



Big Sandy Plant Unit 1 & 2
CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
American Electric Power Company

Project No. 11488-066
March 28, 2013
Revision 0



55 East Monroe Street
Chicago, IL 60603-5780 USA



Big Sandy Plant Unit 1 & 2
 American Electric Power Company
 Conceptual Demolition Cost Estimate
 March 28, 2013

Issue Summary Page

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	03/12/13	Comments	R. Kinsinger	J. A. Evanchik D. F. Franczak		All
0	03/28/13	Use	R. Kinsinger <i>R. Kinsinger</i>	J. A. Evanchik <i>J. A. Evanchik</i> D. F. Franczak <i>D. F. Franczak</i>	S.R. Bertheau <i>S.R. Bertheau</i>	All



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<u>EXHIBIT</u>	<u>DESCRIPTION</u>
1	Conceptual Demolition Cost Estimate No. 31983B



1.0 INTRODUCTION

The Big Sandy Plant is located near Louisa, Kentucky in Lawrence County. The plant consists of two (2) generating units with a total generating capacity of 1,097 megawatts (Unit 1 = 281MW, Unit 2 = 816 MW). Units 1 & 2 were placed in operation in 1963 and 1969 respectively.

The American Electric Power Company (AEP) recently contracted Sargent & Lundy, LLC. to prepare a conceptual demolition cost estimate using 1st Quarter 2013 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for Big Sandy Plant Units 1 and 2 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No. 31983B, dated March 28, 2013, was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs (including steel, equipment & piping scrap value)
18	Scrap Value Costs
91	Other Direct & Construction Indirect Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:



Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Cost	\$38,725,498
Scrap Value	\$(20,887,112)
Direct Cost Subtotal	\$17,838,386
Indirect Cost	\$ 1,783,800
Contingency Cost	\$9,209,600
Total Project Cost	\$28,831,786

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete Big Sandy Plant Units 1 & 2 generating facility and plant common services associated with both units. Common facilities include:

- 825 ft Chimney
- Various Buildings
- Coal Rail and Truck Unloading Facilities

The following are excluded from the scope of the conceptual demolition cost estimate.

- Bottom Ash Pond
- Asbestos Removal
- Switchyard

The scope of the demolition cost estimate is based on a review of the facility by two (2) S&L employees conducted in January 2013 for development of the demolition cost estimate.

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the Big Sandy Plant is a conceptual estimate of the cost to dismantle Big Sandy Plant Units 1 and 2.



Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of steel and copper, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (1st Quarter 2013 levels). A two (2) year demolition schedule is anticipated not including asbestos removal (to be performed prior to start of demolition work).

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate were calculated as Non-Union Kentucky Craft Labor rates based on Personnel Administration Services (PAS) Inc. "2013 Merit Shop Wage and Benefit Survey". The craft rates were incorporated into work crews appropriate for the activities by adding allowances for small tools, construction equipment, insurance, and site overheads to arrive at crew hourly rates detailed in the cost estimate. A 1.05 regional labor productivity multiplier was included based on Compass International Global Construction Yearbook, 2013 Edition, for non-union work in Kentucky.

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 Construction Indirects

Allowances were included in the cost estimate as direct costs as noted for the following:

- Freight: Material and scrap freight included in the material and scrap costs.
- Additional Crane Allowance: None included. Cost of cranes and construction machinery are included in the labor wage rates.
- Mobilization and Demobilization: Included in labor wage rates.
- Scaffolding: Included in labor wage rates.
- Consumables: Included in material and labor costs.



- Per Diem Costs: Excluded from the estimate.
- Contractor's General and Administrative Costs and Profit: Included in the labor wage rates.

4.4 Scrap Value

The value of scrap was determined by a 12 month average (March 2012 through February of 2013) using Zone 4 (USA Midwest) of the "Scrap Metals Market Watch" (www.americanrecycler.com).

Since the values obtained are delivered pieces, 10% of the values obtained were deducted to pay for separation, preparation and shipping to the mills. This resulted in realized prices of:

- Mixed Steel Value @ \$287/Ton
- Copper Value @ \$6,091/Ton
- Stainless Steel @ \$1,336/Ton

Note: 1 Ton = 2,000 Lbs

All steel is considered to be mixed steel unless otherwise noted.

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate. All costs are determined in 1st Quarter 2013 levels.

4.7 Contingency

Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 15.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.



- Material: Included as 15.0% of the total material cost.
- Labor: Included as 15.0% of the total labor cost.
- Indirect: Included as 15.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All coal and fuel oil will be consumed prior to demolition.
- Catalyst, if any, is assumed to be removed and returned to the OEM by others, prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included. Removal of five (5) feet of fill inside the bermed areas around the oil tanks and metal cleaning waste tank is included.
- Asbestos and PCB's are removed from site by others prior to start of demolition.
- Bottom Ash Pond is not included. These costs will be determined by the Owner.
- Demolition of the chimney will be subcontracted. The chimney is 825 ft high and is located approximately 580 ft from the Big Sandy River to the South and 480 ft from the main switchyard to the North. Also, the main line for the Chesapeake and Ohio Railroad is approximately 825 ft North and US 29 is approximately 50 ft beyond the railroad. Therefore Careful Demolition (top down demolition process) will be used to dismantle the chimney. The chimney is demolished by breaking it up from the top and dropping the debris down the throat of the chimney and removing the debris periodically through the duct openings on the sides of the chimney (located 75 to 100 ft above grade). The remaining chimney below the duct openings is then demolished as any other structure.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place. The other site fences are removed.
- All items above grade and to a depth of 2 foot will be demolished. Any other items buried more than 2 foot will remain in place. All foundations are removed and buried on site with the exception of power block (turbine building, boiler building and service building), and the one (1) chimney thick mat foundation at grade. These foundations will have two (2) feet of soil spread over them and will be graded into the surrounding area.



- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than 4 feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Disturbed areas will be buried under 2 feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be purchased from nearby (10 mile round trip) offsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a 5 mile haul.



5.0 REFERENCES

Drawings utilized in the preparation of this demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Unit	Document Number	Revision	Title
0	12-5030-2	0	Plot Plan
0	12-5030-10	0	Plot Plan
0	12-5030A-2	0	SCR Project Plot Plan
1	1-1200A-18	1	Auxiliary One Line
1	1-5031-2	1	General Cross Section
1	1-5032-2	1	Long Section Thru Turbine Room & Service Building Unit 1
1	1-5033-2	1	Long Section Thru Heater Bay & Service Building & Elev. South Side of Blr
2	2-1395	2	Fire Protection Foam House Electrical Assembly
2	2-1396	2	Fire Protection Sump F.O. Tank, & Truck Unloading Station Electrical Assemblies
2	2-3044-4-1	2	Concrete Stack Circular Steel Platforms
2	2-4101-2	2	Plumbing & Drainage, Roof & Drain System Sheet 1 of 6
2	2-4103-1	2	Plumbing & Drainage, Roof & Drain System Sheet 3 of 6
2	2-4107-2	2	Plumbing & Drainage, Floor Plan Service Building
2	2-4112-4	2	Plumbing & Drainage, Locomotive House & Tractor Shed Building
2	2-4122	2	Plumbing & Drainage, Service Building Annex Plans & Details
2	2-5001-3	2	Composite Cycle Diagram Unit 2
2	2-5050-15	2	Circulating Water Piping Sheet 1 of 3
2	2-5051-10	2	Circulating Water Piping Sheet 2 of 3
2	2-5109-1	2	Metal Cleaning Waste Treatment Facility General Arrangement & Yard Piping
2	2-5110-1	2	Metal Cleaning Waste Treatment Facility Piping Details
2	2-5135-32	2	Yard Piping Unit No 2, Sheet 1 of 3
2	2-536801-3	2	Urea Conversion Area Piping Composite
2	2-536802-0	2	Urea Preparation Area Piping Composite
2	2-536803-2	2	Urea Conversion Area Piping Composite
2	2-536804-2	2	Urea Conversion Area Piping Composite
2	2-538806-0	2	SCR Project Composite Piping Units 1 & 2 Precipitator Area
2	2-538807-1	2	SCR Project Piping Site Key Plan
2	2-538829-0	2	SCR Project Composite Piping Plans El. 116' 3"
2	Figure BS-2-3-15-1	2	Cooling Tower
2	2-MSK-459	2	Study of Revised River Water Makeup for Units 1 & 2
2	100109-9267512-02	2	SCR General Arrangement, Front Sectional View
2	100109-9267513-02	2	SCR General Arrangement, Unit 2 - Rear Sectional Views



Unit	Document Number	Revision	Title
2	100109-9267514-02	2	SCR General Arrangement, Unit 2 - Auxiliary Views
2	100109-9267520-02	2	SCR General Arrangement, SCR 2 - Plan View
2	100109-9267521-02	2	SCR General Arrangement, Unit 2 - Plan View
2	100109-9267530-02	2	SCR General Arrangement, Big Sandy 2, Isometric View
2	Training Document	2	Big Sandy Unit 2 Longitudinal Sections
2	Training Document	2	Big Sandy Unit 2 General Cross Section

0 = Common For Units 1 & 2

1 = Unit 1

2 = Unit 2



EXHIBIT 1
Big Sandy Plant Units 1 & 2
Conceptual Demolition Cost Estimate No. 31983B

**AMERICAN ELECTRIC POWER
Decommissioning Study Big Sandy
Units 1, 2 and Common Facilities**

Project name	Big Sandy
Estimator	RCK
Labor rate table	13NUKY
Project No.	11488-066
Station Name	Big Sandy
Unit	1, 2 and Common
Location	Kentucky
Product Factor	1
Price Level	2013
Issue Date	3/28/2013
Estimate Date	3/28/2013
Reviewed By	JAE
Approved By	MNO
Estimate No.	31983B
Estimate Class	Conceptual
Report format	Sorted by 'Area/Group phase' 'Group phase' summary
Cost index	NUKY

AMERICAN ELECTRIC POWER
Decommissioning Study Big Sandy
Units 1, 2 and Common Facilities

Estimate Totals

Description	Amount	Totals	Hours
LABOR	29,540,432		357,986.217 hrs
MATERIAL	7,535,066		
SUBCONTRACT	1,650,000		
SCRAP RECOVERY	<u>(20,887,112)</u>		
	17,838,386	17,838,386	
91-1 SCAFFOLDING			
91-2 OT WORKING 5-10 HOUR DAYS			
91-3 OT Working 7-10 Hr Days			
91-2 PER DIEM			
91-5 CONSUMABLES			
91-6 FREIGHT ON EQUIPMENT			
91-7 FREIGHT ON SPECIAL EQUIP.			
91-8 FREIGHT ON MATERIAL			
91-9 FREIGHT ON SCRAP INCL			
91-10 SALES TAX			
91-11 CONTRACTOR'S G&A EXPENSE			
91-12 CONTRACTOR'S PROFIT		17,838,386	
93-1 FP&P SERVICES			
93-2 CM SUPPORT			
93-3 START-UP/COMMISSIONING			
93-4 START-UP/SPARE PARTS			
93-5 EXCESS LIABILITY INSUR			
93-6 SALES TAX ON INDIRECTS			
93-7 OWNER'S COST	1,783,800		
93-8 EPC FEE	<u>1,783,800</u>	19,622,186	
94-3 CONTINGENCY ON MATERIAL	1,130,300		
94-4 CONTINGENCY ON LABOR	4,431,100		
94-5 CONTINGENCY ON SUB.	247,500		
94-6 CONTINGENCY ON SCRAP	3,133,100		
94-7 CONTINGENCY ON INDIRECTS	<u>267,600</u>	28,831,786	
96-3 ESCALATION ON MATERIAL			
96-4 ESCALATION ON LABOR			
96-5 ESCALATION ON SUB.			
96-6 ESCALATION ON SCRAP			
96-7 ESCALATION ON INDIRECTS		28,831,786	
98 INTEREST DURING CONSTR.		28,831,786	
Total		28,831,786	

AMERICAN ELECTRIC POWER
Decommissioning Study Big Sandy
Units 1, 2 and Common Facilities

AREA	GROUP	PHASE	DESCRIPTION	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR AMOUNT	TOTAL AMOUNT
Common								
	10.00.00		WHOLE PLANT DEMOLITION		7,449,896	74,076	8,819,470	17,919,366
	18.00.00		SCRAP VALUE	(2,183,209)				(2,183,209)
			Common	(2,183,209)	7,449,896	74,076	8,819,470	15,736,157
Unit 1								
	10.00.00		WHOLE PLANT DEMOLITION		27,770	82,596	6,043,293	6,071,063
	18.00.00		SCRAP VALUE	(5,153,373)				(5,153,373)
			Unit 1	(5,153,373)	27,770	82,596	6,043,293	917,690
Unit 2								
	10.00.00		WHOLE PLANT DEMOLITION		57,400	201,314	14,677,668	14,735,068
	18.00.00		SCRAP VALUE	(13,550,530)				(13,550,530)
			Unit 2	(13,550,530)	57,400	201,314	14,677,668	1,184,539

