23. LIST OF SUPPLY CONTRACTS ASSIGNED TO THE CONSTRUCTION CONTRACTOR UNDER CONTRACT NO. DA-45-164-ENG-3552

CONTRACT	CONTRACTOR	ITEM
DA-25-066-ENG:		
5981 5982 5983	CompuDyne Corporation Hatboro, Pa.	PLS Valves and Related Equipment (Contract Price $767,431.51)
5924 5925 5926	LOX Equipment Company Livermore, Calif.	PLS Equipment (Cryogenic Vessels) (Contract Price $812,295.00)
5974 5975 5976	Keenan Pipe & Supply Company Denver, Colo.	PLS Equipment (Pressure Vessels) (Contract Price $994,038.00)
5964 5965 5966	Nordberg Manufacturing Co. Milwaukee, Wis.	Electrical Generating Equipment (Contract Price $1,162,806.00)
5958 5959 5960	Federal Pacific Electric Co. Scranton, Pa.	2.4 K.V. Switchgear (Contract Price $277,965.00)
5930 5931 5932	Trane Company LaCrosse, Wis.	Air Conditioning and Refrigeration Equipment (Contract Price $147,066.00)
5936 5937 5938	Joy Manufacturing Company Chicago, Ill.	Air Compressors (Contract Price $93,735.00)
5942 5943 5944	CompuDyne Corporation Hatboro, Pa.	Alarm System Equipment (Damage Control and Annunciator) (Contract Price $96,138.50)
5948 5949 5950	G. M. Wallace & Company Denver, Colo.	Pumps (Contract Price $103,715.00)

Note:

Three contracts were awarded to each supply contractor, one contract for each of the complexes. This method was used as it was considered possible that the construction contract for each complex could be awarded to a different prime contractor.

24. LIST OF CONTRACTS ADMINISTERED BY LARSON AREA

CONTRACT NUMBER	DESCRIPTION
Construction Contracts:	
ENG-3510	Water Wells at Complex 1-B
ENG-3511	Water Wells at Complexes 1-A and 1-C
ENG-3552	Missile Launch Complexes
ENG-3599	Re-Entry Facilities
ENG-3622	Liquid Oxygen Plant
ENG-3624	Guided Missile Assembly Building
Service Contracts:	
ENG-3598	Zep-Aero Corp. (PLS Consulting Service) El Segundo, Calif.
A. E. Contracts:	
ENG-3550	Ralph M. Parsons Co. (Shop Drawing Review) Los Angeles, Calif.

C. H. Whitesell, Colonel, CE, Director, Titan I Directorate was Successor Contracting Officer on all contracts. Colonel H. C. Rowland, Jr., Area Engineer was Contracting Officer's Representative.

Under Contract 3598, the Zep-Aero Corporation furnished a supervisory consultant and from 1 to 11 field consultants as required during the period 11 September 1960 through 19 March 1962. Consultants were utilized as test directors, test schedulers, and as members of testing and inspection teams along with Corps Employees. Final cost of this contract was $289,166.75.

Under the provisions of Contract 3550, shop drawings furnished by the Construction Contractor were transmitted to the Parsons Co. in Los

Angeles for review to assure complete compliance with provisions of Contract 3552 and modifications thereto. The contract extended from 16 November 1959 through December 1961. During the period December 1959 through November 1961, from one to five personnel of the Parsons Co. were on duty in Engineering Branch of the Area Office to provide direct services and liaison with work being performed by the firm in their Los Angeles office. Final cost of the contract was $205,626.62.

25. LIST OF CONTRACTS PERTAINING TO LARSON AREA ADMINISTERED BY TITAN I DIRECTORATE

Contract DA-04-548-ENG-11

United Testing Laboratories, Monterey Park, California. Under this contract, consulting personnel were made available for inspection and certification of PLS installation and testing at all Titan I bases. At Larson from one to seven consultants were available during the period October 1961 to February 1962. UTL personnel augmented Zep-Aero and Corps inspectors. They were valuable in view of experience gained in conducting testing at earlier Titan I sites.

Contract DA-04-548-ENG-12

Texas Engineering and Manufacturing Company (TEMCO), Dallas, Texas. Progress reporting by electrical data processing methods. TEMCO teams were employed at all Titan I bases. At Larson a team of three men and a secretary set up effective progress reporting method involving more than 3,000 categories into which work was broken down. The contractual reporting began in January 1960 and the contract terminated on 31 January 1962. Data pertained only to work on Contract ENG-3552 and was used on pay estimates and for required reports to CEBMCO and Air Force Headquarters. Cost of the contract at Larson was $135,245.28.

Contract DA-04-548-ENG-14

Zep-Aero Corporation, El Segundo, California. Production of PLS manuals for Beale, Mt. Home, Ellsworth and Larson. Manuals produced under this contract were used during installation and testing of the Propellant Loading System.

Contract DA-04-548-ENG-16

Estimators Limited, Inc., Long Beach, California, estimating services. During the period 20 February 1961 through April 1962, from one to six estimators were furnished for use at Larson under this contract. Contractor also provided similar service at all other Titan I bases. As previously noted in this history the value of estimating service provided under this contract was a direct result of the background and adaptibility of the estimator furnished. One estimator was found to be quite effective in preparation of Government estimates in conformance with Corps of Engineers requirements. For the most part, the other personnel provided under this contract were of limited value. However, their services, although requiring considerable supervision by Contract Administration personnel, did assist the Area in maintaining a current status on estimating and negotiating during a critical period of the contract.

