

Contract No. C-15-006-81
James and Luther
CHEVRON U.S.A. INC.
ENGINEERING DEPARTMENT - EL PASO, TEXAS

SPECIFICATION NO. EP-418-Q
January 12, 1981
Appendix I
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A.1 STANDARD SPECIFICATIONS

<u>Number</u>	<u>Title</u>
EG-850C	Placing and Curing Concrete
EG-851	Concrete Proportioning
EG-1048A	Small Tools
EG-1049C	Supplies
EG-516C	Reinforcing Steel
EG-398H	Steel Fabrication
EG-581	Clearing Grading and Earthwork

A.2 REFINERY AND ENGINEERING INSTRUCTIONS

1404 General Instructions to Contractors Working Within the Refinery

A.3 CONSTRUCTION DRAWINGS

PC-38-32224	Foundation - Fuel Gas Knock Out Drum
PD-13-29921	Sheet No. 15-110 # Steam Supports
PA-38-22096	Concrete Foundation Location Plan
PA-38-22001	Plot Plan - Plant 38
PA-13-23083	Overhead Pipeway
PD-13-32212	Plot Plan - Widen Pipeway

A.4 MISCELLANEOUS

EP-2200 Qualification of Welders

Richard A. Lavin 1/19/81
Engineer

Con W. Jones 1/19/81
Lead Engineer

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FOUNDATION WORK - PLANT 33 ISOLATION
EL PASO REFINERY

SECTION I - GENERAL REQUIREMENTS

1.0 SCOPE OF WORK

CONTRACTOR shall provide all tools, construction equipment, labor including supervision and inspection, and all items of a consumable nature that are required for construction of foundations and pipeway stanchions for the isolation of the Platformer Plant at the Chevron U.S.A. Inc. El Paso Refinery as detailed by this specification, including the drawings and other attachments listed in the appendix.

This work includes, but is not limited to:

- a. Excavation for foundations
- b. Placing of concrete forms, reinforcing steel and concrete
- c. Construction of stanchions and supports to widen an existing pipeway.

2.0 WORK, MATERIALS AND UTILITIES BY COMPANY AND OTHERS

COMPANY will provide the following material: W-shapes, angle iron, channel iron, reinforcing rods, steel plate, anchor bolts.

COMPANY will provide industrial fresh water and 80 psig air at nearest point of supply to working site. Suitable couplings and all materials for extension of service to CONTRACTOR'S work areas shall be provided by CONTRACTOR.

CONTRACTOR shall provide concrete and forms and all painting material required.

3.0 SEQUENCE OF WORK

The sequence of work shall be as mutually agreed between the COMPANY and CONTRACTOR and shall be consistent with the facing sheet of the agreement.

4.0 INTENT

The installations shall be complete in every respect, constructed in accordance with generally accepted, current good practices of the several trades involved and the detailed requirements of this specification and ready to serve in the manner expressed or implied herein, regardless of whether or not full details of such completeness or practices are contained herein.

The specifications and drawings are not complete in every detail and CONTRACTOR shall comply with their true intent taken as a whole, and not avail himself of any errors or omissions to the detriment of the work. Should any error, omission or discrepancy appear in the drawings, specifications and instructions, CONTRACTOR shall notify COMPANY at once, and COMPANY will issue instructions

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to be followed. If CONTRACTOR proceeds prior to receiving such instructions, necessary corrections shall be at CONTRACTOR'S expense. Anything not indicated on the drawings or outlined in the specification which is necessary for full and faithful construction of the installations in accordance with the true intent of this agreement or anything indicated on the drawings but not outlined, or vice versa, shall be provided and incorporated at the expense of CONTRACTOR to the same extent as though fully set forth in both the drawings and the specification.

5.0 COMPANY REVIEW AND APPROVAL

COMPANY'S review of, approval of, or agreement to the performance of certain items of work or the provisions of certain material shall in no way relieve CONTRACTOR of full responsibility for the performance of such work or for the adequacy of such material. All such reviews, approvals or agreements shall be obtained through COMPANY'S Construction representative, or in a manner previously approved in writing by COMPANY'S Construction representative.