**AMERICAN ELECTRIC POWER
 Decommissioning Study Big Sandy
 Units 1, 2 and Common Facilities**

Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
Common										
	10.00.00		WHOLE PLANT DEMOLITION							
		10.21.00	CIVIL WORK							
			COVERED DISTURBED AREAS OF SITE W/2 FT TOPSOIL	296,500.00 CY	-	7,116,000	15,572	102.05 /MH	1,589,171	8,705,171
			SEED AND MULCH	92.00 AC	-	256,496	2,609	32.86 /MH	85,740	342,236
			PAVED SURFACES	15,400.00 SY	-	0	1,941	102.05 /MH	198,097	198,097
			DEMOLITION - 26450 TRACK FEET of 110# RAILROAD TRACK	26,450.00 TF	-	0	8,335	102.05 /MH	850,595	850,595
			DEMOLITION - PERIMETER FENCE	4,500.00 LF	-	0	189	102.05 /MH	19,295	19,295
			CIVIL WORK			7,372,496	28,647		2,742,899	10,115,395
		10.22.00	CONCRETE							
			BUILDING PAD FOUNDATION 110LB/CY, OUTBUILDINGS & MISC FDNS	2,555.00 CY	-	0	3,019	76.08 /MH	229,708	229,708
			EQUIPMENT FOUNDATION 110 LB/CY, MISC EQUIPMENT	1,300.00 CY	-		1,387	76.08 /MH	105,553	105,553
			INTAKE CLOSURE	800.00 CY	-	73,600	840	76.08 /MH	63,933	137,533
			CONCRETE			73,600	5,247		399,194	472,794
		10.24.00	ARCHITECTURAL							
			BUILDING, WAREHOUSE #4, 100' X 35' X 14' TALL	49,000.00 CF	-		309	74.88 /MH	23,125	23,125
			BUILDING, CHEMICAL BLDG. 3900 SF X 14' TALL	54,600.00 CF	-		344	74.88 /MH	25,768	25,768
			BUILDING, WAREHOUSE #5, 100' X50' X14' TALL	70,000.00 CF	-		441	74.88 /MH	33,035	33,035
			BUILDING, CONSTRUCTION OFFICES, 140' X 50' X 14' TALL	98,000.00 CF	-		618	74.88 /MH	46,249	46,249
			BUILDING, CONSTRUCTION LOCKERROOM / WAREHOUSE, 100' X 40' X 14' TALL	56,000.00 CF	-		353	74.88 /MH	26,428	26,428
			BUILDING, ANNEX, 85' X 48' 14' TALL	57,120.00 CF	-		360	74.88 /MH	26,957	26,957
			BUILDING, CAR DUMPER, 40' X68' X 22' TALL	59,840.00 CF	-		377	74.88 /MH	28,240	28,240
			BUILDING, SHOWER BLDG & COAL HANDLING OFFICE, 80' X 74' X 20' TALL	118,400.00 CF	-		746	74.88 /MH	55,877	55,877
			BUILDING, THAW-OUT SHED, 220' X 24' X 14' TALL	73,920.00 CF	-		466	74.88 /MH	34,885	34,885
			BUILDING, THAW-OUT SHED ELECTRICAL, 90' X 20' X 14' TALL	25,200.00 CF	-		159	74.88 /MH	11,893	11,893
			BUILDING, TRACTOR REPAIR BUILDING PART 1 88' X 25' X 14' TALL	30,800.00 CF	-		194	74.88 /MH	14,536	14,536
			BUILDING, TRACTOR REPAIR BUILDING PAR2 1 40' X 24' X 14' TALL	13,440.00 CF	-		85	74.88 /MH	6,343	6,343
			BUILDING, PICNIC SHELTER, 60' X 34' X 10' TALL	20,400.00 CF	-		129	74.88 /MH	9,627	9,627
			BUILDING, WAREHOUSE BOB AREA, 150' X 74' X 14' TALL	155,400.00 CF	-		979	74.88 /MH	73,338	73,338

**AMERICAN ELECTRIC POWER
 Decommissioning Study Big Sandy
 Units 1, 2 and Common Facilities**

Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
		10.24.00	ARCHITECTURAL							
			BUILDING, OLD GATEHOUSE - TRAIONING BLDG, 35' X 30' X 12' TALL	12,600.00 CF	-		79	74.88 /MH	5,946	5,946
			BUILDING, RIVER SCREEN HOUSEM 50' X 30' X 14' TALL	21,000.00 CF	-		132	74.88 /MH	9,911	9,911
			BUILDING, FOAM HOUSE, 30' X 30' X 12' TALL	10,800.00 CF	-		68	74.88 /MH	5,097	5,097
			BUILDING, WATER TREATING BLDG, 40' X 30' X 14' TALL	16,800.00 CF	-		106	74.88 /MH	7,928	7,928
			BUILDING, GATEHOUSE - NORTH ENTRANCE, 20' X 16' X 14' TALL	4,480.00 CF	-		28	74.88 /MH	2,114	2,114
			BUILDING, FIREHOUSE, 30' X 15' X 12' TALL	5,400.00 CF	-		34	74.88 /MH	2,548	2,548
			BUILDING, UNIDENTIFED BLDG WEST OF FIRE HOUSE, 60' X 24' X 12' TALL	17,280.00 CF	-		109	74.88 /MH	8,155	8,155
			BUILDING, UNIDENTIFED BLDG EAST OF FIRE HOUSE, 60' X 24' X 12' TALL	17,280.00 CF	-		109	74.88 /MH	8,155	8,155
			BUILDING, SHED SW OF UNIT 1 SERVICE BLDG, 40' X 30' X 12' TALL	14,400.00 CF	-		91	74.88 /MH	6,796	6,796
			ARCHITECTURAL				6,316		472,952	472,952
		10.25.00	CONCRETE CHIMNEY & STACK							
			825' TALL CONCRETE CHIMNEY	825.00 VLF	-			76.08 /MH		1,650,000
			CONCRETE CHIMNEY & STACK							1,650,000
		10.31.00	MECHANICAL EQUIPMENT							
			TANKS, FUEL OIL TANK, 3,400,000 GALLONS, BOTTOM ONLY (TOP HAS BEEN REMOVED)	32.40 TN	-		91	65.32 /MH	5,940	5,940
			TANKS, FUEL OIL TANK, 500,000 GALLONS	50.00 TN	-		140	65.32 /MH	9,167	9,167
			TANKS, METAL CLEANING WASTE TANK 1,000,000 GALLONS	83.00 TN	-		233	65.32 /MH	15,217	15,217
			MECHANICAL EQUIPMENT				464		30,324	30,324
		10.33.00	MATERIAL HANDLING EQUIPMENT							
			MATERIAL HANDLING EQUIPMENT - COAL HANDLING SYSTEM	1,015.00 TN	-		2,159	65.32 /MH	141,026	141,026
			MATERIAL HANDLING EQUIPMENT				2,159		141,026	141,026
		10.35.00	PIPING							
			PIPING - CIRC WATER PIPING AND TUNNELS	1.00 LS	-		1,071	76.08 /MH	81,514	81,514
			PIPING - DEMO BOP PIPING AND HANGERS	1.00 LS	-		535	65.32 /MH	34,924	34,924
			PIPING				1,606		116,439	116,439
		10.41.00	ELECTRICAL EQUIPMENT							
			MISCELLANEOUS ELECTRICAL EQUIPMENT	75.00 TN	-		211	65.32 /MH	13,750	13,750
			MISCELLANEOUS ELECTRICAL EQUIPMENT, TRANSFORMERS	50.00 TN	-		140	65.32 /MH	9,167	9,167

ESTIMATE NO.: 31983B
 PROJECT NO.: 11488-066
 ISSUE DATE: 3/28/2013
 PREP./REV.: RCK/JAE
 APPROVED: MNO

**AMERICAN ELECTRIC POWER
 Decommissioning Study Big Sandy
 Units 1, 2 and Common Facilities**

KPSC Case No. 2014-00396
 KIUC's First Set of Data Requests
 Dated January 29, 2015
 Sargent & Lundy
 Item No. 59
 Attachment 1
 Page 18 of 26

Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
			ELECTRICAL EQUIPMENT				351		22,917	22,917
		10.42.00	RACEWAY, CABLE TRAY, & CONDUIT							
			RACEWAY, CABLE TRAY, & CONDUIT -	225.00 TN	-		479	65.32 /MH	31,262	31,262
			RACEWAY, CABLE TRAY, & CONDUIT				479		31,262	31,262
		10.86.00	WASTE							
			WASTE - OIL CONTAMINATED FILL, 3,400,000 GALLON OIL TANK COINTAINMENT	16,225.00 CY	-	0	20,179	168.94 /MH	3,409,039	3,409,039
			WASTE - METAL CLEANING TANK BERMED AREA CONTAMINATED FILL	3,889.00 CY	-	0	4,837	168.94 /MH	817,119	817,119
			WASTE - BUILDING WASTE - COMMON BLDGS	380.00 CY	-	3,800	40	65.32 /MH	2,607	6,407
			WASTE - OIL CONTAMINATED FILL, 500,000 GALLON OIL TANK COINTAINMENT	3,016.00 CY	-	0	3,751	168.94 /MH	633,693	633,693
			WASTE			3,800	28,807		4,862,457	4,862,257
			WHOLE PLANT DEMOLITION			7,449,896	74,076		8,819,470	17,919,366
	18.00.00		SCRAP VALUE							
		18.10.00	MIXED STEEL							
			MIXED STEEL REBAR RECOVERY FROM OUTBUILDINGS FOUNDATIONS & MISC FDNS	-164.00 TN	(47,068)	-		65.89 /MH		(47,068)
			MIXED STEEL REBAR RECOVERY FROM 825' CHIMNEY	-448.00 TN	(128,576)	-		65.89 /MH	0	(128,576)
			MIXED STEEL, STEEL LINER FROM 825' CHIMNEY	-278.00 TN	(79,786)	-		65.89 /MH	0	(79,786)
			MIXED STEEL, EQUIPMENT FOUNDATION 110 LB/CY, MISC EQUIPMENT, REINFORCING	-72.00 TN	(20,664)	-		65.89 /MH		(20,664)
			MIXED STEEL, MATERIAL HANDLING EQUIPMENT - COAL HANDLING SYSTEM, COMMON	-1,015.00 TN	(291,305)	-		65.89 /MH		(291,305)
			MIXED STEEL, 26450 TF OF RAILROAD TRACK, 110# rRAIL	-970.00 TN	(278,390)	-		65.89 /MH	0	(278,390)
			MIXED STEEL, RACEWAY, CABLE TRAY, & CONDUIT -	-225.00 TN	(64,575)	-		65.89 /MH	0	(64,575)
			MIXED STEEL, MISCELLANEOUS ELECTRICAL EQUIPMENT, TRANSFORMERS	-25.00 TN	(7,175)	-		65.89 /MH		(7,175)
			MIXED STEEL, TANKS, FUEL OIL TANK, 3,400,000 GALLONS, BOTTOM ONLY (TOP HAS BEEN REMOVED)	-32.40 TN	(9,299)	-		65.89 /MH		(9,299)
			MIXED STEEL, TANKS, FUEL OIL TANK, 500,000 GALLONS	-50.00 TN	(14,350)	-		65.89 /MH		(14,350)