26. LIST OF MODIFICATION NUMBERS

CONTRACT ENG-3552:

As of 1 May 1962 there were 339 finalized modifications to this contract. The numbers of modifications exceeding $100,000 have been listed in Chapter 20 of this report. Because of the large number of modifications they have not been listed here. Interested persons or agencies may obtain such information from the ENGMA-VK 17 report which will remain on file in Headquarters, CEBMCO, until inactivation of that office and then revert to OCE contract files.

CONTRACT ENG-3559:

Mod No.	Description	Settled Price
1	Change in Contracting Officer Designation	n/a
2	Revision to A/C Paving	$402.00
3	Provide Additional Power Circuits--Bench Maintenance	368.00

CONTRACT ENG-3622:

Mod No.	Description	Settled Price
1	Change in Contracting Officer Designation	n/a
2	Relocate Metal Louver; Add Floor Drain, Room No. 105	82.00
3	Horizontal Joint Reinforcement	$413.00
4	Substitute Liquid Nitrogen for Liquid Oxygen for Testing	n/a
5	Add Perimeter Insulation	301.00
6	Modify Switching Station	(222.00) Cr
7	Additional Excavation & Compacted Fill	6,088.00
8	Process Piping Layout Discrepancies	383.00

Mod No.	Description	Settled Price
9	Testing, Bid Item No. 4	$ 730.00
10	Testing of Nitrogen & Oxygen Vessels	3,262.00
CONTRACT ENG-3624:		
1	Change in Contracting Officer Designation	n/a
2	Revise Asphalt Tile	64.00
3	Dustproofing Concrete Floor	None
4	Increase in Weight of 1" & 2" High Pressure Piping	3,865.00
5	Rerouting Main Feeder Conduits	266.00
6	Delete 3/4 inch Security Bars from Air Ducts	(206.00) Cr
7	Relocate Cold Water Supply	None.
8	Revise Security Fence alignment; Plywood Substitution	576.00
9	Reroute 3" Conduit for Electric Service	391.00
10	Additional Power outlets, Room 401; Bronze Pressure Regulating Valve	(147.00) Cr
11	Snap-Tite Coupling	304.00
12	Modify Platform in Precleaning Area	68.00
13	Time Extension - V-1 Fan	n/a
14	Enlarge Pit No. 2	325.00
15	Mod. Heating Sys. Condensate Return Lines; Mod. Exhaust Ducts in Rooms 420 & 421; Piping Identification Band Color Change	1,885.00
16	Reroute Grounding Cable	988.00
17	Additional Manual Fire Alarm Station; Provide Emergency Door, Room 420	1,475.00
18	Tie 125 psi Air to 110 psi Air Line; Provide Drip Pans	618.00

Mod No.	Description	Settled Price
19	Deletion of 2" Nitrogen Vent; Const. Maint. Access Ladders & Catwalks; Shutoff Valves, 125 psi Service	7,206.00
20	Revise Door Hardware; Modify Industrial Waste Piping; Revised Footings for Nitrogen Cylinder; Miscellaneous Electrical Changes; Leak Test of Completed Nitrogen System; Clean Nitrogen Vent Piping; Raise Exhaust Grills	18,177.00
21	Re X-Ray Pipe Welds	20,625.00
22	Modify Nitrogen Piping	15,823.00
23	Electrical Delay Costs; Repair of Ceilings	5,522.00
24	S.S. Float Sw. & Saran Lined C.V. (29-9); Approved Testing Lab (29-7); Safety Relief Valve, 4400 psi No. Ser. (29-8)	15,053.00
25	Claim for Delays	11,767.00
26	Claim for Substitution of Saran Lined Pipe	8,510.00

27. CONCLUSIONS AND RECOMMENDATIONS

Estimating personnel should be staffed early in the life of the Area, if the Area is to be responsible for estimating and negotiating Change Orders. It was determined that regular Corps employees were, in general, far more efficient and reliable and much more economical than estimators furnished by an Estimating Contracting firm.

Change Orders should be issued to the Contractor only after all sections concerned with the changed work have reviewed the Change Order to determine the necessity for the work and its effect on the performance of the overall job. At Larson this end was effectively accomplished by use of Change Order conferences at which representatives of the Corps Construction and Engineering Branches and SATAF representatives considered each Change before it was adapted.

To assist in the timely submittal of all necessary documents and to provide desirable information for use when the guarantees are involved, it is recommended that the contract be very explicit in provisions pertaining to guarantees to the extent of providing a standard form outlining the exact items covered under the guarantee.

Due to the number and nature of difficulties encountered in assignment of Standardized Equipment contracts, it is recommended that future projects utilize previously established methods of retaining Standardized Equipment contracts directly under control of the Corps.

PART IV

MISCELLANEOUS

28. GOVERNMENT COSTS

General:

The extremely rigid specifications pertaining to cleanliness of the Propellant Loading System and to shock mounting of underground facilities plus the urgent necessity for complying with strict time schedules under joint occupancy conditions demanded much closer control of contractor operations on ICBM construction projects than required in normal Corps of Engineers operations. In addition, frequent Air Force requirements for special surveys or re-checks of entire systems affected by minor changes to a portion of the system required more than normal staffing and expenditure of manhours by Corps personnel. These factors resulted in AE/A Office costs higher than normal for Corps of Engineers jobs. The Area Engineer maintained constant personal surveillance of all phases of the job in order to keep Government costs at a minimum; however, there was no lessening of standards of quality for the sole purpose of decreasing costs.

Factors Involved:

The total Government Cost pertaining to the Larson Project is composed of the following:

a. Labor - The Larson Area Office attained a peak assigned strength of 143 employees in April 1961. By the end of April 1962, the effective assigned strength was 29 as the result of a planned phase out in which personnel were released as soon as the requirement for their services no longer existed. Remarkable success was encountered in placing persons released as a result of reduction in force.

The office will be inactivated on 2 June 1962, with continuing reduction in force in the interim. The few employees remaining on duty after 2 June will be assigned to a CEBMCO holding detachment. When necessary for performance of specialized functions, specially qualified persons were obtained on temporary duty from other Corps agencies, particularly from Headquarters, CEBMCO or from Walla Walla District. The overtime factor in the total labor cost is considerable and increased in proportion to contractor earnings for final phases of the work due to the necessity for especially close supervision of the contractor's multi-shift operations on the highly technical PLS and equipment installation, testing, and acceptance portions of the job. A chart at the end of this chapter indicates the number of Corps Employees assigned to Larson during the project.

b. Travel and Transportation (Persons)- The assumption of Contracting Officer functions by the Director, Titan I, and the frequent necessity for conferences at CEBMCO and Air Force offices in Los Angeles caused increases in this item after the CEBMCO takeover because of the distance between the Directorate and the Area Office. Travel of new hires contributed greatly to this item during staffing of the office. The impact of CEBMCO takeover on this portion of the cost was not great since the great proportion of personnel were already present for duty on 26 October 1960.

c. Transportation (Things) - This item included freight and transportation of trailers for PLS testing, major items during the later phases of the job. The isolated location of Larson with regard to major sources of supply was a strong influencing factor in high transportation costs.

d. Rent, Communication, and Facilities - Rent and facilities were comparatively minor items and were handled by reimbursement of the Air Force for office space and laboratories on base. Field office space was furnished by the contractor under contract requirements. Communications in the form of commercial telephones, a direct commercial tie line to the Titan I Directorate, and a teletype station were also factors. The funds expended in improvement of communications were fully justified by increased efficiency of personnel and in expediting actions required to complete work of an emergency nature. Frequent changes in the contract caused by the theory of concurrency are estimated as being directly or indirectly responsible for about one-half of the long distance telephone charges due to the urgency regularly required by the Air Force in implementing last-minute changes.

e. Reproduction - A considerable portion of this item was the original cost of reproducing the thousands of copies of plans required by the contract for distribution to the successful bidder and to the Air Force Using Agency. Reproduction costs during the contract were also high because of the many changes and the requirement to reproduce 110 copies of all plans and specifications affected by modifications for use of the Corps and the contractor and for distribution to 16 Air Force agencies.

f. Other Contractual Services - This item comprised all contractual services of an overhead nature not otherwise classified above.

g. Materials and Supplies - Office materials and supplies of an expendable nature were included within this cost.

h. Vehicle Expense - Larson vehicles were either U.S. Army-owned or rented under contract. Cost for maintenance and repairs was included within this cost.

i. Suggestions and Awards - This item was necessary to maintain morale of personnel working on a crash program in an isolated area. Great emphasis was placed upon this program to assure proper recognition of personnel who made outstanding contributions to the job.

j. Mobilization Cost - This cost was pertinent to the Area Office mobilization costs incurred prior to construction.

k. Technical Support Billings - This represented costs billed by supporting Districts for services performed by their Technical Divisions, excluding Real Estate but including Administrative, Personnel, Geology, Legal, Safety, and Supply functions.

l. (Other) Direct to Line Items - Within the framework of this cost were such items as nonexpendable office equipment and services provided outside the supporting Districts for laboratory tests soils and materials tests, construction surveys, and source inspection of installed equipment.

m. Architect Engineer Inspection Contracts - A list of A/E contracts at Larson has been provided in the Contract Administration portion of this report.

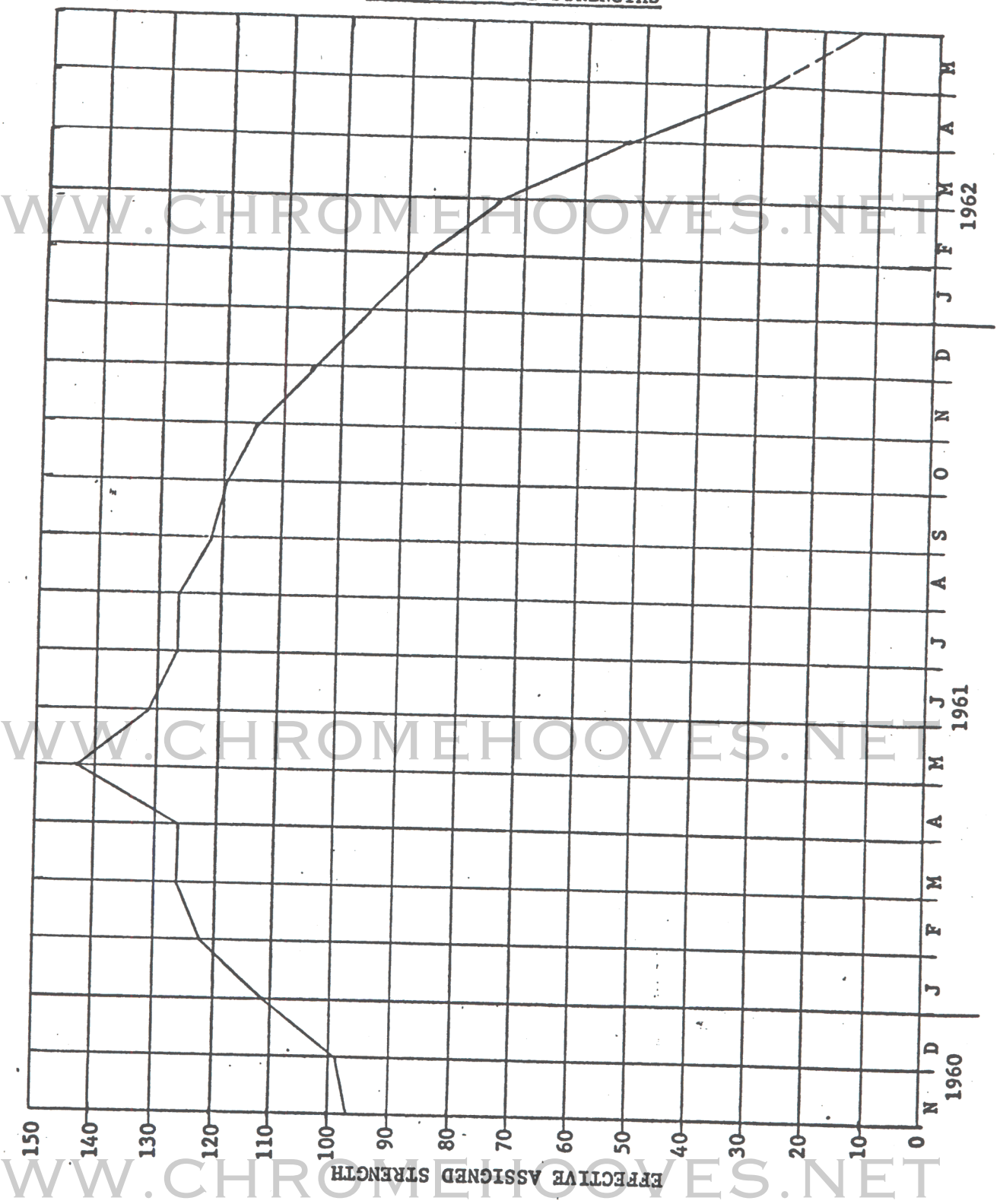
n. Directorate 802.2 - Titan I Directorate Costs charged against the Area.

