULATION IN ACCORDANCE WITH OSHA REQUIREMENTS, IF IT CONTAINS ASBESTOS. DISPOSE OF ASBESTOS-CONTAINING MATERIALS IN ACCORDANCE WITH STATE OF TENNESSEE SOLID WASTE REQUIREMENTS.

12. SPACE SUPPORTS FOR 4" ø LIME SLURRY PIPING ON 10' CENTER TO CENTER.

PRELIMINARY
DATE: 02/7/05

R 0		DRS	JAB	CDM	HLP	REP	DLL		D
ISSUED FOR DREDGE CELL EXPANSION									

SCALE: 1"=20' EXCEPT AS NOTED

YARD

DREDGE CELL
WEIR REPLACEMENT
FINAL DIKE & WEIR LAYOUT

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
D.R. SMITH	J. BLANKENSHIP	G.D. MELTON	H.L. PETTY	R. E. PURKEY	D.L. LUNDY	

KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

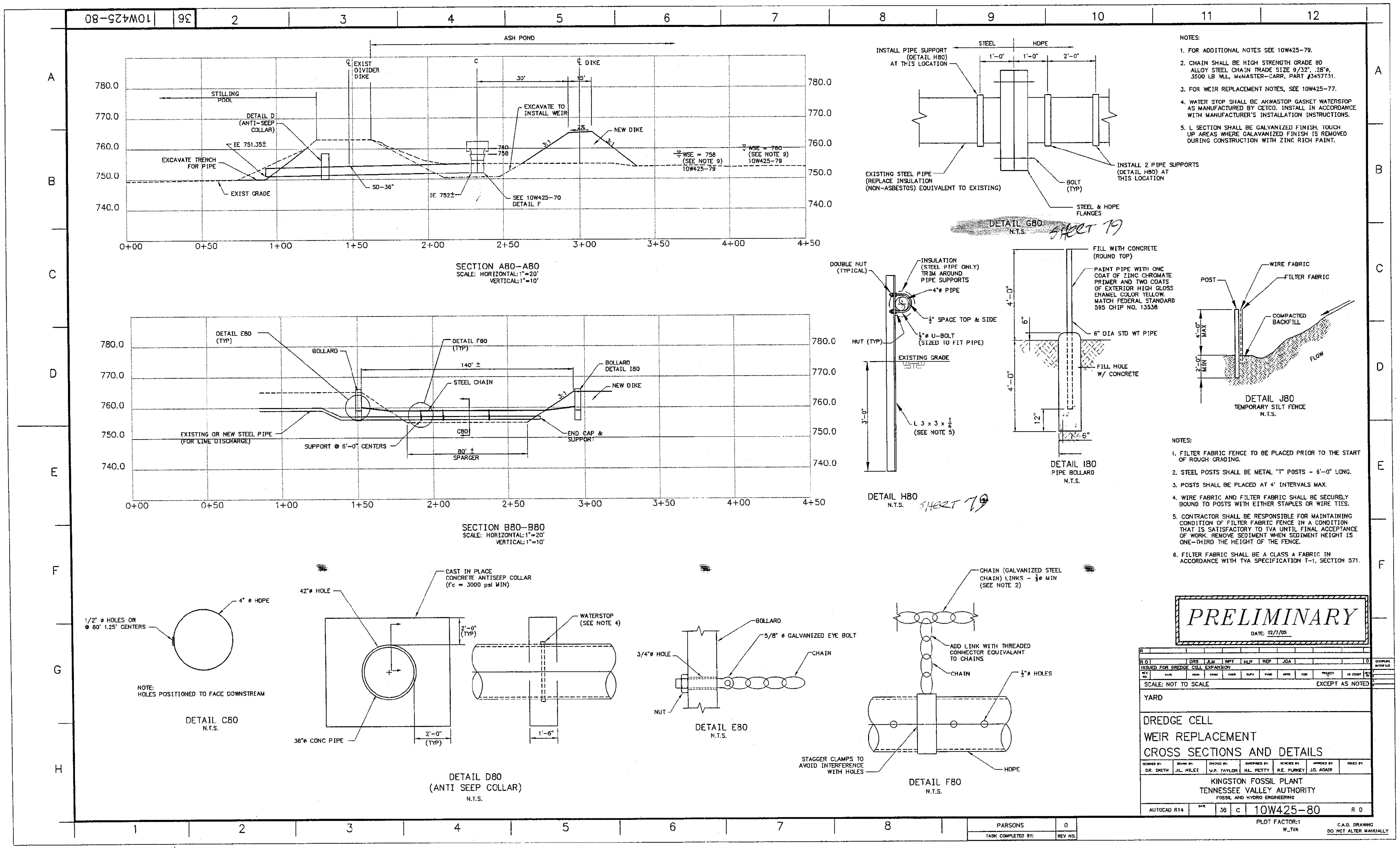
AUTOCAD R14 | DATE | 36 | C | 10W425-79 | R 0

PLOT FACTOR:600
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

PARSONS | 0
TASK COMPLETED BY: | REV NO.

36 | C | 10W425-79



SECTION A80–A80
SCALE: HORIZONTAL: 1"=20' VERTICAL: 1"=10'
ASH POND
STILLING POOL
DETAIL D (ANTI-SEEP COLLAR)
IE 751.35±
EXCAVATE TRENCH FOR PIPE
EXIST GRADE
EXIST DIVIDER DIKE
SD-36"
IE 752±
SEE 10W425-70 DETAIL F
EXCAVATE TO INSTALL WEIR
NEW DIKE
WSE = 758 (SEE NOTE 9) 10W425-79
WSE = 760 (SEE NOTE 9) 10W425-79
SECTION B80–B80
SCALE: HORIZONTAL: 1"=20' VERTICAL: 1"=10'
DETAIL E80 (TYP)
BOLLARD
DETAIL F80 (TYP)
STEEL CHAIN
BOLLARD DETAIL I80
NEW DIKE
EXISTING OR NEW STEEL PIPE (FOR LINE DISCHARGE)
SUPPORT @ 6'-0" CENTERS
80' ± SPARGER
END CAP & SUPPORT
DETAIL C80
N.T.S.
1/2" ⌀ HOLES ON @ 80' 1.25" CENTERS
4" ⌀ HDPE
NOTE: HOLES POSITIONED TO FACE DOWNSTREAM
DETAIL D80 (ANTI SEEP COLLAR)
N.T.S.
CAST IN PLACE CONCRETE ANTISEEP COLLAR (f'c = 3000 psi MIN)
42"⌀ HOLE
36"⌀ CONC PIPE
WATERSTOP (SEE NOTE 4)
DETAIL E80
N.T.S.
BOLLARD
5/8" ⌀ GALVANIZED EYE BOLT
3/4"⌀ HOLE
CHAIN
NUT
DETAIL F80
N.T.S.
CHAIN (GALVANIZED STEEL CHAIN) LINKS – 3/8⌀ MIN (SEE NOTE 2)
ADD LINK WITH THREADED CONNECTOR EQUIVALANT TO CHAINS
CHAIN
1/2"⌀ HOLES
STAGGER CLAMPS TO AVOID INTERFERENCE WITH HOLES
HDPE
DETAIL G80
N.T.S.
SHEET 79
INSTALL PIPE SUPPORT (DETAIL H80) AT THIS LOCATION
STEEL
HDPE
EXISTING STEEL PIPE (REPLACE INSULATION (NON-ASBESTOS) EQUIVALENT TO EXISTING)
BOLT (TYP)
STEEL & HDPE FLANGES
INSTALL 2 PIPE SUPPORTS (DETAIL H80) AT THIS LOCATION
DETAIL H80
N.T.S.
SHEET 79
DOUBLE NUT (TYPICAL)
INSULATION (STEEL PIPE ONLY) TRIM AROUND PIPE SUPPORTS
4"⌀ PIPE
1/2" SPACE TOP & SIDE
1/2"⌀ U-BOLT (SIZED TO FIT PIPE)
NUT (TYP)
EXISTING GRADE
L 3 x 3 x 1/4 (SEE NOTE 5)
DETAIL I80
PIPE BOLLARD
N.T.S.
FILL WITH CONCRETE (ROUND TOP)
PAINT PIPE WITH ONE COAT OF ZINC CHROMATE PRIMER AND TWO COATS OF EXTERIOR HIGH GLOSS ENAMEL COLOR YELLOW. MATCH FEDERAL STANDARD 595 CHIP NO. 13538
6" DIA STD WT PIPE
FILL HOLE W/ CONCRETE
DETAIL J80
TEMPORARY SILT FENCE
N.T.S.
POST
WIRE FABRIC
FILTER FABRIC
COMPACTED BACKFILL
FLOW
NOTES:
1. FOR ADDITIONAL NOTES SEE 10W425-79.
2. CHAIN SHALL BE HIGH STRENGTH GRADE 80 ALLOY STEEL CHAIN TRADE SIZE 9/32", .28"⌀, 3500 LB WLL, McMASTER-CARR, PART #3457T31.
3. FOR WEIR REPLACEMENT NOTES, SEE 10W425-77.
4. WATER STOP SHALL BE AKWASTOP GASKET WATERSTOP AS MANUFACTURED BY CETCO. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
5. L SECTION SHALL BE GALVANIZED FINISH. TOUCH UP AREAS WHERE GALVANIZED FINISH IS REMOVED DURING CONSTRUCTION WITH ZINC RICH PAINT.
NOTES:
1. FILTER FABRIC FENCE TO BE PLACED PRIOR TO THE START OF ROUGH GRADING.
2. STEEL POSTS SHALL BE METAL "T" POSTS – 6'-0" LONG.
3. POSTS SHALL BE PLACED AT 4' INTERVALS MAX.
4. WIRE FABRIC AND FILTER FABRIC SHALL BE SECURELY BOUND TO POSTS WITH EITHER STAPLES OR WIRE TIES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONDITION OF FILTER FABRIC FENCE IN A CONDITION THAT IS SATISFACTORY TO TVA UNTIL FINAL ACCEPTANCE OF WORK. REMOVE SEDIMENT WHEN SEDIMENT HEIGHT IS ONE-THIRD THE HEIGHT OF THE FENCE.
6. FILTER FABRIC SHALL BE A CLASS A FABRIC IN ACCORDANCE WITH TVA SPECIFICATION T-1, SECTION 571.
PRELIMINARY
DATE: 02/7/05
ISSUED FOR DREDGE CELL EXPANSION
SCALE: NOT TO SCALE
EXCEPT AS NOTED
YARD
DREDGE CELL
WEIR REPLACEMENT
CROSS SECTIONS AND DETAILS
KINGSTON FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING
AUTOCAD R14
36
C
10W425-80
R 0
PLOT FACTOR:1
C.A.D. DRAWING DO NOT ALTER MANUALLY
PARSONS

FORM B – MODIFICATION IMPACT REVIEW - FOSSIL OPERATIONS

1. ☒ DCN or ☐ PIC No. KIF-05-1074 Rev. 0 Parent DCN No. (For PIC, else N/A) NA Page 1 of 1

PART I — OPERATIONS INPUT TO DCN

2. PLANT KIF UNIT(s) 1-9 3. CONTINUATION PAGES ATTACHED? _____
4. OPERATION ORGANIZATIONS AFFECTED: PROCEDURES ☐ LABELING ☐ TRAINING ☐
5. DOES THE REVIEWER HAVE COMMENTS? YES ☐ NO ☐
6. SPECIAL REQUIREMENTS? YES ☐ NO ☐
7. IS AN OPERATIONS TURNOVER WALKDOWN REQUIRED? YES ☐ NO ☐
8. ARE TEMPORARY ALTERATIONS NECESSARY TO IMPLEMENT THE MODIFICATION? YES ☐ NO ☐
(If YES, describe and give TAP number on continuation page.)

PART II — IMPACT OF COMPLETED DCN

9. LIST PROCEDURES, SOPs, INSTRUCTIONS, AND OPERATOR LETTERS REQUIRING CREATION OR REVISION AS A RESULT OF THIS DCN BEFORE RTO. (Pages can be attached as necessary.)

10. LIST PROCEDURES, SOPs, INSTRUCTIONS, AND OPERATOR LETTERS REQUIRING CREATION OR REVISION AS A RESULT OF THIS DCN BEFORE CLOSURE. (Pages can be attached as necessary.)

11. A. ARE PREFIRE PLANS, FIRE SYSTEMS, RTO, OR FIRE ASSESSMENT ITEMS AFFECTED? YES ☐ NO ☐
(If YES, list on continuation sheet.)
B. IS TRAINING REQUIRED? (If YES, describe on continuation sheet.) YES ☐ NO ☐
C. IS PLANT COMPONENT IDENTIFICATION LABELING AFFECTED? YES ☐ NO ☐
D. ARE PUNCHLIST ITEMS INVOLVED? (Items to be completed after RTO but before Closure.) YES ☐ NO ☐

(The impact of this DCN on Operations/Maintenance is as described above.)

12. IMPACT REVIEW IS COMPLETE	REVIEWER (PRINT NAME)	SIGNATURE	PHONE	DATE

PART III — LEVEL I ACTIONS (Required to be complete for RTO.)

13. A. TRAINING REQUIRED FOR RTO COMPLETE? YES ☐ N/A ☐
B. PROCEDURES, SOPs, INSTRUCTIONS, & DRAWINGS REQUIRED FOR RTO REVISED TO INCORPORATE REDLINE FIELD CHANGES (I.E., AA PICs)? YES ☐ N/A ☐

14. ACTIONS REQUIRED FOR RTO ARE COMPLETE	REVIEWER (PRINT NAME)	SIGNATURE	PHONE	DATE

PART IV — LEVEL II ACTIONS (Required to be complete for DCN Closure.)

15. A. TRAINING REQUIRED FOR CLOSURE COMPLETE? YES ☐ N/A ☐
B. PLANT COMPONENT IDENTIFICATION LABELING COMPLETE? YES ☐ N/A ☐
C. PROCEDURES/INSTRUCTIONS/SOPs REQD FOR DCN CLOSURE CREATED/REVISED? YES ☐ N/A ☐
D. TEMPORARY ALTERATIONS REMOVED OR INCORPORATED INTO CONFIG MGMT? YES ☐ N/A ☐
E. PUNCHLIST ITEMS COMPLETE? YES ☐ N/A ☐

16. ACTIONS REQUIRED FOR CLOSURE ARE COMPLETE	REVIEWER (PRINT NAME)	SIGNATURE	PHONE	DATE

FORM B – MODIFICATION IMPACT REVIEW - FOSSIL PLANT MAINTENANCE

1. ☒ DCN or ☐ PIC No. KIF-05-1074 Rev. 0 Parent DCN No. (For PIC, else N/A) NA Page 1 of _____

PART I —MAINTENANCE INPUT TO DCN

2. PLANT KIF UNIT(s) 1-9 3. CONTINUATION PAGES ATTACHED? _____
4. GROUPS AFFECTED: ELEC ☐ I&C ☐ MECH ☐ (Sheet required for each affected)
5. COMMENTS? _____ YES ☐ NO ☐
6. SPECIAL REQUIREMENTS? YES ☐ NO ☐

PART II — IMPACT OF COMPLETED DCN

7. LIST PROCEDURES, SOPs, INSTRUCTIONS, AND OPERATOR LETTERS REQUIRING CREATION OR REVISION AS A RESULT OF THIS DCN BEFORE RTO. (Pages can be attached as necessary.)

8. LIST PROCEDURES, SOPs, INSTRUCTIONS, AND OPERATOR LETTERS REQUIRING CREATION OR REVISION AS A RESULT OF THIS DCN BEFORE CLOSURE. (Pages can be attached as necessary.)

9. A. IS TRAINING REQUIRED? (If YES, describe on continuation sheet.) YES ☐ NO ☐
   B. ARE NEW PREVENTIVE MAINTENANCE (PM) TASKS REQUIRED? YES ☐ NO ☐
   C. IS REVISION OF A PM TASK REQUIRED? YES ☐ NO ☐
   D. ARE NEW/REVISED MSDS DATASHEETS REQUIRED? YES ☐ NO ☐
   E. ARE SPARE PARTS REQUIRED? YES ☐ NO ☐
   F. HAVE SPARE PARTS BEEEN MADE OBSOLETE BY THIS CHANGE? YES ☐ NO ☐

(The impact of this DCN on Operations/Maintenance is as described above.)

10.	IMPACT REVIEW IS COMPLETE	REVIEWER (PRINT NAME)	SIGNATURE	PHONE	DATE

PART III — LEVEL I ACTIONS (Required to be complete for RTO.)

11. A. PROCEDURES/INSTRUCTIONS REQUIRED FOR RTO REVISED? YES ☐ N/A ☐
    B. TRAINING REQUIRED FOR RTO COMPLETE? YES ☐ N/A ☐
    C. SPARE PARTS IN STOCK IN POWER STORES? YES ☐ N/A ☐

12.	ACTIONS REQUIRED FOR RTO ARE COMPLETE	REVIEWER (PRINT NAME)	SIGNATURE	PHONE	DATE

PART IV — LEVEL II ACTIONS (Required to be complete for DCN Closure.)