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SECTION II - GENERAL CONDITIONS AND PERFORMANCE OF WORK

6.0 PRECEDENCE

6.1 The following items shall take precedence in the order listed in the event of conflict:

- a. Facing sheet of agreement
- b. Terms and Conditions
- c. Refinery Instruction No. 1404
- d. This specification
- e. Construction drawings in Appendix A.3 attached to this specification
- f. Standard specification in Appendix A.1 attached to this specification
- g. Reference drawings and specifications, engineering instructions, recommended practices, and refinery instructions in Appendix A.2 attached to this specification.

6.2 As used in the standard specifications attached hereto:

- a. "Purchaser" shall mean COMPANY
- b. "Supplier" or "vendor" shall mean CONTRACTOR
- c. "Purchaser's Inspector" shall mean COMPANY Construction Representative.

6.3 Unless otherwise expressly provided in this specification:

- a. Any data, specifications, material and work or any other matter which is covered by this agreement which the standard specifications require to be provided by COMPANY shall instead be provided by CONTRACTOR,
- b. Any provisions of the standard specifications requiring COMPANY to inspect certain material or work shall mean that COMPANY has an option, rather than the obligation, to so inspect such material or work,
- c. Any warranty of guarantee provisions contained in the standard specifications shall be of no effect and the warranty and guarantee provisions of this specification, if any, shall apply, and
- d. Any item of material, work, inspection or testing to be furnished at extra expense to COMPANY pursuant to the standard specifications shall be furnished under this specification at no increase in CONTRACTOR'S compensation.

All provisions in the standard specifications concerning compensation or payment to CONTRACTOR in case of delay shall be of no effect, and the provisions of the Terms and Conditions and of this specification shall apply.

In the engineering instructions, reference to COMPANY'S personnel shall be of no effect, and CONTRACTOR'S personnel shall perform all activities which are to be performed under the engineering instructions, except as otherwise provided elsewhere in this specification.

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Where standard specifications on materials contain sections covering COMPANY'S normal requirement for purchasing and field erection, these sections shall be of no effect except as otherwise expressly stated in this specification.

7.0 FIELD REPRESENTATIVES

7.1 COMPANY'S Representative

COMPANY will maintain a representative in the field pursuant to Section 4.0 of Refinery Instruction No. 1404, General Instructions to Contractors Working Within the Refinery, attached.

Examples of his functions are to:

- a. Establish and maintain field liaison between CONTRACTOR'S Construction Representative and COMPANY.
- b. Provide materials to CONTRACTOR as provided in this specification.
- c. Review CONTRACTOR'S construction schedule.
- d. Provide drawings and specifications as required.
- f. Make such inspections as COMPANY may desire in order to check the quality and progress of the work.
- g. Review and approve field changes or material substitutions, or any other matter where COMPANY'S approval or agreement is required by this specification.
- h. Negotiate with CONTRACTOR'S Construction Representative the adjustment in compensation arising from a change.

7.2 CONTRACTOR'S Construction Representative

CONTRACTOR shall maintain a construction representative in the field at all times who shall act in full charge of CONTRACTOR'S work and maintain field liaison between CONTRACTOR and COMPANY'S Construction Representative.

8.0 OTHER CONTRACTS

COMPANY reserves the right to let other contracts or other services in connection with CONTRACTOR'S work hereunder. CONTRACTOR shall afford others equitable opportunities for the introduction and storage of their materials and the execution of their work and shall properly coordinate its work with theirs.

9.0 WORK WEEK AND OVERTIME

CONTRACTOR shall pursue to field construction work on a 40-hour per week work schedule in accordance with Section 6.0 of Refinery Instruction No. 1404, General Instructions to Contractors Working Within the Refinery, attached.

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10.0 PLANT REGULATIONS

Prior to the commencement of work, CONTRACTOR shall become familiar with the plant regulations specified in the attached Refinery Instruction No. 1404, General Instructions to Contractors Working Within the Refinery and the following regulations. CONTRACTOR shall be responsible for compliance with these regulations during the execution of his work.

10.1 Electrical Safety Requirements

CONTRACTOR shall provide and use ground fault circuit interrupters for personnel protection at all construction sites (including areas inside existing plants) on all 120 volt single phase 15 and 20 amperes receptacle outlets.

Hubbell type GFP or Porta-Power Pak Inc., Model 72 series are typical of acceptable portable receptacle units.

