

February 4, 2021

Ms. Elisabeth Brown SWRCB Project Manager

State Water Resources Control Board

E-Mail: Elisabeth.Brown@waterboards.ca.gov

6075 Kimball Avenue • Chino, CA 91708 P.O. Box 9020 • Chino Hills, CA 91709 TEL (909) 993-1600 • FAX (909) 993-1985

NOTE:

This waiver submission may include references to proprietary items and brand name products. These references have been retained in order to provide context for the waiver submission. EPA does not evaluate a waiver based on a proprietary item but reviews the performance-based specifications for the project/products. As such, any references to brand or proprietary items are reviewed on an "or equal" basis by EPA.

Items and pages may have been intentionally redacted or excluded by the EPA. Contact CWSRFWaiver@epa.gov for more information if necessary.

Subject: Request for Waiver of AIS Provisions for Small Diameter Stainless Steel Fittings for the Regional Water Recycling Plant No. 5 Liquids Treatment Expansion to 22.5 MGD and Solids Treatment Facility under SWRCB Agreement No 8173-210

Dear Ms. Brown:

The Inland Empire Utilities Agency (IEUA) is requesting a product-specific project waiver of American Iron and Steel (AIS) provisions be issued for ¼-inch to 3-inch diameter Schedule 40 stainless steel pipe fittings for the construction of the Regional Water Recycling Plant No. 5 (RP-5) Expansion Project. In accordance with the United States Environmental Protection Agency (USEPA) memorandum, Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act of 2014, the information required for a waiver to be processed is included below and in the attached documents.

Project Background

IEUA plans to expand its existing RP-5 facility to convert raw wastewater and food waste into low carbon biogas in Chino as part of an extensive \$330 million upgrade project. IEUA will modify and improve the facility, which includes installing new influent pump stations, headworks, primary clarifiers, secondary/tertiary treatment, and off-spec storage to increase its current liquid processing capacity from 15 million gallons per day (MGD) to 22.5 MGD. Additionally, IEUA will upgrade its solids treatment facility, which will be capable of accepting an average of 50,000 gallons of pre-processed slurry per day. The wastewater and solid food waste will be converted to biogas to be used by the plant's two existing cogeneration engines or three boilers.

The RP-5 Expansion Project is funded by a loan through the Clean Water State Revolving Loan Fund (CWSRF). The Consolidated Appropriations Act of 2014 includes an "American Iron and Steel" (AIS) provision that requires recipients of CWSRF assistance to use iron and steel products produced in the United States.

The RP-5 Expansion Project includes the installation of %-inch to 3-inch diameter Schedule 40 stainless steel pipe fittings for the following systems: Hydrogen Sulfide Removal, RAS Pumps, Pressure Gauges, MBR Filtrate Pumps, MBR Compressed Air, Acid Cleaning, Seal Water, Non potable Water, Potable Water, High Pressure Air, Lube Oil, and Digester Overflow.

The project specifications for stainless steel piping are in Attachment No. 1. The project requires 3,195 fittings for a total cost of See Attachment No. 2 for a detailed breakdown. The project

anticipates needing the fittings on or before 4/3/2021 to meet the expected completion date of 1/9/2025.

Location of the project
Regional Water Recycling Plant No. 5
6063 Kimball Avenue
Chino, California 91708

Name and Address of Proposed Supplier Ferguson Waterworks 1502 Columbia Ave Riverside, CA 92507

Availability Waiver Request

IEUA has made a good faith effort to solicit bids for domestic iron and steel products as demonstrated by language in requests for proposals, contracts, and communications with the general contractor, as referenced in Attachment No. 3 where the AIS provision contract language was incorporated into the Contract.

Discussions with possible manufacturers and suppliers for the ¼-inch to 3-inch diameter stainless steel fitting suppliers have indicated that none are able to meet both the project specifications and the AIS provisions. Our research indicates that these products are not produced in the U.S. in sufficient and reasonably available quantities and of satisfactory quality to meet the needs of the project.

The General Contractor, W.M. Lyles Co., contacted the following suppliers about the availability of the specified fittings:

- Ferguson Waterworks
- Santa Fe Winwater

However, none of the suppliers contacted could domestically source the pipe fittings in accordance with the contract requirements. Please see manufacturer's statements regarding availability in Attachments No. 4 and No. 5 respectively.