o. Overhead - Costs other than Titan I Directorate charged against the Area.

Increase in Government Cost Percentage:

As indicated in the chart attached at the end of this chapter, Government costs for Larson project rose as the end of the job approached. The rise at job's end was normal since contractor's earnings decreased sharply, while inspection and supervision costs remained high due to the close control of punch list items and testing which had to be maintained and to the large number of personnel required in the Contract Administration portion for closeout. The final resolution of pending claims and modifications with the extensive travel and overtime required to coordinate and justify such action with the distant CEBMCO and Air Force offices concerned also added considerably to Government costs. It is estimated that the final Government cost including A&E contracts and CEBMCO Supporting District costs will be about eight per cent of construction costs. The accompanying listing of field office costs does not include A&E costs or CEBMCO or Supporting District costs. The final field office costs will be less than the 5.5 per cent indicated for April as a result of finalization and payment of outstanding claims and modifications.

AREA PERSONNEL STRENGTHS



PERCENTAGE OF FIELD OFFICE COSTS TO CONTRACTOR EARNINGS

Month	Accumulative Field Office Costs *	Accumulative Contractor Earnings	Percentage of Field Office Costs to Contractor Earnings
1959			
DEC	$ 118,686	$ 2,304,534	5.1 %
1960			
JAN	180,933	6,118,436	3.0 %
FEB	241,762	7,194,171	3.4 %
MAR	319,105	8,621,654	3.7%
APR	389,358	10,164,756	3.8%
MAY	453,259	10,674,814	4.3%
JUNE	520,487	13,568,588	3.8%
JULY	582,793	16,032,090	3.5%
AUG	654,001	19,159,630	3.4%
SEPT	739,218	22 641,497	3.3%
OCT	820,933	24,951, 057	3.3%
NOV	821,344	24,952,403	3.3%
DEC	925,376	28,303,800	3.3%
1961			
JAN	1,007 148	30,864,473	3.3%
FEB	1,121,940	33,127,555	3.4%
MAR	1,255,315	35,168,705	3.6%
APR	1,363,961	36.570,296	3.7%
MAY	1,480,230	37,516,070	3.9%
JUNE	1,595,719	38,240,611	4.2%
JULY	1,697,956	39,539,031	4.3%
AUG	1,842,580	40,479,158	4.6%
SEPT	1.950,526	40,830,095	4.8%
OCT	2,081,061	43,042,381	4.8%
NOV	2.185,242	44,051 756	5.0%

Month	Accumulative Field Office Costs *	Accumulative Contractor Earnings	Percentage of Field Office Costs to Contractor Earnings
DEC	$2,276,362	$44,538,845	5.1%
1962			
JAN	2,384,988	45,346,023	5.3%
FEB	2,597,926	46,082,319	5.6%
MAR	2,678,866	47,641,999	5.6%
APR	2,730,000 **	49,264,012	5.5%

*Does not include Architect-Engineer Costs or CEBMCO Overhead and Supporting District Costs.

** Estimated

BASIC CRITERIA

Department of Labor Wage Rate Decision U-3765 dated 1 September 1959 was applicable to contracts at Larson and was included in specifications of all construction contracts.

Office Procedure:

A preconstruction conference was held prior to the start of construction at which the contract labor standards were discussed. Items discussed were:

a. The purpose of the labor standards - to insure proper payment of wages of laborers and mechanics in accordance with Acts of Congress and Department of Labor Regulations.

b. The difference between subcontractors and material men was pointed out and the necessity for inclusion of the labor standards in all subcontracts was emphasized, and the use of Engineer Form 3192 was explained.

c. The site of work was explained as a broad term and not necessarily confined to specific work sites.

d. The contractor would be required to furnish proof that apprentices were registered in a Federally-recognized apprenticeship program.

e. Additional classifications must be established by the contractor and craft involved and approved by the Contracting Officer before being used by the contractor.

f. Straight time rates must be paid for work performed up to eight hours and overtime rates of one and one-half times base pay for all work performed in excess of eight hours.

g. Only authorized legal deductions would be permitted. Deductions requiring prior approval of the Department of Labor could not be made until

such approval had been obtained.

h. Posters indicating wage rates must be displayed on the jobsites at all times.

i. The contractor must advise the Contracting Officer of any work stoppage or threatened work stoppage and keep him currently advised of the status of any stoppage.

j. The nondiscrimination provision was explained and discussed.

