

COASTAL STATES PETROCHEMICAL COMPANY
PHONE TULIP 3-5211
CORPUS CHRISTI, TEXAS 78403

PLAINTIFF'S EXHIBIT

CC-246

August 24, 1970

MAILING ADDRESS
P. O. DRAWER 521

Berry Contracting Company
P. O. Box 1757
Corpus Christi, Texas 78403

Attention: Mr. J. O. Reynolds

Gentlemen:

You are invited to bid on the utility and process piping connecting to a reformer refinery unit.

The work is described in the attached plans and specification.

Please note contractor is to purchase all material and do all work.

Existing valves at the reformer battery limits, which are to be removed, may be reused by contractor.

Yours very truly,



C. W. Allison
Project Engineer

CWA/kck
Attachments

EXHIBIT "A"

mLb

CED0006303

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EXHIBIT "A"

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I SCOPE

You are invited to bid on the complet installation, ready to run,
of reformer off-site utility and process piping.

II LOCATION OF WORK

The piping will be installed in Coastal States Petrochemical Company's West Refinery.

The area is adjacent to refining units in operation and refinery safety regulations will be observed.

Other construction contractors are working in the area and sharing of road systems and parking areas may be required.

Most of the piping will be run on overhead pipe racks and only a limited amount of prefabrication can be done.

EXHIBIT "A" *m Lb*

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III START DATE - COMPLETION DATE

Construction is scheduled to start September 14, 1970 and be complete October 16, 1970.

EXHIBIT "A" *encl.*

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IV BID INSTRUCTIONS

You are invited to bid the completely installed piping ready to run.

You are invited to state in your bid any exceptions or reservations to installing a complete and ready to run unit.

Bids will be received until 12:00 Noon September 8, 1970, addressed to:

Mr. B. A. Paulson - Vice President
Coastal States Petrochemical Company
P. O. Box 521
Corpus Christi, Texas 78403

The contract for construction of this unit will be awarded within two weeks of the bid date.

EXHIBIT "A"

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V COASTAL STATES PARTICIPATION

1. Equipment - Coastal States will furnish no material for this installation.
2. Utilities - Coastal States will make available to the contractor.
 - A. Electricity
 - B. City Water

EXHIBIT "A"

CED0006309

VI CONTRACTOR RESPONSIBILITIES

1. Labor & Materials - Contractor will purchase, store and provide all material for the job not shown as being furnished by Coastal above. Contractor will furnish or supply all labor, supervision, construction tools, consumable supplies, equipment and temporary facilities needed to accomplish the installation.
2. Contractor will receive material furnished by Coastal at the refinery warehouse or will off load the material from the vendor truck at the job site.
3. Site Preparation - Pipe supports on which the piping is to be run are existing.

Contractor will use existing bench markers and established elevations and do his own survey work.

4. Piping and Testing - contractor will install all piping in accordance with the code for pressure piping USA B31.3 latest revision.

Contractor will make piping tie-ins to existing piping. Contractor will coordinate the tie-ins with Coastal's operating and safety personnel. Each tie-in will require a set of flanges and contractor will blind these flanges.

Contractor will do all hot tap work required to tie-in to lines in service.

Contractor will install high point bleed valves and low point bleed valves and low point drain valves in all piping.

Contractor will fabricate and install expansion loops as required and install anchors and pipe shoes as required. There are no steam traced lines in this installation. Contractor will hydrostatically test all installed piping and keep a written record of the hydrostatic tests.

5. Structural and Civil - Contractor will carefully lay out the unit and hold locations and elevations as shown on the drawings.
6. Painting - No painting is required.
7. Insulation - Thermal insulation as called for on the line list will be in accordance with UOP Specification 295.

EXHIBIT "A"

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VII COASTAL STANDARDS

1. Piping Specifications 150 & 300
2. Insulation Specifications

EXHIBIT "A" *mLP*

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VIII SCHEDULES

1. Line List
2. Discussion of Lines.

EXHIBIT "A" m LP

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IX DRAWINGS

1. Plot Plans & Flow Sheets
408-101-1 Reformer Tie-ins
2. Foundation & Paving
None
3. Structural Steel - 408-105-1 & 2
4. Piping Drawings
343-307-1 Piping Plan
343-307-6 Utility Area
343-207-22 Piping Plan
343-207-19 Piping Plan
343-207-20 Piping Plan
343-207-21 Piping Plan
343-207-4 Piping Plan
343-207-6 Upper Piping Plan
343-207-7 Lower Piping Plan
343-207-8 Upper Piping Plan
343-207-9 Piping Plan
343-207-10 Piping Plan Upper Level
343-207-23 Lower Piping Plan
343-207-24 Upper Piping Plan
343-107-142 Steam Trap
343-507-105 Cooling Water Pump
343-507-103 Tie Rod Detail
343-207-26