Similar waivers regarding stainless steel fittings have been previously issued by the USEPA for the following projects: City of San Diego's Pump Station No. 2 Power Reliability and Surge Protection Project (Attachment No. 6) and City of Blackfoot Wastewater Treatment Plant (Attachment No. 7)

If you have any questions, please contact me at (909) 993-1545 or via e-mail at jpompa@ieua.org.

Sincerely,

INLAND EMPIRE UTILITIES AGENCY

Jesse Pompa, P.E., BCEE

Manager of Grants

Attachments: Attachment No. 1 – Project Specifications – Section 15010

Attachment No. 2 – Ferguson Waterworks Cost Breakdown

Attachment No. 3 – AIS Contract Language (Project Requirements 13.0) Attachment No. 4 – Ferguson Waterworks SS Fittings Availability Statement Attachment No. 5 – Santa Fe Winwater SS Fittings Availability Statement

Attachment No. 6 – EPA AIS Waiver City of San Diego Attachment No. 7 – EPA AIS Waiver City of Blackfoot

80 as indicated. Fittings for galvanized steel pipe shall be of galvanized malleable iron, with National Pipe Thread (NPT), flanged or grooved ends as indicated. Black pipe may have welded joints, with standard or extra strong welded fittings unless otherwise indicated in the Piping Schedule.

2.03 STAINLESS STEEL PIPE

- A. Stainless steel pipe sizes ½" to 24" shall be 316(L) Schedule 40 pipe ASTM A312, plain beveled, threaded or grooved ends, fittings shall be 316(L) stainless steel Schedule 40 butt weld, threaded or grooved ends, flanges shall be Class 150# ASTM B16.5 flat face, stainless steel ASTM A182 Grade F316L.
- B. Lightweight stainless steel pipe sizes ½" and larger shall be 304L or 316L Schedule 10S pipe conforming to AWWA C200, with 304L or 316L stainless steel butt weld or grooved fittings conforming to AWWA C226, flanges conforming to AWWA C228. Lightweight stainless steel pipe shall be used on aeration/agitation/scouring air/permeate/back pulse/foul air pipe applications as indicated in the Pipe Schedule. Lightweight stainless steel pipe sizes ½" to 2" may be connected with Vic-Press fittings of grade material matching base pipe material.

2.04 HYDRAULIC TUBING

- A. Hydraulic tubing fabricated of fully annealed stainless steel ASTM A269 Grade TP316L, precision seamless. Sizes 1/4" to 3/8" shall have a minimum wall thickness of 0.065" and shall be rated for 6,000 psi operating pressure and 24,000 psi burst pressure. Sizes 1/2" to 3/4" shall have a minimum wall thickness of 0.083" and shall be rated for 6,000 psi operating pressure and 24,000 psi burst pressure. Sizes 1" to 1 1/2" shall have a minimum wall thickness of 0.120" and shall be rated for 3,800 psi operating pressure and 12,000 psi burst pressure.
- B. Hydraulic fittings sizes 1/4" to 1 1/2, fabricated of stainless steel ASTM A276, shall be compression type, two-piece design of the medium pressure tube fittings and adapters shall consists of a female fitting body and preassembled cartridge containing the male nut and color-coded front and back ferrules on a disposable plastic arbor. The medium-pressure tube fitting shall offers a leaktight gas seal and vibration resistance in applications up to 15,000 psig.
- C. Reference Manufacturers, or equal: Swagelock; GVC.

2.05 SANITARY TUBING

- A. Sanitary tubing sizes 1" to 6" fabricated of fully annealed stainless steel ASTM A269 Grade TP316L, seamless.
- B. Sanitary fittings shall be butt weld or type S ferrule end with heavy duty clamp connecting pieces. Tube fittings shall offers a leak tight seal and vibration resistance. Fittings shall be fabricated of 316 stainless steel to ASTM A276.
- C. Fittings gasket shall be suitable for fatty acids and shall be rated for steam at 330°F and 80 psig, Sanifluor® as manufactured by PTI (Process Technologies Inc.), FKM as manufactured by Swagelock, or equal.
- D. Reference Manufacturer, or equal: Smith Cooper International; WCB-FP; Tri-Clover; