COST ESTIMATE

ENR Index 1963. S.

JOB Local Emission Control — PLANT El Paso

JOB NO. EA-22-EP — AUTH. NO.

MADE BY Design Section DATE 5-17-74 — CHECKED BY A.O.Marsh,Jr. DATE 5-17-74

DRAWING NOS. See List Below

GROUP NO	CLASSIFIED MATERIAL	QUANTITIES	ESTD LIFE	ESTD DATE OF COMPL	UNIT PRICES MATERIAL	UNIT PRICES LABOR	ESTIMATED COST MATERIAL	ESTIMATED COST LABOR	TOTAL ESTIMATED COST
					SUMMARY				
C	- MACHINERY AND EQUIPMENT								$306,300
	1. Total Direct Labor & Materials								$306,300
	2. Engineering								
	2.1 Design	@ 8.5% of (1)							26,700
	2.2 Field supervision	@ 1.5% of (1)							5,000
	3. Contractor's Field Distributables	@ 17.5% of (1)							54,000
	4. Total Field & Engineering Costs								$392,000
	5. Contingencies	@ 10% of (4)							39,000
	6. Escalation	@ 15% of (4)							59,000
	7. Contractor's Fee								29,000
	8. Total Estimated Capital Costs								$519,000
	9. Sales Taxes - Bulk Materials & Equipment								17,000
	10. TOTAL ESTIMATED PROJECT COSTS								$536,000

List of Drawings:

E-13530
EP-21151-902-G
EP-21152-902-G
EP-21153-902-G

PLAINTIFF'S EXHIBIT

ASA-1059

COST ESTIMATE

ENR Index 1963. S-1

JOB Local Emission Control PLANT El Paso
JOB NO. EA-22-EP AUTH. NO. DRAWING NOS.
MADE BY Design Section DATE 5-17-74 CHECKED BY A.O.Marsh,Jr. DATE 5-17-74

GROUP NO.	CLASSIFIED MATERIAL	QUANTITIES	EST'D LIFE	EST'D DATE OF COMPL.	UNIT PRICES		ESTIMATED COST		TOTAL ESTIMATED COST
					MATERIAL	LABOR	MATERIAL	LABOR	
				SUMMARY					
C	- MACHINERY AND EQUIPMENT								
C-1	Sinter Machine Ventilation								$ 36,650.
C-2	Cadmium Plant Ventilation								72,450.
C-3	Blast Furnace Elevator Ventilation								167,000.
C-4	Dross Kettle Ventilation								6,200.
C-5	Cadmium Crane Cab Ventilation								8,000.
C-6	Dross Reverb Crane Cab Ventilation								16,000.
	TOTAL DIRECT LABOR & MATERIALS								$306,300.

COST ESTIMATE

ENR Index 1963.

FORM 4A

JOB Local Emission Control PLANT El Paso

JOB NO. EA-22-EP AUTH. NO. DRAWING NOS.