EXHIBIT A mLP

LINE LIST

	Construction Class	Insulation
16" Relief	150	None
8" Platformate	150	None
3" Service Water	150	None
1½" Water to Disposal	150	None
1½" 5 BE Caustic	150	None
1½" Spent Caustic	150	None
6" Sour Off Gas	150	None
1½" Stripper O'H LE	150	None
2" Stab O'H LE	150	None
6" FR Hydrobon Prod.	300	None
6" Hydrogen	300	None
1" Press Maint Gas	300	None
2" Inst. Air	150	None
3" Regen. Air	150	None
6" 15# Steam	150	1"
4" LP Condensate	150	None
4" Boiler Feed Water	300	1"
6" Boiler Feed Water	300	1"
6" 150# Steam	150	1"
8" 450# Steam	300	1½"
10" 450# Steam	300	1½"
8" Fuel Gas	150	None
8" Sweet Gas	150	None
3" Blowdown	150	None
4" Blowdown	150	None
30" Cooling Water	150	None
24" Cooling Water	150	None

6" HYDROBON CHG.
4" P-206 LPG.
6" PLANT AIR

EXHIBIT "A" m AP

Discussion of Lines Included in This Bid.

16" Relief line Dwg. 343-207-23

The 16" line will be run from the reformer battery limits to an existing 16" WN flange stub on the 24" relief line. The 16" WN flange is blinded and contractor will leave this blind in place. This work comprises the installation of less than 8 feet of 16" pipe.

8" Platformate to storage Dwg. 343-207-23

The line will be run from the reformer battery limits to the east side of Cantwell Lane as shown on the following dwgs.

343-207-23
343-207-24
343-207-10
343-207-8
343-207-6
343-207-4
343-207-21
343-207-19

3" Service Water Dwg. 343-207-23

The line will tie into an existing 6" service water line. The 6" line can be drained while the connection is being made. -

1½" Water to Disposal Dwg. 343-207-23

This line ties into a 4" water header line which is also part of the work required. The 4" header is existing 2'-0 1/8" south of PS-19.

1½" 5 BE Caustic Dwg. 343-207-23

The entire line is shown on this drawing and will tie into existing 2" flange on line 2" K-22.

1½" Spent Caustic 343-207-23

This line will tie into a new 3" header line (part of this work) which will tie into an existing 3" flange on line 3" K-12.

6" Sour Off Gas Dwg. 343-207-23

This line will be reduced from 8" at the reformer battery limits and run as 6" to the fuel gas mixing drum as shown on the following drawings.

343-207-24
343-207-10
343-207-8
343-307-1
343-307-6

EXHIBIT "A" mLB

1½" Stripper O'H Light Ends Dwg. 343-207-23

2" Stab O'H Light Ends Dwg. 343-207-23

These two lines originate at the reformer battery limits and connect into a new 4" header 4" P-206 (part of this work) which will extend North to an existing valve at PS-17. Line is shown on dwgs:

343-207-9

343-207-7

6" FR Hydrobon Prod. Dwg. 343-207-23

This line is not part of this work.

6" Hydrogen From Hydeal Dwg. 343-207-23

This line will originate at the reformer battery limits as shown and be run North to existing open ended line North of PS-19. Dwg. 343-207-9.

1" Press Maint. Gas Dwg. 343-207-24

This line will require a hot tap into existing 3" FG (high pressure gas) header.

2" Instrument air Dwg. 343-207-24

This line has a valve at the reformer battery limits. This valve will be removed. The line will hot tap into existing instrument air header 4" 1A-301-150

3" Regen Air Dwg. 343-207-24

The line has a valve at the reformer battery limits. This valve will be removed. The line will tie into a new 6" plant air header (part of this work) as shown on Dwgs:

343-207-10

343-207-8

343-207-6

343-207-4

Jumpers off the new header will be tied into the crude unit and coking unit as part of this work.

