

CONTRACTOR'S ON-SITE

MAXIMUM MONTHLY WORK-FORCE

<u>Month</u>	<u>Maximum Force</u>	<u>Month</u>	<u>Maximum Force</u>
Mar 60	197	Apr 61	1,224
Apr 60	506	May 61	1,147
May 60	542	Jun 61	1,164
Jun 60	495	Jul 61	1,204
Jul 60	592	Aug 61	1,286
Aug 60	834	Sep 61	1,367
Sep 60	856	Oct 61	1,353
Oct 60	910	Nov 61	958
Nov 60	796	Dec 61	885
Dec 60	674	Jan 62	1,644
Jan 61	796	Feb 62	422
Feb 61	757	Mar 62	248
Mar 61	928		

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WEATHER DATA

MONTH	TEMP						PRECIP TOTAL			30-YEAR AVERAGE		
	'60	'61	'62	'60	'61	'62	'60	'61	'62	Max	Min	Precip
Jan		52	54		10	-22		.18	.78	38	21	.80
Feb	54	63	52	18	18	03	1.15	.56	.66	41	22	.76
Mar	78	69	68	10	21	22	1.31	.96	.76	50	29	.83
Apr	84	75	88	26	24	28	.11	.17	.41	62	36	.75
May	93	93		29	31		.52	.06		72	44	1.10
Jun	98	105		40	47		Trace	.14		78	49	1.22
Jul	109	102		58	57		.31	.42		92	58	.19
Aug	103	106		38	51		.14	.07		89	55	.19
Sep	94	90		44	30		.22	.95		82	47	.96
Oct	85	82		26	23		.18	.39		68	38	.42
Nov	67	60		16	9		1.07	.37		50	28	.59
Dec	55	54		9	-1		.12	.74		37	19	.64

TABULATION
~~ABSTRACT~~ OF BIDS - CONSTRUCTION

SHEET NO. 1 OF 1

INVITATION FOR BIDS NO. ENG-45-164-61-8
 OFFICE U. S. Army Engineer District, Walla Walla
 Corps of Engineers
 Bldg. 602, City-County Airport
 Walla Walla, Washington

ISSUED 20 September 1960
 OPENED 2:15 p.m. (P.s.t.), 4 October 1960

(MAY BE TOPIC FOR FILING)

ITEM NO.	FOR:	Quantity Unit		GOVERNMENT ESTIMATE		BID NO. 5 (Low)		BID NO. 1 (2nd Low)		BID NO. 2 (3rd Low)	
	Rehabilitation and Air Conditioning of Buildings, Mountain Home Air Force Base, near Mountain Home, Elmore County, Idaho										
				<input type="checkbox"/> HIRED LABOR ESTIMATE		J. E. NONENMACHER CONSTRUCTION COMPANY		REED CONSTRUCTION, INC.		WATKINS CONSTRUCTION COMPANY	
				<input type="checkbox"/> REASONABLE CONTRACT ESTIMATE (without profit)		5518 Cruzen Road		Box 4171		P. O. Box 1786	
				<input checked="" type="checkbox"/> REASONABLE CONTRACT ESTIMATE (including profit)		Boise, Idaho		Boise, Idaho		Boise, Idaho	
1.	Building T101	1	Job	L.S.	\$ 9,000.00	L.S.	\$ 10,000.00	L.S.	\$ 9,513.00	L.S.	\$ 10,136.00
2.	Building T102	1	Job	L.S.	8,500.00	L.S.	10,000.00	L.S.	9,103.00	L.S.	8,375.00
3.	Building T1109	1	Job	L.S.	6,450.00	L.S.	5,000.00	L.S.	4,483.00	L.S.	5,090.00
4.	Evaporative cooling systems for Bldg. Nos. T101, T102, T114, T117, T118, T121, T122, and T132	1	Job	L.S.	30,060.00	L.S.	18,867.00	L.S.	22,207.00		24,647.00
	SCHEDULE TOTAL				\$ 54,010.00		\$ 43,867.00		\$ 45,306.00		\$ 48,248.00
	Tabulation covering other bids received, indicating totals only:										
	BIDDER NO. 3 K. H. MATTHEWS Box 1265 Boise, Idaho				\$ 53,843.00						
	BIDDER NO. 4 BABBITT CONSTRUCTION COMPANY 1620 Taggart Street Boise, Idaho				\$ 49,986.00						

**TABULATION
ABSTRACT OF BIDS - CONSTRUCTION**

SHEET NO. 1 of 1

INVITATION FOR BIDS NO. ENG-45-164-61-5	OFFICE U. S. Army Engineer District, Walla Walla Corps of Engineers Bldg. 602, City-County Airport Walla Walla, Washington
ISSUED 2 September 1960	OPENED 19 October 1960, 2:30 p.m., (P.s.t.)