MADE BY Design Section DATE 5-17-74 CHECKED BY A.O.Marsh,Jr. DATE 5-17-74

GROUP NO.	CLASSIFIED MATERIAL	QUANTITIES	EST'D LIFE	EST'D DATE OF COMPL.	UNIT PRICES		ESTIMATED COST		TOTAL EST'D MATL COST
					MATERIAL	LABOR	MATERIAL	LABOR	
	C-1 Sinter Machine Ventilation								
	1. 8" dia. duct	100'	10	0329	@ 8/ft				$ 800.
	2. 12" dia. duct	150'	10	0329	@ 11/ft				1,650.
	3. Hoods, fan supports & floor steel	9T	10	0329	@ 1500/T				13,500.
	4. Fans - 3500 CFM @ 6" S.P. complete w/motors & drives	6	20	0560	1200	250	7200	1500	8,700.
	5. Electrical	60HP	30	0536	@ 200/HP				12,000.
							TOTAL C-1		$36,650
	C-2 Cadmium Plant Ventilation								
	1. 8" dia. duct	50'	10	0329	@ 8/ft				400.
	2. 12" dia. duct	150'	10	0329	@ 11/ft				1,650.
	3. 16" dia. duct	50'	10	0329	@ 14/ft				700.
	4. 20" dia. duct	40'	10	0329	@ 20/ft				800.
	5. Hoods & structural steel	6T			@ 1400/T				8,400.
	6. Baghouse-10,000CFM								
	Structural steel hopper & thimble floor	15T	20	0639	@ 1400/T				21,000.
	Floor grating	200SF	20	0639	@ 6/SF				1,200.
	Galbestos siding	26 Sq	20	0639	@ 200/Sq				5,200.
	Shaker frame 2"dia. Std pipe	150'	20	0639	@ 8/ft				1,200.
	Frame support rollers, cranks, discs, bag hangers	Lot	20	0639			3000	1200	4,200.
	15HP gearmotor chain drive & bearings	1	20	0639			2000	500	2,500.
	Bags 8"dia.x18'-0	130	20	0639	@ 10/bag				1,300.

FORM 25A

JOB Local Emission Control PLANT El Paso

JOB NO. EA-22-EP AUTH. NO. DRAWING NOS.

MADE BY Design Section DATE 5-17-74 CHECKED BY A.O.Marsh, Jr. DATE 5-17-74

GROUP NO.	CLASSIFIED MATERIAL	QUANTITIES	EST'D LIFE	EST'D DATE OF COMPL.	UNIT PRICES MATERIAL	UNIT PRICES LABOR	ESTIMATED COST MATERIAL	ESTIMATED COST LABOR	TOTAL ESTIMATED COST
	C-2 Cadmium Plant Ventilation, continued:								
	7. 10,000 CFM fan w/ motor & drive	1	20	0560			2600	700	$ 3,300.
	8. Screw conveyor	30'	10	0277	@ 120/ft				3,600.
	9. Concrete	30CY	20	0560	@ 200/CY				6,000.
	10. Electrical	55HP	50	0536	@ 200/HP				11,000.
							TOTAL C-2		$72,450.
	C-3 Blast Furnace Elevator Ventilation								
	1. Elevator building								
	Girts, door & support steel	13T	20	0308	@ 1400/T				18,200.
	Galvanized corrugated roofing & siding	50Sq	20	0308	@ 200/Sq				10,000.
	2. 36" dia.x10 ga. duct	5T	10	0329	@ 1500/T				7,500.
	3. 30,000 CFM fan w/ motor & drive	1	20	0560			8500	1000	9,500.
	4. Concrete	30CY	20	0560	@ 200/CY				6,000.
	5. Screw conveyor	110'	10	0277	@ 120/ft				13,200.
	6. Baghouse								
	Structural steel hopper & thimble floor	34T	20	0639	@ 1400/T				47,600.
	Floor grating	525SF	20	0639	@ 6/SF				3,150.
	Galbestos siding	38Sq	20	0639	@ 200/Sq				7,600.
	Shaker frame 2"dia. pipe	450'	20	0639	@ 8/ft				3,600.
	Frame supports, drive cranes, discs, bag hangers & holders	Lot	20	0639			7000	3000	10,000.

FORM ...1A

JOB Local Emission Control — PLANT El Paso

JOB NO. EA-22-EP AUTH. NO. — DRAWING NOS.

