

**INTEGRAL  
MONITORED RETRIEVABLE STORAGE (MRS)  
FACILITY**

**CONCEPTUAL DESIGN REPORT**

**VOLUME V BOOK VIII – COST ESTIMATE**

*Prepared for*

**UNITED STATES DEPARTMENT OF ENERGY  
Richland Operations Office**

Report No. MRS 11

Contract No. DE-AC06-84RL 10436

September 1985

**THE RALPH M. PARSONS COMPANY OF DELAWARE  
Westinghouse Electric Corporation  
Golder Associates**

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*JKP*  
**MASTER**

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PREPARED BY:

MRS Facility Alternate Case Clinch River

PROJECT COST ESTIMATE SUMMARY

TITLE Project Cost Estimate (Drywells)	PREPARED FOR PNL/DOE	PREPARED BY V. Mesec	CHECKED BY CCE	PROJECT NO. 6440-11	DATE August 85
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	TITLE I	TITLE II	TITLE III	( \$ TOTAL X 1000)
<b>A. ENGINEERING</b>				
ARCHITECT - ENGINEER	NA	49,500	23,600	73,100
OTHER ENGINEERING - SPECIFY	NA	4,800	0	4,800
<b>SUBTOTAL</b>	NA	54,300	23,600	77,900
ESCALATION	<u>NA</u> %	0	0	0
CONTINGENCY	<u>NA</u> %	10,700	4,400	15,100
<b>SUBTOTAL ENGINEERING</b>	NA	65,000	28,000	93,000
<b>OPERATING CONTRACTOR</b>				0
<b>TOTAL A</b>				93,000
<b>B. CONSTRUCTION</b>				
(1) IMPROVEMENTS TO LAND				52,825
(2) BUILDINGS				0
BUILDING NO. <u>R&amp;H Bldg</u> <u>709,025</u> SQ. FT.				337,300
BUILDING NO. <u>Suppt. Bldgs</u> SQ. FT.				35,248
(3) OTHER (DETACHED) STRUCTURES <u>CHTRU Bldg.</u>				1,163
(4) SPECIAL FACILITIES AND INSTAL. <u>Storage Area</u>				111,240
(5) UTILITIES				3,360
(6) OPERATING EXPENSE CHARGES <u>NA</u>				0
(7) CONTRACT ADMINISTRATION <u>NA</u>				0
(8) <u>Construction Management</u>				45,240
<b>SUBTOTAL</b>				536,105
ESCALATION <u>NA</u> % @ <u>NA</u> YEARS				0
CONTINGENCY <u>Varies</u> %				117,064
<b>TOTAL B</b>				703,440
<b>C. STANDARD EQUIPMENT</b>				0
<b>TOTAL C</b>				0
<b>D. TRANSFERRED CAPITAL PROP. OR EQUIPMENT</b> <u>NA</u>				0
<b>CURRENT ENR. COST INDEX</b>	BUILDING _____	CONSTRUCTION _____	<b>TOTAL PROJECT ESTIMATE</b>	<b>\$ 796,440</b>

<b>PROPOSED FUNDS ALLOCATION</b>			<b>TYPE OF ESTIMATE:</b>		<b>REMARKS:</b> (1) All cost 2nd quarter 1985. (2) 85% productivity on labor is included in the estimate. Productivity factor furnished by DOE Oak Ridge. (3) Escalation not included in estimate. (4) NA = Not applicable
<b>FUNDS PURPOSE</b>	<b>OPER. CONTR.</b>	<b>DOE-RL</b>	<b>APPROVALS</b>	<b>DATE</b>	
ENGINEERING	_____	_____	_____	_____	
PROCUREMENT	_____	_____	_____	_____	
CONSTRUCTION	_____	_____	<b>ESTIMATING</b>	_____	
ESCALATION	_____	_____	_____	_____	
CONTINGENCY	_____	_____	<b>PROJECT MANAGER</b>	_____	
TCP/TCE	_____	_____	_____	_____	
WASH. STATE TAX	_____	_____	<b>CLIENT ENGINEER</b>	_____	
TOTAL	_____	_____	_____	_____	

**PARSONS**  
ESTIMATE WORKSHEET

CLINCH RIVER - ALTERNATE CASE

M.T.O. BY \_\_\_\_\_ PRICED BY \_\_\_\_\_ DATE Aug. 85 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO.: 6440-11 CLIENT: DOE/PAU TYPE OF ESTIMATE ROM CHECKED BY \_\_\_\_\_

UNIT/AREA DESCRIPTION CAPACITY ACCNT	QUAN- TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
			MATL	M/H	LAB \$		M/HRS	DOLLARS	M/HRS	DOLLARS	
CONTINGENCY FACTORS											
REF BLDG (AREAS 1, 2, 3 & 4)	25%		337300	K							84330000
STORAGE (AREA 6)	15%		111240	K							16686000
SUPPORT BLDG (PART AREA 5)			35248	K							
CHTRU " "			1163	K							
UTILITIES " "			3360	K							
IMPROVEMENTS TO LAND ( " & AREA 7)			52825	K							
	10%		92596	K							9260000
SUB-TOTAL											110216000
CONSTRUCTION MANAGEMENT	15%		45240	K							6786000
TOTAL											117062000
ROUND OFF ADJUST											+2000
USE											117064000

PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER - ALTERNATE CASE

M.T.O. BY \_\_\_\_\_ PRICED BY \_\_\_\_\_ DATE Aug. 85 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO.: 6440-11 CLIENT: VOE/PTL TYPE OF ESTIMATE ROM CHECKED BY \_\_\_\_\_

UNIT/AREA	DESCRIPTION	CAPACITY	ACCNT	QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
						MATL	M/H	LAB\$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
	TOTAL Summary BY AREAS													
	R & B BUILDING - AREA	1												121 224 000
	- "	2												23 261 000
	- "	3												161 004 000
	- "	4												31 811 000
	R & B													337 300 000
	SUPPORT BUILDING (PART OF AREA 5)					26922 +	PRODUCTIVITY (942	+ OH & P (1384)						35 248 000
	CHTRU ( " )					893	(26)	(244)						1 163 000
	STORAGE (AREA 6)													111 240 000
	UTILITIES (PART OF AREA 5)					2512		(144)						3 360 000
	AREA 5 SITE													43 701 000
	" 7 "													9 118 000
	TOTAL IMPROVE TO LAND													52 825 000
	TOTAL													541 136 000

BY ESEC  
 SUBJECT Summary Sheet

MAT. & LABOR

DATE UG. '85

JOB NO. 6890-11

*DM*

ALTERNATE CASE MINCH RIVER

DIVISION	TITLE	AREA #1	AREA #2	AREA #3	AREA #4	AREA #5	AREA #6	AREA #7	TOTAL MIL \$ (X 1000)	CONST MGT \$ #	TOTAL \$ #
		TOTAL MIL \$ (X 1000)	TOTAL MIL \$ (X 1000)	TOTAL MIL \$ (X 1000)	TOTAL MIL \$ (X 1000)	TOTAL MIL \$ (X 1000)	TOTAL MIL \$ (X 1000)	TOTAL MIL \$ (X 1000)			
2	SITE WORK	676	7	666	49	26363	72393	4933	105087		
3	CONCRETE	12882	4113	28004	5982				51011		
4	MASONRY				31				31		
5	METALS	4955	4650	1195	3036				13836		
6	WOOD / PLASTICS			7	9				16		
7	THERMAL / MOST PROTECTION			940	1592				2532		
8	DOORS / WINDOWS	3921		4475	278				8674		
9	FINISHES		215	1920	605				2740		
10	SPECIALTIES			11	189				200		
11	EQUIPMENT	61811	2262	20910	1087	21.3	7377		93158.3		
12	FURNISHINGS				214				214		
13	SPECIAL CONSTRUCTION			3574	1035		38		4647		
14	CONVEYING SYSTEMS			1013	708				1721		
15	MECHANICAL	4839	4659	37631	5446				52565		
16	ELECTRICAL	2959	1256	9176	2933	6804.4	5136	1955	30219.1		
17	INSTRUMENTATION	1560		11525		234.4			13319.4		
<b>S/TOTAL</b>		<b>93653</b>	<b>17192</b>	<b>120677</b>	<b>23227</b>	<b>33423</b>	<b>84944</b>	<b>6888</b>	<b>380004</b>		
<b>Productivity on Labor</b>		<b>1592</b>	<b>875</b>	<b>4829</b>	<b>1105</b>	<b>8240</b>	<b>2989</b>	<b>320</b>	<b>14250</b>		
<b>SHIFT DIFFERENTIALS</b>		<b>584</b>	<b>321</b>	<b>1770</b>	<b>515</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8190</b>		
<b>S/TOTAL</b>		<b>95829</b>	<b>18388</b>	<b>127276</b>	<b>25147</b>	<b>35663</b>	<b>87933</b>	<b>7208</b>	<b>397444</b>		
<b>CNTRU FACILITY</b>						<b>893</b>			<b>893</b>		
<b>SUPPORT FACILITIES</b>						<b>26922</b>			<b>26922</b>		
<b>UTILITIES</b>						<b>2512</b>			<b>2512</b>		
<b>TOTAL DIRECT COST</b>		<b>95829</b>	<b>18388</b>	<b>127276</b>	<b>25147</b>	<b>65990</b>	<b>87933</b>	<b>7208</b>	<b>427771</b>		
<b>CONTRACTOR OH &amp; PROFIT</b>		<b>25395</b>	<b>4873</b>	<b>33728</b>	<b>6664</b>	<b>17489</b>	<b>23307</b>	<b>1911</b>	<b>113365</b>		
<b>S/TOTAL</b>		<b>121224</b>	<b>23261</b>	<b>161004</b>	<b>31811</b>	<b>83479</b>	<b>111240</b>	<b>9119</b>	<b>541136</b>	<b>115210</b>	<b>1000000</b>
<b>CONTINGENCY</b>		<b>30308</b>	<b>5816</b>	<b>10233</b>	<b>7753</b>	<b>8348</b>	<b>16686</b>	<b>912</b>	<b>110278</b>	<b>6786</b>	<b>117184</b>
<b>TOTAL</b>		<b>151532</b>	<b>29077</b>	<b>201237</b>	<b>39564</b>	<b>91827</b>	<b>127926</b>	<b>10031</b>	<b>651414</b>	<b>52026</b>	<b>703440</b>





BY: ISEC

DATE: UG. '85

SUBJECT: Summary Sheet

CONSTRUCTION  
LABOR MAN HOURS

JOB NO. 6490-11

ALTERNATE CASE CLINCH RIVER

DIVISION	TITLE	AREA # 1	AREA # 2	AREA # 3	AREA # 4	AREA # 5	AREA # 6	AREA # 7	TOTAL
		LABOR MN	LABOR MN	LABOR MN	LABOR MN	LABOR MN	LABOR MN	LABOR MN	LABOR MN
2	SITE WORK	4711	106	5031	596	805015	721813	15359	1315631
3	CONCRETE	233887	73636	506643	171627				1025793
4	MASONRY				1301				1301
5	METALS	77574	65395	23262	41810				208071
6	WOOD / PLASTICS			346	377				723
7	THERMAL / MOIST PROTECTION			14121	26144				40265
8	DOORS / WINDOWS	7824		8707	2103				18674
9	FINISHES		6008	58490	19125				83623
10	SPECIALTIES			35	1616				1651
11	EQUIPMENT	78300	5785	54484	6119		2010		141638
12	FURNISHINGS				328				328
13	SPECIAL CONSTRUCTION			790	9560		768		18008
14	CONVEYING SYSTEMS			945	2695				12110
15	MECHANICAL	98513	122006	582957	119990				923496
16	ELECTRICAL	23533	7237	190520	61993	82377	112663	33566	515889
17	INSTRUMENTATION	8300		74812		1925			85037
	<u>S/TOTAL</u>	<u>527672</u>	<u>280113</u>	<u>1580513</u>	<u>465064</u>	<u>389317</u>	<u>1010254</u>	<u>108915</u>	<u>4392258</u>
	<u>CENTRY FACILITY</u>					9086			9086
	<u>SUPPORT FACILITIES</u>					323507			323507
	<u>UTILITIES</u>					43381			43381
	<u>TOTAL DIRECT MHR'S</u>	<u>527672</u>	<u>280113</u>	<u>1580513</u>	<u>465064</u>	<u>765291</u>	<u>1040254</u>	<u>108915</u>	<u>4428232</u>
	<u>PRODUCTIVITY</u>	<u>93119</u>	<u>49435</u>	<u>278914</u>	<u>82141</u>	<u>135053</u>	<u>183574</u>	<u>19222</u>	<u>841458</u>
	<u>TOTAL MHR HOURS CONSTRUCTION</u>	<u>620791</u>	<u>329548</u>	<u>1859427</u>	<u>547605</u>	<u>900344</u>	<u>1223828</u>	<u>1281147</u>	<u>5607690</u>

PARSONS

ESTIMATE WORKSHEET

CLING RIVER ALTERNATE CASE

M.T.O. BY ENGINEERING PRICED BY V. MESEC DATE Aug 85 SHEET      OF       
 JOB NO.: 6440-11 CLIENT:      TYPE OF ESTIMATE ROM CHECKED BY g.s. 15

UNIT/AREA	DESCRIPTION	CAPACITY	ACCNT	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE			SUBCONTRACT		LABOR		TOTAL DOLLARS		
						MATL	M/H	LAB \$	M/HR\$	DOLLARS	M/HR\$	DOLLARS	M/HR\$	DOLLARS				
	<u>SUMMARY AREA #1</u>																	
	<u>SUMMARY BY DIVISIONS</u>									<u>84,629,000</u>			<u>527,672</u>	<u>9,024,000</u>	<u>93,653,000</u>			
	<u>LABOR PRODUCTIVITY</u>			<u>85%</u>				<u>17.10</u>					<u>93,119</u>	<u>1,592,000</u>	<u>1,592,000</u>			
	<u>S/TOTAL</u>									<u>84,629,000</u>			<u>620,791</u>	<u>10,616,000</u>	<u>95,245,000</u>			
	<u>SHIFT DIFFERENTIAL (<math>\frac{10,616,000}{2} \times 11\%</math>) -</u>													<u>582,000</u>	<u>684,000</u>			
	<u>S/TOTAL</u>									<u>84,629,000</u>			<u>620,791</u>	<u>11,200,000</u>	<u>95,829,000</u>			
	<u>CONTRACTORS OHD-PROFIT</u>			<u>26.5%</u>											<u>25,395,000</u>			
	<u>TOTAL AREA #1 w/out CONTINGENCY</u>														<u>121,224,000</u>			