13. A. PM REQUIREMENTS IDENTIFIED & INPUT SENT TO PM SCHEDULING & TRACKING? YES ☐ N/A ☐
    B. PROCEDURES/INSTRUCTIONS/SOPs REQD FOR DCN CLOSURE CREATED/REVISED? YES ☐ N/A ☐
    C. TRAINING REQUIRED FOR CLOSURE COMPLETE? YES ☐ N/A ☐
    D. SPARE PARTS IN STOCK IN POWER STORES? YES ☐ N/A ☐
    E. HAVE OBSOLETE SPARE PARTS BEEN SURPLUSED? YES ☐ N/A ☐

14.	ACTIONS REQUIRED FOR CLOSURE ARE COMPLETE	REVIEWER (PRINT NAME)	SIGNATURE	PHONE	DATE

FORM B – MODIFICATION IMPACT REVIEW - PLANT SYSTEMS ENGINEER (SE)

1. ☒ DCN or ☐ PIC No. KIF-05-1074 Rev. 0 Parent DCN No. (For PIC, else N/A) NA Page 1 of _____

PART I — SYSTEMS ENGINEER INPUT TO DCN

2. PLANT KIF UNIT(s) 1-9
3. SYSTEM(S) AFFECTED: _____ (Provide review form for each SE affected.)
4. COMMENTS? ☐ Y ☐ N _____
5. SPECIAL REQUIREMENTS? ☐ YES ☐ NO _____
6. CHANGE WILL CREATE A DIFFERENCE BETWEEN OPERATING UNITS? ☐ YES ☐ NO

PART II — IMPACT OF COMPLETED DCN

7. LIST PROCEDURES/INSTRUCTIONS REQUIRING CREATION/REVISION BEFORE RTO.
(Pages can be attached as necessary.)

8. LIST PROCEDURE/INSTRUCTIONS REQUIRING CREATION/REVISION BEFORE DCN CLOSURE.
(Pages can be attached as necessary.)

9.	IS TRAINING REQUIRED?	☐ YES	☐ NO
10.	IS ANY TESTING REQUIRED? (If YES, Post Modification Test.)	☐ YES	☐ NO
11.	REQUIREMENTS ATTACHED? (Not applicable to Functional Test.)	☐ YES	☐ NO
12.	DO THE CHANGES CONTRIBUTE TO FLOW ACCELERATED CORROSION (FAC)? (FPG Only)	☐ YES	☐ NO

(The impact of this DCN on areas for which SE is responsible is as described above.)

13.	IMPACT REVIEW IS COMPLETE	SE (PRINT NAME)	SIGNATURE	PHONE	DATE

PART III — LEVEL I ACTIONS (Required to be complete for RTO.)

14.		YES	N/A
A.	PROCEDURES/INSTRUCTIONS REQUIRED FOR RTO HAVE BEEN CREATED/REVISED.	☐	☐
B.	RTO TRAINING COMPLETE.	☐	☐
C.	ANY REQUIRED TESTING HAS BEEN COMPLETED OR PUNCHLISTED.	☐	☐
D.	HAS THE FAC COORDINATOR REVIEWED AND ACCEPTED CHANGES?	☐	☐

15.	ACTIONS REQUIRED FOR RTO ARE COMPLETE	SE (PRINT NAME)	SIGNATURE	PHONE	DATE

PART IV — LEVEL II ACTIONS (Required to be complete for DCN Closure.)

16.		YES	N/A
A.	PROCEDURES/INSTRUCTION REQUIRED FOR CLOSURE HAVE BEEN CREATED/REVISED	☐	☐
B.	TRAINING ACTIONS REQUIRED FOR CLOSURE ARE COMPLETE	☐	☐
C.	POST MODIFICATION OR FUNCTIONAL TESTING COMPLETED.	☐	☐

17.	ACTIONS REQUIRED FOR CLOSURE ARE COMPLETE	SE (PRINT NAME)	SIGNATURE	PHONE	DATE

TVA/COO	FORM A – DESIGN CHANGE NOTICE				Page 1 of 2
1. a. DCN Type ☒ Base DCN ☐ PIC for Base/ Parent DCN No.: NA	b. Class Routine Design Change ☒ Documentation Only ☐ Material Equivalency ☐	2.	DCN No.	KIF-05-1074	Rev. 0
		3.	Plant/TL/SUB/ Facility	KIF	
			Unit/TL/SUB No.	1-9	
	c. Advance Authorization ☐ Yes ☒ No	4.	System(s)	14	

PART I - REQUESTED CHANGE

5.	Authorizing Documents	KIF531
6.	Requested Change or Problem Statement	The weirs that discharge from the active ash pond are a field design rather than a standard TVA engineered design. (See Block 6 continuation)

7.	D.R.Smith	Parsons E&C	(423)757-8088	8.	William Lytle	1/27/05
	Initiator's Name (Print)	Organization	Phone		Supervisor/Principal Engr	Date

PART II - INITIATION APPROVAL

(Skip blocks 9 and 10 for Advance Authorization Approval)

9.			10.		
	Reviewed INITIATOR'S DEPARTMENT MANAGER	Date		Approved ENGRG/OPERATIONS MANAGER	Date

PART III - APPROVED CHANGE/DETAILED DESIGN

11.	Approved Change Description	☐ Planned at Initiation	☐ As Issued (If different than planned, line through below and update on continuation sheet.)
	Provide design drawings and details for implementing construction of the weirs.		
12.	Advanced Authorization Approval (If applicable, otherwise mark N/A.)	RE or Manager	Date
13.	Does this change contain any assumptions or constraints that require confirmation before RTO?		☐ Yes ☐ No
14.	Does this change address the full scope of the authorizing document?		☐ Yes ☐ No

15.				16.		
	RE	Phone	Date		Civil Lead	Date
17.				18.		
	Electrical/I&C Lead		Date		Mechanical Lead	Date
19.				20.		
	Operations		Date		Maintenance	Date
21.				22.		
	System Engineer		Date		Implementing Organization	Date
23.				25.		
	Telecommunications		Date		Plant / Site Manager	Date
24.				26	ISSUE EDMS #	
	Engrg or Site Engrg Manager		Date			

PART IV - DCN CLOSURE

27.			29.	CLOSURE EDMS #
	Facility Manager or Engrg Manager	Date		
28.				
	RE Signature for DCN Closure	Date		

Mark "N/A" in any blocks not applicable.

TVA/COO	FORM A - DESIGN CHANGE NOTICE	Page 2 of 2

DCN REVISION LOG

Revision Number	Effective Date	Pages Affected	Description of Revision
0	02/11/04	ALL	Initial Issue

DCN CONTINUATION SHEET

6. Cont'd Requested Change or Problem Statement	The existing weir configuration and exact location is not known, which inhibits the ability to accurately determine and report pond free water volume in accordance with the plant NPDES requirements. The discharge side of the weirs are equipped with control gates that require manual manipulation and adjustment based on precipitation and dredging activities. This activity is hazardous due to the location, physical requirements for performing work, and risk to employees should equipment failure occur. Equipment failure could also cause a water surge that would likely result in dike overtopping and an REE.
11. Cont'd Approved Change Description	See Block 11.

RELATED DCNS REQUIRED TO COMPLETE THIS MODIFICATION

NA

FORM B – MODIFICATION IMPACT REVIEW - ENGINEERING

1. ☒ DCN or ☐ PIC No. KIF-05-1074 Rev. 0 Parent DCN No. (For PIC, else N/A) NA Page 1 of 1

PART I — ENGINEERING INPUT TO DCN

2. PLANT / TL / SUB KIF UNIT(s) 1-9 TL / SUB No. NA
3. DESIGN ORGANIZATIONS AFFECTED (One form for each discipline affected.)
   ELEC ☐ I&C ☐ CIVIL ☒ MECH ☐ TRANSMISSION LINE ☐ TELECOM ☐ SUBSTATION ☐
4. DESIGN BASIS DOCUMENTS AFFECTED: NA

PART II — IMPACT OF COMPLETED DCN

5. Activities associated with "YES" answers to the following must be addressed in the DCN before issue to support RTO:	YES	NO
A. ARE PREDECESSOR DCNs / WOs IDENTIFIED?	☐	☒
B. ARE NEW/REVISED PRIMARY/CRITICAL DRAWINGS REQUIRED?	☐	☒
C. ARE UNVERIFIED ASSUMPTIONS IDENTIFIED?	☐	☒
D. ARE SPECIAL REQUIREMENTS IDENTIFIED?	☐	☒
E. ARE POST MOD TEST RESULTS REQUIRED?	☐	☒
F. ARE RELAY SETTING SHEETS CREATED/REVISED AND IMPLEMENTED?	☐	☒
G. DO THE CHANGES CONTRIBUTE TO FLOW ACCELERATED CORROSION (FAC)? (FPG Only)	☐	☒
6. Activities associated with "YES" answers to the following must be addressed in the DCN before issue to support Closure:		
A. ARE VENDOR MANUALS AFFECTED?	☐	☒
B. ARE DESIGN CRITERIA / SYSTEM DESCRIPTIONS AFFECTED?	☐	☒
C. ARE CALCULATIONS / ANALYSES REQUIRED?	☐	☒
D. ARE OTHER DESIGN OUTPUT DOCUMENTS AFFECTED?	☐	☒

(The impact of this DCN on Engineering is as described above.)

7. IMPACT REVIEW IS COMPLETE	Daniel R. Smith		757-8088	1/5/04
	REVIEWER (PRINT NAME)	SIGNATURE	PHONE	DATE

PART III — LEVEL I ACTIONS (Required to be complete for RTO.)