**AMERICAN ELECTRIC POWER
 Decommissioning Study Big Sandy
 Units 1, 2 and Common Facilities**

Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
		18.10.00	MIXED STEEL							
			MIXED STEEL, TANKS, METAL CLEANING WASTE TANK 1,000,000 GALLONS	-83.00 TN	(23,821)	-		65.89 /MH		(23,821)
										(965,009)
		18.30.00	COPPER							
			COPPER SCRAP CABLE & COMMON	-150.00 TN	(913,650)	-		65.89 /MH		(913,650)
			COPPER, MISCELLANEOUS ELECTRICAL EQUIPMENT, TRANSFORMERS	-50.00 TN	(304,550)	-		65.89 /MH		(304,550)
										(1,218,200)
			COPPER							(1,218,200)
			SCRAP VALUE							(2,183,209)
			Common		(2,183,209)	7,449,896	74,076		8,819,470	15,736,157
Unit 1										
	10.00.00		WHOLE PLANT DEMOLITION							
		10.22.00	CONCRETE							
			BUILDING PAD FOUNDATION 110 LB/CY, UNIT 1 COOLING TOWER BASIN	3,835.00 CY	-	0	4,532	76.08 /MH	344,787	344,787
			BUILDING PAD FOUNDATION 110LB/CY, OUTBUILDINGS & MISC FDNS	49.00 CY	-		58	76.08 /MH	4,405	4,405
			ELEVATED FOUNDATION 110/CY, UNIT 1 COOLING TOWER SHELL	7,112.00 CY	-	0	4,475	76.08 /MH	340,449	340,449
			ELEVATED FOUNDATION, UNIT 1 TURBINE AND BLR BLDGS	2,000.00 CY	-	0	1,258	76.08 /MH	95,739	95,739
			TURBINE PEDESTAL FOUNDATION 140 LB/CY, UNIT 1	1,911.00 CY	-	0	3,613	76.08 /MH	274,895	274,895
										13,936
			CONCRETE							1,060,276
		10.23.00	STEEL							
			DUCTWORK W/BREECHINGS AND STEEL SUPPORTS, UNIT 1	537.00 TN	-	0	1,507	65.89 /MH	99,310	99,310
										1,507
			STEEL							99,310
		10.24.00	ARCHITECTURAL							
			BUILDING, UNIT 1 POWER BLOCK, INCLUDING TURBINE BLDG, BOILER HOUSE PREHTR FAN ENCLOSURE & COAL BUNKERS	4,501,000.00 CF	-	0	47,279	74.88 /MH	3,540,282	3,540,282
			BUILDING, UNIT 1 THAW-OUT SHED, 60' X 22' X 16' TALL	21,120.00 CF	-		133	74.88 /MH	9,967	9,967
										47,413
			ARCHITECTURAL							3,550,250
		10.31.00	MECHANICAL EQUIPMENT							
			MAIN BOILER AND APPURTENANCES, UNIT 1	3,218.00 TN	-	0	6,845	71.35 /MH	488,392	488,392
			FD & ID FANS, UNIT 1	214.00 TN	-	0	455	71.35 /MH	32,478	32,478
			FEEDWATER DEARATING EQUIPMENT, UNIT 1	100.00 TN	-	0	213	65.32 /MH	13,894	13,894
			TANKS, UNIT 1 CONDENSATE STORAGE TANK, 300,000 GALLONS	29.00 TN	-		81	65.32 /MH	5,317	5,317

**AMERICAN ELECTRIC POWER
 Decommissioning Study Big Sandy
 Units 1, 2 and Common Facilities**

Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
		10.31.00	MECHANICAL EQUIPMENT							
			WATER TREATMENT DEMINEALIZATION & CHEMICAL TREATMENT EQUIPMENT, UNIT 1	136.00 TN	-	0	289	65.32 /MH	18,896	18,896
			TURBINE GENERATOR, UNIT 1	750.00 TN	-	0	1,595	65.32 /MH	104,207	104,207
			CONDENSER, UNIT 1	423.00 TN	-	0	900	65.32 /MH	58,773	58,773
			CIRCULATING WATER EQUIPMENT, UNIT 1	69.00 TN	-	0	147	65.32 /MH	9,587	9,587
			COOLING TOWER, UNIT 1 REMOVE FILL	295,000.00 CF	-	0	1,859	65.32 /MH	121,446	121,446
			MECHANICAL EQUIPMENT - UNIT 1 MISC. POWER PLANT EQUIPMENT	155.00 TN	-	0	330	65.32 /MH	21,536	21,536
			MECHANICAL EQUIPMENT - DEMOLISH UNIT 1 TURBINE ROOM OVERHEAD CRANE	1.00 LS	-	0	331	65.32 /MH	21,613	21,613
			MECHANICAL EQUIPMENT - UNIT 1 DUST COLLECTORS	137.00 TN	-	0	291	65.32 /MH	19,035	19,035
			MECHANICAL EQUIPMENT - PRECIPITATORS UNIT 1	200.00 TN	-	0	425	65.32 /MH	27,788	27,788
			MECHANICAL EQUIPMENT				13,762		942,962	942,962
		10.33.00	MATERIAL HANDLING EQUIPMENT							
			MATERIAL HANDLING EQUIPMENT - UNIT 1 ASH HANDLING EQUIPMENT	77.00 TN	-	0	164	65.32 /MH	10,699	10,699
			MATERIAL HANDLING EQUIPMENT - UNIT 1 FUEL EQUIPMENT, CONVEYORS INCL TRUSSES & BENTS	837.00 TN	-	0	1,780	65.32 /MH	116,295	116,295
			MATERIAL HANDLING EQUIPMENT				1,944		126,993	126,993
		10.34.00	HVAC							
			HVAC - UNIT 1	1.00 LS	-		897	65.32 /MH	58,596	58,596
			HVAC				897		58,596	58,596
		10.35.00	PIPING							
			PIPING - UNIT 1 BOILER PLANT AND TURBINE PIPING	799.00 TN	-	0	1,784	65.32 /MH	116,552	116,552
			PIPING				1,784		116,552	116,552
		10.41.00	ELECTRICAL EQUIPMENT							
			GENERATOR BUS TRANSFORMERS UNIT 1 MAIN POWER TRANSFORMER	344.00 TN	-	0	966	65.32 /MH	63,067	63,067
			STATION AUXILIARY TRANSFORMERS, UNIT 1 MAIN AUX TRANSFORMERS	34.00 TN	-	0	95	65.32 /MH	6,233	6,233
			ELECTRICAL EQUIPMENT				1,061		69,301	69,301
		10.86.00	WASTE							
			WASTE - UNIT 1 COOLING TOWER FILL	1,094.00 CY	-	10,940	115	65.32 /MH	7,506	18,446
			WASTE - UNIT 1 BLDG WASTE	1,683.00 CY	-	16,830	177	65.32 /MH	11,548	28,378
			WASTE			27,770	292		19,054	46,824
			WHOLE PLANT DEMOLITION			27,770	82,596		6,043,293	6,071,063
	18.00.00		SCRAP VALUE							
		18.10.00	MIXED STEEL							

AMERICAN ELECTRIC POWER
Decommissioning Study Big Sandy
Units 1, 2 and Common Facilities

Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
		18.10.00	MIXED STEEL							
			MIXED STEEL, UNIT 1 POWER BLOCK, INCLUDING TURBINE BLDG, BOILER HOUSE PREHTR FAN ENCLOSURE & COAL BUNKERS & SERVICE BLDG	-2,251.00 TN	(646,037)	-		65.89 /MH		(646,037)
			MIXED STEEL, REBAR RECOVERED, TURBINE PEDESTAL FOUNDATION 140 LB/CY, UNIT 1	-105.00 TN	(30,135)	-		65.89 /MH	0	(30,135)
			MIXED STEEL, UNIT 1 COOLING TOWER REINFORCING RECOVERED	-603.00 TN	(173,061)	-		65.89 /MH	0	(173,061)
			MIXED STEEL, ELEVATED FOUNDATION, UNIT 1 TURBINE AND BLR BLDGS, REINFORCING	-110.00 TN	(31,570)	-		65.89 /MH		(31,570)
			MIXED STEEL, MAIN BOILER AND APPURTENANCES, UNIT 1	-3,218.00 TN	(923,566)	-		65.89 /MH	0	(923,566)
			MIXED STEEL, FD & ID FANS, UNIT 1	-214.00 TN	(61,418)	-		65.89 /MH	0	(61,418)
			MIXED STEEL, DUCTWORK W/BREECHINGS AND STEEL SUPPORTS, UNIT 1	-537.00 TN	(154,119)	-		65.89 /MH	0	(154,119)
			MIXED STEEL, FEEDWATER DEARATING EQUIPMENT, UNIT 1	-100.00 TN	(28,700)	-		65.89 /MH	0	(28,700)
			MIXED STEEL, WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT, UNIT 1	-136.00 TN	(39,032)	-		65.89 /MH	0	(39,032)
			MIXED STEEL, UNIT 1 CONDENSER	-287.00 TN	(82,369)	-		65.89 /MH	0	(82,369)
			MIXED STEEL, MATERIAL HANDLING EQUIPMENT - UNIT 1 ASH HANDLING EQUIPMENT	-77.00 TN	(22,099)	-		65.89 /MH	0	(22,099)
			MIXED STEEL, MATERIAL HANDLING EQUIPMENT - UNIT 1 FUEL EQUIPMENT, CONVEYORS INCL TRUSSES & BENTS	-837.00 TN	(240,219)	-		65.89 /MH	0	(240,219)
			MIXED STEEL, TURBINE GENERATOR, UNIT 1	-750.00 TN	(215,250)	-		65.89 /MH	0	(215,250)
			MIXED STEEL, CIRCULATING WATER EQUIPMENT, UNIT 1	-69.00 TN	(19,803)	-		65.89 /MH	0	(19,803)
			MIXED STEEL, MECHANICAL EQUIPMENT - UNIT 1 MISC. POWER PLANT EQUIPMENT	-155.00 TN	(44,485)	-		65.89 /MH	0	(44,485)
			MIXED STEEL, MECHANICAL EQUIPMENT - UNIT 1 DUST COLLECTORS	-137.00 TN	(39,319)	-		65.89 /MH	0	(39,319)
			MIXED STEEL, PIPING - UNIT 1 BOILER PLANT AND TURBINE PIPING	-799.00 TN	(229,313)	-		65.89 /MH		(229,313)
			MIXED STEEL, MECHANICAL EQUIPMENT - PRECIPITATORS UNIT 1	-200.00 TN	(57,400)	-		65.89 /MH	0	(57,400)
			MIXED STEEL, GENERATOR BUS TRANSFORMERS UNIT 1 MAIN POWER TRANSFORMER	-193.50 TN	(55,535)	-		65.89 /MH	0	(55,535)

**AMERICAN ELECTRIC POWER
 Decommissioning Study Big Sandy
 Units 1, 2 and Common Facilities**

Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
		18.10.00	MIXED STEEL							
			MIXED STEEL, STATION AUXILIARY TRANSFORMERS, UNIT 1 MAIN AUX TRANSFORMERS	-19.70 TN	(5,654)	-		65.89 /MH	0	(5,654)
			MIXED STEEL, TANKS, UNIT 1 CONDENSATE STORAGE TANK, 300,000 GALLONS	-29.00 TN	(8,323)	-		65.89 /MH		(8,323)
					(3,107,406)					(3,107,406)
		18.30.00	COPPER							
			COPPER, UNIT 1 CONDENSER TUBES COPPER / NI	-135.40 TN	(824,721)	-		65.89 /MH		(824,721)
			COPPER, GENERATOR BUS TRANSFORMERS UNIT 1 MAIN POWER TRANSFORMER	-147.50 TN	(898,423)	-		65.89 /MH		(898,423)
			COPPER, STATION AUXILIARY TRANSFORMERS, UNIT 1 MAIN AUX TRANSFORMERS	-53.00 TN	(322,823)	-		65.89 /MH		(322,823)
					(2,045,967)					(2,045,967)
			SCRAP VALUE		(5,153,373)					(5,153,373)
			Unit 1		(5,153,373)	27,770	82,596		6,043,293	917,690
Unit 2										
	10.00.00		WHOLE PLANT DEMOLITION							
		10.22.00	CONCRETE							
			BUILDING PAD FOUNDATION 110 LB/CY, UNIT 2 COOLING TOWER BASIN	9,583.00 CY	-		11,324	76.08 /MH	861,564	861,564
			BUILDING PAD FOUNDATION 110LB/CY, OUTBUILDINGS & MISC FDNS	363.00 CY	-		429	76.08 /MH	32,636	32,636
			ELEVATED FOUNDATION 110/CY, UNIT 2 COOLING TOWER SHELL	13,122.00 CY	-		8,256	76.08 /MH	628,146	628,146
			ELEVATED FOUNDATION , UNIT 2 TURBINE AND BLR BLDGS	2,035.00 CY	-		1,280	76.08 /MH	97,415	97,415
			TURBINE PEDESTAL FOUNDATION 140 LB/CY, UNIT 2	7,778.00 CY	-		14,706	76.08 /MH	1,118,856	1,118,856
							35,997		2,738,616	2,738,616
		10.23.00	STEEL							
			DUCTWORK W/BREECHINGS AND STEEL SUPPORTS, UNIT 2	1,022.00 TN	-		2,868	65.89 /MH	189,004	189,004
							2,868		189,004	189,004
		10.24.00	ARCHITECTURAL							
			BUILDING, UNIT 2 POWER BLOCK, INCLUDING TURBINE BLDG, BOILER HOUSE PREHTR FAN ENCLOSURE & COAL BUNKERS	8,863,000.00 CF	-	0	93,099	74.88 /MH	6,971,234	6,971,234
			BUILDING, UNIT 2, UREA SYSTEM BLDG, 60' 45' X 40' TALL	108,000.00 CF	-		681	74.88 /MH	50,969	50,969