Administrative Procedures:

The first contractor payroll was submitted for the week ending 13 December 1959. Engineer Form 3180 set up as Forms 3192 (Statement of Acknowledgement) were received from the Contractors. The subcontractor's name and address was entered on Form 3180 and a file folder was prepared for the statement of acknowledgement and payrolls to be submitted. Routine Labor Relations Interview forms were completed by inspectors in the field and transmitted to the Area Office where they were checked against the contractor or subcontractor payrolls. Action was immediately initiated on any discrepancies noted. There were approximately 1103 Routine Labor Relations Interviews (Form 3218) completed. About 2,452 payroll reviews were made. There were approximately 89 certificates of registration in apprenticeship files indicating apprentices were properly registered. After February 1961 a tabulation of regular and overtime hours, regular and overtime pay, travel pay, number of employees, and man days worked was maintained and kept current.

Investigations:

Following is a summary of investigations made to assure compliance with requirements of the Davis-Bacon Act:

a. Asbury Transportation Co. - Change Order No. 290 revised contract specifications to make it the responsibility of the contractor to haul Government-furnished gases and liquids from rail cars, trailers and LOX Plants.

This required off-loading Liquid Nitrogen, Gaseous Nitrogen, Helium, and RP-1 Fuel, from railheads and storage plants transferring the material to truck-tractors, and transporting it to the several missile sites. Special training was required for the truck drivers to handle Helium Compressors and Nitrogen Rechargers as well as Cryogenic vessels. The Asbury Transportation Company was engaged by the Contractor to perform this part of the work. The Asbury Transportation Co. is an Interstate certified common carrier and rates paid truck drivers were based on I.C.C. wage scale of $2.73 and $2.80 per hour. Prevailing area scale is $3.30 per hour. A difference of opinion developed over the application of the Davis-Bacon Act to the above work and an investigation was initiated on the basis of a complaint by the Business Agent for the Teamsters Local No. 148. A U.S. Department of Labor letter dated 6 February 1962, ruled that the Asbury Transportation Company was not subject to the contract labor provisions.

b. Eaton Metal Products Company - A letter dated 11 March 1960 from the Ironworkers Local #14, Spokane, Washington, asserted that Eaton Metal Products Company was a subcontractor, subject to the contract labor provisions, rather than a supplier. The Prime Contractor had entered into an agreement with Eaton Metal Products to furnish various parts and to assemble tunnel sections in accordance with plans and specifications. Eaton Metal fabricated and sold commercially such items as culverts, water tanks and like items. They had permanent fabricating shops at Denver, Colorado, and Billings, Montana. In this instance, Eaton Metal leased a hangar at the Ephrata, Washington, airport for a period of a year with an option for renewal on a month-to-month basis. Fabricating tools were brought and fabrication started. Classifications used in the shop were boilermaker

fitters, welders, general helpers, crane operators, oilers, etc. These men were paid shop rates rather than construction rates. Completed tunnel sections were hauled by Beardmore Heavy Hauling and Crane Service to points adjacent to the missile sites where the prime contractor installed pipe and electrical materials while the sections were still on the truck. When this was completed, the tunnel sections were taken to the job and placed into position by the prime contractor. No Eaton Metal Products Company men were employed on the jobsite. As a result of the complaint by the Ironworkers Local, an investigation was made by the Area Office and the Department of Labor was requested to make a determination as to the applicability of the Davis-Bacon Act. On 18 April 1960 the Ironworkers' Local #14 of Spokane, Washington, picketed all three complexes and also the Eaton Metal Products plant at Ephrata in protest of failure to pay contract predetermined wage rates. Other crafts honored the picket lines. The prime contractor applied for an injunction to enjoin the ironworkers from unfair labor practices and also brought the matter before the National Labor Relations Board. A temporary injunction was obtained on 19 April 1960 and was dissolved 22 April 1960. Work was resumed on 19 April 1960 after a total loss of 353 man days. In a letter dated 23 August 1960, the prime contractor was advised the Department of Labor had ruled that the Eaton Metal Products Company was a supplier rather than a subcontractor.

c. Cement Distributors, Inc. - A complaint by the Teamsters Local #148, Wenatchee, Washington, alleged that hauling of aggregate from pits to batch plants on job sites should be covered by the Davis-Bacon Act. An investigation was made. Pre-Mix Associates was a joint venture formed specifically to furnish all labor, materials, and service for supply of redi-mix concrete for the missile complexes. Pre-Mix Associates divided the work into two parts:

(1) Material Supply which consisted of mixing of aggregate purchased in open market pits at Othello, and Larson Air Force Base, Washington, and delivery of same to temporary batch plants located on the jobsite. The work was not considered covered by the Davis-Bacon Act. The hauling of the aggregate from pits to the jobsite was done by Cement Distributors, Inc., who paid truck drivers in accordance with ICC over-the-highway agreements.