MADE BY Design Section DATE 5-17-74 — CHECKED BY A.O.Marsh, Jr. DATE 5-17-74

GROUP NO.	CLASSIFIED MATERIAL	QUANTITY	EST'D LIFE	ESTIMATED DATE OF COMPL.	UNIT PRICES MATERIAL	UNIT PRICES LABOR	ESTIMATED COST MATERIAL	ESTIMATED COST LABOR	TOTAL ESTIMATED COST
	C-3 Blast Furnace Elevator Ventilation, continued:								
	6. Baghouse, cont.								
	10HP gear motors	2	20	0639	@ 1800/ea				$ 3,600
	Bags	432	20	0639	@ 9/bag				3,888
	7. Electrical	110HP	50	0536	@ 200/HP				22,000
	8. Air supply & damper control valve	Lot					762	400	1,162
							TOTAL C-3		$167,000
	C-4 Dross Kettle Ventilation								
	1. Vent hoods & ducts	4T	10	0329	@ 1500/T				6,000
	2. Concrete	1CY	10	0329	@ 200/CY				200
							TOTAL C-4		$ 6,200
	C-5 Cadmium Crane Cab Ventilation								
	1. Air conditioning & filtering unit	1	15	0637			5000	1000	6,000
	2. Cab modifications	1T	15	0637	@ 1400/T				1,400
	3. Electrical	3HP	50	0536	@ 200/HP				600
							TOTAL C-5		$ 8,000
	C-6 Dross Reverb Crane Cab Ventilation								
	1. Air conditioning & filtering unit	2	15	0637			10,000	2000	12,000
	2. Cab modifications	2T	15	0637	@ 1400/T				2,800
	3. Electrical	6HP	50	0536	@ 200/HP				1,200
							TOTAL C-6		$ 16,000

MEN 2102

TITLE	STANDARDS	SHEET	SERIAL NUMBER	STRUCTURE
SPECIAL FOR 2102 PIPING - CLASS 112 - STEEL, IRON AND BRONZE	Enviro-Chem Systems Inc.	2 OF 2	00112	1
		USAGE 01	REFERENCE HJA-2-CEM	CATEGORY OP
			ISSUE DATE 2-10-69	NATURE 2
			SUPERSEDES	SUB-NATURE 3

APPROVALS HR 1-11-75 HJE 1-11-75

PREPARED BY HJA DATE 2-7-69

VALVES:

Gates, flanged (steel)	- VA-83
Gates, flanged	- Vi-139
Gates, screwed (all steel)	- VA-41
Gates, screwed (bronze)	- VA-190
Globes, flanged	- VA-98
Globes, screwed (all iron)	- VA-149
Globes, screwed (bronze)	- VA-202
Checks, screwed (all iron)	- VA-132
Checks, screwed (bronze)	- VA-189
Butterfly	- VA-387 *
~~Butterfly~~	~~- VA-339*~~
Checks, wafer	- VA-254*
Checks, flanged	- VA-89

*Water service only.

BOLTS: Carbon steel machine bolts with hex. heads and hexagon nuts.

GASKETS: Asbestos composition gaskets. Use full face gaskets, punched for ANSI 125# standard, with flat face flanges. Garlock #7021 or equal.

REV. 1-8-75 HR

PG 3/6

MEN 2102

TITLE	STANDARDS	SHEET	SERIAL NUMBER	SYSTEM
SPECIAL FOR 2102 PIPING - CLASS 492 GALVANIZED C.S.	Envirotech Chem Systems Inc.	1 OF 1	00492	0002
		USAGE 01	REFERENCE SR-7-JS	CATEGORY OP
		123	ISSUE DATE 3/27/74	NATURE 2
			SUPERSEDES	SUB-NATURE 2

APPROVALS
ER 4-3-74
JS 4-3-74

PREPARED BY SAR
DATE 3/27/74

RATING: 150 PSIG, 150° F

SERVICE: Potable water, Instrument air

PIPE: 2" and smaller - ASTM A-120 T&C galvanized steel Schedule 40.

FITTINGS: 2" and smaller - 150 lb., screwed, galvanized malleable iron ASTM A-197; 300# malleable iron, brass ground seat unions.

FLANGES: 150 lb.,-ANSI, flat face, screwed ASTM A-181, Grade I or II

VALVES:
Gates, screwed - VA 190
Globes, screwed - VA 202
Checks, screwed - VA-189

BOLTS & NUTS: Carbon steel machine bolts with square heads and hexagon nuts.

GASKETS: All compressed asbestos, 1/16" thick, full face Garlock #7021 or equal.

Rev. 2-26-75 HR