8.	YES	N/A
A. PREDECESSOR DCNs/ WOs HAVE BEEN RETURNED TO OPERABILITY?	☐	☐
B. HAVE PREVIOUSLY APPROVED (DOCUMENTED ON AA DCNs OR PICs) PRIMARY/CRITICAL DRAWING REDLINES BEEN SUBMITTED TO OPERATIONS AND TAPs WRITTEN?	☐	☐
C. APPLICABLE UNVERIFIED ASSUMPTIONS HAVE BEEN SATISFIED?	☐	☐
D. SPECIAL REQUIREMENTS HAVE BEEN SATISFIED?	☐	☐
E. POST MOD TEST RESULTS HAVE BEEN REVIEWED AND ACCEPTED?	☐	☐
F. RELAY SETTING SHEETS HAVE BEEN CREATED/REVISED AND IMPLEMENTED?	☐	☐
G. HAS THE FAC COORDINATOR REVIEWED AND ACCEPTED CHANGES?	☐	☐

9. ACTIONS REQUIRED FOR RTO ARE COMPLETE				
	REVIEWER (PRINT NAME)	SIGNATURE	PHONE	DATE

PART IV — LEVEL II ACTIONS (Required to be complete for DCN Closure.)

10.	YES	N/A
A. VENDOR MANUALS HAVE BEEN UPDATED AND SUBMITTED TO DOCUMENT CONTROL?	☐	☐
B. DESIGN CRITERIA / SYSTEM DESCRIPTIONS HAVE BEEN REVISED TO INCLUDE CHANGES?	☐	☐
C. CALCULATIONS/ANALYSES HAS BEEN ISSUED?	☐	☐
D. OTHER DESIGN OUTPUT DOCUMENTS UPDATED?	☐	☐
E. AS-BUILT DRAWINGS HAVE BEEN ISSUED AND ENTERED INTO CONTROLLED STORAGE?	☐	☐

11. ACTIONS REQUIRED FOR CLOSURE ARE COMPLETE				
	REVIEWER (PRINT NAME)	SIGNATURE	PHONE	DATE

1.0 SCOPE

A. SYSTEM(S): 14

B. FEATURE(S): WEIRS FOR EXISTING ASH POND

C. SCOPE DESCRIPTION: ABANDON THE EXISTING WEIRS AND INSTALL STANDARD TVA ENGINEERED WEIRS THAT REQUIRE NO MANUAL OPERATION OR INTERVENTION.

D. List existing design criteria document(s) with revision number that cover this modification.
N/A

2.0 DESIGN BASIS

Provide the following information if it applies to this modification; otherwise mark "N/A".

NOTE: If the required information can be found in existing design input documents, give the document number, revision number, and applicable section(s).

A. FUNCTIONAL REQUIREMENTS: WEIRS DISCHARGE EFFLUENT FROM THE EXISTING ASH POND TO THE STILLING BASIN.

B. OSHA REQUIREMENTS: (1) OSHA 29 CFR 1926, SUBPART P - EXCAVATION
(2) Check with KIF Environmental Program Administrator [PA(E)], Linda Campbell prior to removing insulation from existing lime discharge pipe. If insulation contains asbestos, removal shall comply with OSHA requirements. Dispose of any asbestos material in accordance with State of Tennessee solid waste requirements.

C. SSC OPERATING ENVIRONMENT: NA

D. ELECTRICAL REQUIREMENTS: NA

E. INSTRUMENTATION REQUIREMENTS: NA

F. PROTECTION AND CONTROL REQUIRMENTS: NA

G. MECHANICAL REQUIREMENTS: NA

H. CIVIL REQUIREMENTS: (SEE ITEM L, INSTALLATION REQUIREMENTS, AND BELOW:

1. General Notes shown on 10W425-26 are repeated on Appendix 1 of Form C, Modification Criteria.

I. TELECOMMUNICATIONS REQUIREMENTS: NA

J. LOGIC FOR OPERATION: NA

K. **MAINTENANCE: Inspect at regular intervals to ensure that weirs are operating correctly.**

L. INSTALLATION REQUIREMENTS:

1. Locate and install dikes in accordance with 10W425-78 & 79.
2. Locate and install new weirs in accordance with 10W425-70 & 79.
3. For suggested sequence of installing 36 in. dia. concrete pipe, see Attachment 2 to Form C, Modification Criteria.
4. Remove lime slurry discharge piping from existing weir. Re-utilize piping or discard and install new in accordance with drawings 10W425-79 & 80.
5. Install HDPE sparger as shown on 10W425-80.
6. Remove sections of existing weir discharge piping and grout existing pipe remaining in divider dike in accordance with Note 2, 10W425-79.
7. Remove existing walkway to existing weir.
8. Following installation of weirs, remove section of dike to allow ash pond to discharge through new weirs.
9. Disconnect discharge piping from existing weirs and tremie grout sections of existing 24 in. dia. CMP through divider dike with grout.

See Attachment 1 to Form C for General Notes from drawing 10W425-26.

M. HAZARDOUS WASTE REQUIREMENTS: (SEE ITEM B)
(Including 29CRF1910.119(1) Management of Change to Highly Hazardous Materials)

N. NEPA ENVIRONMENTAL REVIEW COMMITMENTS: SEE CEC 8914.

O. OTHER: NA
(e.g., location, security, FME, cleanliness, and Emergency Notification System requirements)

3.0 TEST AND INSPECTION REQUIREMENTS

NOTE: If the required information can be found in existing TVA general specifications and construction documents, give the document number, revision number, and applicable section(s).

A. **Component Testing (Including any construction checks):**

(1) **Inspect concrete piping to ensure that joints are secure, and properly attached to weir structure.**

(2) **Determine elevation of weir to ensure it is set at the proper elevation in accordance with the drawings.**

(3) Inspect lime slurry discharge piping for leaks after installation.

B. System Testing: NA

C. In-Service Inspection: NA

4.0 OPERABILITY, RELIABILITY, MAINTAINABILITY, & PERFORMANCE ANALYSIS:

NA

5.0 COMMENTS

NA

6.0 REFERENCES AND ATTACHMENTS

A. List of Required Design Input: NA

B. Other References (if required) / Attach IA Summary, sketches, etc.:

NA

7.0. SPECIAL REQUIREMENTS OR UNVERIFIED ASSUMPTIONS (UVA)

A. Engineering UVA's / Special Requirements: NA

B. Non-Engineering Special Requirements: NA

APPENDIX 1 TO FORM C – DCN KIF-05-1074
GENERAL NOTES – FROM 10W425-26

1. FOR DRAWING INDEX AND LEGEND, SEE DRAWING 10W425-20.
2. EXISTING TOPOGRAPHY AND SITE FEATURES OBTAINED FROM A SURVEY PERFORMED BY TVA, DATED OCTOBER 2003. SUPPLEMENTAL SURVEYING FOR PHASE 1 EXPANSION WERE PERFORMED MARCH 2004. EXISTING MONITORING WELL LOCATIONS WERE PROVIDED BY TVA. EXISTING ELEVATION CONTOURS ARE SHOWN AT 1-FOOT INTERVALS UNLESS NOTED OTHERWISE. ELEVATION CONTOURS FOR DREDGE CELL EXPANSION ARE SHOWN AT 2-FOOT INTERVALS UNLESS NOTED OTHERWISE.
3. SURVEY COORDINATES ARE REFERENCED TO TENNESSEE STATE PLANE COORDINATE SYSTEM, NAD 27. COORDINATES FOR UTILITY STRUCTURES AND PIPING ARE TO CENTERLINE OF STRUCTURE OR PIPE UNLESS NOTED OTHERWISE.
4. HORIZONTAL AND VERTICAL CONTROL SHALL BE ESTABLISHED BY USING THE EXISTING BENCHMARK LOCATIONS LISTED ON 10W425-20, AND DEPICTED ON THESE DRAWINGS.
FOR BENCHMARK DESCRIPTIONS, CONTACT TVA MAPPING, 1101 MARKET ST, CHATTANOOGA, TN 37402.
5. THE ASH POND HAS AN EXISTING STILLING BASIN TO PROVIDE SEDIMENTATION CONTROL DURING CONSTRUCTION AND OPERATION. EROSION CONTROL MEASURES (TEMPORARY SILT FENCING, CHECK DAMS) ARE NOT DEPICTED ON THE DRAWINGS BUT MAY BE UTILIZED BY THE CONSTRUCTOR AND OPERATOR TO CONTROL SEDIMENT DISCHARGE TO THE STILLING BASIN.
6. THE CONSTRUCTOR AND OPERATOR SHALL PROVIDE A MEANS TO CONTROL DUST DURING CONSTRUCTION AND OPERATION. CONTROLS MAY INCLUDE THE USE OF WATER TRUCKS, OR COMMERCIALLY AVAILABLE APPLIED SPRAY-ON MEMBRANE EROSION CONTROL PRODUCTS.
7. SECTION NUMBERS REFER DIRECTLY TO TVA SPECIFICATION T-1, UNLESS NOTED OTHERWISE.
8. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH TVA SPECIFICATION T-1, AND THE FOLLOWING ASH POND EXPANSION DOCUMENTS: OPERATIONS MANUAL; THE CLOSURE/POST CLOSURE PLAN; AND THE QA/QC PLAN.
9. WHERE ENCOUNTERED, VERIFY AMPLE CLEARANCE UNDER OVERHEAD ELECTRICAL LINES FOR CONSTRUCTION EQUIPMENT. CONSTRUCTOR SHALL NOTIFY CONSTRUCTION MANAGER BEFORE ANY WORK STARTS NEAR OVERHEAD ELECTRICAL LINES.
10. THE CONSTRUCTOR IS HEREBY ADVISED THAT THERE MAY UNDERGROUND UTILITIES PRESENT AT THIS SITE WHICH ARE NOT SHOWN ON THESE DRAWINGS. THE CONSTRUCTOR SHALL LOCATE AND VERIFY EXISTING UNDERGROUND UTILITIES THAT MAY NOT BE SHOWN ON THIS DRAWING THAT ARE WITHIN ANY AREA TO BE DISTURBED. THE CONSTRUCTOR SHALL VERIFY THAT ANY UNDERGROUND ELECTRICAL UTILITIES ARE LOCKED OUT/TAGGED OUT AND ARE NOT ACTIVATED PRIOR TO REMOVAL.
11. CONSTRUCTOR SHALL EXERCISE CARE TO PREVENT DAMAGE TO EXISTING MONITORING WELLS AND/OR EXISTING STRUCTURES.
12. DISPOSAL OF DEMOLISHED ITEMS SUCH AS EXISTING STORM SEWER PIPING OR OTHER MISCELLANEOUS ITEMS SHALL BE AS DIRECTED BY TVA.
13. FOR CONSTRUCTION OF THE PHASE 2 BASE AND STARTER DIKE SEE ON DRAWING 10W425-65 AND THE QA/QC PLAN.
14. ELEVATION CONTOURS SHOWN ON THE OUTER SLOPES OF THE PHASE 2 AND 3 EXPANSION ARE FINISHED GRADE.
15. ELEVATIONS SHOWN INSIDE THE PHASE 2 AND 3 STARTER DIKES ARE TO TOP OF THE FLY ASH BASE AS SHOWN ON TYPICAL CROSS SECTION SHOWN ON 10W425-65.