(2) Construction. This work was considered covered by the Davis-Bacon Act. Pre-Mix Associates had set up three temporary batch plants on the jobsites to specifically supply the missile sites. Batch plant operators and transit mix truck drivers were paid $3.30 and $3.35 per hour respectively. Rates paid exceeded applicable rates of the Department of Labor wage rate decision. The ruling set forth in a letter from the Solicitor of Labor dated 19 September 1961 in connection with the Boise-Cascade Corporation at Mountain Home, AFB, Idaho, considered to be pertinent to the subject case in that the hauling operation was incident to the delivery of materials and not to the operation of the batch plant. For this reason Pre-Mix Associates was considered to have been in compliance with the labor standards provisions.

Work Stoppages:

From mid-December 1959 to 11 April 1962, there were twenty-two work stoppages resulting in a total of 2,879 mandays lost out of an approximate total of 500,000 mandays worked. Seven of the stoppages were the result of jurisdictional disputes. One, as noted above, was a combination of a jurisdictional dispute and Davis-Bacon coverage. Three stoppages resulted because of disputes over hazard or premium pay and others resulted because of alleged profane language, hiring of a new general foreman, supervision methods and a reduction-in-force. Of the work stoppages 19 occurred before

the establishment of Missile Sites Labor Committee in June of 1961.

Missile Sites Labor Relations Committee:

The Missile Sites Labor Relations Committee was activated on 27 June 1961. It was composed of the Area Engineer and Labor Relations Advisor of the Corps of Engineers, the Commander and Labor Relations Advisor of the SATAF, a representative of the Associated General Contractors, the Labor Advisor of MacDonald-Scott & Associates, the Labor Advisor of the Martin Company, the Federal Electric Company's Labor Officer and Business Agents for the several Building and Construction and Industrial Trades Unions. The Chairman of the Committee was Commissioner Albin L. Peterson of the Federal Mediation and Conciliation Service. Meetings were held the first and third Tuesday of each month, or as required. The mission of the Committee was to anticipate and discuss impending problems in an effort to preclude all strikes, lockouts or other interruptions of efficient performance of work. Subsequent to the establishment of the Committee, projects supervised by Larson Area experienced 3 work stoppages for a total of 81 mandays lost, a marked improvement over the preceding eighteen months.

All contractor personnel were off the jobsite as of 11 April 1962.

30. RELATIONS WITH AIR FORCE AGENCIES

SATAF:

The Larson Site Activation Task Force (SATAF) was essentially an Air Force surveillance and coordination team. Formed in September 1960, the SATAF was responsible to insure that the construction of facilities, the installation and checkout of the weapons system and associated equipment and the turnover of completed, operational Titan I missile launching and support facilities to the Strategic Air Command were coordinated and performed in a timely and economical manner.

The Concept of Concurrency utilized in the ICBM program required unusual cooperation between all agencies. The fine relations established at the Larson project contributed greatly to the successful completion of construction and were a tribute to the personnel of the Area Engineer's office, the Site Activation Task Force, and the various facility and technical contractors.

Larson Area enjoyed exceptionally fine relations with the SATAF Commander and his staff. The SATAF Commander delegated authority to and placed great confidence in the Area Engineer and the Area staff in matters of construction procedures and standards and in contract interpretation. In turn, the Area Engineer, as Deputy for Construction to the SATAF Commander, was able to eliminate duplication of effort and to augment the Area staff by utilizing Air Force Officers, civilian employees and consultants within the Area structure. As a result of the close liaison between the Area and SATAF staffs disagreements as to contract interpretations were kept to a minimum, the impact of joint occupancy due to the "theory of concurrency" was remarkably low, and turnover and acceptance of facilities was prompt and efficient.

The policy of the SATAF Commander which required SATAF screening of all Martin and Associate Contractors' comments on Corps construction eliminated the very great majority of potential problems arising from that source.

Larson Air Force Base:

All Corps of Engineers officers on duty at Larson were authorized and furnished married officers quarters on the same basis as Air Force Officers assigned to the Base. Quarters furnished were comfortable and adequate and full access to all Base facilities was authorized the officers and their dependents. The Area Office utilized services of the Base Transportation Officer for receipt and shipment of materials, the Base POL Office for fuel for vehicles, and the Base Automotive Repair Shop for limited technical assistance on vehicle repairs.

31. RECOGNITION AND AWARDS

General:

The isolation of the area in which the Larson ICBM construction was performed, the difficulty of obtaining adequate housing, the extreme urgency required for construction, and the temporary nature of employment all contributed to a situation which could have been detrimental to the morale of the personnel employed on this project. The Area Engineer recognized these factors early in the construction period and took positive action to indoctrinate all employees in the importance of the job to National Security. In addition, he took aggressive action to assure prompt and proper recognition of the accomplishment of all deserving employees. This program which indicated a sincere appreciation of difficulties encountered and of the remarkable accomplishments attained by the staff of career employees of the Corps of Engineers engendered a spirit of "can do" within the Area Office and high morale among Corps employees.

Civilian Awards:

In furtherance of the Area Engineer's policy, a total of 64 awards were presented through 30 April 1962. In addition, 12 civilian awards have been transmitted to the appropriate headquarters for processing prior to presentation. Awards include Outstanding Performance, Sustained Superior Performance, CEBMCO Certificate of Achievement, and a Letter of Commendation signed by the Area Engineer. In addition to awards initiated by the Area Office, 4 Area employees have received letters of commendation from the SATAF Commander, the Chief of Engineers has personally written two Area employees to congratulate them on their

achievement, and one employee received a letter of commendation from the Chief of a special investigating team set up by the Chief of Engineers.

Military:

The seven Army Officers assigned to Larson have been recommended for or have received two Air Force Commendation Medals, 3 Army Commendation Medals and one CEBMCO Certificate of Achievement. In recognition of outstanding service given by Air Force Officers in support of Corps operations, four Air Force Officers have been recommended for the Army Commendation Medal and four for the CEBMCO Certificate of Achievement.