ESTIMATE NO.: 31983B
 PROJECT NO.: 11488-066
 ISSUE DATE: 3/28/2013
 PREP./REV.: RCK/JAE
 APPROVED: MNO

**AMERICAN ELECTRIC POWER
 Decommissioning Study Big Sandy
 Units 1, 2 and Common Facilities**

KPSC Case No. 2014-00396
 KIUC's First Set of Data Requests
 Dated January 29, 2015
 Sargent & Lundy
 Item No. 59
 Attachment 1
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Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
		10.24.00	ARCHITECTURAL							
			BUILDING, UNIT 2 UREA SYSTEM AMMONIOA ON DEMAND (AOD) BLDG, 60' X 40' X14' TALL	33,600.00 CF	-		212	74.88 /MH	15,857	15,857
			BUILDING, UNIT 2 SCR BLDG, 70' 67' X 20' TALL	93,800.00 CF	-		591	74.88 /MH	44,267	44,267
			ARCHITECTURAL				94,582		7,082,327	7,082,327
		10.31.00	MECHANICAL EQUIPMENT							
			MAIN BOILER AND APPURTENANCES, UNIT 2	12,160.00 TN	-		25,866	71.35 /MH	1,845,507	1,845,507
			FD & ID FANS, UNIT 2	6,135.00 TN	-		13,050	71.35 /MH	931,101	931,101
			FEEDWATER DEARATING EQUIPMENT, UNIT 2	215.00 TN	-		457	65.32 /MH	29,873	29,873
			TANKS, UNIT 2 CLEAN CONDENSATE TANK, 750,000 GALLONS	77.00 TN	-		216	65.32 /MH	14,117	14,117
			TANKS, UNIT 2 CONTAMINATED CONDENSATE TANK, 500,000 GALLONS	50.00 TN	-		140	65.32 /MH	9,167	9,167
			TANKS, UNIT 2 UREA SOLUTION STORAGE TANK, 200,000 GALLONS TK103-100	25.00 TN	-		70	65.32 /MH	4,583	4,583
			TANKS, UNIT 2 UREA SOLUTION STORAGE TANK, 200,000 GALLONS TK104-100	25.00 TN	-		70	65.32 /MH	4,583	4,583
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT, UNIT 2	269.00 TN	-		572	65.32 /MH	37,375	37,375
			TURBINE GENERATOR, UNIT 2	2,045.00 TN	-		4,350	65.32 /MH	284,137	284,137
			CONDENSER, UNIT 2	1,165.00 TN	-		2,478	65.32 /MH	161,868	161,868
			CIRCULATING WATER EQUIPMENT, UNIT 2	484.00 TN	-		1,030	65.32 /MH	67,248	67,248
			COOLING TOWER, UNIT 2 REMOVE FILL	664,000.00 CF	-		4,185	65.32 /MH	273,356	273,356
			MECHANICAL EQUIPMENT - UNIT 2 MISC. POWER PLANT EQUIPMENT	613.00 TN	-		1,304	65.32 /MH	85,172	85,172
			MECHANICAL EQUIPMENT - DEMOLISH UNIT 2 TURBINE ROOM OVERHEAD CRANE	1.00 LS	-		331	65.32 /MH	21,613	21,613
			MECHANICAL EQUIPMENT - UNIT 2 DUST COLLECTORS	269.00 TN	-		572	65.32 /MH	37,375	37,375
			MECHANICAL EQUIPMENT - PRECIPITATORS UNIT 2	600.00 TN	-		1,276	65.32 /MH	83,365	83,365
			MECHANICAL EQUIPMENT - SCR UNIT 2	664.00 TN	-		1,412	65.32 /MH	92,258	92,258
			MECHANICAL EQUIPMENT				57,380		3,982,698	3,982,698
		10.33.00	MATERIAL HANDLING EQUIPMENT							
			MATERIAL HANDLING EQUIPMENT - UNIT 2 ASH HANDLING EQUIPMENT	377.00 TN	-		802	65.32 /MH	52,381	52,381
			MATERIAL HANDLING EQUIPMENT - UNIT 2 FUEL EQUIPMENT, CONVEYORS INCL TRUSSES & BENTS	32.00 TN	-		68	65.32 /MH	4,446	4,446

**AMERICAN ELECTRIC POWER
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Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
			MATERIAL HANDLING EQUIPMENT				870		56,827	56,827
		10.34.00	HVAC							
			HVAC - UNIT 2	1.00 LS	-		1,780	65.32 /MH	116,300	116,300
			HVAC				1,780		116,300	116,300
		10.35.00	PIPING							
			PIPING - UNIT 2 BOILER PLANT AND TURBINE PIPING	2,690.00 TN	-		6,007	65.32 /MH	392,396	392,396
			PIPING				6,007		392,396	392,396
		10.41.00	ELECTRICAL EQUIPMENT							
			GENERATOR BUS TRANSFORMERS UNIT 2 MAIN POWER TRANSFORMER	328.00 TN	-		921	65.32 /MH	60,134	60,134
			STATION AUXILIARY TRANSFORMERS, UNIT 2 MAIN AUX TRANSFORMERS	109.00 TN	-		306	65.32 /MH	19,984	19,984
			ELECTRICAL EQUIPMENT				1,227		80,117	80,117
		10.86.00	WASTE							
			WASTE - UNIT 2 COOLING TOWER FILL	2,460.00 CY	-	24,600	258	65.32 /MH	16,879	41,479
			WASTE - UNIT 2 BLDG WASTE	3,280.00 CY	-	32,800	345	65.32 /MH	22,505	55,305
			WASTE			57,400	603		39,384	96,784
			WHOLE PLANT DEMOLITION			57,400	201,314		14,677,668	14,735,068
	18.00.00		SCRAP VALUE							
		18.10.00	MIXED STEEL							
			MIXED STEEL, UNIT 2 POWER BLOCK, INCLUDING TURBINE BLDG, BOILER HOUSE PREHTR FAN ENCLOSURE & COAL BUNKERS & SERVICE BLDG	-4,431.50 TN	(1,271,841)	-		65.89 /MH		(1,271,841)
			MIXED STEEL, REBAR RECOVERED, TURBINE PEDESTAL FOUNDATION 140 LB/CY, UNIT 2	-467.00 TN	(134,029)	-		65.89 /MH		(134,029)
			MIXED STEEL, UNIT 2 COOLING TOWER REINFORCING RECOVERED	-1,249.00 TN	(358,463)	-		65.89 /MH		(358,463)
			MIXED STEEL, ELEVATED FOUNDATION , UNIT 2 TURBINE AND BLR BLDGS, REINFORCING	-112.00 TN	(32,144)	-		65.89 /MH		(32,144)
			MIXED STEEL, MAIN BOILER AND APPURTENANCES, UNIT 2	-12,160.00 TN	(3,489,920)	-		65.89 /MH		(3,489,920)
			MIXED STEEL, FD & ID FANS, UNIT 2	-6,135.00 TN	(1,760,745)	-		65.89 /MH		(1,760,745)
			MIXED STEEL, DUCTWORK W/BREECHINGS AND STEEL SUPPORTS, UNIT 2	-1,022.00 TN	(293,314)	-		65.89 /MH		(293,314)
			MIXED STEEL, FEEDWATER DEARATING EQUIPMENT, UNIT 2	-215.00 TN	(61,705)	-		65.89 /MH		(61,705)
			MIXED STEEL, WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT, UNIT 2	-269.00 TN	(77,203)	-		65.89 /MH		(77,203)
			MIXED STEEL, UNIT 2 CONDENSER	-792.00 TN	(227,304)	-		65.89 /MH		(227,304)