APPENDIX 2 TO FORM C – DCN KIF-05-1074

Suggested Procedure for Installing 36 in. dia. concrete pipe from the new weirs to the stilling basin.

Work performed in water within stilling basin. Approximate elevation of water surface in the stilling basin is 754.3.

1. Install silt fence in accordance with drawings.
2. Excavate trench from the downstream side to the approximate crest of the divider dike, so that anti-seep collar and full-length sections of pipe can be installed.
3. Place (dump) 1032 crushed stone bedding in trench, and place pipe. Place pipe plug (balloon) in downstream end of pipe prior to placing in water. Continue filling stone to the waterline. Tamp stone and backfill with excavated material along the length of pipe, maintaining exposure of the upsteam end of pipe.
4. Pump water out of excavation. Install waterstop around pipe and place concrete anti-seep collar.
5. While starting item #1, construct cut-off dike inside the ash pond.
6. When all downstream pipes are installed with balloons and anti-seep collars, and water within cutoff pipe is pumped out so that construction can be accomplished in the dry, continue installing 36 in. dia. pipes and weirs.
7. When all weirs are installed, and inspections performed, balloons can be removed, which will flood the interior portion of the dike. Excavate the dike opening, and install piping. Alternately, excavate the opening in the dike then remove the balloons.

DOCUMENT REQUEST FORM / DCN FORM D

☑ These drawings are included in DCN # KIF-05-1074 Rev 0

☐ These drawings are included in PDL # _____ Rev _____

☐ These drawings are not associated with a DCN or PDL # of Drawings: _____

PLANT: KIF UNIT(s): 1-9

Project Title/Description: ASH POND DREDGE CELL WEIR REPLACEMENT

PCN or W/O Number: KIF531 IBS Engineering Short Code Number: 001DN4B

Project Eng. (PE) or Program Manager: Stan Haber Address: LP-2 Phone: 751-3838

Drawings Prepared By:

TVA	_____	T	VOITH _____	V
PARSONS	P	P	Other _____	
MESA	_____	M		
ALSTOM	_____	A		

If drawings are prepared by an outside A/E, please mark code accordingly.

Engineer: D.R. Smith Address: RC-4 AC Phone: 757-8088

Section Supervisor: H.L. Petty Address: LP-2 Phone: 751-6704

Comments / Special Filing Instructions: _____

SUPERVISOR: COMPLETE THIS SECTION FOR ISSUE OF TVA DRAWINGS

All electronic drawing files for this issue are in folders on J:Drive (\\chachagfp6\fheshr)\issue\KIF-1074

This package is released for the Issue Process. The package contains all drawings listed and electronic files have been placed on the file server.

_____ Supervisor Signature _____ Date

CONTRACT ADMIN: COMPLETE THIS SECTION FOR RELEASE OF VENDOR DRAWINGS

All electronic drawing files for this release are in J:Drive (\\chachagfp6\fheshr)\issue\(Plant - Vendor - DCN or PDL # - Rev)

Hardcopies of drawings / documents are provided for scanning where electronic files aren't available.

See special filing instructions for listed items which are NOT to be inserted into the AutoManager system.

_____ Signature _____ Date _____ Phone

FOR RECORDS USE ONLY

Tracking No. _____

Date AutoCad Files Received: _____ / _____

Date Drawings Cleared: _____ / _____

Date Drawings Mailed : _____ / _____

CC:

Section Supervisor, address above, Copy of Completed release Sheet and Drawing List (With all DATES)

Project Engineer, address above, Copy of Completed Release Sheet and Drawing List (With all DATES)

Program Manager, address above, Copy of Completed Release Sheet and Drawing list (With all DATES)

Form#: TVA 17644

ENG. RECORDS USE ONLY: Ticket#: _____

DOCUMENT REQUEST FORM / DCN FORM D

PDL#: _____ DCN#: KIF-05-1074 (Plant Year Seq) Rev. 0 UNIT(s): 1-9

PCN/WO#: KIF531

Rev Codes (Dwgs Only)

A = Test Related	F = Unplanned Scope Changes
B = Design/Eng. Errors	G = Configuration Different
C = Vendor Caused	H = Drawing Restoration Only
D = Planned Project Initial Issues	J = As Built
E = Construction Deviation	

Format	ACAD = AutoCAD	TIF = Image File
	H.C. = Hard Copy	XLS = Excel File
	CAL = Image File	___ = Other

Doc Codes

A = Architectural Dwgs	BOM = Bill of Materials
C = Civil Dwgs	REF = Reference Dwgs
E = Electrical Dwgs	V = Vendor Dwgs
M = Mechanical Dwgs	CN = Calculations
I = Instrumentation Dwgs	SP = Specifications
P = Protection & Control Dwgs	RPT = Reports
T = Telecomm Dwgs	ENV = Environmental Docs
S = Sketches	PRM = Permits

Format	Rev Code	(Please sort docs per Instructions Tab) Dwg/Doc No.	Sht	Rev	Contract No.	Doc Code	Title	DCN REVISION (Modify as needed)	(Modify as needed)	(Modify as needed)	Put in DCN Folder	Issue	ERU Instructions
ACAD	D	10W425-24					PHASE 1 DREDGE CELL LATERAL EXPANSION DEVELOPMENT PLAN SHEET 1	X	X				
ACAD	D	10W425-70					ASH DISPOSAL AREA LATERAL EXPANSION WEIR & SKIMMER DETAILS	X	X				
ACAD	D	10W425-77					DREDGE CELL WEIR REPLACEMENT OVERALL PLAN	X	X				
ACAD	D	10W425-78					DREDGE CELL WEIR REPLACEMENT INITIAL DIKE LAYOUT	X	X				
ACAD	D	10W425-79					DREDGE CELL WEIR REPLACEMENT FINAL DIKE & WEIR LAYOUT	X	X				
ACAD	D	10W425-80					DREDGE CELL WEIR REPLACEMENT CROSS SECTIONS AND DETAILS	X	X				

ENG. RECORDS USE ONLY: Ticket#: _____

DOCUMENT REQUEST FORM / DCN FORM D

PDL#: _____ DCN#: KIF-05-1074 (Plant Year Seq) Rev. 0 UNIT(s): 1-9

PCN/WO#: KIF531

Rev Codes (Dwgs Only)

A = Test Related	F = Unplanned Scope Changes
B = Design/Eng. Errors	G = Configuration Different
C = Vendor Caused	H = Drawing Restoration Only
D = Planned Project Initial Issues	J = As Built
E = Construction Deviation	

Format

ACAD = AutoCAD	TIF = Image File
H.C. = Hard Copy	XLS = Excel File
CAL = Image File	___ = Other

Doc Codes

A = Architectural Dwgs	BOM = Bill of Materials
C = Civil Dwgs	REF = Reference Dwgs
E = Electrical Dwgs	V = Vendor Dwgs
M = Mechanical Dwgs	CN = Calculations
I = Instrumentation Dwgs	SP = Specifications
P = Protection & Control Dwgs	RPT = Reports
T = Telecomm Dwgs	ENV = Environmental Docs
S = Sketches	PRM = Permits

DCN REVISION
(Modify as needed)
(Modify as needed)
(Modify as needed)
Put in DCN Folder
Issue

(Please sort docs per Instructions Tab)

