

Monsanto Enviro-Chem

RECEIVED MAR 24 1978

F. R. R. 2

Monsanto Enviro-Chem Systems Inc.
Corporate Square Office Park
Box 14547
St. Louis, Missouri 63178
Phone: (314) 694-1000

PLAINTIFF'S EXHIBIT

ASA-1144

April 19, 1978

ASARCO, Inc.
P.O. Box 1111
El Paso, Texas 79912

Attention: Mr. R. H. Hunt
Reference: ASARCO Order No. 17H0711
Subject: EA26EP, NY3954, PLT 623
Mec Letter No. 2102-222
Variation Order Transmittal
ASARCO File No. 8.19.5

Dear Rod:

Please find enclosed two copies of variation order No. 20 covering the installation of the gas cleaning plant material and equipment.

Please note that, although this work will be done under the provisions of the present and plant contract, we have established Project Number 2156 to accumulate and bill the costs of this work. This will simplify accounting, and will assure complete separation of costs between the acid and gas cleaning plants work.

Since this work has been previously authorized, it is proceeding. However, in order to complete our records, please sign one copy of the attached variation order and return to me by May 1, 1978

Sincerely,

J. L. Serra-Jones
Senior Project Manager

JLS-J:jm
Enclosure

CC: ASARCO

Salt Lake
W.T. Sweat
M.L. Leary
W.R. Mahoney

New York
W.A. Bennis

El Paso
W.R. Kelly
C.L. Glaser

MEC
J.L. Serra-Jones
P.F. Taylor
PA File 2102-613

PHH R.P. 4 25 78

ASARCO ELP 0008012

Monsanto Enviro-Chem

CONTRACT VARIATION
ORDER

VARIATION ORDER NO:

- 20 -

DATED April 17, 1978

TO: CONTRACT BETWEEN MONSANTO ENVIRO-CHEM SYSTEMS INC.

AND ASARCO, Inc.

MONSANTO ENVIRO-CHEM SYSTEMS INC. CONTRACT NO. 2102

DATED

PROJECT	ASARCO Gas Cleaning Plant
LOCATION	El Paso, Texas

The following described variations are authorized and accepted in accordance with Article 12E of General Conditions of the contract and the contract is hereby amended accordingly.

This variation order is issued to cover the cost of procurement and installation, based on ASARCO's detailed design drawings, of equipment and materials related to ASARCO's Gas Cleaning Plant and other work as directed by ASARCO. A portion of the required equipment and materials may be provided by ASARCO.

The following General Conditions apply to this CVO.

A. Costs

1. ASARCO's estimate was used to establish this variation order is for reference only. Reimbursement will be on the basis of actual cost as defined in Exhibit "B" of the acid plant contract, except that home office purchasing personnel salaries (Cost Center 735.50) will not be reimbursed.
2. The cost of this work will be kept separate from the cost of the acid plant.
3. ASARCO's Code of Accounts will be used on all billings and purchase orders. Enviro-Chem will not generate computerized cost reports for this work.

B. Schedule

1. Enviro-Chem will not generate a CPM schedule for this work, however, a bar-chart type schedule will be generated by the field and will be based on material and equipment availability and delivery.

(Continued)

Variation order cost basis	Per Exhibit "B" of Contract
Cost of variation	\$1,357M plus \$61M Fee Estimated
Effect on contract price	None - See Item A2 above

Effect on contract schedule None

AUTHORIZED:

ACCEPTED:

MONSANTO ENVIRO-CHEM SYSTEMS, INC.

By _____ Date _____

By J. C. Smith Date 4/19/78

CC:9 PEV 5/10

ASARCO ELP 0008013

Monsanto Enviro-Chem

CONTRACT VARIATION ORDER

VARIATION ORDER NO: - 20 - (Continued) DATED April 17, 1978

TO: CONTRACT BETWEEN MONSANTO ENVIRO-CHEM SYSTEMS INC.

AND ASARCO, Inc.

MONSANTO ENVIRO-CHEM SYSTEMS INC. CONTRACT NO. 2102 DATED _____

PROJECT	<u>ASARCO Gas Cleaning Plant</u>
LOCATION	<u>El Paso, Texas</u>

The following described variations are authorized and accepted in accordance with Article of the contract and the contract is hereby amended accordingly.

C. Fee

1. Enviro-Chem's fee for this work will be 4½% of all reimbursable costs.
2. Enviro-Chem will bill the fee monthly based on the total expenditures for that month. ASARCO will withhold 10% of each fee billing as retention.

D. Billings

1. Billings to ASARCO will be as per current practice; i.e.: weekly billings for labor and materials and monthly billings for permanent Salaried Personnel and Fee.

Variation order cost basis

Cost of variation

Effect on contract price

Effect on contract schedule

AUTHORIZED:

ACCEPTED:

MONSANTO ENVIRO-CHEM SYSTEMS, INC.

By _____ Date _____

By _____ Date _____

EC 65 REV 9/76

ASARCO ELP 0008014

MEN 2102 ASARCO
ACID PLANT NO. 2, EL P
EFFECT VARIATION ORDERS ON CO TRACT COSTS

<u>Variation Order No.</u>	<u>Costs</u>	<u>Engineering Manhours</u>	<u>Work Not Inv vling, Engineer</u>
1. Vertical Coolers	\$ 7,800	311	0
2. Cooling Tower capacity	\$24,400	50	0
3. Cooling Tower Pumps	\$ 9,800	0	0
4. Cooling Tower Vendor	\$37,400	20	0
5. Sales Tax	(\$335,000)	0	0
6. Add UPS System	\$14,100	38	0
7. Increase Control Room Size	\$4,120	129	0
8. Provide Lift System for Main Compressor	\$19,425	130	0
9. Install lead lined elbow		-VOID-	
10. Miscellaneous electrical changes	\$53,940	205	0
11. Storage tank foundations	\$40,000	0	40,000
12. Additional product line	\$17,342	0	17,342
13. Install product acid cooler	\$149,400	600	0
14. Install decolorization system	\$728,500	2,165	0
15. Install mist precip. structure		-VOID-	
16. 985 Acid	\$47,860	430	0
17. Miscellaneous Field Changes	\$ 9,121	34	0
18. Seal Weld & Drain Fuct	\$30,000	0	30,000
19. Install 98" Unloading Pipe	\$30,300	224	0
20. Gas Cleaning Plant	*[\$1,357,000]	0	0
Total	865,786	4336	87,342

* Not included in guaranteed max.

CONTRACT COSTS ADJUSTMENTS:

Adjusted guaranteed maximum: $11,830,800 + 865,786 = 12,696,986$

CONTRACT FEE ADJUSTMENT:

A. Engineering Manhours Adjustment

Engineering manhour current projection: 25,636
 Engineering manhour due to variation orders: 4,336
 Manhour ratio per Article 12d General Conditions: 0.203
 Fee adjustment to date: (790,000) (0.199): 160,812

B. Adjustment For Work Not Involving Engineering

Cost of work to date: 87,342
 Fee adjustment per Article 12e General Conditions: 0
 Adjusted Fixed Fee: $790,000 + 160,802 = 950,812$