ITEM NO.	FOR:	Quantity Unit		GOVERNMENT ESTIMATE		BID NO. 9 (Low)		BID NO. 2 (2nd Low)		BID NO. 1 (3rd Low)	
				<input type="checkbox"/> HIRED LABOR ESTIMATE	<input type="checkbox"/> REASONABLE CONTRACT ESTIMATE (without profit)	<input checked="" type="checkbox"/> REASONABLE CONTRACT ESTIMATE (including profit)					
1.	25-Ton Liquid Oxygen Plant and Helium Unloading Facility, Mountain Home Air Force Base, Idaho			L.S.	\$ 453,527.00	L.S.	\$ 402,500.00	L.S.	\$ 409,500.00	L.S.	\$ 414,837.00
	TOTAL				\$ 453,527.00		\$ 402,500.00		\$ 409,500.00		\$ 414,837.00
	Tabulation covering other bids received, indicating totals only:										
	BIDDER NO. 3 Purvis Construction Company P. O. Box 64 Yardley, Washington				\$449,794.00						
	BIDDER NO. 4 Sound Construction & Engineering Co. 1300 Aloha Street Seattle 9, Washington				\$465,000.00						
	BIDDER NO. 5 Quality Builders P. O. Box 1503 Tacoma 1, Washington				\$422,000.00						
	BIDDER NO. 6 Universal Engineers & Const., Inc. 10502 E. 51st, P. O. Box 5423 Tulsa, Oklahoma				\$427,149.00						
	BIDDER NO. 7 H. Halvorson, Inc. 630 Judge Building Salt Lake City, Utah				\$419,700.00						
	BIDDER NO. 8 Kaiser-Raymond-Macco-Puget Sound (Joint Venture), (Henry J. Kaiser Company, 300 Lakeside Drive, Oakland, California; Raymond International, Inc., 140 Cedar St., New York, New York; Macco Corporation, 4409 S. Paramount Blvd., Paramount, Calif.; and Puget Sound Bridge & Dry Dock Company, 2929 16th Ave. S. W., Seattle, Washington; P. O. Box 295, Mountain Home, Idaho)				\$417,000.00						

TABULATION

~~MARKET~~ OF BIDS - CONSTRUCTION

SHEET NO. 1 OF 1

INVITATION FOR BIDS NO. ENG-45-164-61-7	OFFICE U. S. Army Engineer District, Walla Walla Corps of Engineers Bldg. 602, City-County Airport Walla Walla, Washington
ISSUED 19 September 1960	OPENED 2:15 p.m., (P.s.t.), 25 October 1960

(MAY BE TORN)

ITEM NO.	FOR:	Quantity Unit		GOVERNMENT ESTIMATE		BID NO. 2 (Low)		BID NO. 10 (2nd Low)		BID NO. 1 (3rd Low)	
				<input type="checkbox"/> WIRE LABOR ESTIMATE <input type="checkbox"/> REASONABLE CONTRACT ESTIMATE (without profit) <input checked="" type="checkbox"/> REASONABLE CONTRACT ESTIMATE (including profit)							
1.	Guided Missile Assembly and Technical Supply Facility, Mountain Home Air Force Base, near Mountain Home, Idaho	1	Job	L.S.	\$ 555,000.00	L.S.	\$ 423,016.00	L.S.	\$ 446,000.00	L.S.	\$ 457,700.00
2.	Preparation and Submittals of Master Equipment Lists, Equipment Operation & Maintenance Data, and Schematic Drawings (Par. SC-5) and Recommended Spare Parts Lists and Special Tools and Test Equipment Lists (Par. SC-6) of Special Conditions	1	Job	L.S.	13,000.00	L.S.	13,000.00	L.S.	13,000.00	L.S.	13,000.00
TOTAL						\$ 568,000.00	\$ 436,016.00	\$ 459,000.00	\$ 470,700.00		
Tabulation covering others bids received, indicating totals only:											
	BIDDER NO. 3 Max A. Boesiger 185 E. 2nd North Mountain Home, Idaho				\$ 515,418.00	BIDDER NO. 7 H. Halvorson, Inc. 630 Judge Building Salt Lake City, Utah					\$ 498,000.00
	BIDDER NO. 4 Purvis Construction Company P. O. Box 64 Yardley, Washington				\$ 483,673.00	BIDDER NO. 8 Swanson & Youngdale Const. Co. 737 France Avenue North Minneapolis 22, Minnesota					\$ 495,974.00
	BIDDER NO. 5 Watkins Construction Company P. O. Box 1786 Boise, Idaho				\$ 517,000.00	BIDDER NO. 9 Cleveland Electric Co. 2003 Galena Denver 8, Colorado					\$ 521,994.00
	BIDDER NO. 6 Raber-Kief, Inc. 5939 Fourth Ave. South Seattle 8, Washington				\$ 575,000.00						

TABULATION

//~~MAST~~ACT OF BIDS - CONSTRUCTION

SHEET NO. 1 OF 1

INVITATION FOR BIDS NO. ENG-45-164-61-2	OFFICE U. S. Army Engineer District, Walla Walla Corps of Engineers Bldg. 602, City-County Airport Walla Walla, Washington
ISSUED 22 September 1960	OPENED 26 October 1960, 2:15 p.m., (P.s.t.)

ITEM NO.	FOR: Re-Entry Facilities, Mountain Home Air Force Base, Idaho	Quantity	Unit	GOVERNMENT ESTIMATE		BID NO. 5 (Low)		BID NO. 1 (2nd Low)		BID NO. 2 (3rd Low)	
				<input type="checkbox"/> HIRED LABOR ESTIMATE <input type="checkbox"/> REASONABLE CONTRACT ESTIMATE (without profit) <input checked="" type="checkbox"/> REASONABLE CONTRACT ESTIMATE (including profit)		QUALITY BUILDERS P. O. Box 1503 Tacoma 1, Washington		RABBITT CONSTRUCTION COMPANY 1620 Taggart Street Boise, Idaho		WATKINS CONSTRUCTION COMPANY P. O. Box 1786 Boise, Idaho	
1.	New bay addition to multi-cubicle magazine	1	Job	L.S.	\$ 10,600.00	L.S.	\$ 11,000.00	L.S.	\$ 15,593.00	L.S.	\$ 12,900.00
2.	Office space in base spares building	1	Job	L.S.	12,245.00	L.S.	9,000.00	L.S.	12,286.00	L.S.	9,400.00
3.	Parking area	1	Job	L.S.	6,900.00	L.S.	8,000.00	L.S.	8,098.00	L.S.	9,220.00
4.	New re-entry vehicle bay addition and modifications to S.&I. building	1	Job	L.S.	69,700.00	L.S.	74,000.00	L.S.	71,693.00	L.S.	77,000.00
	TOTAL				\$ 99,445.00		\$ 102,000.00		\$ 107,670.00		\$ 108,520.00
	Tabulation covering other bids received, indicating totals only:										
	BIDDER NO. 3 MAX A. BOESIGER 185 E. 2nd. North Mountain Home, Idaho				\$ 109,296.00						
	BIDDER NO. 4 REED CONSTRUCTION, INC. Box 4171 Boise, Idaho				\$ 142,020.00						