6" 15# Steam. Dwg 343-207-24

The existing valve at the reformer battery limits will be removed. The battery limit flang will be left. The line will tie into existing 10" S-303-150I. Hot tap this connection. Line will be insulated as part of the work.

EXHIBIT "A"

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4" LP Condensate Dwg 343-207-24

Valve at the reformer battery limits will be removed flanges will remain. Line will tie into existing 4" C-501-150 by Hot tap.

4" Boiler Feed Water

Valve at battery limits will be removed flange remains. Line will tie into 6" BFW-101-300I header to be installed as part of this work North to PS-17. Line will be insulated and on shoes as part of this work. Line is shown on Dwg:

343-207-10
343-207-8

6" 150# Steam Dwg. 343-207-24

Valve at the reformer battery limits will be removed flanges will remain. Line will tie into existing 8" S-302-150I line will be insulated as part of the work.

8" 450# Steam Dwg. 343-207-24

Valve at reformer battery limits will be removed flanges will remain. Line will tie into a new 10" steam header 10" S-301-300I run North to an existing valve at PS-17 as part of this work. The header line 10" S-301-300I will include pipe shoes, insulation expansion loop, guides and anchors, high point bleeds, low point drains, condensate collection pot, steam traps with liquid line tied into condensate line 4" C-501-150 as part of the work. Line is shown on Dwgs:

343-207-10
343-207-8

8" Fuel Gas Dwg 343-207-24

The line will extend from the reformer battery limits to the fuel gas mixing drum header as shown on Dwgs:

343-207-10
343-207-8
343-307-1
343-307-6

8" Sweet Gas Dwg. 343-207-24

Line will extend from reformer battery limits to fuel gas mixing drum header as shown on dwgs:

343-207-10
343-207-8
343-307-1
343-307-6

EXHIBIT "A" 7/11/78

3" Blowdown Dwg. 343-207-24

Line will tie into a new 4" header part of this work which will be run North to an existing flange at PS-15. Line is shown on Dwgs:

343-207-23

343-207-9

343-207-7

30" & 24" Cooling Water Pump Dwg. 343-507-105

The 30" and 24" butterfly valves are existing. Contractor will make up pipe and fittings between these two valves including tie rods across 24" dresser coupling as shown on Dwg. 343-507-103.

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EXHIBIT "A"

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PIPING SPECIFICATION 150

ASA Rating 150# R.F.

Carbon Steel

0.05" Corrosion Allowance

Service Limits: 275 psig at 100°F: 150 psig at 500°F

Valves:

Gate: 1/2" - 2" - 600# screwed ends, bolted bonnet, OS&Y,
F6 trim, Crane 3604 XU or equal. (Vents and Drains Only)

(1) 1/2" - 2" 600# socket weld, ditto above except
Crane 3605 XU or equal.

3" - 24" - 150# R.F. flanged, bolted bonnet, OS&Y,
F6 trim, Crane 47X* or equal.

Globe: 1/2" - 2" - 600# screwed ends, union bonnet, OS&Y,
F6 trim, Crane 3644 XW* or equal.

1/2" - 2" - 600# socket weld, Vogt #SW-12181* -
#SW-12188*, or equal.

3" - 4" - 150# R.F. flanged, bolted bonnet, OS&Y, F6
trim, Crane 143 X* or equal.

Check: 1/2" - 2" - 600# socket weld, Vogt #SWB-6083* - 6088*,
or equal.

3" or larger 150# R.F. flanged, bolted cover, swing type,
F6 trim, Crane #147 X* or equal.

Plug: 1/2" - 2" - 300# screwed ends, wrench operated,
Nordstrom 2024 or equal.

3" - 4" - 150# R.F. flanged, wrench operated Nordstrom
1925 or equal.

6" - 12" - Nordstrom #1989, or equal.

14" and larger Nordstrom #4169, or equal.

Ball: (Normally for fuel gas only - Approval may be granted
for other specific uses.)

1/2" - 2" - 2000# carbon steel, screwed ends, Teflon
seals and seat; Jamesbury Type A-22, or equal.

3" - 10" - 150# A.S.A. R.F. flanged, carbon steel,
Teflon seals and seat; Jamesbury Type DL50F-22, or equal.

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EXHIBIT "A"

PROCESS PLANTS ENGINEERING, INC.