Awards to Civilian Agencies:

In recognition of the assistance given by union business agents and other union officials, the Area Engineer presented letters of appreciation to 21 officials of Labor Union Locals and Trade Councils in the Central and Eastern Washington Area. Four contracting firms were presented with Department of the Army Safety Awards for contributing to the outstanding safety record attained by the Larson Project.

32. SPECIAL EVENTS

General:

Special events of major interest to the Larson Area Office were five key visits and one ceremony. The visits were made on 27 July 1960 by Lt. Gen. E. C. Itschner, then Chief of Engineers; on 28 November 1961 by Lt. Gen. W. K. Wilson, Jr., present Chief of Engineers; on 1 December 1961 by Maj. Gen. T. H. F. Foulkes, O.B.E., the Engineer-In-Chief of United Kingdom Forces; on 17 June 1961 by a group of Greek Army Officers; and on two occasions, in April and December 1961 by R.O.T.C. Cadets of Washington State University. Command visits by other key personnel are listed at the end of this section.

Visit of Lt. Gen. E. C. Itschner:

General Itschner arrived by plane at Larson on 27 July 1960 and departed the same day. He was accompanied by Major General William F. Cassidy and by the Assistant Engineer Inspector General who performed the Annual General Inspection during the Chief of Engineers' visit. General Itschner visited Complexes 1-A and 1-B where he observed construction operations and conferred with Col. Symbol, District Engineer, Walla Walla; with Lt. Col. Fritz, Area Engineer, Larson; and with members of the Walla Walla and Larson Staffs.

Visit of Lt. Gen. Walter K. Wilson, Jr.:

On Tuesday, 28 November 1961, Lt. General Walter K. Wilson, Jr., Chief of Engineers, arrived by plane at Larson Air Force Base from Ft. Lewis, Washington on a familiarization and inspection tour of Missile Construction Sites.

General Wilson was welcomed to Larson by Col. Calhoun, Deputy

Commander, 4170th Strategic Wing; Lt. Col. Salter, Base Commander, Larson Air Force Base; Col. E. J. York, Commander, SATAF Detachment No. 9; and Col. H. C. Rowland, Area Engineer. Officers assigned to the Larson Area Office and the Deputy Area Engineer were present and were presented to General Wilson and party.

General Wilson was accompanied by Col. S. Lipton, Deputy Division Engineer, WPD; Maj. J. E. Lynch, Executive Assistant to General Wilson; Col. C. H. Whitesell, Director, Titan I, CEBMCO; Lt. Col. E. L. Perry, District Engineer, Seattle; and Lt. Col. J. H. Harper, Deputy District Engineer, Seattle.

A briefing on the status of construction at Larson was presented by Col. Rowland enroute to Complex 1-B near Warden, Washington. The tour at Complex 1-B was conducted by Maj. P. F. Carroll, Chief, Construction Branch. Capt. R. B. Spieldoch conducted the tour of a Propellant Terminal and briefed General Wilson on the status of PLS testing at Larson.

Gen. Wilson and party departed by plane for Walla Walla after spending about two and a half hours at Larson.

Visit of Maj. Gen. T.H.F. Foulkes, OBE, Engineer-In-Chief, United Kingdom:

On Thursday, 1 December 1961, Maj. General Foulkes arrived by plane at Larson Air Force Base from Fort Lewis Washington on a familiarization tour of various Corps of Engineers construction projects.

General Foulkes was welcomed by Col. D. A. Tate, Commander 4170th Strategic Wing; Lt. Col. R. D. Salter, Commander, Larson Air Force Base; Col. E. J. York, Commander, SATAF, Detachment No. 9; Col. T. J. Hayes,

Commander, CEBMCO; and Col. H. C. Rowland, Area Engineer.

General Foulkes was accompanied by Col. Lindsell, British Liaison Officer to the Corps of Engineers and Lt. Col. J. F. Kimbel, Acting Deputy Division Engineer, NPD.

After luncheon at the Larson AFB Officer's Club the party proceeded to Complex 1-B near Warden, Washington for a tour conducted by Maj. P. F. Carroll. Following this tour Gen. Foulkes returned to Larson AFB and boarded the aircraft for flight to Fairchild AFB.

Clearance for Gen. Foulkes' visit was granted by BSD.

Visit of Greek Army Officers:

On Saturday, 17 June 1961, four Greek Army Officers, Lt. Col. M. Polykandriates, Maj. J. Lillas, Maj. B. Valentras, and Maj. G. Manoles arrived at the Larson Area Office accompanied by Mr. R. Pulfer of Walla Walla District. Their visit to the Larson Project was a part of the Engineer Observer Training Course sponsored by the Military Assistance Program and had been cleared through the Air Force BSD.

Following a briefing in the Area Office by Capt. Bauer the group proceeded to Complex 1-B for a tour of the Complex.

Visit of ROTC Cadets and Society of Military Engineers, Washington State University:

Members of the ROTC and Student Chapter, SAME of Washington State University visited the Larson Project on two occasions, during April 1961 and again during December 1961. The purpose of these visits was to familiarize engineering undergraduate students with some of the work performed by the Corps of Engineers. Both visits included a tour of

Complex 1-A near Odessa, Washington. These tours were conducted by Capt. Walter, Project Engineer, Complex 1-A, assisted by the officers assigned to the Area Office.

Thr tours were preceeded by a briefing on the overall aspects of the missile construction program and the Corps of Engineers responsibilities in this program. After these briefings the students were divided into small groups and each group guided through the Complex by one of the Area Officers. Clearance for the visits was given by the SATAF Commander and SATAF Officers and Associate Contractors' engineers assisted in briefings and demonstrations.