TABULATION

ABSTRACT OF BIDS - CONSTRUCTION

SHEET NO. 4 OF 5

INVITATION FOR BIDS NO. ENG-45 164-60-1	OFFICE
ISSUED	OPENED

ITEM NO.	FOR:	Quantity	Unit	GOVERNMENT ESTIMATE		BID NO. 5 (Low)		BID NO. 6 (2nd Low)		BID NO. 1 (3rd Low)	
				<input type="checkbox"/> WIRE LABOR ESTIMATE							
				<input type="checkbox"/> REASONABLE CONTRACT ESTIMATE (without profit)							
				<input checked="" type="checkbox"/> REASONABLE CONTRACT ESTIMATE (including profit)							
30. b.	Drilling	500	L.F.	6.03	3,015.00	65.00	32,500.00	63.50	31,750.00	60.00	30,000.00
c.	Furnish and install well casing and liners	22,000	Lb.	.27	5,940.00	.25	5,500.00	.225	4,950.00	.25	5,500.00
d.	Furnish and Install Well Screens	40	L.F.	1.97	788.00	62.00	2,480.00	60.00	2,400.00	50.00	2,000.00
e.	Portland Cement	100	Bag	7.99	799.00	4.60	460.00	4.50	450.00	4.65	465.00
f.	Drill-out Cement Plugs	50	L.F.	43.30	2,165.00	10.40	520.00	10.00	500.00	8.00	400.00
g.	Perforation of Casing and Liners	50	L.F.	16.40	820.00	5.20	260.00	5.00	250.00	5.00	250.00
h.	Development of Well	30	Hour	32.37	971.10	103.00	3,090.00	100.00	3,000.00	750.00	22,500.00
i.	Test Pump Installation and Removal	2	Each	576.00	1,152.00	10,170.00	20,340.00	9,850.00	19,700.00	5,000.00	10,000.00
j.	Pumping Test	140	Hour	21.54	3,015.60	52.00	7,280.00	50.00	7,000.00	50.00	7,000.00
k.	Standby Charge for Rig, Equipment and Personnel	10	Day	393.40	3,934.00	1,550.00	15,500.00	1,500.00	15,000.00	1,000.00	10,000.00
l.	Well Alinement Survey for Records	1	Each	1,009.00	1,009.00	1,035.00	1,035.00	1,000.00	1,000.00	500.00	500.00
31.	Waterwell Construction Complex 1C:										
a.	Mobilization and Demobilization of Drilling Equipment	1	Job	L.S.	1,290.00	L.S.	3,255.00	L.S.	3,000.00	L.S.	10,000.00
b.	Drilling	100	L.F.	16.18	1,618.00	41.00	4,100.00	37.50	3,750.00	30.00	3,000.00
c.	Furnish and Install Well Casing and Liners	30,000	Lb.	.25	7,500.00	.26	7,800.00	.24	7,200.00	.25	7,500.00
d.	Furnish and Install Well Screens	40	L.F.	33.37	1,334.80	59.00	2,360.00	54.00	2,160.00	20.00	800.00
e.	Portland Cement	100	Bag	7.99	799.00	3.25	325.00	3.00	300.00	4.65	465.00
f.	Drill-out Cement Plugs	50	L.F.	64.74	3,237.00	3.30	165.00	3.00	150.00	8.00	400.00
g.	Perforation of Casing and Liners	50	L.F.	24.38	1,219.00	6.50	325.00	6.00	300.00	5.00	250.00
h.	Development of Well	30	Hour	32.36	970.80	26.00	780.00	24.00	720.00	750.00	22,500.00
i.	Test Pump Installation and Removal	2	Each	566.50	1,133.00	3,255.00	6,510.00	3,000.00	6,000.00	5,000.00	10,000.00