Piping Specification 150 Continued

<u>Fittings:</u>	1/2" - 2" - 3000# socket weld, carbon steel, ASTM A 105 Grade I. 3" - 24" - Butt welded, seamless, ASTM A 234 Grade WPB, weight to match pipe, or Weldolet welding fittings, ASTM A 181 Grade I or A 216 Grade WOB.
<u>Flanges:</u>	3" - 24" - 150# R.F., W.N. or S.O., ASTM A 181 Grade I, Bore to match pipe.
<u>Unions:</u>	1/2" - 2" - 3000# socket weld, ground joint, integral steel seat, ASTM A 105.
<u>Couplings:</u>	1/2" - 2" - 3000# socket weld, carbon steel, ASTM A 105 Grade II.
<u>Pipe:</u>	1/2" - 2" - Schedule 80, seamless, ASTM A 106 Grade B, or ASTM A 53, Grade A. 3" - 10" - Standard weight (Schedule 40) seamless, ASTM A 53 Grade A. 12" - 24" - Standard weight (.375" wall) seamless, ASTM A 53 Grade A. (With prior approval, electric fusion welded, ASTM A 155 C-55 made from ASTM A 285 F.B. may be substituted.)
<u>Bolting:</u>	Alloy steel studs, ASTM A 193 Grade B7 each with two hexagonal nuts, ASTM A 194 Class 2H.
<u>Gaskets:</u>	Flexitallic Style D, "Self-Centering", or equal, spiral-wound, asbestos filled, contact width per ASA B16.5 Appendix E, Figure 2.

* For steam service, valves should be specified with "XU" Trim.

(1) Use flanged valves at equipment where necessary.

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EXHIBIT "A"

PIPING SPECIFICATION 300

ASA Rating 300# R.F. Carbon Steel 0.050" Corrosion Allowance

Service Limits: 720 psig at 100°F. 425 psig at 750°F.

Valves:

Gate: 1/2" - 2" - 600# screwed ends, bolted bonnet, CS&Y,
F6 trim, Crane 3604XU or equal (Vents and Drains Only)

(1) 1/2" - 2" - 600# socket weld, bolted bonnet, CS&Y,
F6 trim, Crane 3605XU or equal

3" - 24" - 300# R.F. flanged, bolted bonnet, CS&Y,
Crane 33X or equal.

Globe: 1/2" - 2" - 600# screwed ends, union bonnet, CS&Y,
F6 trim, Crane 3644XW or equal.

1/2" - 2" - 600# socket weld, union bonnet, CS&Y,
F6 trim, Vogt #SW-12141 - SW-12146 or equal

3" - 4" - 300# R.F. flanged, bolted bonnet, CS&Y,
Crane 151X or equal.

Check: 1/2" - 2" - 600# socket weld, Vogt #SWB-6087 ID-6088,
or equal.
3" and larger - 300# R.F. flanged, bolted bonnet, CS&Y,
F6 trim, Crane #159X or equal (Chapman disc, or
equal for tilting disc.)

Fittings: 1/2" - 2" - 3000# socket weld, carbon steel, ASTM A 105
Grade I.

3" - 24" - Butt welded, seamless, ASTM A 234 Grade
WPB, weight to match pipe.
Weldolet fittings, ASTM A 105 Grade I or A 105 Grade WPB.

Flanges: 3" - 24" - 300# R.F. W.N. or .050", ASTM A 105 Grade I
bore to match pipe.

Unions: 1/2" - 2" - 3000# socket weld, ground joint, carbon
steel seat, ASTM A 105.

Ends: 1/2" - 2" - 3000# socket weld, carbon steel, ASTM A 105
Grade II.

Pipes: 1/2" - 2" - Schedule 80, seamless, ASTM A 105 Grade II,
or ASTM A 53 Grade A.

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EXHIBIT "A"

PROCESS PLANTS ENGINEERING INC.

Piping Specification 300 Continued

Pipe - Continued

3" - 10" - Standard weight (Schedule 40)
seamless A191 Grade B, or ASTM A 53 Grade A.

12" - 14" Ditto above (3/8" wall)

16" - 24" Calculate wall thickness.

Bolting:

Alloy steel studs, ASTM A 193 Grade B7 each with two
nuts, ASTM A 194 Class 2H.

Gaskets:

Flexitallic Style D, "Self-Centering", or equal, spiral-wound,
asbestos filled, contact width per ASA B16.5 Appendix E,
Figure 2.

- * For steam service, valves should be specified with
"XU" Trim.

- (1) Use flanged valves at equipment where necessary.

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EXHIBIT "A"