Format	Rev Code	Dwg/Doc No.	Sht	Rev	Contract No.	Doc Code	Title	ERU Instructions

Alternate Form D - DCN Package Document List (PDL) for DCAs and ESKs

DCN NUMBER KIF-05-1074 **REV.** 0 **Unit(s)** 1 thru 9

A = Architectural Drawings
C = Civil Drawings
E = Electrical Drawings
M = Mechanical Drawings
I = Instrumentation Drawings
P = Protective & Controls Drawings
T = Telecommunication Drawings
S = Sketch
BOM = Bill of Materials
RPT = Report
V = Vendor Documents
CN = Calculation
SP = Specification
REF = Reference Documents not Included in the DCN package
ENV = Enviornmental Documents
PRM = Permit
O = Other

Code	*	Document/DCA/ESK	Rev	Base Drawing	Sheet	Rev	**	Cat	Contract No.	Title or Description
C	*			10W425-24		0				PHASE 1 DREDGE CELL LATERAL EXPANSION DEVELOPMENT PLAN SHEET 1
C	*			10W425-70		0				ASH DISPOSAL AREA LATERAL EXPANSION WEIR & SKIMMER DETAILS
C	*			10W425-77		0				DREDGE CELL WEIR REPLACEMENT OVERALL PLAN
C	*			10W425-78		0				DREDGE CELL WEIR REPLACEMENT INITIAL DIKE LAYOUT
C	*			10W424-79		0				DREDGE CELL WEIR REPLACEMENT FINAL DIKE & WEIR LAYOUT
C	*			10W425-80		0				DREDGE CELL WEIR REPLACEMENT CROSS SECTIONS AND DETAILS

* Mark a check beside documents included in the DCN package. Other documents maintained in a controlled storage system shall be referenced by a retrievable document or EMDS number.
** Check mark if anticipated drawing.

Alternate Form D - DCN Package Document List (PDL) for DCAs and ESKs

Code	*	Document/DCA/ESK	Rev	Base Drawing	Sheet	Rev	**	Cat	Contract No.	Title or Description

* Mark a check beside documents included in the DCN package. Other documents maintained in a controlled storage system shall be referenced by a retrievable document or EMDS number.
** Check mark if anticipated drawing.

FORM E – COMPONENT UNID DATA SHEET

NOTE: A listing (e.g., from a database) with similar data may be used in lieu of this form.

1. DCN No. KIF-05-1074 Rev. 0 Page 1 of 1

2. PLANT/TL/SUB KIF UNIT(s) 1-9 TL/SUB No. _____

Component Data (Use additional sheets as needed)	Action (Check one)			
	New UNID	Delete UNID	Modify UNID	Rename UNID
3. EMPAC UNID (e.g., plant-unit-function-system-loc ID-seq. no.): NA 4. Renamed UNID: 5. Component Location (e.g., For plants: plant, unit, system, building, elevation, column lines; For Transmission: plant, unit, system, loc ID, seq. no., GPS coordinates or phase location, etc.): 6. UNID English Description: 7. Drawing Number:	☐	☐	☐	☐
3. EMPAC UNID (e.g., plant-unit-function-system-loc ID-seq. no.): 4. Renamed UNID: 5. Component Location (e.g., For plants: plant, unit, system, building, elevation, column lines; For Transmission: plant, unit, system, loc ID, seq. no., GPS coordinates or phase location, etc.): 6. UNID English Description: 7. Drawing Number:	☐	☐	☐	☐

Prepared: _____ Date: _____

Checked: _____ Date: _____

FORM F – MODIFICATION TURNOVER PACKAGE DATA SHEET

1. DCN No. KIF-05-1074 Rev. 0 Page 1 of 1

PART I – SCOPE / DESCRIPTION

2. PLANT/TL/SUB KIF UNIT(s) 1-9 TL/SUB No. NA

3. SSC INVOLVED NA SYSTEM 14 UNID NA

4. TURNOVER PACKAGE SCOPE/DESCRIPTION (If less than full scope is turned over, indicate the scope included. Include additional data sheets as necessary for other partial scopes until the full scope is turned over.)

PART II – ACTIONS REQUIRED FOR RETURN TO OPERABILITY (RTO)

			YES	N/A
5.	A.	ALL IMPACT ITEMS REQUIRED FOR RTO, AS IDENTIFIED ON IMPACT REVIEW FORMS, HAVE BEEN COMPLETED. COPIES OF IMPACT REVIEW FORMS ARE ATTACHED.	☐	☐
	B.	ALL LEVEL I ACTIONS, AS IDENTIFIED ON THE IMPACT REVIEW FORMS, IF APPLICABLE, HAVE BEEN COMPLETED. (REQUIRED FOR FIELD WORK DCNS ONLY)	☐	☐
	C.	WORK ORDER IMPLEMENTATION VERIFIED COMPLETE. (REQUIRED FOR FIELD WORK DCNS ONLY) VERIFIED BY IMPLEMENTING ORG.: _____	☐	☐
	D.	SPECIAL REQUIREMENTS IMPLEMENTED.	☐	☐
	E.	POST-MOD TESTING, IF REQUIRED, WAS COMPLETED AND EVALUATED.	☐	☐
6.		SPECIAL CONDITIONS, IF APPLICABLE:		
7.		BASED ON A REVIEW OF THE ABOVE DOCUMENTS, RTO OF THE SYSTEM AFFECTED BY THIS DCN IS RECOMMENDED. (N/A IF DOC ONLY DCN.)	☐	☐

RE-SE	DATE	RE-SE- SUPV	DATE	OPERATIONS	DATE

PART III – ACTIONS REQUIRED FOR DCN CLOSURE

		YES	N/A
8.	ALL IMPACT ITEMS REQUIRED FOR DCN CLOSURE HAVE BEEN COMPLETED. ALL LEVEL II ITEMS HAVE BEEN COMPLETED.	☐	☐
9.	BASED ON REVIEW OF THE ABOVE DOCUMENTS, CLOSURE OF THIS DCN IS RECOMMENDED.	☐	☐

RE	DATE	RE SUPV	DATE

Capital Project Justification Form

Project Name	Project ID	Rev#
YARD--KIF-REPLACE KENNEDY WEIR	KIF531	0

CSF: Manage the environmental and safety impacts TVA's operations have on employees and the region.

. Project Description

Organization
Owner: FPG
Lead: Yard Operations

Location
Loc: Kingston Fossil Plant

Technical Contact
Name: HEDGECOTH,MELISSA A
Phone: 423/751-6426

Responsible Mgr
Name: DAVIS,MICHAEL D
Phone: 423/751-7864

Project
Type: Capital
Cat: REGULATORY
Prgm: Environmental Compliance (FPG)

	Estimated	Actual
Start Date:	10/01/2004	
In-Srvc Date:	08/15/2004	
Outage Date:		

Problem Description
The weirs that discharge from the active ash pond to the stilling pond are a field design rather than a TVA standard engineered design. The weir configuration and condition are not known, which inhibits the ability to accurately determine and report pond free water volume in accordance with the plant NPDES permit requirements. The discharge side of the weirs are equipped with control gates that require manual manipulation and adjustment based on precipitation and dredging activities. This activity is hazardous due to the location, physical requirements for performing work, and risk to employees should equipment failure occur. It should be noted that equipment failure could also cause a water surge that would likely result in dike overtopping and an REE.

Project Scope
Plug and abandon the existing weirs, remove first sections of existing walkway, and install TVA standard engineered design weirs with access walkways that require no manual intervention or operation. The integrity of the lime injection system will be maintained.

Performance Measurement
Ash pond free water volume accurately determined and reported.
No water surges that result in dike overtopping and REEs as measured for the first 120 days following implementation.
No reportable employee safety incidents as measured by the first 120 days following project implementation.

Other Options/Alternatives
Continue to manually operate the system as-is, placing employees at risk should equipment fail, and risking water surges that might overtop the like and result in REEs.

Reason For Change
New project

News Release
N/A

Capital Project Justification Form

Project Name
YARD--KIF-REPLACE KENNEDY WEIR

Project ID
KIF531

Rev#
0

CSF: Manage the environmental and safety impacts TVA's operations have on employees and the region.

. Project Economic Evaluation

COST

SUNK CAPITAL: $0
SUNK O&M: $0
REMAINING COST: $250
TOTAL COST: $250
ESTIMATE TYPE: Order of Magnitude

ECONOMIC INDICATORS

NPV: -$250.0
PI: 0
IRR: 0.0
SIMPLE PAYBACK: 20
BASE YEAR: 2005

Year	Capital Cost	O&M Cost	Total Benefit	O&M Base Increase	Environmental Cost
SUNK	0	0	0	0	
OUT YEARS	0	0	0	0	
2005	250	0	0	0	0
2006	0	0	0	0	0
2007	0	0	0	0	0
2008	0	0	0	0	0
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	0	0	0	0	0
2014	0	0	0	0	0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	0	0	0	0	0
2018	0	0	0	0	0
2019	0	0	0	0	0
2020	0	0	0	0	0
2021	0	0	0	0	0
2022	0	0	0	0	0
2023	0	0	0	0	0
2024	0	0	0	0	0

Capital Project Justification Form

Project Name	Project ID	Rev#
YARD--KIF-REPLACE KENNEDY WEIR	KIF531	0

CSF: Manage the environmental and safety impacts TVA's operations have on employees and the region.