TABULATION
SUMMARY OF BIDS - CONSTRUCTION

SHEET NO. 5 OF 5

INVITATION FOR BIDS NO. ENG-45-164-60-1	OFFICE
ISSUED	OPENED

ITEM NO.	FOR:	Quantity	Unit	GOVERNMENT ESTIMATE		BID NO. 5 (Low)		BID NO. 6 (2nd Low)		BID NO. 1 (3rd Low)	
				<input type="checkbox"/> HIRED LABOR ESTIMATE	<input type="checkbox"/> REASONABLE CONTRACT ESTIMATE (without profit)						
31. i.	Pumping Test	140	Hour	\$ 21.77	\$ 3,047.80	\$ 22.00	\$ 3,080.00	\$ 20.00	\$ 2,800.00	\$ 50.00	\$ 7,000.00
k.	Standby Charge for Rig, Equipment and Personnel	10	Day	393.40	3,934.00	54.00	540.00	50.00	500.00	1,000.00	10,000.00
l.	Well Alinement Survey for Records	1	Each	673.00	673.00	190.00	190.00	175.00	175.00	500.00	500.00
	TOTAL				\$32,887,169.18		\$28,899,053.00		\$ 29,315,000.60		\$ 30,120,291.20
	BIDDER NO. 1 - Western Contracting Corporation, Sioux City, Iowa - \$30,120,291.20 BIDDER NO. 2 - Utah-Manhattan, 100 Bush Street, San Francisco 4, California. A joint venture consisting of: Utah Construction & Mining Co., 100 Bush St., San Francisco, California; Manhattan Construction Co., Muskogee, Oklahoma. \$30,809,349.00 BIDDER NO. 3 - Peter Kiewit Sons' Co., 1300 Aloha Street, Seattle 9, Washington. \$30,502,681.00 BIDDER NO. 4 - George A. Fuller Company, 3100 West 8th St., Los Angeles 5, Calif. - \$30,496,000.02 BIDDER NO. 5 - Kaiser-Raymond-Macco-Puget Sound, 1924 Broadway, Oakland, Calif. A joint venture consisting of: Henry J. Kaiser Company, 1924 Broadway, Oakland, Calif. Raymond International Inc., 140 Cedar St., New York, N. Y.; Macco Corporation, 14409 S. Paramount Blvd., Paramount, Calif.; Puget Sound Bridge & Dry Dock Company, 2929 16th Ave. S.W., Seattle, Wash. - \$28,899,053.00 BIDDER NO. 6 - Morrison-Knudsen Company, Inc. - Hardeman & Associates, 411 West Fifth St., Los Angeles 13, California. A joint venture consisting of: Morrison-Knudsen Company, Inc., 411 West Fifth St., Los Angeles, Calif.; Paul Hardeman, Inc., 411 West Fifth St., Los Angeles, Calif.; MacDonald Construction Company, 411 West Fifth St., Los Angeles, Calif.; Scott Co. of Northern California, 411 West Fifth St., Los Angeles, Calif.; C. H. Leavell & Company, 411 West Fifth St., Los Angeles, Calif. F. E. Young Construction Co., 411 West Fifth St., Los Angeles, Calif. - \$29,315,000.60.										

Modifications to
 Contract No. DA-45-164-ENG-3565
 WS-107 A-2 Technical Facilities

Mod No.	Case No.	Description	Value
1	1	Delete Shock Mount Spring Assembly	\$ 5,699.97 CR
2	3	Transpose Schedules Complex A & C	None
3	4	Deletion of Storage Magazine	11,844.40 CR
4	23	Provide Payment to LOX Equipment Co.	2,430.00
5	9	Negotiating Costs - Standardized Equip.	3,010.27
6	5	Revise Control Center Air Conditioning	2,865.00
7	8	Relocate Unistruts	3,893.00
	14	Install 3" Check Valves	
8	34	Install Additional Air Ducts in Antenna Terminal Room	2,480.69
	35	Increase Size of Duct Openings - P.H.	
	43	Replace Unsuitable Material with Concrete	
	44	Place Sand for Ground Mats - Control Center	
9	48	Area Engineer Authority	None
10	11	Revise Shock Mounts	1,392.95
11	36	Additional Fire Sensors	4,053.00
	56	Ring Beam Wrapping	
12	12	Provide Sleeves	6,963.30
	30	Bench Mark, Hatch Cover & Push Buttons	
	49	Lower Sewage Lines	
	50	Columns in Powerhouse	
13	61	Administration Change	None
14	13	Revise Water Control Valves	2,317.25
	18	Reduce Hydraulic Pipe Valve Sizes	
	38	Revise Junction Box & Air Duct	
15	37	Wire, Conduit, Cable Sleeve Change	4,906.00
	39	Screen Tray & Sleeve Change	
16	15	Revise Vertical Shock Mount Tubing	4,244.00 CR
17	68	Additional Channel Ducts, Water Proofing and Screws	715.38
18	45	Tile & Paint in Control Center	2,581.00
19	19	Delete Antenna Silo	5,101.00 CR
	22	Revise Conduit Routing	
20	63	Deletion of Gimbal Joints in PLS System	1,700.41 CR
	66	Revise Antenna Terminal Air Duct	
	76	Additional Re-steel for E.T. Sumps, Sites B & C	
21	47	Shock Mount Conduit & Dimension	2,505.55
22	32	Modify Cribs in Missile Silo	33,558.00
	41	Flange and Head Change	
23	10	Delete Gatehouse & Vehicle Storage	87,089.00 CR
24	7	Change in Standardized Equipment	5,754.00

25	46	4" Valve Substitution	\$ 377.00
	83	Revise Accumulator Supports in Type E Tunnels	
26	53	Modify Yoke Beam	10,216.00
27	54	Modify Cross Bracing & Steel Angle	1,308.00
28	59	Anchor Block, Bed Frame, Conduit & Duct Revisions	2,423.00
29	96	Revise Uni strut Welding	4,300.00 CR
30	26	Revise Control Wiring	6,797.00
31	87	Add Grating Over Generator Slab Pipe Trench	
	89	Additional Concrete for Generator Foundations	
	90	Anchor Bolt Slots for Tank T-505	
32	78	P. L. S. Piping Revisions	1,625,000.00
33	25	Revise Process Piping Connections	11,289.00
34	79	Revise Elevator in Antenna Silo	270.63
	105	Resubmittal of Shop Drawings	
35	55	Relocate AnchorBolts	401.00
36	75	Telephone Cabinet & Conduit Change	5,382.00
	97	Revise Signs	
37	71	Anchor Bolt & Spring Revisions	13,223.00
	73	Revise Make-up Water Piping	
38	33	Delete T. V. Surveillance	36,904.46 CR
39	2	Change to Flex Hose Specifications	28,963.33
40	86	Relocate Powerhouse Sump Openings, Site B	12,763.00
	91	Cylinder Grouting in P.T.s	
	99	Additional Inserts in Antenna Silo	
41	80	Revise C-2 Compressors	70,000.00
42	82	Drainage & Floor Opening Revisions	9,540.00
	88	Relocate LOX Subcooler T-401	
43	92	Test Control Station Revisions	3,908.00
	93	Reroute Conduit Sleeves in Control Center	
44	24	Add Nuclear Blast Detector	75,231.00
45	94	P.L.S. Bench Testing	115,000.00
46	60	Modify Type "C" Tunnels	24,000.00
47	81	Revise Blast Cover & Check Valves	3,546.00
48	72	Delete 1/8" Plate & Revise Junction Box	891.00
49	31	Support Tray Fixture & Anchor Bolt	6,266.00
50	100	Air Conditioner, Spring Beam Ladder, Bracket & Insert Revisions	19,584.00
51	107	Add Strap to Embedded Plate in Antenna Silo	3,383.00
52	70	Equipment Terminal Grounding	1,018.00 CR
53	51	Fuel System Anchors & Details	71,600.00
54	65	Revise Floor Panel Hold Down	11,110.00
55	64	Additional Reinforcing steel	5,598.79
56	104	Additional subpanel in Equipment Terminals	137,376.00
	106	Revise Water Chillers	
57	42	Miscellaneous Changes	400,000.00
58	77	Revise Antenna Silo Upper Drainage	6,344.00
59	58	Mod. to Stromberg-Carlson Conduit Sizes	41,621.00