Ground fault circuit interrupters shall not be used in areas where flammable vapors are present.

It is essential that the polarity of the conductors in all cords, plugs and receptacles supplying single pole portable ground fault circuit interrupter units be properly maintained to insure proper operation of the units.

10.2 Work Space and Storage Area

COMPANY will assign space in the general vicinity of the CONTRACTOR's work for CONTRACTOR's office, work space and storage area.

11.0 TEMPORARY CONSTRUCTION FACILITIES

11.1 CONTRACTOR shall provide and install all necessary temporary facilities including, but not limited to, tool rooms, locker rooms, toilets, office and storehouse. All temporary installations shall be subject to approval by COMPANY prior to installation.

11.2 In addition, CONTRACTOR shall provide all necessary temporary equipment and material including, but not limited to, shoring, concrete forms, bracing, ladders, scaffolding, staging, drop cloths and tarpaulins.

11.3 CONTRACTOR shall maintain all temporary facilities, material and equipment in a safe and adequate manner and remove them immediately upon completion of the work requiring their presence.

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12.0 SURVEYING

CONTRACTOR shall perform all surveying necessary from base lines and bench marks established by COMPANY. The accuracy for all grades and elevations of any structures and location of installations described in this specification shall be the responsibility of CONTRACTOR.

13.0 EXCAVATION AND BACKFILL

Earthwork shall be in accordance with applicable paragraphs of Specification EG-581. CONTRACTOR shall haul any excess excavated material to a location designated by COMPANY'S Construction Representative.

14.0 DELIVERY AND HANDLING OF COMPANY PROVIDED MATERIALS

- 14.1 Materials furnished by COMPANY will be available to CONTRACTOR at the Refinery Storehouse. CONTRACTOR shall provide the necessary labor and equipment for handling and transporting materials.
- 14.2 CONTRACTOR shall be responsible for keeping all material in good condition until acceptance of the installations, subject to Section 5.3 of the Terms and Conditions.
- 14.3 Upon completion of the installations, CONTRACTOR shall provide COMPANY an inventory of all remaining material which was provided by COMPANY including the quantity, description, and the item number for each item. When directed by COMPANY, CONTRACTOR shall transport the remaining material to the locations on COMPANY'S premises designated by COMPANY.
- 14.4 CONTRACTOR'S requests for withdrawal of COMPANY-furnished material and equipment shall be based on quantities shown on drawings or lists of materials furnished by COMPANY. CONTRACTOR shall obtain approval from COMPANY'S Representative before materials in excess of the quantities shown on the drawings or lists of materials will be issued.
- 14.5 CONTRACTOR shall:
 - a. Be responsible for keeping all materials and equipment in good condition until the completed installations are accepted by COMPANY, including taking any necessary steps such as painting, greasing, installation of rust preventive oil, or covering, etc., to protect all equipment externally and internally from mechanical damage or damage from the elements,
 - b. Be held accountable for surplus materials furnished by COMPANY, items received from COMPANY and to be returned, and for shortages or damages to equipment and materials furnished by COMPANY.

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14.6 CONTRACTOR shall promptly check bills of material or drawings for any errors which would result in shortages and shall notify COMPANY in writing if there are any such errors or if the listed are insufficient to meet his anticipated needs. Delays caused by CONTRACTOR'S failure to discover and promptly report such errors or that the equipment and materials listed are insufficient to meet his anticipated needs shall not constitute a basis for extension of time of completion under Section 3.2 or a basis for reimbursement under Section 3.3 of the Terms and Conditions.

15.0 DRAWINGS AND DIMENSIONS

COMPANY will provide to CONTRACTOR two copies of all pertinent standard drawings, standard specifications, reference drawings, and construction drawings.

16.0 INSPECTION AND TESTING

16.1 General

CONTRACTOR shall be solely responsible for thorough craft inspection during construction and for the quality of the work. COMPANY will make such inspection as COMPANY may desire in order to check the progress and quality of the work, to see that CONTRACTOR'S employees are properly qualified in their respective crafts, that workmanship is of an acceptable grade, and that all requirements of this Specification are being met. Such inspection or any other inspection or testing by COMPANY shall in no way relieve CONTRACTOR of full responsibility for the work hereunder.