I. Project Economic Evaluation

Cost Assumptions

1. Abandon existing weirs in place; design, procure materials, and install TVA standard Design Weirs - $250k

Risks

Based upon similar project costs.

Benefit Assumptions

1. Ash pond free water volume accurately determined and reported.

2. No water surges leading to dike overtopping and REEs as measured by the first 120 days following project implementation.

3. No reportable employee safety incidents associated with operation or maintenance of the system as measured by the first 120 days following project implementation.

Risks

Kingston Fossil Plant
KIF531 (Kennedy Weir): Project Kick-off Meeting

December 10, 2004

Agenda

- Introductions
- Opening Comments
- Project Scope
    a. PJ
    b. Questions by Darlene Keller
    c. Project EMP
    d. Project Checklist
- Project Schedule
- Emergent Work
- Problems/Corrective Actions
- DCNs
    a. Design Review Meetings (DRMs)
    b. Approvals
    c. Closures
- Future Meetings in Feb as we get ready to go for Ph 2
- Action Items
- Closing Comments 4/05 : be ready for Ph 3

Capital Project Justification Form

Project Name | **Project ID** | **Rev#**
YARD--KIF-REPLACE KENNEDY WEIR | KIF531 | 0

CSF: Manage the environmental and safety impacts TVA's operations have on employees and the region.

I. Project Description

Organization
Owner: FPG
Lead: Yard Operations

Location
Loc: Kingston Fossil Plant

Technical Contact
Name: HEDGECOTH,MELISSA A
Phone: 423/751-6426

Responsible Mgr
Name: DAVIS,MICHAEL D
Phone: 423/751-7864

Project
Type: Capital
Cat: REGULATORY
Prgm: Environmental Compliance (FPG)

	Estimated	Actual
Start Date:	10/01/2004	
In-Srvc Date:	08/15/2004	
Outage Date:		

Problem Description
The weirs that discharges from the active ash pond to the stilling pond are a field design rather than a TVA standard engineered design. The weir configuration is not known, which inhibits the ability to accurately determine and report pond free water volume in accordance with the plant NPDES permit requirements. The discharge side of the weirs are equipped with control gates that require manual manipulation and adjustment based on precipitation and dredging activities. This activity is hazardous due to the location, physical requirements for performing work, and risk to employees should equipment failure occur. It should be noted that equipment failure could also cause a water surge that would likely result in dike overtopping and an REE.

Project Scope
Abandon the existing weirs and install a TVA ~~standard~~ engineered design weir that requires no manual intervention or operation.

Performance Measurement
Ash pond free water volume accurately determined and reported.
No water surges that result in dike overtopping and REEs as measured for the first 120 days following implementation.
No reportable employee safety incidents as measured by the first 120 days following project implementation.

Other Options/Alternatives
Continue to manually operate the system as-is, placing employees at risk should equipment fail, and risking water surges that might overtop the dike and result in REEs.

Reason For Change
New project

News Release
N/A

Capital Project Justification Form

Project Name
YARD--KIF-REPLACE KENNEDY WEIR

Project ID
KIF531

Rev#
0

CSF: Manage the environmental and safety impacts TVA's operations have on employees and the region.

II. Project Economic Evaluation

Cost Assumptions

1. Abandon existing weirs in place; design, procure materials, and install TVA standard Design Weirs - $250k

Risks

Based upon similar project costs.

Benefit Assumptions

Risks

1. Ash pond free water volume accurately determined and reported.

2. No water surges leading to dike overtopping and REEs as measured by the first 120 days following project implementation.

3. No reportable employee safety incidents associated with operation or maintenance of the system as measured by the first 120 days following project implementation.

12/10/2004 9:21:11 AM

I can't find where I ever sent you my comments on the EMP. After looking at this again, I have a few questions. ① When you say the existing weirs will be "sealed" and abandoned in place, how will they be sealed? With concrete? I would think that the act of sealing these weirs may result in the potential to introduce a pollutant to the water. This should either addressed in the scope and the control measure reflected in the water section if applicable. My 2nd thought is what type of equipment will be needed to install the new weirs? ② Will there be any equipment that may require fueling near the pond? If so, this needs to be addressed in the SPCC section. I would assume that best management practices would be used to contain fuel and keep any spills from reaching the water. ③ Also, will the installation of the new weirs result in potential turbidity issues? One last comment. ④ Where is the lime injection system discharging to now? Will discharging it to the new weir system require any changes to the permit?

J. Darlene Keller
SR Regulatory Specialist,
NEPA & Remediation
FPG - Environmental Affairs
423-751-6640

① may get bentonite grout in pond
insert flex pipe into weir &
pump in grout flex additional pipe

② normal operating equipment
use & existing BMPs

③ same turbidity from installation?
same water discharge, just engineer

④ question for Lindy Johnson
- going from 2 to 5 weirs should
be less turbidity

follow up mtg w/.
Mike Hughes
Dan Smith
Estimating
D. Keller
L. Campbell
Radford

Need MSDS on grout product

Project Review - Performance Impact Checklist

Project Name: Replace Kennedy Weir PCN KIF531

Location: Kingston

PERFORMANCE PARAMETERS	Improve	No Impact	Degrade	COMMENTS
Reliability				
Frequency of failure (MTBF)	☐	☒	☐	
Frequency of deratings	☐	☒	☐	
Availability				
Planned outage durations	☐	☒	☐	
Forced outage durations	☐	☒	☐	
Unit deratings (MW and duration)	☐	☒	☐	
Repair/replacement time (MTTR)	☐	☒	☐	
Frequency of corrective/preventive maintenance	☐	☒	☐	
MW output (unit capability)	☐	☒	☐	
Thermal				
Net heat rate (Btu/kWh) – Identify in the Comments the specific Heat Rate Parameter(s) or process indicator(s) that is(are) affected	☐	☒	☐	
Station service usage	☐	☒	☐	
Customer Requirements				
On-line time (+/- 30 minutes)	☐	☒	☐	
AGC availability	☐	☒	☐	
Net dependable capacity	☐	☒	☐	
Voltage control	☐	☒	☐	
Minimum load	☐	☒	☐	
Unit ramp time	☐	☒	☐	
Cost				
Fuel costs (coal, limestone, chemicals)	☐	☒	☐	
Fuel handling costs	☐	☒	☐	
Operations labor costs	☒	☒	☐	easier operation of new Valves
Maintenance labor costs	☐	☒	☐	
Waste disposal costs (solid or hazardous)	☐	☒	☐	
Inventory costs	☐	☒	☐	
Other costs (identify in Comments)	☐	☒	☐	
Safety				
Public safety	☐	☒	☐	
Employee Safety	☒	☐	☐	
Equipment Safety	☐	☒	☐	
Other Performance Impacts				
Water chemistry specifications	☐	☒	☐	
LIST OTHER IMPACTS BELOW				
Environmental (REEs)	☒	☐	☐	Eliminate the risk of REEs from water surges and dike over-topping
Environmental (reporting)	☒	☐	☐	improves calculation and reporting of ash pond free water volume
	☐	☒	☐	
	☐	☒	☐	
	☐	☒	☐	

Project Review - Performance Impact Checklist

Project Name: Replace Kennedy Weir PCN KIF531

Location: Kingston

PERFORMANCE PARAMETERS	Improve	No Impact	Degrade	COMMENTS
Environmental				
NOTE: Initiate the project EMP and evaluate the following environmental impacts in conjunction with completing the first column of the EMP.				
Air emissions	☐	☒	☐	
SO_2	☐	☒	☐	
NOx	☐	☒	☐	
Particulate	☐	☒	☐	
Hg	☐	☒	☐	
Quantity of fuel burned	☐	☒	☐	
Ash pond toxicity	☐	☒	☐	
CEMS /COMS availability	☐	☒	☐	
NPDES (Water) discharges	☐	☒	☐	
Shoreline/river impacts	☐	☒	☐	
SPCC/IPP impacts (Fuel, oil, chemical storage)	☐	☒	☐	
				YES ☒ NO ☐
EMP Initiated	----------	----------	----------	YES ☐ NO ☒
Permitting/Notifications Identified	----------	----------	----------	

PROCEDURE CHANGES	Revisions	No Change	IDENTIFY PROCEDURES
Operations	☒	☐	
Maintenance	☒	☐	
Environmental	☐	☒	
Safety	☒	☒	

PEOPLE PARAMETERS	Needed	No Impact	COMMENTS
People			
Operations Training	☒	☒	
Maintenance Training	☒	☒	
Environmental Training	☐	☒	
Manpower availability	☐	☒	

Project Engineer: Stanley M. Haber

Date: 6/23/03

New weir sketch dwg 10W425-31

Project Environmental Management Plan Outline

Prepared by: S.M. Haber/R. D. Powell Date: 4/24/04

1. **Detail Description of Project:**

KIF531 – Replace Kennedy Weir: Scope includes replacement of existing weirs (total of 2; skimmer structure to be removed where applicable, and the weirs sealed and abandoned in place). The water level in the pond will need to be drawn down such that the top of the weir is exposed.