60	101	Install Additional Antenna Silo Door Hardware	\$ 150,000.00
61	112	Case A, Standardized Equip. Changes	None
62	114	Case B, Standardized Equip. Changes	97,823.50
63	110	Relocate TTC-21 and Add Antenna Silo Cable Trays	19,000.00
64	116	Revise RP-1 Nitrogen Piping & T-401 Vent Piping	12,500.00
65	117	Relocate He and N ₂ Lines in Missile Silo	13,300.00
66	118	Case G, Standardized Equipment	10,122.98
67	125	Add Float Switch, Etc.	3,151.00
68	109	Relocate Ducts & Lights	12,000.00
69	119	Case D, Standardized Equipment	131.34
70	121	Provide Concrete Fill for Yoke Beams	52,210.75
71	122	Case C, Standardized Equipment	1,450.00
72	123	Case E, Standardized Equipment	750.00
73	124	Deletion of Wells	123,555.00 CR
74	126	Modify Elevator Support Bracket in Antenna Silos	10,607.00
75	120	Car Rider for LOX Vessels	1,430.00
	127	Jamb & Head Angles for Antenna Silo Blast Doors	
76	128	Relocate Ladder in Powerhouse	851.00
77	130	Cases L, N, P, Q, and R, Standardized Equipment Changes	7,072.85
78	131	Modifications to Fire Water System	28,300.00
79	133	(Case I) Reductions in Engine Test Time	2,160.00 CR
80	134	(Case F) Additional Voltage Regulator Switches	290.88
81	102	Security Fence Revisions	33,789.00
82	136	Ring Beams at Complex 1-A	153,102.00
83	135	Seals in Junction Boxes	10,557.00
84	144	Indicator Lights for Fuel Transfer Panels	1,965.55
85	132	Relocate Floor opening in Control Center	1,850.00
86	139	Changes to Fuel Transfer Panel	15,624.00
87	140	Modification to Liquid Level Sensor	3,247.00
88	141	Revision to Alarm Panels	7,243.50
89	138	Protective Devices, Cryogenic Vessels	2,691.14
90	146	Additional Blast Lock Reinforcement	490,000.00
91	150	Adm. Costs, Standardized Equipment Contr.	12,000.00
92	151	Revised Completion Schedule	None
93	152	Delete Credit Under Mod. No. 16	4,244.00
94	142	Deletions of Blast Detectors & Sensing Heads	None
95	154	Generator Exhaust Piping Supports	645.00
96	27&178	Revise Specs, TP-39	1,791,000.00
97	155	Additional Pipe Supports	208,000.00
98	153	Modify Clevis on Escape Hatch	1,036.00
99	156	Additional Structural Framing, Portal Silo	1,695.00
100	137	Add Contactor in Control Center and Delete PT-A2 Circuit	2,713.00
101	157	Add 12V, 150 Amp. Receptacle in P.H.	455.00
102	16	Revisions to Shock Testing Specifications	None

103	158	Add Pipe Sleeves in Blast Lock	\$ 5,658.00
	161	Relocate Missile Silo Door Switch	
104	159	Revise P. H. Pump Control & Add Circuit in Portal Silo	6,237.00
105	166	Add Bolts in Communication manhole cover	668.00
106	129	Deletion of Shock Test for TJ-12 Fan Mount	900.00 CR
107	163	Repair Missile Silo Pillow Block Mount	None
108	164	Add Ladder in TJ-11 & Revise Seal Chamber In M.S.	19,200.00
109	165	Additional Pipe Supports in TJ-12	167,000.00
110	149	Ship P. L. S. Filters for Testing	609.00
111	103	Additional Layout Drawings	6,472.00
112	170	Addition of Sealer to Vent Shaft Insulation	10,200.00
113	171	Revise LOX Crib Column	9,678.00
114	168	Ship P. L. S. Valves to Beale AFB	1,500.00
115	172	Testing Cleanliness of Tube Bank Trailers	None
116	167	Add Mesh in Communication Handhole, Etc.	15,000.00
117	173	Modify Angle Bracing in P.T., Etc.	4,590.00
118	145	Revised Aluminum Alloy in LOX Piping Crib	85,000.00
119	169	Modify or Replace P.L.S. Safety Valves	80,945.00
120	148	Communication Conduit & Speaker Hangar Deletions	None
121	174	Portal Silo Hydraulic Cylinder Clevis Reinforcement	5,900.00
122	175	Relocate TTCs at Site 1-A & Revise MCC #5	9,500.00
123	143	Substitute Welded for Bolted Members, Cable Tray Supports	None
124	147	Revisions to 48" Blast Valves, Etc.	1,190.00
125	177	Remove and Store Light Fixtures, Control Center	215.00
126	176	Portal Silo Door Limit Switch Plates	4,800.00
127	179	Reroute Grounding Bus in Control Center	1,830.00
128	180	Pickle Lube, Fuel & Oil Lines in P.H.	89,250.00
129	183	Delivery of Government-Furnished Liquids and Gases	125,000.00
130	181	Revise LOX Bay Channel Liners	25,132.00
131	248	Lower Pumps P-27 & P-28 at Sites A & B	8,100.00
132	186	Relocate Shock Mount in P.T., Etc.	24,000.00
133	182	Design Validation Tests at Site 1-A	404,000.00
	353	Additional Acceptance Tests	235,000.00
134	187	Post-Tensioning of Control Center Foundations	17,278.00
135	188	Additional Structural Wall Framing, 1-A	4,282.00
136	189	Revisions to TP-40	82,000.00
137	190	Relocate Anchor Bolts for WC-1 at P.H.	3,158.53
138	191	Blowdown of PLS & F.S. Process Vessels	8,191.00
139	192	Revise Shock Sleeves in TJ-12, Etc.	16,500.00
140	193	Replace Expansion Joints with Flex Hose in TJ-10	257,600.00
141	195	Revisions to Launcher Air Filtration Structure, Etc.	5,100.00
142	196	Well Packer, Site 1-B	3,426.00