AMERICAN ELECTRIC POWER
Decommissioning Study Big Sandy
Units 1, 2 and Common Facilities

Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
		18.10.00	MIXED STEEL							
			MIXED STEEL, MATERIAL HANDLING EQUIPMENT - UNIT 2 ASH HANDLING EQUIPMENT	-377.00 TN	(108,199)	-		65.89 /MH		(108,199)
			MIXED STEEL, MATERIAL HANDLING EQUIPMENT - UNIT 2 FUEL EQUIPMENT, CONVEYORS INCL TRUSSES & BENTS	-35.00 TN	(10,045)	-		65.89 /MH		(10,045)
			MIXED STEEL, TURBINE GENERATOR, UNIT 2	-2,045.00 TN	(586,915)	-		65.89 /MH		(586,915)
			MIXED STEEL, CIRCULATING WATER EQUIPMENT, UNIT 2	-484.00 TN	(138,908)	-		65.89 /MH		(138,908)
			MIXED STEEL, MECHANICAL EQUIPMENT - UNIT 2 MISC. POWER PLANT EQUIPMENT	-613.00 TN	(175,931)	-		65.89 /MH		(175,931)
			MIXED STEEL, MECHANICAL EQUIPMENT - UNIT 2 DUST COLLECTORS	-269.00 TN	(77,203)	-		65.89 /MH		(77,203)
			MIXED STEEL, PIPING - UNIT 2 BOILER PLANT AND TURBINE PIPING	-2,690.00 TN	(772,030)	-		65.89 /MH		(772,030)
			MIXED STEEL, MECHANICAL EQUIPMENT - PRECIPITATORS UNIT 2	-600.00 TN	(172,200)	-		65.89 /MH		(172,200)
			MIXED STEEL, GENERATOR BUS TRANSFORMERS UNIT 2 MAIN POWER TRANSFORMERS	-180.50 TN	(51,804)	-		65.89 /MH		(51,804)
			MIXED STEEL, STATION AUXILIARY TRANSFORMERS, UNIT 2 MAIN AUX TRANSFORMERS	-56.00 TN	(16,072)	-		65.89 /MH		(16,072)
			MIXED STEEL, MECHANICAL EQUIPMENT - SCR UNIT 2	-664.00 TN	(190,568)	-		65.89 /MH		(190,568)
			MIXED STEEL, TANKS, UNIT 2 CLEAN CONDENSATE TANK, 750,000 GALLONS	-77.00 TN	(22,099)	-		65.89 /MH		(22,099)
			MIXED STEEL, TANKS, UNIT 2 CONTAMINATED CONDENSATE TANK, 500,000 GALLONS	-50.00 TN	(14,350)	-		65.89 /MH		(14,350)
			MIXED STEEL, TANKS, UNIT 2 UREA SOLUTION STORAGE TANK, 200,000 GALLONS TK103-100	-25.00 TN	(7,175)	-		65.89 /MH		(7,175)
			MIXED STEEL, TANKS, UNIT 2 UREA SOLUTION STORAGE TANK, 200,000 GALLONS TK104-100	-25.00 TN	(7,175)	-		65.89 /MH		(7,175)
			MIXED STEEL		(10,057,341)					(10,057,341)
		18.30.00	COPPER							
			COPPER, UNIT 2 CONDENSER TUBES COPPER / NI	-373.00 TN	(2,271,943)	-		65.89 /MH		(2,271,943)
			COPPER, GENERATOR BUS TRANSFORMERS UNIT 2 MAIN POWER TRANSFORMER	-147.50 TN	(898,423)	-		65.89 /MH		(898,423)

ESTIMATE NO.: 31983B
 PROJECT NO.: 11488-066
 ISSUE DATE: 3/28/2013
 PREP./REV.: RCK/JAE
 APPROVED: MNO

AMERICAN ELECTRIC POWER
Decommissioning Study Big Sandy
Units 1, 2 and Common Facilities

KPSC Case No. 2014-00396
 KIUC's First Set of Data Requests
 Dated January 29, 2015
 Sargent & Lundy
 Item No. 59
 Attachment 1
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Area	Group	Phase	DESCRIPTION	TAKEOFF QUANTITY	SCRAP AMOUNT	MATERIAL AMOUNT	LABOR MAN HRS	LABOR PRICE	LABOR AMOUNT	TOTAL AMOUNT
		18.30.00	COPPER							
			COPPER, STATION AUXILIARY TRANSFORMERS, UNIT 2 MAIN AUX TRANSFORMERS	-53.00 TN	(322,823)	-		65.89 /MH		(322,823)
			COPPER		(3,493,189)					(3,493,189)
			SCRAP VALUE		(13,550,530)					(13,550,530)
			Unit 2		(13,550,530)	57,400	201,314		14,677,668	1,184,539