It also includes the design and installation of a new weir system. The new system will use a standard TVA weir/skimmer design. Provisions will be made to route the existing lime injection system to the new weir system. Weirs for the new system will be located in the southeast corner of the main ash pond, close to the stilling pond. The height of the stilling basin weirs will need to be raised as part of this project (final height TBD). Piping (permanent) will be installed across the dike separating the main ash pond from the stilling basin to allow the main ash pond to drain into the stilling basin.

need ft of pipe & routing for cost est.

el. 760'

The need for an emergency overflow weir in the dike between the main ash pond and the stilling basin, and an emergency weir on the outer dike from the stilling basin to the intake structure will be assessed. finalize in study

Sheet piling (temporary) will be installed to allow the area where the new weirs will be installed to be pumped out. The existing weirs and limestone injection system will be left in service until the replacement system is installed and functional.

* build an "L" shaped ash dike (temp; to be removed partially)

- operation of lime system is by plant

	Environmental Concern?		Control Measures to be used
2. Potential environmental issues	YES	NO	
A. Air			
1. Fugitive Emissions:	☐	☒	____
2. Open Burning:	☐	☒	____
3. New Source Review:	☐	☒	____
4. Other: ____	☐	☒	____
B. Water			
1. Site / Erosion Control:	☐	☒	____
2. Sewage:	☐	☒	____
3. Contaminated Runoff:	☐	☒	____

Valves on pipes would need to be upstream of Concrete pipe; may change piping to ductile iron & add platform for ops/maint use a floating platform & anchor (avoids issues w/ driving & piling & potential H_2O cont.)

Project Environmental Management Plan Outline

	Environmental Concern? YES	Environmental Concern? NO	Control Measures to be used
4. Process Wastewater (adding pollutants or rerouting flows):	☒	☒	GRADE
5. Potentially affect:	☒	☒	POTENTIAL OF SOLIDS GRADE.
5a. Surface Water:	☐	☒	—
5b. Groundwater:	☐	☒	—
5c. Drinking Water Supply or Potable Water:	☐	☒	—
5d. Wild or Scenic Rivers or Their Tributaries:	☐	☒	—
5e. Stream on the Nationwide Rivers Inventory:	☐	☒	—
5f. Wetlands, Waterflow, Stream Channels, ditches or Stream Banks:	☐	☒	—
5g. 100-Year Floodplain:	☐	☒	—
5h. Unique or Aquatic Habitat:	☐	☒	—
6. Other: ____			
C. Solid Waste			
1. Garbage:	☐	☒	—
2. Construction/Demolition Waste:	☒	☒	—
3. Clearing Waste:	☐	☒	—
4. Sandblasting Waste:	☐	☒	—
5. Oil Contaminated Waste:	☐	☒	—
6. Other (e.g., sand, glass, etc.): ____	☐	☒	—
D. Hazardous Waste			
1. Painting Waste (solvents, etc.):	☐	☒	—
2. Sandblasting Waste (Hazardous):	☐	☒	—
3. Degreasing Solvents:	☐	☒	—

Project Environmental Management Plan Outline

	Environmental Concern? YES	Environmental Concern? NO	Control Measures to be used
4. Corrosive Wastes (acids, caustics):	☐	☒	____
5. Pesticides:	☐	☒	____
6. Other: ____	☐	☒	____
E. Asbestos			
1. Insulation Waste:	☐	☒	____
2. Roofing Waste:	☐	☒	____
3. Floor Tile Waste:	☐	☒	____
4. Other: ____	☐	☒	____
F. PCB			
1. Handling & Storage:	☐	☒	____
2. Liquid Waste Disposal:	☐	☒	____
3. Equipment Disposal:	☐	☒	____
4. Contaminated Debris Disposal:	☐	☒	____
5. Other (capacitors, transformers, etc.): ____	☐	☒	____
G. SPCC/BMP			
1. Fuel/Lube/Insulating oil Storage:	☐	☒	____
2. Oil Transfer (Procedure):	☐	☒	____
3. Other: ____	☐	☒	____
H. Underground Storage Tanks (UST's)			
1. Contaminated Soil:	☐	☒	____
2. Tank Disposal:	☐	☒	____
3. Other: ____	☐	☒	____
I. Above-ground Storage Tanks (AST's)			

Project Environmental Management Plan Outline

	Environmental Concern? YES	NO	Control Measures to be used
1. Contaminated Soil:	☐	☒	____
2. Tank Disposal:	☐	☒	____
3. Other: ____	☐	☒	____

J. Plant or Animal

1. Potentially affect:			
Endangered, threatened ,or Special Status Species:	☐	☒	____
Migratory bird populations:	☒	☒	____
Unique or important terrestrial habitat:	☐	☒	____
2. Potentially take prime or unique farmland out of production:	☐	☒	____
3. Contribute to the spread of exotic or invasive species:	☐	☒	____

K. Other:

1. Potentially affect:			
Ecologically critical areas, federal, state, or local park lands, national or state forests, wilderness areas, scenic areas, management wildlife areas, recreational areas, greenways, or trails:	☐		____
Historic structures, historic sites, Native American religious or Cultural properties, or archaeological sites:	☐		____

Project Environmental Management Plan Outline

3.	Environmental Permits/Notifications	Permit Received? Y	Permit Received? N	Type	Date of Notification
A.	Air:	☐	☒	____	____
B.	Water:	☐	☒	____	Discharge point to stilling pool only changed
C.	Hazardous Waste:	☐	☒	____	____
D.	Asbestos:	☐	☒	____	____
E.	PCB:	☐	☒	____	____
F.	UST's / AST's:	☐	☒	____	____
G.	Solid Waste:	☒	☒	____	____
H.	Other (i.e., Spill Notification): ____	☐	☒	____	____

4.	Employee Training	Required? Y	Required? N	Provided / Verified
A.	Hazardous Waste	☐	☒	____
B.	Asbestos Competent Person	☐	☒	____
C.	Emergency Spill/ Prevention	☐	☒	____
D.	OSHA 1910.120	☐	☒	____
E.	Other (e.g., Ammonia Awareness): ____	☐	☒	____

5. **Emergency Response**

Is the Site Emergency Response Plan adequate for this project? If not, a copy of any required additions must be attached to this plan. Yes ☒ No ☐

Are all environmental concerns addressed in a generic CEC (see Appendix E)? If not, prepare a project-specific CEC. Yes ☐ No ☒

Do project activities result in environmental concerns? Yes ☒ No ☐

Are all Appendix E? Yes ☐ No ☒

Project Environmental Management Plan Outline

If not, prepare a project-specific CEC.

Is a CEC required for this project? Yes ☒ No ☐

	Signatures	Date
Project Initiator/Manager:		
Site PA(E):		
Other Signatures: (as appropriate)		
Filed in EDMS		

Design Review Meetings

10% DESIGN REVIEW

Prerequisites

- Preliminary design complete
- Feasibility walkdowns
- DCN cover sheet completed through line 10
- Draft of modification criteria (appendix C)
- Marked up drawings
- Preliminary calculations prepared
- Draft procurement request for LL materials

Agenda

- Agreement on scope and approach
- Technical criteria for the task
- Verification of assumptions made during prelim engr
- Special requirements
- Initiate impact review forms

50% DESIGN REVIEW

Prerequisites

- Completed procure requests for all eng matls (not consumables)
- All drawings prepared and ready for checking
- Completed modification criteria (appendix C)
- Checked calculations

Agenda

- Confirmation of scope and approach
- Compatibility of procurement and design schedules
- Critical impact review interfaces
- Technical problems
- Operability, Maintainability, Constructibility
- Testing requirements

Hold Point

- Resolve comments before proceeding with final engr design

90% DESIGN REVIEW

Prerequisites

- Draft of DCN package
- All drawings and documents complete
- All calculations issued
- All impact review forms completed (with schedule for open items)

Agenda

- Final constr walkdown w/implementor
- Review DCN pkg
- Discuss mod criteria, special reqmts, testing reqmts, impact review open items and schedule
- Discuss matl delivery, plant support reqmts, implementation schedule
- Assignments for completion of any open items

KIF531 (Kennedy Weir)
Meeting Agenda (1/19/05)

- Introductions
- Review the project basis
  - Systems Background
  - CPJ
    - Problem Description
    - Project Scope
    - Performance Measurement
    - Other Options/Alternatives
- Review of notes from 12/10/04 meeting
  - Darlene Keller email
  - Project Impact Checklist
  - EMP
- Project Scope and Schedule
  - Scope definition
  - Implementation schedule
- Action Items
- Next Meeting

Toney, Calvin L.

Subject:	KIF531: Discusion of Kennedy Weir Project
Location:	Conference Room next to Dennis Lundy's Office
Start:	Wed 01/19/2005 1:00 PM
End:	Wed 01/19/2005 2:30 PM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Required Attendees:	Haber, Stanley M.; Baugh, James S.; Hedgecoth, Melissa A.; Campbell, Linda F.; Toney, Calvin L.; Petty, Harold L.; Hughes, Michael; Purkey, Ronald E.; Waldrep, Roger T.; Keller, Darlene; Catlett, James H

Please let me know if you will need to call in to participate in this meeting.