143	194	Revise WC-1 and WC-2 Relief Lines	\$ 325.00	CR
144	197	RP-1 Fuel System Revision	103,000.00	
145	199	Add Supports for Air Filtration Equipment, Etc.	22,250.00	
146	200	Time Extension F.P.E. Delivery Schedule	1,000.00	
147	201	Radiography of Welds	3,154.51	
148	202	Additional Freight Costs, Cont. 5928	755.66	
149	203	Delete Portion of 3" Insulation in Type "A" Tunnel, Etc.	18,700.00	
150	204	Revise Air Conditioning Duct Work in P.T.	90,000.00	
151	206	Revise Diesel Engine Exhaust Pipe Flange Support, Etc.	12,850.00	
152	208	Change Concrete Insert Size	4,000.00	CR
153	256	Fluorgreen Gaskets	30,077.00	
154	210	Add Flex Hose on C-4 Compressor in P.H.	1,050.00	
155	211	Additional Manufacturer's Representative Services, Contract 5968	34,246.00	
146	213	Additional P.L.S. Pipe Support Revisions	20,000.00	
157	184	Revise Neoprene Closures in P.H., Etc.	5,400.00	
158	214	P.L.S. Pipe Revisions in P.T. & Type D Tunnels	36,000.00	
159	205	Repair Helium Compressor & Flush RP-1 Trailers	33,200.00	
160	215	Removal of Government-Owned Scaffold from M.S.	24,500.00	
161	216	Insulators on Trane Supplied Equipment	7,800.00	
162	217	Air Exhaust Structure Compaction, Etc.	873.00	
163	218	Blast Valves, Filters, Lubricators, Dust Covers, Etc.	249,500.00	
164	219	Reclean CompuDyne Valves	252,000.00	
165	220	Machined Surfaces for Shock Mount	29,100.00	
166	207	Blast Detector Circuit Revision	9,000.00	
167	221	Relocate Alarm Cables	27,500.00	
168	223	Deletion of Gate Guard Requirements	None	
169	225	Relocation of lighting fixtures	3,616.00	
170	226	Add Fill Around Air Intake & Exhaust Structures	3,100.00	
171	224	Finish Painting of Cryogenic Vessels	1,029.00	
172	227	Expansion Joints, Type "D" Tunnels	14,000.00	
173	228	Furnish Spare Parts for P.L.S.	183,400.00	
174	229	Furnish 300# Strainers in Lieu of 250#	6,060.00	
175	230	Provide Electrical Service & Motor Control, Etc.	9,250.00	
176	233	Kits for Water Chillers	1,315.80	
177	235	Repair P.L.S. Filters	14,111.00	
178	252	Firewater Control Revisions	29,000.00	
179	231	Portal Silo Door Safety Revisions	41,500.00	
180	237	Delete and Ship Pot Filters to Lowry AFB	6,200.00	CR
181	241	Inspection of P.L.S. Valves	100,000.00	
182	239	C-2 Compressor Revisions	22,740.00	
183	222	Additional P.L.S. Regulator	3,488.00	
184	240	Powerhouse Vent Hood and Duct to CT-4	11,000.00	
185	198	Field Assembly Pumps & Motors	6,500.00	