PARSONS

CLINCH RIVER - ALTERNATE CASE

ESTIMATE WORKSHEET

M.T.O. BY <b>ENGINEERING</b>		PRICED BY <b>V. MIESEC</b>		DATE <b>AUG. 85</b>		SHEET <b>    </b> OF <b>    </b>							
JOB NO.: <b>6440-11</b>		CLIENT <b>DOE/PNL</b>		TYPE OF ESTIMATE <b>ROM.</b>		CHECKED BY <b>Km</b>							
UNIT/AREA <b>MRS FACILITY</b>		QUAN-TITY	UNIT	COST OR M/HR'S PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS		
DESCRIPTION <b>K &amp; H BUILDING</b>				MATL	M/H	LAB \$	M/HR'S	DOLLARS	M/HR'S	DOLLARS			
CAPACITY													
ACCNT	<b>Summary AREA (S)</b>												
	<b># 1</b>												
<b>DIV 2</b>	<b>SITE WORK</b>												
	<b>3 CONCRETE</b>				<b>16.00</b>		<b>600 000</b>				<b>4711</b>	<b>76 000</b>	<b>676 000</b>
	<b>4 MASONARY</b>				<b>15.00</b>		<b>9887 000</b>				<b>233887</b>	<b>3585 000</b>	<b>12882 000</b>
	<b>5 METALS</b>				<b>16.50</b>		<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
	<b>6 WOOD &amp; PLASTICS</b>				<b>16.50</b>		<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
	<b>7 THERMAL MOIST. PROTECTION</b>				<b>16.50</b>		<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
	<b>8 DOORS &amp; WINDOWS</b>				<b>16.50</b>		<b>3792 000</b>				<b>7824</b>	<b>128 000</b>	<b>3920 000</b>
	<b>9 FINISHES</b>				<b>16.50</b>		<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
	<b>10 SPECIALTIES</b>				<b>17.00</b>		<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
	<b>11 EQUIPMENT</b>				<b>18.74</b>		<b>60 847 000</b>				<b>73300</b>	<b>1 374 000</b>	<b>61 871 000</b>
	<b>12 FURNISHINGS</b>				<b>16.50</b>		<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
	<b>13 SPECIAL CONSTRUCTION.</b>				<b>18.74</b>		<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
	<b>14 CONVEYING. SYSTEMS</b>				<b>18.74</b>		<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
	<b>15 MECHANICAL SYSTEMS</b>				<b>18.74</b>		<b>2 982 000</b>				<b>98543</b>	<b>1 847 000</b>	<b>4 829 000</b>
	<b>16 ELECTRICAL</b>				<b>17.00</b>		<b>2 539 000</b>				<b>23533</b>	<b>420 000</b>	<b>2 959 000</b>
	<b>17 INSTRUMENTATION.</b>				<b>18.00</b>		<b>1 407 000</b>				<b>8300</b>	<b>153 000</b>	<b>1 560 000</b>
	<b>TOTAL AREA # 1</b>						<b>84 629 000</b>				<b>527672</b>	<b>9 020 000</b>	<b>93 653 000</b>



ESTIMATE WORKSHEET

CLINCH RIVER - ALTERNATE CASE

M.T.O. BY ENGINEERING PRICED BY V. MESEC DATE AUG. 85 SHEET      OF     

JOB NO.: 6440-11 CLIENT: DOE/PNL TYPE OF ESTIMATE ROM. CHECKED BY KCM

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS	
					MATL	M/H	LAB\$		M/HR\$	DOLLARS	M/HR\$	DOLLARS		
ACCNT	Summary AREA (5) # 2													
DIV 2	SITE WORK													
3	CONCRETE		15890	CY			1531	3011000			73636	1132000	4143000	
4	MASONARY						1650	0			0	0	0	
5	METALS		1290	TN			1844	3144000			65395	1260000	4660000	
6	WOOD & PLASTICS						1650	0			0	0	0	
7	THERMAL MOIST. PROTECTION						1650	0			0	0	0	
8	DOORS & WINDOWS						1650	0			0	0	0	
9	FINISHES						1632	117000			608	98000	215000	
10	SPECIALTIES						1761	0			0	0	0	
11	EQUIPMENT						1874	2155000			5725	107000	2262000	
12	FURNISHINGS						1650	0			0	0	0	
13	SPECIAL CONSTRUCTION.						1874	0			0	0	0	
14	CONVEYING. SYSTEMS						1874	0			0	0	0	
15	MECHANICAL SYSTEMS						1874	2373000			121006	2286000	4659000	
16	ELECTRICAL						1785	1126000			7237	136000	1256000	
17	INSTRUMENTATION.						1838	0			0	0	0	
	TOTAL AREA 2								12231000			280113	4961000	17197000

ESTIMATE WORKSHEET

CLINCH RIVER ALTERNATE CASE

M.T.O. BY ENGINEERING PRICED BY V. NIBSEC DATE Apr 85 SHEET      OF       
 JOB NO.: 6440-11 CLIENT: DOE/PNL TYPE OF ESTIMATE ROM CHECKED BY LUE LRS

UNIT/AREA MRS FACILITY  
 DESCRIPTION RSH. BLDG.  
 CAPACITY  
 ACCNT

QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS	
		MATL	M/H	LAB \$		M/HRS	DOLLARS	M/HRS	DOLLARS		
		<u>Summary Area # 3</u>									
					<u>17.4</u>	<u>93313000</u>			<u>1580593</u>	<u>27364000</u>	<u>170677000</u>
		<u>85%</u>						<u>878914</u>	<u>4829000</u>	<u>4829000</u>	
					<u>17.31</u>	<u>93313000</u>			<u>1859427</u>	<u>92193000</u>	<u>125506000</u>
										<u>1770000</u>	<u>1770000</u>
									<u>33963000</u>	<u>127276000</u>	
		<u>26.5%</u>								<u>33728000</u>	
										<u>161004000</u>	

ESTIMATE WORKSHEET

CLINCH RIVER - ALTERNATE CASE

M.T.O. BY <u>ENGINEERING</u>		PRICED BY <u>V. MESEK</u>		DATE <u>AUG. 85</u>		SHEET <u>    </u> OF <u>    </u>						
JOB NO.: <u>6440-11</u>		CLIENT <u>DOE/PNL</u>		TYPE OF ESTIMATE <u>ROM.</u>		CHECKED BY <u>als</u>						
UNIT/AREA <u>MRS FACILITY</u>		QUAN-TITY	UNIT	COST OR M/HR PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS	
DESCRIPTION <u>R&amp;H BLDG</u>				MATL	M/H	LAB \$	M/HR	DOLLARS	M/HR	DOLLARS		
CAPACITY												
ACCNT	<u>SUMMARY AREA (S)</u>											
	<u># 3</u>											
<u>DIR 2</u>	<u>SITE WORK</u>											
<u>3</u>	<u>CONCRETE</u>	<u>96941</u>	<u>CY</u>	<u>-</u>	<u>15<sup>39</sup></u>	<u>1962000</u>				<u>546443</u>	<u>8462000</u>	<u>29004000</u>
<u>4</u>	<u>MASONRY</u>			<u>-</u>	<u>16<sup>50</sup></u>	<u>0</u>				<u>0</u>	<u>0</u>	<u>0</u>
<u>5</u>	<u>METALS</u>	<u>165</u>	<u>TN</u>	<u>✓</u>	<u>18<sup>00</sup></u>	<u>766000</u>				<u>23262</u>	<u>409000</u>	<u>1195000</u>
<u>6</u>	<u>WOOD &amp; PLASTICS</u>			<u>-</u>	<u>16<sup>50</sup></u>	<u>1000</u>				<u>346</u>	<u>6000</u>	<u>7000</u>
<u>7</u>	<u>THERMAL MOIST. PROTECTION</u>			<u>-</u>	<u>16<sup>50</sup></u>	<u>707600</u>				<u>14121</u>	<u>233000</u>	<u>946000</u>
<u>8</u>	<u>DOORS &amp; WINDOWS</u>			<u>-</u>	<u>16<sup>50</sup></u>	<u>4331000</u>				<u>8707</u>	<u>144000</u>	<u>4475000</u>
<u>9</u>	<u>FINISHES</u>			<u>-</u>	<u>16<sup>32</sup></u>	<u>765000</u>				<u>58490</u>	<u>955000</u>	<u>1970000</u>
<u>10</u>	<u>SPECIALTIES</u>			<u>-</u>	<u>17<sup>01</sup></u>	<u>10000</u>				<u>35</u>	<u>1000</u>	<u>11000</u>
<u>11</u>	<u>EQUIPMENT</u>			<u>✓</u>	<u>18<sup>00</sup></u>	<u>19519000</u>				<u>54484</u>	<u>1021000</u>	<u>20540000</u>
<u>12</u>	<u>FURNISHINGS</u>			<u>-</u>	<u>16<sup>50</sup></u>	<u>0</u>				<u>0</u>	<u>0</u>	<u>0</u>
<u>13</u>	<u>SPECIAL CONSTRUCTION</u>			<u>-</u>	<u>18<sup>00</sup></u>	<u>3430000</u>				<u>7690</u>	<u>144000</u>	<u>3514000</u>
<u>14</u>	<u>CONVEYING SYSTEMS</u>			<u>-</u>	<u>18<sup>00</sup></u>	<u>837000</u>				<u>9415</u>	<u>176000</u>	<u>1013000</u>
<u>15</u>	<u>MECHANICAL SYSTEMS</u>			<u>-</u>	<u>18<sup>00</sup></u>	<u>26706000</u>				<u>582957</u>	<u>10925000</u>	<u>37631000</u>
<u>16</u>	<u>ELECTRICAL</u>			<u>-</u>	<u>17<sup>00</sup></u>	<u>5704000</u>				<u>194520</u>	<u>3472000</u>	<u>9176000</u>
<u>17</u>	<u>INSTRUMENTATION</u>	<u>1</u>	<u>LOT</u>	<u>-</u>	<u>18<sup>00</sup></u>	<u>10150000</u>				<u>74812</u>	<u>1375000</u>	<u>11525000</u>
	<u>TOTAL</u>					<u>93313000</u>				<u>158053</u>	<u>2734000</u>	<u>120677000</u>

PARSONS

ESTIMATE WORKSHEET

YING H RIVER - ALTERNATE CASE

M.T.O. BY ENGINEERING PRICED BY V. M. BEK DATE Aug. 85 SHEET      OF       
 JOB NO.: 6440-11 CLIENT: DOE/PNL TYPE OF ESTIMATE ROM CHECKED BY R. S. TILK

UNIT/AREA	DESCRIPTION	CAPACITY	ACCNT	QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS
						MATL	M/H	LAB \$	M/HR\$	DOLLARS	M/HR\$	DOLLARS			
	<u>SUMMARY AREA # 4</u>														
	<u>SUMMARY BY DIVISIONS</u>														
	<u>LABOR PRODUCTIVITY (BASE HOURS)</u> <u>85%</u> <u>17.12</u>														
	<u>5/TOTAL</u>														
	<u>3 SHIFT DIFFERENTIAL (*9365000 / 2 * 11%) =</u>														
	<u>3/TOTAL</u>														
	<u>CONTRACTORS OMD/P&amp;FIT</u> <u>26.5%</u>														
	<u>TOTAL COST AREA # 4 w/O MD CONTINGENCY</u>														

ESTIMATE WORKSHEET

CINCINNATI RIVER - ALTERNATE CASE

M.T.O. BY **ENGINEERING** PRICED BY **V. MESEK** DATE **AUG. 85** SHEET  OF

JOB NO.: **6440-11** CLIENT **DOE/PNL** TYPE OF ESTIMATE **ROM.** CHECKED BY **Tom King**

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS	
					MATL	M/H	LAB \$			M/HR	DOLLARS	M/HR	DOLLARS		
ACCNT	<b>Summary Area (5)</b>														
DIV 2	<b>SITE WORK</b>														
3	CONCRETE		22860	CY			15.37	3204000				171627	2638000		5982000
4	MASONRY						16.50	13000				1301	21000		34000
5	METALS		1553	TN			18.00	2764000				41840	772000		3036000
6	WOOD & PLASTICS						16.50	2000				397	7000		9000
7	THERMAL MOIST. PROTECTION						16.50	1161000				26144	431000		1592000
8	DOORS & WINDOWS						16.50	243000				2143	35000		278000
9	FINISHES						16.50	293000				19125	372000		605000
10	SPECIALTIES						17.00	161000				1616	28000		189000
11	EQUIPMENT						18.00	972000				6119	115000		1087000
12	FURNISHINGS						16.50	239000				528	5000		244000
13	SPECIAL CONSTRUCTION						18.00	856000				9550	179000		1035000
14	CONVEYING SYSTEMS						18.00	657000				2695	51000		708000
15	MECHANICAL SYSTEMS						18.00	3197000				119990	2219000		5416000
16	ELECTRICAL						17.00	1826000				61993	1107000		2933000
17	INSTRUMENTATION						18.00	INCLUDED IN AREA 3							
	<b>TOTAL AREA #4</b>														
								15267000				465460	7960000		23427000



PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER ALTERNATE CASE

M.T.O. BY		PRICED BY		DATE		SHEET		OF				
JOB NO.: 6440-11		CLIENT: DOE/PNL		TYPE OF ESTIMATE		CHECKED BY		Rom				
UNIT/AREA		QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS	
DESCRIPTION				MATL	M/H	LAB \$	MATERIAL EXPENSE	M/HR	DOLLARS	M/HR	DOLLARS	
CAPACITY												
ACCNT												
SUMMARY AREA * 6												
SUMMARY BY DIVISIONS					16.72	27 012 000			389 333	6 411 000	33 423 000	
LABOR PRODUCTIVITY		85%							68 706	1 128 000	1 128 000	
5/TOTAL						27 012 000			458 039	7 539 000	34 551 000	
CONTRACTORS OH-PROFIT											9 156 000	
TOTAL COST AREA 5 W/OUT CONTINGENCY											43 707 000	

PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER ALTERNATE CASE

M.T.O. BY ENGINEERING PRICED BY V. MIESEL DATE AUG. 85 SHEET      OF       
 JOB NO.: 6440-11 CLIENT DOE/PNL TYPE OF ESTIMATE ROM. CHECKED BY Rm

UNIT/AREA		QUAN- TITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE			SUBCONTRACT		LABOR		TOTAL DOLLARS	
DESCRIPTION	CAPACITY			MATL	M/H	LAB \$				M/HR	DOLLARS	M/HR	DOLLARS		
ACCNT	Summary AREA (5) AREA #5														
DIV 2	SITE WORK														
3	CONCRETE														
4	MASONRY														
5	METALS														
6	WOOD & PLASTICS														
7	THERMAL MOIST. PROTECTION														
8	DOORS & WINDOWS														
9	FINISHES														
10	SPECIALTIES														
11	EQUIPMENT														
12	FURNISHINGS														
13	SPECIAL CONSTRUCTION														
14	CONVEYING. SYSTEMS														
15	MECHANICAL SYSTEMS														
16	ELECTRICAL														
17	INSTRUMENTATION														
TOTAL								27012000				389333	6411000	33423000	

**PARSONS**  
ESTIMATE WORKSHEET

CLINCH RIVER - ALTERNATE

M.T.O. BY		PRICED BY	DATE			SHEET		OF									
JOB NO.: 6410-11		CLIENT: DOE/PNL	TYPE OF ESTIMATE: POM			CHECKED BY: [Signature]											
UNIT/AREA	DESCRIPTION	CAPACITY	ACCNT	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS		
						MATL	M/H	LAB\$	M/HR\$	DOLLARS	M/HR\$	DOLLARS					
	SUMMARY	CHTRU FACILITY															
	TOTAL DIRECT COST								713000			9086	150000				893000
	LABOR PRODUCTIVITY			85%								1603	26000				26000
									713000			10689	176000				919000
																	244000
	TOTAL - CHTRU FAC. W/O CONTINGENCY																1163000

PARSONS

ESTIMATE WORKSHEET

CLICK RIVER - ALTERNATE

M.T.O. BY		PRICED BY		DATE		SHEET		OF			
JOB NO.: G1410-11		CLIENT: DOE/PNL		TYPE OF ESTIMATE: ROM		CHECKED BY: Rem					
UNIT/AREA: MRS FACILITY		QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION: AREAL #5				MATL	M/H	LAB \$	M/HRS	DOLLARS	M/HRS	DOLLARS	
ACCNT											
	SUMMARY										
	SUPPORT FACILITIES:										
	TOTAL DIRECT COST				16.50	21,584,000			525,507	5,338,000	26,922,000
	LABOR PRODUCTIVITY	85%							57,089	942,000	942,000
	S/TOTAL					21,584,000			580,596	6,280,000	27,864,000
	CONTRACTORS OH-PROFIT										738,400
	TOTAL SUPPORT FACILITIES w/o CONTINGENCY										35,248,000

**PARSONS**  
ESTIMATE WORKSHEET

CLINCH RIVER - ALUMINATE

M.T.O. BY		PRICED BY		DATE		SHEET		OF						
JOB NO.:		CLIENT:		TYPE OF ESTIMATE		CHECKED BY								
UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS		
					MATL	M/H	LAB \$	M/HRS	DOLLARS	M/HRS	DOLLARS			
ACCNT	SUMMARY													
	UTILITIES: -													
	TOTAL DIRECT COST													
						18.75			1,699,000			14,338.1	813,000	2,512,000
			85%									7,655	1,441,000	1,441,000
									1,699,000			5,103.6	957,000	2,656,000
														704,000
														3,360,000
	TOTAL COST "UTILITIES" w/o Contingency													



CLINCH RIVER  
AREA # 9  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RWF		DATE AUG. '85				SHEET 1 OF			
JOB NO.: 6440-11		CLIENT: DOE / PNL		TYPE OF ESTIMATE ROM				CHECKED BY [Signature]			
UNIT/AREA MRS FACILITY		QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION SITE LOCATION				MATL	M/H	LAB \$	M/HR\$	DOLLARS	M/HR\$	DOLLARS	
CAPACITY											
ACCNT DIV. 2	SITEWORK AREA # 5										
2010	SUBSURFACE										
2100	CLEARING										
2102	CLEARING AND GRUBBING	185	AC	1007	44		186300			41140	
2110	DEMOLITION - CONC. FDN. ETC SUBSTA = 250cy CONC.	1	LOT	LS	LS		15000			1500	
2100	SUB TOTAL						201300			5940	

CLINCH RIVER  
AREA #5  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. '85 SHEET 2 OF 2  
JOB NO.: G440-11 CLIENT: DDE/PNL TYPE OF ESTIMATE ROM CHECKED BY [Signature]

UNIT/AREA DESCRIPTION CAPACITY	QUAN- TITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
			MATL	M/H	LABS		M/HR	DOLLARS	M/HR	DOLLARS	
ACCNT DN. 2	SITEWORK										
2200	EARTHWORK										
10	EMB GRADING - EARTH (MACH)	33	AC	1878.	48-	61 910				1584	
11	EXCAVATION INCL. HAULING - EARTH	181 500	CY	1.09	.01	196 750				1805	
12	EMBANKMENT - COMPACTED FILL	190 575	CY	1.10	.02	209 680				3812	
13	ROCK EXCAV. & HAUL - BLASTING	890 800	CY	4.50	.10	4 008 600				89080	
14	ROCK EXCAV. & HAUL - RIPPABLE	0	CY	1.70	.02						
15	ROCK EMBANKMENT - COMP - HAUL	1383 675	CY	1.00	.008	1 383 680				11069	
16	CRUSHING & SCREENING & HAULING	3 845 000	CY	2.00	.016	7 690 000				61520	
17	DIKE (EARTH FILL) POND	0	CY	1.10	.02						
18	EARTH FILL AT EXISTING TUNNEL & DIKES	370	CY	1.10	.02	410				7	
19A	EXCAVATION AT PONDS	33 40	CY	1.09	.01	3640				33	
19B	IMPORT	2 153 250	CY	1.00	.01	2 153 250				21533	
2200	SUB TOTAL										
						15 707 930				190 443	

CLINCH RIVER  
AREA #5  
ALTERNATE CASE

PARSONS

ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RUF			DATE AUG. '86			SHEET 3 OF				
JOB NO.: GWD-11		CLIENT: DOE/PNL			TYPE OF ESTIMATE ROM			CHECKED BY AS				
UNIT/AREA MRS FACILITY		QUAN- TITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION SITE LOCATION				MATL	M/H	LAB \$		M/HR	DOLLARS	M/HR	DOLLARS	
CAPACITY												
ACCNT DIV 2	SITWORK											
2220	TRENCHING - Incl. DITCHES											
21	EXCAV. AND HAUL - EARTH	40200	CY	1.90	.08		76380			3216		
22	EXCAV. AND HAUL - ROCK TRENCHES	8750	CY	6.00	.15		52500			1313		
22.1	1 FT PREP FOR FOUNDATIONS	0	CY	6.00	.15							
22.2	2 " " " "	0	CY	6.00	.15							
22.5	VARIOUS " " ELEC. POWER LINES	0	CY	6.00	.15							
22.6	GFT " " PIPE, DODINS, ETC	38931	CY	6.00	.15		233590			5840		
SUB TOTAL							362970			10369		

CLINCH RIVER  
AREA AS  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RWF		DATE AUG. '85		SHEET 4 OF						
JOB NO.: G410-11		CLIENT: VDOT/PNL		TYPE OF ESTIMATE ROM		CHECKED BY [Signature]						
UNIT/AREA MRS FACILITY		QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS	
DESCRIPTION SITE LOCATION				MATL	M/H	LAB \$	M/HR\$	DOLLARS	M/HR\$	DOLLARS		
CAPACITY												
ACCNT												
DIV. 2	SITEWORK											
2223	BACKFILL	22600	Cy	3.48	.07		78650			1582		
24	GRAVEL BEDDING	12260	Cy	13.51	.09		165630			1103		
25	SHORING - EARTH TRENCH WALLS	68640	SF	0.60	1.06		41180			4118		
26	SAND (PONDS)	0	Cy	17.40	.05							
SUB TOTAL						285860				6803		
2220	TOTAL TRENCHING & BACKFILL					647930				17172		

CLINCH RIVER  
AREA #5  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RUF			DATE AUG. '85			SHEET 5 OF				
JOB NO.: C440-11		CLIENT: DOE/PIL			TYPE OF ESTIMATE ROM			CHECKED BY RS				
UNIT/AREA	MKS FACILITY	QUAN- TITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION	SITE LOCATION			MATL	M/H	LABS		M/HR	DOLLARS	M/HR	DOLLARS	
CAPACITY												
ACCNT DIV. 2	SITWORK											
2500	SITE DRAINAGE SYSTEM											
2501	CONC. HEADWALL - REINF	25	CY	72.00	3.5		1800			88		
02	CONC. RETAINING WALL	0	CY	72.00	3.0							
03	CATCH BASIN	70	CY	99.50	4.0		6970			280		
04	FRAMES AND GRATES	49	EA	224.50	4.0		10980			196		
05	CLEAN OUTS	0	EA	80.00	2.5							
06	CONC. DITCHES 4" THK	3320	SY	7.20	.19		23900			631		
07	RIPRAP 12" THK	96	SY	10.00	.83		960			32		
08	DITCH CHECK CONC.	0	CY	62.40	4.0							
2509	MAN PROOF BARRIER - REINF. CONC.	2	CY	77.20	3.5		150			7		
2509.1	TACK WELDED REINF. BAR SCREEN	210	SP	1.80	.05		380			11		
2509.2	CONC. FLUME - REINF.	25	CY	169.00	19.5		4230			483		
2611	MANHOLES - PRECAST CONC.											
2511.1	9'-0" DEEP - 4' DIA.	16	EA	690.	27		11040			432		
2511.2	10'-0" " - 4' DIA.	0	EA	750.	30							
2511.3	6'-0" " - 4' DIA.	17	EA	600.	25		10200			425		
	SUB TOTAL						70610			2585		



CLINCH RIVER  
AREA #5  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RUF		DATE AUG. '85		SHEET 7 OF					
JOB NO.: G410-11		CLIENT: ODE/PNL		TYPE OF ESTIMATE ROM		CHECKED BY					
UNIT/AREA	MRS FACILITY	QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION	SITE LOCATION			MATL	M/H	LAB \$	M/HR\$	DOLLARS	M/HR\$	DOLLARS	
CAPACITY											
ACCNT DIV. 2	SITENWORK										
1512	CORRUGATED METAL PIPE										
2512 15	15" DIA	240	LF	8.00	.14		1920			34	
.18	18"	255		9.30	.15		2370			38	
.21	21"	150		13.20	.18		1980			27	
.24	24"	55		15.00	.18		820			10	
.30	30"	85		18.50	.24		1570			20	
.36	36"	200		29.40	.47		5880			94	
.42	42"	80		37.10	.56		2970			45	
.48	48"	480		41.80	.56		20060			269	
.60	60"	0		65.00	.75						
.72	72" PERFORATED	0		32.00	.50						
SUB TOTAL							37580			337	

CLINCH RIVER  
AREA #5  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. '85 SHEET 8 OF

JOB NO.: 6440-11 CLIENT: DOE/PNL TYPE OF ESTIMATE ROM CHECKED BY

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACCNT DIV. 2	SITEWORK												
	DRAINAGE PIPE (CONT)												
2523	CMP END SECTIONS												
2523.15	15" DIA.		10	EA	48.00	1.6		480			16		
.18	18"	}	12	EA	83.33	1.7		1000			20		
.21	21"		8	EA	68.75	2.0		540			16		
.24	24"		2	EA	103.00	2.2		210			4		
.30	30"		3	EA	127.00	2.3		380			7		
.36	36"		3	EA	184.00	2.8		550			8		
.42	42"		2	EA	215.00	3.5		430			7		
.48	48"		0	EA	248.00	4.7							
.60	60" ↓		0	EA	300.00	5.0							
2524	PVC PERFORATED PIPE												
2524.6	6" DIA		50	LF	1.20	0.06		60			3		
.8	8" ↓		0	LF	2.00	0.07							
	SUB TOTAL							3350			81		
2500	TOTAL DRAINAGE SYSTEM							156380			4254		

CLINCH RIVER  
AREA #15  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RUF		DATE AUG. '85		SHEET 9 OF							
JOB NO.: G1110-11		CLIENT: DOE/PNL		TYPE OF ESTIMATE ROM		CHECKED BY RS							
UNIT/AREA		QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION				MATL	M/H	LAB\$	M/HR\$	DOLLARS	M/HR\$	DOLLARS			
CAPACITY													
ACCNT													
DIV. 2	SITWORK												
2550	SITE UTILITIES												
2551	WATER SYSTEM												
2551.4	4" PVC PIPE	0	LF	3.50	.33								
.6	6" }	1225	LF	5.50	.5		6710				613		
.8	8" }	9395	LF	9.00	.55		84560				5167		
.10	10" }	5860	LF	12.50	.6		76180				3516		
.12	12" }	850	LF	25.00	.7		21250				595		
2551.99	OF FITTINGS (25% OF PVC)	1	LOT				47180				2473		
2552.6	6" CAST IRON PIPE	140	LF	10.00	.8		1400				112		
.8	8" DUCTILE IRON CEMENT LINED	1630	LF	15.00	.9		24450				1467		
2555.6	6" GATE VALVES	46	EA.	100.	10.		8280				460		
.8	8"	30	EA.	200.	12		9000				360		
.10	10"	29	EA.	700.	15		20300				435		
.12	12"	3	EA.	1000.	20		3000				60		
2556	VALVE BOXES	91	EA.	15.	5.0		6830				455		
2557	POST INDICATOR	16	EA.	190.	6.0		3040				96		
2558	CONC. THRUST BLOCKS	21	CY	50.	0.5		1110				11		
2559	FIRE HYDRANTS	37	EA.	500.	20.		18500				740		
2550	SUB TOTAL						331820				16560		







CLINCH RIVER  
 AREA #5  
 ALTERNATE CASE

PARSONS  
 ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RUF			DATE AUG. '85				SHEET 13 OF			
JOB NO.: GWD-11		CLIENT: DGE PNL			TYPE OF ESTIMATE ROM				CHECKED BY AF			
UNIT/AREA MRS FACILITY		QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION SITE LOCATION				MATL	M/H	LAB\$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
CAPACITY												
ACCNT												
2565	WATER STORAGE SYSTEM											
	WATER STORAGE TANK	1		EA	175K	} TO UTILITIES						
	TANK FOUNDATION	1		EA	10K							
	TANK HEATER	1		EA	40K							
	INTERCONNECTING PIPE	ALLOW										
	SUB TOTAL											



CLINCH RIVER  
 AREA #5  
 ALTERNATE CASE

PARSONS  
 ESTIMATE WORKSHEET

M.T.O. BY ENGR. PRICED BY RUF DATE AUG '85 SHEET 15 OF

JOB NO: 6410-11 CLIENT: DOE/PAL TYPE OF ESTIMATE ROM CHECKED BY RS

UNIT/AREA	DESCRIPTION	MRS FACILITY	SITE LOCATION	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
						MATL	M/H	LAB\$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	

ACCNT														
-------	--	--	--	--	--	--	--	--	--	--	--	--	--	--

2576 GASOLINE & DIESEL FUEL SYSTEM

FUEL OIL DISTRIBUTION :-  
 1" φ C.S PIPE STD/W  
 1/2" φ  
 1 1/2" φ  
 2" φ  
 3" φ

LF	2.75	.35
LF	2.50	.30
LF	3.00	.35
LF	4.00	.40
LF	5.00	.48
CY	17.00	.05

TO UTILITIES  
 (DIESEL FUEL SYSTEM)

SAND

SUB TOTAL

CUNYH RIVER  
AREA #5  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. '85 SHEET 16 OF  
JOB NO.: G440-11 CLIENT: DOE/PAL TYPE OF ESTIMATE ROM CHECKED BY

UNIT/AREA DESCRIPTION CAPACITY	MRS FACILITY SITE LOCATION	QUAN- TITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
				MATL	M/H	LAB \$		M/HR	DOLLARS	M/HR	DOLLARS	
ACCNT DIV. 2	SITENORK											
2577	MEMBRANE LINER 1.5 MM THK.	1790	sq	.14	.01		2410			172		
2577	TOTAL MEMBRANE LINER						2410			172		









CLINCH RIVER  
AREA #5  
ALTERNATE CASE

PERSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RUF		DATE AUG 1985		SHEET 21 OF							
JOB NO.: 6440-11		CLIENT: DOB/PNE		TYPE OF ESTIMATE ROT 35%		CHECKED BY JLS							
UNIT/AREA MRS FACILITY		QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION SITE LOCATION -				MATL	M/H	LAB\$	M/HR\$	DOLLARS	M/HR\$	DOLLARS			
CAPACITY AREA - KE													
ACCNT	SITE WORK												
DUZ													
2600	ROADS & PAVING												
2612	ASPHALT CONC PAVING												
2612.03	3" THK	15550	SY	4.95	.06		74640				233		
2612.05	5" THK	73830	SY	8.72	.09		590640				6645		
2613	CONCRETE PAVING												
2613.04	4" THK	3770	SY	7.00	.05		26390				189		
.08	8" (	520	SY	15.00	.07		7800				36		
.09	9" )	2720	SY	15.70	.07		41340				190		
2613.12	12" THK	4150	SY	19.00	.09		82590				374		
2614	CRUSHED ROCK (GRAVEL) PAVING												
2614.2	2" THK	315200	SY	.00	.01		252160				3152		
.12	12" (	40840	SY	5.00	.02		204200				817		
.13	13" )	0	SY	5.50	.03								
2614.15	15" THK	0	SY	6.50	.03								
2615.07	9" GRAVEL BASE	16760	SY	3.00	.02		12360				335		
2615.12	12" THK GRAVEL BASE	0	SY	4.05	.02								
	13" GRAVEL BASE	88160	SY	5.50	.03		484880				2645		
2616	SUB BASE - COMPACTED GRAVEL												
2616.06	6" THK	0	SY	2.50	.01								
	12" THK	42880	SY	9.25	.02		394500				858		
2617	SUB GRADE PREP												
2617.06	6" (SEE 2201)	44030	SY	.36	.01		15850				440		
2617.12	12" ( " )	138160	SY	.63	.01		87040				1382		
	SUB TOTAL												
							2325120				17996		

CLINCH RIVER  
AREA #5  
ALBUQUERQUE CASE#

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR. PRICED BY RUF DATE AUG 1985 SHEET 12 OF 12  
JOB NO.: 6440-11 CLIENT: DOB/PNL TYPE OF ESTIMATE ROM 35% CHECKED BY [Signature]

UNIT/AREA	DESCRIPTION SITE LOCATION - CAPACITY AREA -	QUAN- TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
				MATL	M/H	LAB \$		M/HRS	DOLLARS	M/HRS	DOLLARS	
ACCNT DUV 2	SITE WORK											
	ROADS & PAVING (CONT)											
2618	CONC CURBS	3530	LF	5.40	.21		19 060			741		
2619	CONC CURB & GUTTER	6175	LF	6.25	.42		38 590			2594		
2620	CONC STAIRS	2	CY	12.95	16.4		260			33		
2622	PAVEMENT STRIPING	17620	LF	.06	.01		1060			176		
2623	PAVEMENT MARKINGS	237	SQ	9.45	.72		2240			171		
2626	SIGNS	38	EA	45.00	.79		1820			28		
2628	PRECAST CONG BUMPERS	-										
2628.4	6 FT	0	EA	12.00	.33							
.8	8 FT	125	EA	24.00	.41		3000			51		
2628.12	12 FT	48	EA	36.00	.50		1730			24		
	SUB TOTAL						67 760			5818		
2600	TOTAL ROADS & PAVING						2 393 180			21814		



CLINCH RIVER  
AREA #5  
ALTERNATE CASE

PARSONS

ESTIMATE WORKSHEET

M.T.O. BY <u>ELGR.</u>		PRICED BY <u>RUF</u>		DATE <u>AUG 1985</u>				SHEET <u>24</u> OF <u>    </u>				
JOB NO.: <u>6440-11</u>		CLIENT: <u>DOG/PNL</u>		TYPE OF ESTIMATE <u>RFM 35%</u>				CHECKED BY <u>    </u>				
UNIT/AREA <u>MRS FACILITY</u>		QUAN- TITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION-SITE LOCATION- CAPACITY AREA -				MATL	M/H	LAB \$		M/HR	DOLLARS	M/HR	DOLLARS	
ACCNT DIN 2	<u>SITE WORK</u>											
	<u>SITE IMPROVEMENTS (CONT)</u>											
<u>2780</u>	<u>PIPE RAILING 1 1/2" DIA</u>	<u>325</u>	<u>LF</u>	<u>21.03</u>	<u>.13</u>		<u>6830</u>			<u>42</u>		
<u>2790</u>	<u>CONCRETE (MISCELLANEOUS)</u>											
<u>2791</u>	<u>CONC DITCHES 4" (JOB 2507)</u>	<u>0</u>	<u>SY</u>	<u>7.21</u>	<u>.19</u>							
<u>2792</u>	<u>CONC FDNS - REINF</u>	<u>0</u>	<u>CY</u>	<u>62.45</u>	<u>4.0</u>							
	<u>RETAINING WALL AT LOADING DOCK</u>	<u>37</u>	<u>CY</u>	<u>16.1</u>	<u>19.3</u>		<u>(625)</u>			<u>714</u>		
<u>2793</u>	<u>CONC SUPPORT PADS-REINF-FOR CASKS</u>	<u>0</u>	<u>CY</u>		<u>3.0</u>							
	<u>(CAT. 1 STRUCTURE)</u>											
<u>2796</u>	<u>CONC TRENCH (STEAM LINE)</u>	<u>100</u>	<u>CY</u>	<u>16.9</u>	<u>19.3</u>		<u>16900</u>			<u>1930</u>		
<u>2796.1</u>	<u>CHECK PLATE COVER 1/2"</u>	<u>1200</u>	<u>SF</u>	<u>22.0</u>	<u>.48</u>		<u>26400</u>			<u>576</u>		
<u>2798</u>	<u>TRANSPORTABLE METAL CASK FDNS</u>											
<u>2798.1</u>	<u>CONC-REINF CAT. 1 CONC.</u>	<u>0</u>	<u>CY</u>		<u>6.8</u>							
<u>2798.2</u>	<u>1/2" S.S. LINER w/ HOLSOM STUDS</u>	<u>0</u>	<u>SF</u>	<u>11.0</u>	<u>.51</u>							
<u>2795</u>	<u>DRYWELL HOLE DRILLING</u>											
<u>2795.1</u>	<u>EXCAVATION EARTH</u>	<u>0</u>	<u>CY</u>	<u>16.0</u>	<u>1.95</u>							
<u>.2</u>	<u>GRAVEL</u>	<u>0</u>	<u>CY</u>	<u>55.0</u>	<u>INCL</u>							
<u>2795.3</u>	<u>CONC COLLARS-REINF</u>	<u>0</u>	<u>CY</u>	<u>76.0</u>	<u>3.5</u>							
	<u>SUB TOTAL</u>						<u>56380</u>			<u>3262</u>		
<u>2700</u>	<u>SITE IMPROVEMENTS "TOTAL"</u>						<u>286170</u>			<u>5879</u>		

CLINCH RIVER  
AREA #5  
ALTERNATE CASE

RSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RUF		DATE AUG 1985				SHEET 25 OF					
JOB NO.: 6440-11		CLIENT: DOB/PNL		TYPE OF ESTIMATE RMT 35%				CHECKED BY					
UNIT/AREA MRS FACILITY		QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION SITE LOCATION -				MATL	M/H	LAB \$	M/HR\$	DOLLARS	M/HR\$	DOLLARS			
CAPACITY AREA -													
ACCNT													
DIV 2		SITE WORK											
2800	LANDSCAPING	12050	SY	9.45	.28		113	870				8574	
2801	LANDSCAPING & IRRIGATION GRASS SEEDING	162,470	SY	10.00	.36		13	000				162	
2850	RAILROAD WORK												
2851	RAIL - SINGLE	53350	LF	10.75	.42		573	510				22407	
2852	TIES	16010	EA	16.35	.53		201	760				8485	
2853	BALLAST	13900	CY	13.95	.06		193	910				824	
2854	SUB BALLAST	13700	CY	13.19	.05		174	630				666	
2855	SUB GRADE PROP 6"	50035	SY	.36	.01		18	070				500	
2856	SWITCH	31	EA	12110	26.0		375	440				2976	
2857	RAIL CROSSING (RAIL)	0	EA	11300	132.0								
2858	RAIL CROSSING (ROAD) 9'-0" W DTM	1120	LF	30.00	3.0		33	600				3360	
2859	WHEEL STOPS	9	EA	2050	2.0		1	850				18	
2800	SUB TOTAL						179	550				4281	



CLINCH RIVER ALTERNATE CASE

PARSONS ESTIMATE WORKSHEET

M.T.O. BY D.L. SCHLOSSER PRICED BY \_\_\_\_\_ DATE 8/1/85 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO.: 6440-11 CLIENT: DOE/PNL TYPE OF ESTIMATE ROM CHECKED BY Rem/RS

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB\$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACNT													
DN11	YARD EQUIPMENT												
11550	INDUSTRIAL EQUIPT												
11550	LIGHTING TRAILERS		2	EA	9K	8		18000			16		
	TOW STYLE FOUR WHEEL TRAILER UNIT EQUIPPED A GAS DRIVEN PORTABLE ELECTRIC GENERATOR UNIT, AND FOUR ADJUSTABLE STAND STYLE FLOODLIGHT UNITS. ELECTRIC POWER PACK CAPABLE OF 5000 WATT OUTPUT FOR 120/240 VOLTS, 60 HZ POWER. COMPLETE WITH BATTERY AND SOLID STATE IDLE CONTROLS,												
	LAMPS TO BE 300 WATT REFLECTOR INCANDESCENT EXPLOSIVE PROOF.												
	MTG. HWDR. & PRT							2700					
	S/TOTAL		2	EA				20700			16		
	USE							21000					

**PARSONS**  
ESTIMATE WORKSHEET

**CLINCH RIVER ALTERNATE**

M.T.O. BY J.J. PRICED BY J.J. DATE AUG-15 SHEET 1 OF 2

JOB NO.: 6440-11 CLIENT: PNL-DOE TYPE OF ESTIMATE ROM CHECKED BY J.J./Rom

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACNT DIV. 16	ELECTR.	AREA-5											
SUMMARY (ALTERN.) CLINCH RIVER													
	DELETE FEEDER TO CASK BLDG							56430				628	
16100	TOTAL ELECTRICAL (CLINCH RIVER BASE CASE)							539000				83005	
	TOTAL							533350				82377	
								CASE 5334000					

M.T.O. BY J.J. PRICED BY J.J. DATE AUG-15 SHEET 2 OF 2

JOB NO.: 6440-11 CLIENT: PPL-DDE TYPE OF ESTIMATE RDM CHECKED BY As

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACCNT DIV-16	ELECTRICAL AREA		5										
16110	UNDERGROUND PWR DISTR. FEED CASK BLDG.												
	500 MCM CABLE		10350	LF				56,310			612		
	500 MCM CONNECT.		8	E	15	2		120			16		
	TRENCHING & DUCT BANK ARE KEPT AS SPARE		-	-	-	-		-			-		
	DELETED UNDER ALTERNATE							<56430>			<628>		
	NOTE: THE REST OF THE ELECTRICAL INSIDE THE BLDG. IS DEDUCTED W/THE BLDG.												

7/11/85

PARSONS  
ESTIMATE WORKSHEET

CLINCH RIVER ALTERNATE CASE

M.T.O. BY CMH/BM PRICED BY BH DATE AUG 85 SHEET 1 OF 4  
 JOB NO.: 6440-11 CLIENT: PWL/DOE TYPE OF ESTIMATE ROM CHECKED BY D/126

ACCNT	UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
						MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
		<u>RSH BUILDING</u>												
		<u>ONSITE CAL OF PLANT</u>												
<u>DY17</u>		<u>INSTRUMENTATION AREA 5</u>												
		<u>SUMMARY</u>												
<u>1712</u>		<u>ANALYZERS</u>		<u>1</u>	<u>LOT</u>				<u>12600</u>			<u>500</u>		
<u>1714</u>		<u>MISCELLANEOUS INSTRUMENTS</u>		<u>1</u>	<u>LOT</u>				<u>6000</u>			<u>1000</u>		
<u>1718</u>		<u>INSTRUMENT INSTALLATION MATERIAL</u>		<u>1</u>	<u>LOT</u>				<u>7000</u>			<u>225</u>		
<u>1719</u>		<u>CALIBRATION</u>		<u>1</u>	<u>LOT</u>							<u>200</u>		
		<u>SUBTOTAL</u>							<u>193000</u>			<u>1925</u>		
		<u>INLAND FREIGHT ALLOWANCE @ 3%</u>		<u>1</u>	<u>LOT</u>				<u>5400</u>					
		<u>TOTAL</u>							<u>199000</u>			<u>1925</u>		



CLINCH RIVER  
AREA #5  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ESTG/ENGRG.		PRICED BY	DATE	SHEET		OF							
JOB NO.: GWD - 11		CLIENT: DOB/PNL	RUF	AUG '85	1	2							
UNIT/AREA		QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS		
DESCRIPTION ON SITE BALANCE OF PLANT				MATL	M/H	LAB\$	M/HR\$	DOLLARS	M/HR\$	DOLLARS			
ACCNT	CAPACITY												
		SUMMARY AREA #5	AREA	VOLUME									
			(SF)	(CF)									
		SUPPORT FACILITIES											
		ADMINISTRATION BUILDING	19100 SF	286500	1505800			32420	525900	2041700			
		FIRE STATION	9000 "	150660	1612800			13027	244900	1887700			
		SECURITY BUILDING	9800 "	122500	1299000			25354	418300	1712300			
		MAIN GATE - BARGE HOUSE	1500 "	27300	153700			4291	70800	224500			
		GATEHOUSE AND INSPECTION STATION ROOF CANOPY	1200 " 10310 "	27800	408000			8765	144600	552600			
		PROTECTED AREA GATE STATION	6470 "	168613	1384500			23980	395700	1780200			
		VEHICLE MAINTENANCE BLDG.	17710 "	456564	1015500			20900	344900	1360400			
		SITE SERVICES BUILDING	75450 "	2347980	8590000			98306	1622000	10212000			
		WAREHOUSE	38750 "	968750	1102000			24432	403100	1505100			

CLINCH RIVER  
AREA #5  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ESTG / ENGLG PRICED BY RUF DATE AUG. '85 SHEET 2 OF 2  
 JOB NO.: 6440-11 CLIENT: JOB / PNL TYPE OF ESTIMATE ROM CHECKED BY JK

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN- TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE	SUBCONTRACT			LABOR			TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HRS	DOLLARS	M/HRS	DOLLARS			
ACCNT	SUMMARY AREA #5		AREA		VOLUME										
			(SF)		(CF)										
	SUPPORT FACILITIES														
	HELIPORT		1	EA.	-		20600			355	5800			26400	
	STAND-BY GENERATOR BLDG.		11250	SF	405000		2523600			29152	481000			3004600	
	WATER TREATMENT FACILITY		1360	"	20400		175300			2063	34000			209300	
	SEWAGE TREATMENT FACILITY		3840	"	57600		338500			7059	116400			454900	
	STEAM GENERATOR BUILDING		9600	"	345600		1394400			32403	551100			1945500	
	TOTAL (2 QBS)						21583700			323507	5338500			26922200	
					USE		21584000				5338000			26922000	

**PARSONS**  
**ESTIMATE WORKSHEET**

M.T.O. BY <b>ENGR.</b>		PRICED BY <b>RUF</b>			DATE <b>AUG. '85</b>			SHEET _____ OF _____				
JOB NO.: <b>GUWO - 11</b>		CLIENT: <b>DOB / PNL</b>			TYPE OF ESTIMATE <b>RM</b>			CHECKED BY _____				
UNIT/AREA <b>MRS FACILITY</b>		QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION				MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
CAPACITY <b>AREA #5</b>												
ACCNT	<b>SUPPORT FACILITIES</b>											
	<b>SEWAGE TREATMENT FACILITY (REF. CA ESTIMATE S.G.G.SI)</b>											
	<b>BUILDING INCL. ELECTRICAL &amp; INSTR.</b>	<b>3840</b>	<b>SF</b>				<b>191350</b>			<b>4954</b>		
	<b>SANITARY SEWAGE TREATMENT</b>	<b>1</b>	<b>LOT</b>				<b>139140</b>			<b>2105</b>		
	<b>TOTAL</b>						<b>330490</b>			<b>7059</b>		
	<b>ESCAL. (191350 x 0.042)</b>						<b>8040</b>			<b>-</b>		
	<b>TOTAL DIRECT COST (2986)</b>						<b>338530</b>			<b>7059</b>		
							<b>USE 338500</b>					

PARSONS

ESTIMATE WORKSHEET

CLICK RIVER - ALTERNATE CASE

M.T.O. BY <u>ENG.</u>		PRICED BY <u>RUF</u>			DATE <u>Aug. '85</u>			SHEET <u>    </u> OF <u>    </u>				
JOB NO.: <u>GLWD - 11</u>		CLIENT: <u>ODE/PNL</u>			TYPE OF ESTIMATE <u>ROM</u>			CHECKED BY				
UNIT/AREA <u>MRS FACILITY</u>		QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION				MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
CAPACITY												
ACCNT												
<u>SUPPORT FACILITIES - AREA #5</u>												
<u>SEWAGE TREATMENT FACILITY</u>												
<u>SANITARY SEWAGE TREATMENT PLANT</u>												
<u>SEWAGE TREATMENT PLANT</u>		<u>1</u>	<u>LOT</u>				<u>9500</u>			<u>500</u>		
<u>LIFT PUMP &amp; SPARS INCL. WTR.</u>		<u>1</u>	<u>LOT</u>				<u>1500</u>			<u>100</u>		
<u>6" Ø PVC PIPE</u>		<u>1190</u>	<u>LF</u>	<u>9.</u>	<u>.4</u>		<u>10710</u>			<u>476</u>		
<u>8" Ø " "</u>		<u>1840</u>	<u>"</u>	<u>16.</u>	<u>.5</u>		<u>29440</u>			<u>920</u>		
<u>4" Ø PVC PERP</u>		<u>120</u>	<u>LF</u>	<u>2.50</u>	<u>.3</u>		<u>300</u>			<u>36</u>		
<u>4" Ø C.S. STD/W</u>		<u>100</u>	<u>LF</u>	<u>9.</u>	<u>.6</u>		<u>900</u>			<u>60</u>		
<u>SEPTIC TANK</u>												
<u>750 GAL. CAP.</u>		<u>1</u>	<u>EA</u>	<u>900.</u>	<u>.8</u>		<u>900</u>			<u>8</u>		
<u>ROOFING PAPER 20" FELT</u>		<u>360</u>	<u>SP</u>	<u>.10</u>	<u>.01</u>		<u>40</u>			<u>4</u>		
<u>SAND</u>		<u>20</u>	<u>CY</u>	<u>17.25</u>	<u>.05</u>		<u>350</u>			<u>1</u>		
<u>TOTAL</u>							<u>139140</u>			<u>2105</u>		



PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER - ALTERNATE CASE

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. '85 SHEET \_\_\_\_\_ OF \_\_\_\_\_

JOB NO.: G4UD-11 CLIENT: OHS / PNL TYPE OF ESTIMATE ROM CHECKED BY \_\_\_\_\_

UNIT/AREA MRS FACILITY  
 DESCRIPTION  
 CAPACITY  
 ACCNT

UNIT/AREA	DESCRIPTION	CAPACITY	QUANTITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR	DOLLARS	M/HR	DOLLARS	
	UTILITIES AREA # 5												
1560	PROCESS SOWER SYSTEM												
2500.01	FIBERGLASS PIPE 6"Ø		3940	LF	15.	.4		59100				1576	
.02	" " 8"Ø		885	"	23.	.6		20360				531	
.03	CLEAN-OUTS		2	EA.	250.	14		500				28	
.05	SPECIAL EQUIPMENT		1	LOT				26900				89	
.04	{ PACKAGE TREATMENT PLANT EQUIP. INTERCOM. PIPING & INSTAL.		1	LOT				64500				2000	
			30%					18750				600	
TOTAL DIRECT COST								188110			48211		
								USE				188000	

PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER- ALTERNATE CASE

M.T.O. BY ENGR. PRICED BY RUP DATE AUG. 85 SHEET      OF       
 JOB NO.: 6440-11 CLIENT: DOE/PAL TYPE OF ESTIMATE ROM CHECKED BY     

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HRS	DOLLARS	M/HRS	DOLLARS	
ACCNT	UTILITIES	AREA #5											
2565	WATER STORAGE												
	WATER STORAGE TANK		1	EA.				175,000			500		
	INSULATION FOR TANK		1	LT				15,000			200		
	FOUNDATION		1	EA.				10,000			700		
	TANK HEATER		1	EA.				40,000			200		
	INTERCONN. PIPING & INSTAL.		30%					67,500			420		
	ELECTRICAL		1	LOT				10,000			100		
	Area PIPING w/ CIVIL Div. 2 (ACCT. 2562)												
2566	TOTAL							317,500			2,120		

PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER - ALTERNATE CASE

M.T.O. BY ENGR. PRICED BY RUP DATE AUG. 85 SHEET \_\_\_\_\_ OF \_\_\_\_\_

JOB NO.: G440-11 CLIENT: DDB/PAL TYPE OF ESTIMATE ROM CHECKED BY \_\_\_\_\_

UNIT/AREA MRS FACILITY  
 DESCRIPTION  
 CAPACITY  
 QUANTITY UNIT COST OR M/HR PER UNIT MATERIAL EXPENSE SUBCONTRACT LABOR TOTAL DOLLARS  
 MATL M/H LAB \$ M/HR DOLLARS M/HR DOLLARS

ACCNT	DESCRIPTION	QUANTITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
				MATL	M/H	LAB \$		M/HR	DOLLARS	M/HR	DOLLARS	
	UTILITIES AREA #5											
2566	OILY SEWER SYSTEM											
	OILY SEWER COLLECTION TANK											
	452	1	EA.				6,500			36		
	453	1	↓				3,000			16		
	454	1	↓				2,400			16		
	455	1	↓				2,000			16		
	4" Ø OILY SEWER C.S. STD/W	1050	LF	11-	.65		15,950			943		
	10" Ø PVC OUTFALL LINES	1000	LF	13-	.60		13,000			600		
2566	TOTAL						42,850			1627		

**PARSONS**  
**ESTIMATE WORKSHEET**

CLINCH RIVER - ALTERNATE CASE

M.T.O. BY ENGR.		PRICED BY RUP		DATE AUG. 85		SHEET ____ OF ____						
JOB NO.: GUND-11		CLIENT: DDP / PAL		TYPE OF ESTIMATE KOM		CHECKED BY						
UNIT/AREA MRS FACILITY		QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS	
DESCRIPTION				MATL	M/H	LAB \$	M/HR\$	DOLLARS	M/HR\$	DOLLARS		
CAPACITY												
ACCNT												
	UTILITIES AREA #5											
2576	DIESEL FUEL SYSTEM											
	FOUNDATIONS		1	LOT				128400			1644	
	PIPING :-											
	P.O. TO BUDGS											
		1" Ø	1200	LF	2.75	.35		3300			420	
		1/2"	320		2.50	.30		800			96	
		1/2"	790		2.80	.35		2370			277	
		2"	640		4.	.40		2560			256	
		3"	2540		5.	.48		12700			1219	
	TANKS		2	EA.				123300			3065	
	(501 & 502 - 33453 #/ea.											
	MATEL = \$2.97/#											
	LAB (MAB & ERECT) = 30 HR/T											
	PUMPS		1	LOT				7940			124	
	FILTER		1	LOT				1180			15	
257C	TOTAL							282520			7116	
							US\$	282520				

PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER - ALTERNATE CASE

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. '85 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO.: G440-11 CLIENT: DOE/PAL TYPE OF ESTIMATE RDM CHECKED BY \_\_\_\_\_

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACCNT	UTILITIES	AREA #5											
2580	NATURAL GAS SYSTEM												
2580	NATURAL GAS FACILITY (VOL. V BOOK VII - 5.6.7. 55.48)		1	LOT				5720			2760		
	PIPING	CTD/W											
2580.01	1" φ		0	LF									
.05	1 1/2" φ		530	}	3.92	.14		1590			212		
.02	2" φ		695		4.	.14		2540			254		
.03	3" φ		1155		6.	.148		5780			554		
.04	4" φ		2520		11.	.165		27120			1638		
.06	6" φ		1050		25.	.80		26250			840		
.04	CS PIPES	CTD/W	8000	LF	11.	.65		88000			5200		
2580	TOTAL							209090			11458		

PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER ALTERNATE CASE

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. 85 SHEET 1 OF 11  
 JOB NO.: GHD-11 CLIENT: DOE TYPE OF ESTIMATE ROM CHECKED BY [Signature]

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACCNT	UTILITIES												
2582	COOLING TOWER												
	FOUNDATIONS		304	CY				24000				1600	
	COOLING TOWERS		1	SET				190000				3142	
	MECHANICAL - (PUMPS, TANKS, ETC.)		23	EA.				193900				1636	
	PIPING - OUTSIDE BUILDING		1	LOT				133500				3650	
	PIPING - INSIDE BUILDING		1760	LF				56300				4750	
	ELECTRICAL - CHEM BLDG.		1	LOT				930				58	
	INSTRUMENTATION		1	LOT				20000				200	
	COOLING TOWER CHEM. BLDG		400	SF				40000				1200	
2582	TOTAL - DIRECT COST							658630				16236	



PARSONS

ESTIMATE WORKSHEET

Δ 10/14

CLINCH RIVER - ALTERNATE

M.T.O. BY <b>ENGINEERING</b>		PRICED BY <b>V. MESEK</b>		DATE <b>AUG. 85</b>		SHEET <b>    </b> OF <b>    </b>					
JOB NO.: <b>6440-11</b>		CLIENT <b>DOE/PNL</b>		TYPE OF ESTIMATE <b>ROM.</b>		CHECKED BY <b>Rcm</b>					
UNIT/AREA	DESCRIPTION	QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS
CAPACITY				MATL	M/H	LAB \$	M/HRS	DOLLARS	M/HRS	DOLLARS	
ACCNT	<b>Summary AREA(S) AREA #6</b>										
<b>DIV 2</b>	<b>SITE WORK</b>					<b>16.08</b>	<b>57</b>	<b>522,000</b>			<b>924,813</b>
<b>3</b>	<b>CONCRETE</b>					<b>15.31</b>					
<b>4</b>	<b>MASONARY</b>					<b>16.60</b>					
<b>5</b>	<b>METALS</b>					<b>18.74</b>					
<b>6</b>	<b>WOOD &amp; PLASTICS</b>					<b>16.50</b>					
<b>7</b>	<b>THERMAL MOIST. PROTECTION</b>					<b>16.50</b>					
<b>8</b>	<b>DOORS &amp; WINDOWS</b>					<b>16.30</b>					
<b>9</b>	<b>FINISHES</b>					<b>16.30</b>					
<b>10</b>	<b>SPECIALTIES</b>					<b>17.41</b>					
<b>11</b>	<b>EQUIPMENT</b>					<b>18.74</b>		<b>1,229,000</b>		<b>2,010</b>	<b>38,000</b>
<b>12</b>	<b>FURNISHINGS</b>					<b>16.50</b>					
<b>13</b>	<b>SPECIAL CONSTRUCTION</b>					<b>18.74</b>		<b>24,000</b>		<b>768</b>	<b>14,000</b>
<b>14</b>	<b>CONVEYING. SYSTEMS</b>					<b>18.74</b>					
<b>15</b>	<b>MECHANICAL SYSTEMS</b>					<b>18.74</b>					
<b>16</b>	<b>ELECTRICAL</b>					<b>17.85</b>		<b>3,125,000</b>		<b>112,663</b>	<b>2,011,000</b>
<b>17</b>	<b>INSTRUMENTATION</b>					<b>18.38</b>					
	<b>S/TOTAL</b>					<b>16.28</b>		<b>6,800,000</b>		<b>104,024</b>	<b>1,693,000</b>
											<b>8,493,000</b>



CLINCH RIVER  
AREA #6  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RUF		DATE AUG. '85		SHEET ___ OF ___												
JOB NO.: 6440-11		CLIENT: DOE / PNL		TYPE OF ESTIMATE ROM		CHECKED BY [Signature]												
UNIT/AREA	DESCRIPTION	MRS	FACILITY	SITE	LOCATION	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS	
								MATL	M/H	LAB\$	M/HR\$	DOLLARS	M/HR\$	DOLLARS				
ACCNT DIV. 2	SITWORK		AREA #6															
2010	SUB SURFACE																	
2100	CLEARING																	
2102	CLEARING AND GRUBBING		280	AC	1007	24				281	960					6120		
2110	DEMOLITION		1	LOT	LS	LS												
2100	SUB TOTAL									281	960					6120		

CLINCH RIVER  
AREA #6  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. '85 SHEET \_\_\_ OF \_\_\_  
JOB NO.: G400-11 CLIENT: DME/PAL TYPE OF ESTIMATE ROM CHECKED BY JS

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN- TITY	UNIT	COST OR M/HR			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					PER UNIT				M/HR	DOLLARS	M/HR	DOLLARS	
ACCNT					MATL	M/H	LAB \$						
D.V. 2	SITWORK												
2200	EARTHWORK												
10	FINE GRADING - EARTH (MACH)		0	AC	1878	48							
11	EXCAVATION INCL. HAULING - EARTH		2083000	CY	1.09	.01		2270470			20830		
12	EMBANKMENT - COMPACTED FILL		2187150	CY	1.10	.02		2405870			45743		
13	ROCK EXCAV. & HAUL - BLASTING		1063600	CY	4.50	.10		4726200			106360		
14	ROCK EXCAV. & HAUL - RIPPABLE		0	CY	1.70	.02							
15	ROCK EMBANKMENT - COMP - HAUL		1542220	CY	1.00	.08		1542220			12338		
16	CRUSHING & SCREENING & HAULING		4654970	CY	2.00	.016		9309200			74479		
17	DIKE (EARTH FILL) POND		14200	CY	1.10	.02		15620			284		
18	EARTH FILL AT EXISTING TUNNEL & PIPES		0	CY	1.10	.02							
19A	EXCAVATION AT PONDS		0	CY	1.09	.01							
19B	IMPORT		4,491,430	CY	1.00	.01		4491430			44914		
2200	SUB TOTAL							24821750			302948		



CLINCH RIVER  
AREA #C  
ALTERNATE CASE

**PARSONS**  
**ESTIMATE WORKSHEET**

M.T.O. BY ENGR.		PRICED BY RWF			DATE AUG. '85		SHEET _____ OF _____					
JOB NO.: G440-11		CLIENT: VAB/PNL			TYPE OF ESTIMATE ROM		CHECKED BY [Signature]					
UNIT/AREA MRS FACILITY		QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS	
DESCRIPTION SITE LOCATION				MATL	M/H	LAB \$	M/HR\$	DOLLARS	M/HR\$	DOLLARS		
CAPACITY												
ACNT												
DIV. 2	SITWORK											
2223	BACKFILL		630	CY	3.48	.07						
24	GRAVEL BEDDING		3900	CY	13.51	.09						
25	SHORING - EARTH TRENCH WALLS		0	SF	0.60	.06						
26	SAND (PONDS)		1000	CY	17.40	.05						
SUB TOTAL							12280			446		
2220	TOTAL - TRENCHING & BACKFILLING							258560			7113	

CLINTON RIVER  
AREA #6  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR. PRICED BY RUE DATE AUG. '85 SHEET      OF       
 JOB NO.: 6440-11 CLIENT: DOE/PIL TYPE OF ESTIMATE ROM CHECKED BY AS

UNIT/AREA DESCRIPTION CAPACITY	MRS FACILITY SITE LOCATION	QUAN- TITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
				MATL	M/H	LAB \$		M/HR	DOLLARS	M/HR	DOLLARS	
ACCNT DIV. 2	SITENWORK											
2500	SITE DRAINAGE SYSTEM											
2501	CONC. HEADWALL - REINF	14	CY	72.00	3.5		1010			49		
02	CONC. RETAINING WALL	0	CY	72.00	3.0							
03	CATCH BASIN, POND SPILLWAYS	18	CY	99.50	4.0		1790			72		
04	FRAMES AND GRATES	1	EA	221.00	4.0		220			4		
05	CLEAN OUTS	0	EA	80.00	2.5							
06	CONC. DITCHES 12" THK	2860	SY	7.20	.19		20590			543		
07	RIPRAP 12" THK	190	SY	10.00	.33		1900			63		
08	DITCH CHECK CONC.	0	CY	62.40	4.0							
2509	MAN PROOF BARRIER - REINF. CONC.	1	CY	77.20	3.5		80			4		
2509.1	TACK NERPED REINF. BAR SCREEN	160	SF	1.80	.05		290			8		
	CONC. FLUMES - REINF.	0	CY	169.90	19.3							
.2	FRAME & COVER	1	EA	250	5.		250			5		
.3	FILTER CLOTH - FOR POND	12500	SF	0.14	.01		1750			125		
2611	MANHOLES - PRECAST CONC.											
2611.1	9'-0" DEEP - 4' DIA.	0	EA	690.	27							
.2	8'-0" " " - 4' DIA.	0	EA	750.	30							
.3	6'-0" " " - 4' DIA.	0	EA	600.	25							
	SUB TOTAL						27880			873		

CLINCH RIVER  
AREA #6  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR.		PRICED BY RWF			DATE AUG. '85			SHEET OF				
JOB NO.: GWD-11		CLIENT: DOE/PNL			TYPE OF ESTIMATE ROM			CHECKED BY KS				
UNIT/AREA MRS FACILITY		QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION SITE LOCATION				MATL	M/H	LAB\$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
CAPACITY												
ACCNT DIV. 2	SITEWORK											
2520	DRAINAGE PIPES											
2521	REINF. CONC. PIPE W/ GASKETS											
2521.00	6" DIA.	0	LF	3.50	.19							
.15	15"	0	}	6.90	.16							
.18	18"	60		9.70	.25		580		15			
.21	21"	0		11.20	.26							
.24	24"	0		13.30	.31							
.30	30"	130		19.40	.37		2520		48			
.36	36"	0		21.90	.45							
.48	48" ↓	0		28.20	1.0							
SUB TOTAL							3100		63			

CLINCH RIVER  
 ARED. #C  
 ALTERNATE CASE

PARSONS  
 ESTIMATE WORKSHEET

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. '85 SHEET OF  
 JOB NO.: G410-11 CLIENT: ODE/PNL TYPE OF ESTIMATE ROM CHECKED BY

UNIT/AREA DESCRIPTION CAPACITY	MRS FACILITY SITE LOCATION	QUAN- TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
				MATL	M/H	LAB \$		M/HRS	DOLLARS	M/HRS	DOLLARS	
ACCNT DIV. 2	SITWORK											
1912	CORRUGATED METAL PIPE											
2582 15	15" DIA	0	LF	8.00	.14							
.18	18"	0		9.30	.15							
.21	21"	0		13.30	.18							
.24	24"	0		15.10	.18							
.30	30"	50		18.30	.24		930			12		
.36	36"	1120		29.40	.47		32930			526		
.42	42"	80		37.10	.56		2970			45		
.48	48"	830		41.80	.76		34690			465		
.60	60"	540		65.00	.75		35100			405		
.38	36" PERFORATED	0		32.00	.50							
.54	54" Ø	840	LF	60	.70		50400			588		
SUB TOTAL							157070			2041		

CUNY RIVER  
AREA #6  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGR. PRICED BY RWF DATE AUG. '85 SHEET      OF       
 JOB NO.: 6440-11 CLIENT: DOE/PNL TYPE OF ESTIMATE ROM CHECKED BY RS

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACCNT													
DIV. 2	SITEWORK												
	DRAINAGE PIPES (CONT)												
2523	CMP END SECTIONS												
2523.15	15" DIA.		0	EA	42.00	1.6							
.18	18" (		0	EA	58.00	1.7							
.21	21" )		0	EA	68.00	2.0							
.24	24" )		0	EA	103.00	2.2							
.30	30" )		2	EA	151.00	2.3		250			5		
.36	36" )		0	EA	184.00	2.6							
.42	42" )		0	EA	215.00	3.5							
.48	48" )		2	EA	248.00	4.7		500			9		
.60	60" )		0	EA	300.00	5.0							
2524	PVC PERFORATED PIPE												
2524.6	6" DIA		0	LF	1.40	0.06							
.8	8" ↓		0	LF	2.00	0.07							
	SUB TOTAL												
2500	TOTAL "DRAINAGE SYSTEM												
								750			14		
								88	750		2991		

ALTERNATE  
CLINCH RIVER CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY ENGINEERING PRICED BY V. Massac / P. A. DATE Aug 85 SHEET      OF       
 JOB NO.: 6440-1 CLIENT: DOE/POL TYPE OF ESTIMATE ROAD CHECKED BY JH

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACCNT													
Div 2	Site Work	#6											
2600	Roads & Paving												
2614	CRUSHED ROCK (GRAVEL) PAVING												
.2	2" THICK		100800	SY	.80	.01		80640			1008		
.12	12" THICK		209200	SY	5.00	.02		1046000			4184		
2616	SUBBASE COMPACTED GRAVEL												
.22	22" THICK		200000	SY	9.20	.02		1840000			4000		
2617	SUBGRADE PREP												
.06	6" (SEE 2241)		10600	SY	.36	.01		3820			106		
.12	12" (SEE 2241)		20900	SY	.63	.01		131700			2090		
2600	S/TOTAL							3102160			11388		

CLINCH RIVER  
AREA #6  
ALTERNATE CASE

PARSONS  
ESTIMATE WORKSHEET

M.T.O. BY <u>EMGR.</u>		PRICED BY <u>RMF</u>		DATE <u>AUG 1985</u>		SHEET <u>    </u> OF <u>    </u>							
JOB NO.: <u>6440-11</u>		CLIENT: <u>DOG/PNL</u>		TYPE OF ESTIMATE <u>Roll 35%</u>		CHECKED BY <u>AS</u>							
UNIT/AREA <u>MRS FACILITY</u>		QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION <u>SITE LOCATION -</u>				MATL	M/H	LAB \$	M/HR\$	DOLLARS	M/HR\$	DOLLARS			
CAPACITY <u>AREA -</u>													
ACCNT													
<u>DWZ</u>	<u>SITE WORK</u>												
<u>2700</u>	<u>SITE IMPROVEMENTS</u>												
<u>2710</u>	<u>FENCES - CHAIN LINK 4/5 STR D/W</u>												
<u>2710.0</u>	<u>8'-0" HIGH</u>	<u>25800</u>	<u>EA</u>	<u>26</u>	<u>.12</u>		<u>142,880</u>				<u>3036</u>		
	<u>6'-0" HIGH</u>		<u>EA</u>	<u>7.75</u>	<u>.12</u>								
<u>2711</u>	<u>FENCE - BARB WIRE 4'-6" HIGH</u>												
		<u>6200</u>	<u>EA</u>	<u>560</u>	<u>.07</u>		<u>24,120</u>				<u>434</u>		
<u>2714</u>	<u>GATES - MOTORIZED 8'-0" HIGH</u>												
<u>2714.24</u>	<u>24'0</u>		<u>EA</u>	<u>2100</u>	<u>36.0</u>								
<u>2714.30</u>	<u>30'0</u>	<u>1</u>	<u>EA</u>	<u>2300</u>	<u>36.0</u>		<u>2900</u>				<u>36</u>		
	<u>40'-0"</u>		<u>EA</u>										
<u>2715</u>	<u>GATES - DBL SWING 8'-0" HIGH</u>												
<u>2715.24</u>	<u>24'0</u>	<u>1</u>	<u>PR</u>	<u>800</u>	<u>24.0</u>		<u>800</u>				<u>24</u>		
<u>2715.30</u>	<u>30'-0</u>		<u>PR</u>	<u>1400</u>	<u>24.0</u>								
	<u>40'-0</u>		<u>PR</u>	<u>2250</u>	<u>24.0</u>								
<u>2716</u>	<u>GATES - SINGLE SWING 8'-0" HIGH</u>												
<u>2716.12</u>	<u>12'0</u>		<u>EA</u>	<u>400</u>	<u>20.0</u>								
	<u>20'-0</u>		<u>EA</u>	<u>500</u>	<u>20.0</u>								
<u>2717</u>	<u>GATES - PERSONNEL 8'-0" HIGH</u>												
<u>2717.1</u>	<u>3'-6"</u>		<u>EA</u>	<u>500</u>	<u>4.0</u>								
<u>2700</u>	<u>SUB TOTAL</u>												
							<u>240,700</u>				<u>3530</u>		



CLINCH RIVER  
 ALTERNATE CASE ESTIMATE WORKSHEET

PARSONS

M.T.O. BY <i>ENG</i>		PRICED BY <i>ENF</i>		DATE <i>AUG 85</i>				SHEET ____ OF ____				
JOB NO.: <i>6440-1</i>		CLIENT: <i>DOE/PAJ</i>		TYPE OF ESTIMATE <i>ROM</i>				CHECKED BY				
UNIT/AREA <i>MRS FACILITY</i>		QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION <i>SITE LOCATION</i>				MATL	M/H	LAB \$		M/HR	DOLLARS	M/HR	DOLLARS	
CAPACITY												
<i>ACCNT</i>												
<i>012 SITE WORK AREA #6</i>												
<i>2785 DRYWELL HOLE (FILL)</i>												
<i>.1</i>	<i>HOLE DRILLING</i>	<i>26" φ</i>	<i>51700</i>	<i>LF</i>	<i>8</i>	<i>.3</i>	<i>413600</i>			<i>15510</i>		
<i>.2</i>		<i>42" φ</i>	<i>10100</i>	<i>LF</i>	<i>15</i>	<i>.5</i>	<i>152600</i>			<i>5000</i>		
<i>.3</i>		<i>48" φ</i>	<i>1300</i>	<i>LF</i>	<i>21</i>	<i>.7</i>	<i>2700</i>			<i>910</i>		
<i>2785 DRYWELL HOLE (ROCK)</i>												
<i>.1</i>		<i>26" φ</i>	<i>34400</i>	<i>LF</i>	<i>16</i>	<i>.5</i>	<i>53000</i>			<i>17200</i>		
<i>.2</i>		<i>42" φ</i>	<i>6700</i>	<i>LF</i>	<i>31</i>	<i>1.1</i>	<i>207700</i>			<i>7370</i>		
<i>.3</i>		<i>48" φ</i>	<i>800</i>	<i>LF</i>	<i>42</i>	<i>1.8</i>	<i>33600</i>			<i>1120</i>		
<i>.5</i>	<i>DISPOSAL - EARTH/ROCK</i>		<i>18700</i>	<i>CY</i>	<i>2.69</i>	<i>.05</i>	<i>50300</i>			<i>935</i>		
<i>.6 DRYWELL HOLE LINER</i>												
<i>.6</i>		<i>16" φ</i>	<i>84100</i>	<i>LF</i>	<i>164</i>	<i>4.5</i>	<i>13792000</i>			<i>37656</i>		
<i>.7</i>		<i>30" φ</i>	<i>16400</i>	<i>LF</i>	<i>435</i>	<i>6.5</i>	<i>7134000</i>			<i>106600</i>		
<i>.8</i>		<i>36" φ</i>	<i>3100</i>	<i>LF</i>	<i>62</i>	<i>7.5</i>	<i>1312000</i>			<i>15700</i>		
<i>.9</i>	<i>DRYWELL LINER GRANT</i>		<i>11040</i>	<i>CY</i>	<i>43</i>	<i>.9</i>	<i>607800</i>			<i>9936</i>		
<i>.10</i>	<i>EXCAV &amp; DISPOSAL FOR CONC. COLLAR</i>		<i>11000</i>	<i>CY</i>	<i>450</i>	<i>.1</i>	<i>49500</i>			<i>1100</i>		
<i>.11</i>	<i>REINF CONC FOR COLLAR</i>		<i>10.000</i>	<i>CY</i>	<i>188</i>	<i>3.0</i>	<i>1880000</i>			<i>30000</i>		
<i>3/TOTAL (FOR 5000 HOLES)</i>							<i>26215100</i>			<i>58931</i>		
<i>1) INCR BASE TO 5442 HOLES (5000 MTU)</i>			<i>9%</i>	<i>116E</i>			<i>2359900</i>					
<i>3/TOTAL DRYWELLS</i>							<i>28575000</i>			<i>58731</i>		

CLINCH RIVER

AREA #6

ALTERNATE CASE

PARSONS

ESTIMATE WORKSHEET

M.T.O. BY <u>EMGL</u>		PRICED BY <u>RUF</u>		DATE <u>AUG 1985</u>		SHEET <u>    </u> OF <u>    </u>								
JOB NO.: <u>6440-11</u>		CLIENT: <u>DOA/PHL</u>		TYPE OF ESTIMATE <u>ROT 35%</u>		CHECKED BY <u>    </u>								
UNIT/AREA <u>MRS FACILITY</u>		QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS	
DESCRIPTION <u>SITE LOCATION -</u>				MATL	M/H	LAB \$	M/HRS	DOLLARS	M/HRS	DOLLARS				
CAPACITY <u>AREA -</u>														
ACCNT <u>DIU 2</u>														
<u>SITE WORK</u>														
<u>2800</u>	<u>LANDSCAPING</u>		<u>SY</u>	<u>9.45</u>	<u>.28</u>									
<u>2801</u>	<u>LANDSCAPING &amp; IRRIGATION</u>		<u>SY</u>	<u>10.00</u>	<u>.36</u>									
	<u>GRASS SEEDING</u>	<u>161600</u>	<u>SY</u>	<u>0.06</u>	<u>.001</u>		<u>12 930</u>				<u>162</u>			
<u>2850</u>	<u>RAILROAD WORK</u>													
<u>2851</u>	<u>RAIL - SINGLE</u>		<u>LF</u>	<u>10.75</u>	<u>.42</u>									
<u>2852</u>	<u>TIES</u>		<u>EA</u>	<u>4.35</u>	<u>.53</u>									
<u>2853</u>	<u>BALLAST</u>		<u>CY</u>	<u>13.95</u>	<u>.06</u>									
<u>2854</u>	<u>SUB BALLAST</u>		<u>CY</u>	<u>13.19</u>	<u>.05</u>									
<u>2855</u>	<u>SUB GRADE PREP 6"</u>		<u>SY</u>	<u>.36</u>	<u>.01</u>									
<u>2856</u>	<u>SWITCH</u>		<u>EA</u>	<u>12110</u>	<u>96.0</u>									
<u>2857</u>	<u>RAIL CROSSING (RAIL)</u>		<u>EA</u>	<u>1300</u>	<u>132.0</u>									
<u>2858</u>	<u>RAIL CROSSING (ROAD) 9'-0" WDM</u>		<u>LF</u>	<u>30.00</u>	<u>3.0</u>									
<u>2859</u>	<u>WHEEL STOPS</u>		<u>EA</u>	<u>205</u>	<u>3.0</u>									
	<u>SUB TOTAL</u>						<u>12 930</u>				<u>162</u>			

CLINCH RIVER

A/C CASE

PARSONS

ESTIMATE WORKSHEET

M.T.O. BY ENGINEERING PRICED BY V. Messer/PA DATE Aug 85 SHEET      OF     

JOB NO.: 6440-1 CLIENT: DOE/PNL TYPE OF ESTIMATE Room CHECKED BY     

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	

ACCNT	D1K3	CONCRETE AREA #6											
-------	------	------------------	--	--	--	--	--	--	--	--	--	--	--

SHEET 6-17  
NOT USED

PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER - ALTERNATE CASE

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. '85 SHEET \_\_\_\_\_ OF \_\_\_\_\_

JOB NO.: 6440-11 CLIENT: DOE/PNL TYPE OF ESTIMATE ROM CHECKED BY Rem

UNIT/AREA MRS FACILITY  
 DESCRIPTION  
 CAPACITY

QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
		MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	

ACCNT Div. II EQUIPMENT AREA & C

SUMMARY.

11866 CRANE & HANDLING EQUIPMENT FOR NEWELL LINER

7169000

1450

11866 CONTAMINATION BARRIER

110400

560

7339400

2010

USE

7339000

**PARSONS**  
**ESTIMATE WORKSHEET**

M.T.O. BY WESTINGHOUSE      PRICED BY WESTINGHOUSE      DATE 7-19-85      SHEET 1 OF 2  
 JOB NO.: 6440-50      CLIENT: DOE/PHL      TYPE OF ESTIMATE ROM      CHECKED BY ZS

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN- TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB\$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACCNT <u>DW 11</u>	<u>EQUIPMENT AREA 6</u>												
	<u>SUMMARY RECAP.</u>												
<u>118000</u>	<u>ALT. STORAGE (DRYWELL)</u>		<u>37</u>	<u>EA</u>				<u>6027600</u>				<u>1450</u>	
	<u>FREIGHT @ 5%</u>							<u>341400</u>					
	<u>TOTAL AREA 6 (ALT)</u>		<u>37</u>	<u>EA</u>				<u>7169000</u>				<u>1450</u>	

PARSONS

ESTIMATE WORKSHEET

M.T.O. BY WESTINGHOUSE PRICED BY WESTINGHOUSE DATE 7-18-89 SHEET 2 OF 2

JOB NO.: 6440-50 CLIENT: DOE/PAL TYPE OF ESTIMATE REM CHECKED BY AS

UNIT/AREA		QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION ALT. STD. (DRYWELL)				MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACCNT DIV. 11	NOTE: THIS AREA IS OUTSIDE THE R & H BLDG.	AREA										
11866	DRYWELL LINER CRANE	6	EA	15	10		60000			40		
11866	DRYWELL SEAL WELDING MACHINE (INCL. PWR SUPPLY ETC.)	6	EA	17.8	40		89000			200		
11866	DRYWELL LINER HANDLING FIXTURE	6	EA	8.6	40		3600			240		
11866	DRYWELL COVER HANDLING VEHICLE	6	EA	15	40		60000			160		
✓ 11866	TRANSFER SHIELD	6	EA	355	50		3195000			450		
✓ 11866	TRANSFER SHIELD TRANSPORT VEHICLE	6	EA	380	40		3420000			360		
PAGE TOTAL		37					6027600			1450		

**PARSONS**  
ESTIMATE WORKSHEET

M.T.O. BY <u>WESTINGHOUSE</u>		PRICED BY <u>WESTINGHOUSE</u>			DATE <u>7-22-85</u>			SHEET <u>1</u> OF <u>1</u>				
JOB NO.: <u>6440-81</u>		CLIENT: <u>DOE/PHL</u>			TYPE OF ESTIMATE <u>ROM</u>			CHECKED BY <u>WJ</u>				
UNIT/AREA <u>MRS FACILITY / AREA 1</u>		QUAN- TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION				MATL	M/H	LAB \$		M/HRS	DOLLARS	M/HRS	DOLLARS	
CAPACITY <u>ALT. DRYWELL</u>												
ACCNT <u>DIV. 11</u>	<u>EQUIPMENT AREA #6</u>			<u>AK</u>								
<u>11866</u>	<u>CONTAMINATION BARRIER</u>	<u>14</u>	<u>EA</u>	<u>1159</u>	<u>40</u>	<u>162300</u>			<u>560</u>			
	<u>FREIGHT @ 5%</u>					<u>8100</u>						
						<u>170400</u>			<u>560</u>			



PARSONS

CLINCH RIVER ALTERNATE ESTIMATE WORKSHEET

M.T.O. BY J.J. PRICED BY J.J. DATE AUG-15 SHEET 2 OF 2

JOB NO.: 6440-11 CLIENT: PNL-DOE TYPE OF ESTIMATE ROM CHECKED BY [Signature]

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB \$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
	ELECTRICAL												
	AREA-6												
	SUMMARY (ALTERN) CLINCH RIVER												
16400	SUBSTATION # SS-05		ADD.					72,260				496	
16500	AREA & STREET LIGHTING		ADD.					376,540				5,035	
16500	SECURITY LIGHTING		ADD.					106,760				1,477	
16550	AREA GROUNDING		ADD.					30,500				703	
16600	CATHODIC PROTECT.		NEW					852,140				5,174	
16604	ALARM ZONE		ADD.					189,110				3,532	
16900	DRY WELL INSTRUM.		NEW					1,959,030				63,520	
16900	DRY WELL MONIT. WIRING		ADD.					40,400				1,000	
	<u>S/TOTAL</u>								<u>3,626,740</u>			<u>126,937</u>	
<del>16900</del>	<del>DELETE INSTRUM. WIRING FOR CASK STORAGE BASE CASE</del>								<del>501,800</del>			<del>14,274</del>	
	<u>TOTAL AREA 6 ALTERNATE</u>								<u>3,124,940</u>			<u>112,663</u>	
								<u>Use 3,125,000</u>					



CLINCH RIVER ALTERNATE ESTIMATE WORKSHEET

M.T.O. BY		PRICED BY		DATE			SHEET			OF		
N.J.		N.J.		AUG-15			3			1		
JOB NO.:		CLIENT:		TYPE OF ESTIMATE			CHECKED BY					
6440-11		PNL-DOE		ROM			[Signature]					
UNIT/AREA		QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS	
DESCRIPTION				MATL	M/H	LAB \$	M/HRS	DOLLARS	M/HRS	DOLLARS	DOLLARS	
CAPACITY												
ACCNT												
(ALTERN) CLINCH RIVER												
STREET LIGHTING												
MRS FACILITY												
ELECTRICAL AREA 6												
16,500												
ADDIT. AREA LIGHTING @ DRYWELL STORAGE												
$(3.5 \times 200) \times (3 \times 200) \div 2 =$		560,000 <input checked="" type="checkbox"/>										
		< 40,000 <input type="checkbox"/>										
$(14 \times 200) \times (3 \times 200) =$		9,480,000 <input checked="" type="checkbox"/>										
SAY =		5,000,000 <input checked="" type="checkbox"/>										
USING BASE STREET & AREA LIGHTING @ BASE ESTIMATE												
$\$ 798,250 \div 10,600,000 \text{ \$/} = .075307$												
$\text{HRS } 10,676 \div 10,600,000 \text{ \$/} = .001007$												
TOTAL COST OF LIGHTING ADDITIONAL AREA												
$5,000,000 \text{ \$/} \times .075307$					376,540				5035			
$5,000,000 \text{ \$/} \times .001007$												
TOTAL					376,540				5035			

ESTIMATE WORKSHEET

CLINCH RIVER ALTERNATE

M.T.O. BY JJ PRICED BY JJ DATE AUG-15 SHEET 4 OF       
 JOB NO.: 6440-11 CLIENT: PNL-DOE TYPE OF ESTIMATE ROM CHECKED BY X

UNIT/AREA	DESCRIPTION	CAPACITY	QUAN-TITY	UNIT	COST OR M/HR\$ PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
					MATL	M/H	LAB\$		M/HR\$	DOLLARS	M/HR\$	DOLLARS	
ACCNT	ELECTRIC	AREA-6											
	<del>16500</del>	SECURITY LIGHT'G											
		$226340 \times 5000000 =$						106760			1477		
		10,600,000											
		$3132 \times 5000000 =$											
		10,600,000											





# CLINCH RIVER ALTERNATE

## PARSONS ESTIMATE WORKSHEET

M.T.O. BY <i>J.J.</i>		PRICED BY <i>J.J.</i>		DATE <i>AUG-15</i>		SHEET <i>8</i> OF <i>10</i>					
JOB NO.: <i>6440-11</i>		CLIENT: <i>PNL-DOE</i>		TYPE OF ESTIMATE <i>ROM</i>		CHECKED BY <i>[Signature]</i>					
UNIT/AREA	(ALTERN) CLINCH RIVER	QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION	CATHODIC PROTECTION			MATL	M/H	LAB \$	MATERIAL EXPENSE	M/HRS	DOLLARS	M/HRS	
CAPACITY	MRS FACILITY										
ACCNT	ELECTRICAL AREA 6										
<i>16600</i>	<i>CATHODIC PROTECTION</i>										
	<i>25 X 200 = 5000 sq. ft.</i>										
	<i>(1.75 + 1.75) X 200 = 700 ft</i>										
	<i>AREA 5000 X 700 =</i>	<i>3,500,000</i>	<i>ft</i>								
	<i>16328 CADWELD X2</i>	<i>32656</i>	<i>E</i>	<i>5</i>	<i>1</i>		<i>163280</i>			<i>32656</i>	
	<i>PIG TAIL #2 GRND</i>	<i>16328</i>	<i>E</i>	<i>10</i>	<i>1</i>		<i>163280</i>			<i>16328</i>	
	<i># 4/0 GRND GRID</i>										
	<i>109 X 200</i>	<i>21800</i>	<i>LF</i>	<i>1.8</i>	<i>.036</i>		<i>39240</i>			<i>785</i>	
	<i>TRENCH 21800 X .5 X 1.5</i>	<i>606</i>	<i>P.Y.</i>	<i>6</i>	<i>.15</i>		<i>3640</i>			<i>91</i>	
	<i>BACK FILL 21800'</i>	<i>606</i>	<i>P.Y.</i>	<i>35</i>	<i>.07</i>		<i>2120</i>			<i>42</i>	
	<i>GRND. WELL</i>	<i>100</i>	<i>E</i>	<i>50</i>	<i>4</i>		<i>5000</i>			<i>400</i>	
	<i>TESTING POINT</i>	<i>100</i>	<i>E</i>	<i>50</i>	<i>2</i>		<i>5000</i>			<i>200</i>	
	<i>CATHODIC PROT. EQUIPM.</i>	<i>1</i>	<i>LS</i>	<i>-</i>	<i>-</i>		<i>210,580</i>			<i>672</i>	
	<i>XFMR ETC--</i>										
	<i>ENGINEERING FEE</i>						<i>260,000</i>			<i>-</i>	
	<i>TOTAL</i>						<i>852,140</i>			<i>51,174</i>	



# CLINCH RIVER ALTERNATE

## PARSONS ESTIMATE WORKSHEET

M.T.O. BY <i>J.J.J.</i>		PRICED BY <i>J.J.J.</i>		DATE <i>AUG-15</i>				SHEET <i>9</i> OF <i>9</i>					
JOB NO.: <i>6440-11</i>		CLIENT: <i>PNL-DOE</i>		TYPE OF ESTIMATE <i>ROM</i>				CHECKED BY <i>RLS</i>					
UNIT/AREA <i>(ALTERN) CLINCH RIVER</i>		QUAN-TITY	UNIT	COST OR M/HRS PER UNIT			MATERIAL EXPENSE		SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION <i>DRYWELL INSTRUMENTATION</i>				MATL	M/H	LAB \$	M/HRS	DOLLARS	M/HRS	DOLLARS			
CAPACITY <i>MRS FACILITY</i>													
ACCNT													
	<i>INSTRUMENT. AREA-6</i>												
	<i>16900 INSTRUM. WIRING @ DRYWELL</i>												
	<i>DRY WELL <math>3256 \div 50 = 66</math></i>												
	<i>TRENCHING <math>\frac{100}{100}</math></i>												
	<i>13.5 x 200 = 2700 x 5'-0" x 5'-0" <math>\div 27</math></i>	<i>2500</i>	<i>C.Y</i>	<i>6</i>	<i>.15</i>		<i>15,000</i>				<i>375</i>		
	<i>CONCR. DUCT 2700 x 5 x 2.5 <math>\div 27</math></i>	<i>1250</i>	<i>C.Y</i>	<i>55</i>	<i>.5</i>		<i>68,750</i>				<i>625</i>		
	<i>BACKFILL 2500-1250</i>	<i>1250</i>	<i>C.Y</i>	<i>3.5</i>	<i>.07</i>		<i>4380</i>				<i>88</i>		
	<i>2" <math>\phi</math> PVC 2700 x 72</i>	<i>194400</i>	<i>LF</i>	<i>0.76</i>	<i>.08</i>		<i>147740</i>				<i>15552</i>		
	<i>FITTING &amp; SUPPORT</i>	<i>35%</i>	<i>-</i>	<i>-</i>	<i>-</i>		<i>36940</i>				<i>3888</i>		
	<i>WIRING 2000 x 6.5 50 PR WH</i>	<i>130,000</i>	<i>LF</i>	<i>9.727</i>	<i>.075</i>		<i>1263600</i>				<i>9750</i>		
	<i>3256 x 100 1 PR SH</i>	<i>325,000</i>	<i>LF</i>	<i>.213</i>	<i>.008</i>		<i>69225</i>				<i>2600</i>		
	<i>WIRING CONN. 3256 x 6</i>	<i>19536</i>	<i>E</i>	<i>1-</i>	<i>.25</i>		<i>19540</i>				<i>4884</i>		
	<i>1" <math>\phi</math> RGS STUB-UPS 3256 x 50</i>	<i>162800</i>	<i>LF</i>	<i>1.25</i>	<i>.1</i>		<i>203500</i>				<i>16280</i>		
	<i>2" <math>\phi</math> RGS 300 x 8</i>	<i>2400</i>	<i>LF</i>	<i>2.54</i>	<i>.18</i>		<i>6100</i>				<i>432</i>		
	<i>FITTING &amp; SUPPORT 50%</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>		<i>104800</i>				<i>8356</i>		
	<i>J. BOXES 3256 <math>\div</math> 50</i>	<i>65</i>	<i>E</i>	<i>250</i>	<i>10</i>		<i>16250</i>				<i>650</i>		
	<i>HANDHOLES</i>	<i>4</i>	<i>E</i>	<i>800</i>	<i>10</i>		<i>3200</i>				<i>40</i>		
	<i>AREA # 6</i>	<i>TOTAL</i>						<i>1,959,030</i>				<i>63,520</i>	

# CLINCH RIVER ALTERNATE

## PARSONS ESTIMATE WORKSHEET

M.T.O. BY <u>N.J.</u>		PRICED BY <u>J.V.</u>		DATE <u>AUG-15</u>				SHEET <u>10</u> OF <u>    </u>				
JOB NO.: <u>6440-11</u>		CLIENT: <u>PNL-DOE</u>		TYPE OF ESTIMATE <u>ROM</u>				CHECKED BY <u>JS</u>				
UNIT/AREA <u>SF. HLW. RTRN-STORAGE AREA</u>		QUAN- TITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
DESCRIPTION <u>MONITORING</u>				MATL	M/H	LAB \$		M/HR	DOLLARS	M/HR	DOLLARS	
CAPACITY <u>MRS FACILITY</u>												
ACCNT												
	<u>ELECTRICAL AREA # 6</u>											
<u>16900</u>	<u>INSTRUM. WIRING FOR MONITORS @ DRY WELL</u>											
	<u>24 x 200 = 4800 L.F</u>											
	<u>TRENCHING 4800x1x4 @ 27</u>	<u>711</u>	<u>CY</u>	<u>6</u>	<u>.15</u>		<u>4270</u>			<u>107</u>		
	<u>CONCR DUCT 4800x1x1 @ 27</u>	<u>178</u>	<u>CY</u>	<u>55</u>	<u>.5</u>		<u>9790</u>			<u>89</u>		
	<u>BACKFILL 711-178</u>	<u>533</u>	<u>CY</u>	<u>3.5</u>	<u>.07</u>		<u>1870</u>			<u>38</u>		
	<u>3" PVC DUCT</u>	<u>4800</u>	<u>LF</u>	<u>1.6</u>	<u>.09</u>		<u>7680</u>			<u>432</u>		
	<u>FIT'G &amp; SUPPORT 25%</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>		<u>1920</u>			<u>108</u>		
	<u>10 PR OF #14</u>	<u>4800</u>	<u>LF</u>	<u>2.99</u>	<u>.031</u>		<u>14350</u>			<u>149</u>		
	<u>STIPULATE EVERY 200' ON CAMERA</u>											
	<u>4800 ÷ 200 = 24 ea</u>											
	<u>1" RGS COND. 24x10</u>	<u>240</u>	<u>LF</u>	<u>1.2</u>	<u>.1</u>		<u>290</u>			<u>24</u>		
	<u>FIT'G &amp; SUPPORT 50%</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>		<u>150</u>			<u>12</u>		
	<u>WIRE CONN. 26x3 =</u>	<u>78</u>	<u>E</u>	<u>1</u>	<u>.25</u>		<u>80</u>			<u>20</u>		
	<u>TESTING ALL</u>									<u>21</u>		
							<u>40,400</u>			<u>1000</u>		

PARSONS

ESTIMATE WORKSHEET

CLINCH RIVER, ALTERNATE CASE

M.T.O. BY ENGR. PRICED BY RUF DATE AUG. '85 SHEET      OF     

JOB NO.: 6440-11 CLIENT: DOE PNL TYPE OF ESTIMATE ROM CHECKED BY     

UNIT/AREA MRS FACILITY  
 DESCRIPTION  
 CAPACITY  
 ACCNT

DESCRIPTION	QUANTITY	UNIT	COST OR M/HR PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS
			MATL	M/H	LAB \$		M/HR	DOLLARS	M/HR	DOLLARS	
TOTAL Summary AREA #7 INCLUDING CONTRACTORS OHD - PROFIT											
AREA #7 By Divisions				10.69		5077000			108925	1811000	6888000
LABOR PRODUCTIVITY									19222	320000	320000
S/TOTAL						5077000			128147	2131000	7208000
CONTRACTORS OHD - PROFIT											1910000
TOTAL AREA #7 w/OUT CONTINGENCY											9118000

ALTERNATE CASE

PARSONS

ESTIMATE WORKSHEET

M.T.O. BY <u>ENGINEERING</u>		PRICED BY <u>V. NIESEC</u>	DATE <u>Aug. 85</u>	SHEET <u>    </u> OF <u>    </u>									
JOB NO.: <u>6440-11</u>		CLIENT <u>DOE/PNL</u>	TYPE OF ESTIMATE <u>ROM.</u>	CHECKED BY <u>    </u>									
UNIT/AREA	DESCRIPTION	QUAN-TITY	UNIT	COST OR M/HR'S PER UNIT			MATERIAL EXPENSE	SUBCONTRACT		LABOR		TOTAL DOLLARS	
CAPACITY				MATL	M/H	LAB \$		M/HR'S	DOLLARS	M/HR'S	DOLLARS		
ACCNT	<u>SUMMARY AREA (S)</u> <u># 7.</u>												
<u>2</u>	<u>SITE WORK</u>					<u>16.00</u>	<u>3,172,000</u>			<u>75359</u>	<u>1,212,000</u>	<u>11,933,000</u>	
<u>3</u>	<u>CONCRETE</u>					<u>15.37</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>4</u>	<u>MASONARY</u>					<u>15.50</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>5</u>	<u>METALS</u>					<u>18.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>6</u>	<u>WOOD &amp; PLASTICS</u>					<u>16.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>7</u>	<u>THERMAL MOIST. PROTECTION</u>					<u>16.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>8</u>	<u>DOORS &amp; WINDOWS</u>					<u>16.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>9</u>	<u>FINISHES</u>					<u>17.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>10</u>	<u>SPECIALTIES</u>					<u>17.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>11</u>	<u>EQUIPMENT</u>					<u>15.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>12</u>	<u>FURNISHINGS</u>					<u>16.50</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>13</u>	<u>SPECIAL CONSTRUCTION.</u>					<u>18.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>14</u>	<u>CONVEYING. SYSTEMS</u>					<u>18.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>15</u>	<u>MECHANICAL SYSTEMS</u>					<u>18.00</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
<u>16</u>	<u>ELECTRICAL</u>					<u>17.00</u>	<u>1,356,000</u>			<u>33566</u>	<u>599,000</u>	<u>1,955,000</u>	
<u>17</u>	<u>INSTRUMENTATION.</u>					<u>18.30</u>	<u>0</u>			<u>0</u>	<u>0</u>	<u>0</u>	
	<u>S/TOTAL</u>						<u>5,528,000</u>			<u>108925</u>	<u>1,811,000</u>	<u>6,668,000</u>	