Transfer Ceremony (NPW to CEBMCO):

General Orders No. 34, dated 11 October 1960, Headquarters Department of the Army, Office of the Chief of Engineers, Washington 25, D. C. directed the transfer of the Larson Area ICBM construction responsibilities from the Walla Walla District to CEBMCO effective 0001 hours 26 October 1960.

This transfer of responsibilities was accomplished during a ceremony in the Boeing 8 Place Hanger on 26 October 1960.

Persons Present

CEBMCO - B. Gen. A. C. Welling, Commander, CEBMCO
Col. C. H. Whitesell, Director, Titan I, CEBMCO

Walla Walla District - Col. P. Symbol, District Engineer, Walla Walla

Larson Area - Col. H. C. Rowland, Jr., Area Engineer
Mr. C. B. Olmstead, Deputy Area Engineer

Others - Area Officers
Col. E. W. Best, USAF, Commander, 4170th Strat. Wing
Col. E. J. York, USAF, Commander, SATAF Det. #9
Members of the Press

The ceremony consisted of brief speeches by Col. Symbol and Gen. Welling relinquishing and accepting responsibility. The ceremony was followed by a tour of the three complexes by the officers concerned and by the press. Wide coverage of the transfer was given by Spokane, Seattle and local newspapers.

Other Ceremonies:

No ceremonies were conducted at the time the final complex was completed and turned over to the Using Agency. This policy was the result of a decision arrived at between the Area Engineer and the SATAF Commander who agreed that the successful accomplishment of an extremely difficult and highly-technical construction project in less than the allotted time was a routine matter for the Corps of Engineers and that a ceremony would only disrupt the work of Installation and checkout being performed by the Associate Contractors.

News Coverage:

Very favorable relations existed between the Area and local and Spokane and Seattle news media. Newspapers carried numerous illustrated articles covering Corps of Engineers work at Larson and Area accomplishments were the subject of radio and television programs over local stations.

COMMAND STAFF VISITS AND INSPECTIONS
CORPS OF ENGINEERS, LARSON AREA
DECEMBER 1959 THRU APRIL 1962

DATE	AGENCY	INSPECTOR	PURPOSE
26 Jan 60	OCE	Gen. Wilson	Command Visit
12 Feb 60	NPW	Col. P. H. Symbol	Command Visit
28 Mar 60	NPW	Col. P. H. Symbol	Command Visit
28 Mar 60	NPD	Col. H. N. Turner	Orientation
28 Mar 60	NPD	Lt. Col. J. C. Bell, Jr.	Orientation
28 Mar 60	OCE	Col. T. J. Hayes	Command Visit
28 Mar 60	OCE	W.A. Talley	Inspection
29 Mar 60	LAB	Lt. Col. Wendell E. Johnson	Orientation
21 Jun 60	OCE	Theodore E. Silas	Orientation
12 July 60	Zep Aero	W. J. Zepp	Orientation Visit
18 July 60	AFRCE-NP	Col. Eric Dougan	Orientation Visit
27 July 60	Mt. Home AFRCE	Lt. Col. J. C. Bell, Jr.	Orientation Visit
3 Aug 60	NPW	Maj. L. L. Heimerl	Orientation Visit
23 Sept. 60	USAG	Lt. Col. E. R. Clark	Orientation Visit
5 Oct 60	CEBMCO	Col. C. H. Whitesell	Staff Visit
5 Oct 60	NPW	C. C. Davis	Staff Visit
26 Oct. 60	NPD	Brig. Gen. A.C. Welling	Turnover NPW to CEBMCO
26 Oct 60	NPW	Col. S. M. Lipton	Turnover NPW to CEBMCO
26 Oct 60	CEBMCO	Col. C. H. Whitesell	Turnover NPW to CEBMCO
26 Oct 60	NPW	Col. Paul H. Symbol	Turnover NPW to CEBMCO
31 Oct 60	NPW	Col. B. W. Hoare	Orientation
23 Jan 61	CEBMCO	Brig. Gen. A.C. Welling	Staff Visit
21 Mar 61	NPW	Col. P. H. Symbol	Orientation
27 May 61	OCE & CEBMCO	Messrs. Sale, W. Turnbull, F.M. Mellinger, J. G. Robers	Settlement of Tunnels

DATE	AGENCY	INSPECTOR	PURPOSE
27 and 28 June 1961	CEBMCO	WO R. D. Lucas	Security Insp.
6 Jul 61	CEBMCO	Col. C. H. Whitesell	Staff Visit
28 & 29 July 1961	CEBMCO	Messrs. J.L. Jones, C. Tiersch, L.O. Thornburg, L.D. Adams	Subsurface Water leakage, Complex 1-C
14 Aug 61	CEBMCO	D.C. Baer	PLS Inspection
14 Aug 61	OCE	M. R.G. Ahlvin	Survey of water problem, 1-C
14-18 Aug 61	CEBMCO	Mr. Robertson	Army Audit
18 Sep 61	CEBMCO	Col. C. H. Whitesell	Contract Negotiations
20-22 Sep. 61	CEBMCO, BSD, OCE & NPW	Messrs. J.L. Jones, L.D. Adams, J.B. Smith, L.O. Thornburg, C.F. Reynolds, K.S. Eff, R.G. Ahlvin, A.J. Nowowiejski, J.B. Ames	Subsurface water leakage, 1-C
22 Jan 62	CEBMCO	Marie Parlante	Audit of Contr files
22 Jan 62	CEBMCO	E.L. Hughes	Audit of Contr files
29 Jan 62	CEBMCO	W.R. Peterson	Audit of Contr files

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