186	234	Field Assembly of 900 Series Pumps	\$ 9,150.00
187	242	Grout Portal Door Actuator Cylinder Base Plate	1,050.00
188	243	Delete Installation of Generator Slab Trench	1,817.00 CR
189	246	Instrument Air Line Filter	4,770.00
190	247	Deletion of Ring Angles for Air Duct in P.H.	900.00 CR
191	249	Utility Tunnel Pipe Support Change	508,180.00
192	115	Substitute LN ₂ for LOX as Test Media	None
193	251	Delete Access Opening Angle in 3 PTs	1,050.00 CR
194	253	De-Icing Hose Connections	8,300.00
195	254	Instrument Tube Cap Revisions in Portal Silo	10,000.00
196	212	Revised Antenna Silo Door Opening Procedure	None
197	255	Additional Blast Valve Revisions	23,200.00
198	185	Grading Revisions at 1-C	16,114.00 CR
199	258	Relocation of Fog Nozzle No. 15 in M.S.	2,300.00
200	263	Administrative Change	None
201	257	Relocate Sensing Taps	4,000.00
202	244	Inspection of Powell Valves	51,343.00
203	250	Delete Cryogenic Vessel Evap. Loss Tests	5,250.00 CR
204	259	Interference between FW Line & Concrete Supports	8,000.00
	261	Modify Hand Rail, PH	5,580.00
	262	Extending E.T. Access Tunnels	4,076.00
	264	Add S. S. Plugs to Catch Pots	754.00
	265	Remove & Inspect Valve, Site C	464.00
	267	Nozzle Mislocation of Cryogenic Vessels	10,954.00
205	268	Recleaning P.L.S. Components	295,167.00
206	260	Shock Mounting of Hydraulic Control	19,550.00
	266	Rejection of RP-1 Fuel Piping - 1-A	1,344.00
207	269	Incorrect Flange Drilling of Nozzle of T-110 Fuel Tank	320.00
	270	Revise 3/4" Drain Below Filter F-111 & F-112 on Fuel Crib	2,262.00
	271	Fuel Crib Valve Handle Interferences	2,650.00
	272	Interferences Between 3/4 CSN Line & Seal Drain Support	1,225.00
208	273	Missile Silo Interferences	3,250.00
	274	Interferences of 6" CSO-355 Line with Structural Steel	2,800.00
	275	Flow Position of PLS Valves	580.00
209	276	Rejection of SV-518 & 519, Site B	400.00
	277	Reposition Pressure Gauge on PRV Valves 501 & 502	350.00
	278	Additional Piping & Repair to C-2 Compressor	31,100.00
210	282	Additional Shock Mounts in F.W. System	200,000.00
211	283	Additional Valve Limit Switches, PLS	44,500.00
212	287	Revise Angle Bracing Steel Ladder Site	500.00
	292	Air Intake Angle Seal	2,800.00

	293	Check Nuts on Conduit Support in Tunnels	\$ 2,320.00
	280	Interferences Between Valve CV-543 & Ducts in Missile Silo	2,767.00
213	291	Grounding Structural Steel	20,400.00
214	295	Cleaning F-702 Filter & Upstream Air Lines	63,800.00
215	281	Provide 250 psig Air to FCV-701, 702,703	2,350.00
	284	Shipment of P-201 Pumps	700.00
	285	Blowdown of Gaseous Nitrogen Lines in TJ-12	8,000.00
	288	Method of Sealing Ends of PLS Piping	2,340.00
216	298	Shock Mount Supports for MS Firewater Supports	371,300.00
217	290	Additional Electrical Work Due to Piping and Duct Changes	16,500.00
218	286	Interferences Between Valve FCV-605 & Floor Beam	2,320.00
	289	CompuDyne Furnished Aminco Extensions	1,570.00
	297	Relocate Unit Substations	3,480.00
219	302	Additional Floor Wall & Cleaning Plate in E.T.	1,935.00
220	279	Elimination of Identification Tags	1,000.00 CR
	317	Painted in Lieu of Galvanized Checkered Plate	2,900.00 CR
221	308	Block Valves for Fuel Oil Tanks	1,560.00
	314	Pneumatic Tubing for Gas Detection Units	4,950.00
	318	Opening M.S. Doors	66,200.00
	326	Additional Valve Limit Switches, MS & Fuel Terminal	24,475.00
222	299	Interferences Between Beam & Tank T-9 Fill Nozzle	900.00
	300	Motor Operated Dampers	1,000.00
	301	Interferences Between H.W. Piping & Yoke Beam, TJ-5	1,600.00
	310	Interference Between Channel Brace & Fan Support	3,000.00
	321	Centrifuge Motors CE-1 & 2 Starters	3,045.00
223	320	Compensation for Additional Work in raised Floor System	3,480.00
		Interferences Between HW Line & BL 2 Door	2,500.00
224	322	Opening Portal Silo Doors, Site C	1,092.00
	323	Rework Portal Silo Instrument Tube Cap Cylinder	1,000.00
	324	Portal Silo Door Seals	1,000.00
	325	Added Work on Orientation Targets,1-A	2,000.00
	333	Mixer Opening Cover Powerhouse	100.00
225	319	Standby Costs of Instrument Air Pressurization	97,600.00
	330	Relocation of MS Fuel Line & FW Ring Supports	4,800.00
	334	Additional Electrical Testing Work	77,840.00
	339	Ground Diesel Gage Board	350.00
226	294	Delay in Approval of Fence Post Length	1,200.00
	304	Hot & Chilled Water Piping Tests	32,000.00