16.2 Welding Inspection and Qualification

CONTRACTOR shall arrange for welding qualification tests at his expense at El Paso Testing Company, Inc., 2315 Myrtle Street, El Paso, Texas 79901, phone 532-3831, or other approved testing firm, in accordance with Engineering and Maintenance Instruction EP - 2200. Welders shall be required to pass qualification tests before performing and operation. COMPANY reserves the right to require additional qualification tests during construction if it has any doubt about the competence of welders. COMPANY shall be allowed to witness tests and to examine test coupons. If additional tests are required and passed by welders, cost of retesting will be borne by COMPANY; if failed, cost of retesting shall be borne by CONTRACTOR.

16.3 Concrete Samples

COMPANY may perform compression and slump tests on concrete. CONTRACTOR shall furnish samples taken in accordance with ASTM Specifications as may be requested for the following tests and inspections:

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- a. Compression Tests: 3 cylinders from each 10 cu. yd. of structural concrete placed each day.
- b. Slump Tests: Periodic samples daily during pouring of concrete.

17.0 CLEANING UP

During the performance of the work, CONTRACTOR shall keep a reasonable degree of order by disposing of accumulated rubbish and waste material and, at the completion of the work, the site shall be cleared of all debris, left-over tools, consumable supplies, and material which may have accumulated in the performance of the work. Where the CONTRACTOR, after due notice, fails to keep the area of his work reasonably clean and safe, or fails to clean this area at the completion of the work, COMPANY may perform this work; the cost of such work shall be for CONTRACTOR'S account and may be deducted from the sums due or to become due CONTRACTOR.

18.0 COMPLETION

The work will be considered "complete" when CONTRACTOR has performed all work expressly stated or implied in this Specification.

19.0 STEEL WORK

19.1 Fabrication

Structural steel fabrication shall conform to Specification EG-398.

19.2 Erection

CONTRACTOR shall erect all steel work. All work shall comply with latest editions of the AISC Code of Standard Practice for steel building and bridges, AISC Specification for design, fabrication, and erection of structural steel for buildings and AWS Standard Code for Arc and Gas Welding in Building Construction.

19.3 Pipe Supports

CONTRACTOR shall fabricate, locate, and install all required pipe supports. Supports for small lines not shown on project drawings shall be field fabricated by CONTRACTOR.

19.4 Bolts and Clips

All bolts and clips required to fasten all pipe supports to structures shall be installed even though the attachments are not shown on the construction drawings.

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19.5 Welders

Field welding on steel work shall be done by welders who are qualified as specified in Section ~~16-2~~ of this Specification.

17.2

20.0 PAINTING

All exposed metal surfaces of piping, structures, supports, drums and exchangers shall be painted as follows:

20.1 Surface Preparation

Wire brush surface to conform to Steel Structural Painting Council Standard SSPC SP#.

20.2 Primer

LZI primer - low lead, brush, roll or spray.

20.3 Paint

Aluminum paint - Hanley Sunfoe 17-010 or equal, applied according to manufacturer's recommendations.

21.0 CONCRETE WORK

21.1 Scope of Work

CONTRACTOR shall provide and be responsible for all concrete work.

21.2 Methods

Placing and curing concrete shall be in accordance with Specification EG-850.

21.3 Properties

Ready-Mix concrete shall be in accordance with ASTM Specification C-94.

In field mix concrete is used, materials to be used and the procedure to be followed in proportioning and mixing Portland Cement Concrete in the field shall conform with Specification EG-851. Consistency and workability shall be in accordance with Specification EG-851 with a minimum ultimate compressive strength of 3000 psi after 28 days of curing, maximum aggregate size 3/4 inch, slump 3 to 5 inches.

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Method of measuring materials shall be such that the proportions can be accurately controlled and easily checked at any time during the work.

21.4 Anchor Bolts

All anchor bolts securing machinery or equipment shall be provided with sleeves in accordance with Drawing GB-Q68922. After setting equipment, these sleeves shall be filled with grout. Anchor bolts shall be accurately placed and securely tied to avoid movement during concrete placement.

21.5 Special Techniques

CONTRACTOR shall consult COMPANY'S Construction Representative before using such special techniques as, for example: precasting pipeway stanchions, or pumping structural concrete.