	312	Interferences Between HW Line & E Tunnel Wall	\$ 900.00
	332	Furnish SS Plugs on F-201 Filters	700.00
227	326	Ice Banks Control & Wiring	4,010.00
	329	Relocation of Shock Mount Brace, PH, "C"	1,385.00
	336	Pilot Light on Ethyl Glycol Tank	490.00
	337	Seal offs on Conduit in Blast Locks	2,745.00
	338	Alternator Circuit for Sump Pumps	3,610.00
228	340	Shock Mounting, Fluorescent Fixtures	13,000.00
	343	Interferences Between Chiller Relief Line & Yoke Beam, TJ-11 & 13	2,100.00
	345	Interference Between HW Pipe & Yoke Beam, TJ-8 & 9	3,798.00
	346	Repair Elevator Draw Bridges	629.00
229	349	Powerhouse Claim	485,000.00
230	341	Relocate Cable Trays, ATs	7,250.00
	342	Modification to P.S. Elevator Controls	2,100.00
	348	Air Conditioners & Vibration Maint. Approval Delay	27,055.00
231	296	Rework of Tunnel Jct. 11 & 13	3,500.00
	309	M. S. Scaffolds	20,000.00
	313	Delay of Stearns-Rogers Equipment	12,000.00
	344	Interferences Between HW Pipe & Yoke Beam TJ 1,4,7	7,131.00
	347	Changed Electrical Equipment Mounting	3,900.00
232	350	Extra Cleaning Costs of Cryogenic Vessels, Std. Equip. Ct. 5928	25,000.00
233	351	Flexible Hoses	202,646.00
234	352	Acceleration Costs, Eaton Metal	550,000.00
235	355	Resolution of Drawing Discrepancies	15,000.00
	356	Shock Tests for Case 231 Valves	350.00
	357	Revisions to Handrails & Grating in PTs	17,100.00
	358	"D" Tunnels Drawing Discrepancies	300.00
236	362	Bushhammer Concrete of PLS, PS in MS	1,000.00
	363	Delays Due to Power Outages by Others, "C"	1,500.00
	364	Revise Cable Trays & Supports, TJ-7	2,830.00
237	366	Punch List Additional Work	47,500.00
238	369	Revisions to Mounts, Piping & Supports	430,000.00
239	372	Tack Welding of Reinforcing Steel	46,350.00
240	360	Refabrication of RP-1 Discharge Piping	835.00
	361	Vacuum Pump Claim	8,800.00
	367	Retesting FCV-601 & 602, Site C	2,670.00
241	365	Delays Incurred During PLS Testing	38,128.00
242	370	Comprehensive PLS Construction	112,000.00
243	354	Weber Showcase Acceleration & Impact	100,000.00
244	376	Relocation of Embedments	6,880.00
246	359	Damage Caused by Assoc. Contractors	7,000.00
	371	Additional Work on Case 51	3,863.00
	375	Replace Leaking PRV-502, Launcher No. 2, "C"	250.00
246	368	Additional Cost of Concrete Work	55,000.00
	373	Otis Elevator Acceleration & Impact	23,000.00

374	Haas Co. Acceleration & Impact	\$ 80,000.00
378	Acceleration for Kaiser & subs: Neri, Wells-Cargo, Century Metals, Gilmore- Skoubye & Grafe-Weeks, and sub-subs: Montefusco, B&B Engr., Johnson Service, & Alliance	9,687,000.00
247	377 Revise Equipment terminal piping	49,212.00

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Modifications To
Contract No. DA-45-164-3621
Rehabilitation and Air Conditioning of Buildings

<u>Mod. No.</u>	<u>Case No.</u>	<u>Description</u>	<u>Value</u>
1	1	Change Over to CEBMCO	\$ 0
2	6	Revise Completion Dates	0
3	2	Revise Air Conditioning	
	5	Repair Roofs	274.90
4	3	Replace Concrete Flooring	<u>514.80</u>
			<u>\$789.70</u>

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Modification To
 Contract No. DA-45-164-ENG-3623
 Liquid Oxygen and Helium Unloading Facility

<u>Mod. No.</u>	<u>Case No.</u>	<u>Description</u>	<u>Value</u>
1	1	Change Over to CCEMCO	\$ 0
2	3	Lower 8" Water Line	696.00
3	5	Add Power Pole & Accessories	722.00
4	8	Add Closures for Extended Doors	260.88
5	7	Substitution of Class 1500 for Class 2500 Pipe	108.00 Cr
6	2	Revise Warmup Coils and Relocate Louvers	0
	4	Relocate Conductors	127.00
	6	Revise Wiring for N ₂ and O ₂ Compatibility	0
7	9	Claim for Additional Drawings Under Process Piping Section of C.S.	661.19
8	10	Supplemental Agreement - Revised Authority of Contracting Officer's Representative	0
9	11	Recleaning Pipe	5,775.00
	12	Helium Hose Claim	543.35
TOTAL			<u>\$8,677.42</u>

Modifications To
 Contract No. DA-45-164-ENG-3625
 Guided Missile Assembly and Technical Supply Facilities

<u>Mod. No.</u>	<u>Case No.</u>	<u>Description</u>	<u>Value</u>
1	1	Change Over to CEBMCO	\$ 0
2	3	Pipe Trench	620.00
3	6	Delete 35' Pole and Guy	138.83 Cr
4	7	Air Line Revision	1,496.93
5	4	Revise Pipe Schedules	11,620.00
6	8	Add Pull Box	2,072.88
	9	Add Door Trim and Winterize Water Line	
	10	Panic Hardware, Room Finish and Exit Lights	
	11	Interface Clarification	
7	5	Hardware Schedules	104.40
8	12	Paint Industrial Waste Underground Piping	1,092.14
9	13	Add Circuit to Water Pump	109.20
10	15	Add CO ₂ System, Storage Building, and Fill Pipe for Water Chiller	27,242.73
	18	GMAB Roof Repairs	
	19	Add Equipment Cleanliness Test	
11	16	Revise N ₂ Recharge Connections and Replace Relief Valve	3,216.71
12	14	Add Circuit for Vaporizer Trailer	1,630.93
13	20	Revise Communications Power Supply and Add Compressed Air Filter	13,693.49

<u>Mod. No.</u>	<u>Case No.</u>	<u>Description</u>	<u>Value</u>
	21	Install Asphalt Tile Floors in GMAB	\$
	22	Miscellaneous Revisions	
14	23	Miscellaneous Claims	6,700.00
			<hr/>
			\$69,460.58

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Modifications To
Contract No. DA-45-164-ENG-3626
Re-entry Facilities

<u>Mod. No.</u>	<u>Case No.</u>	<u>Description</u>	<u>Value</u>
1	1	Change Over to CEBMCO	0
2	2	Relocate Door Openings	197.54
	3	Reroute Existing Conduit	
3	6	Blast Door Electrical Revisions	300.30
4	4	Retest Cranes	543.00
5	5	Revise Conduits, Columns and Blast Door	850.00
6	7	Remove 12" in Lieu of 6" Concrete Slab	4,000.00
		TOTAL	<u>\$5,890.84</u>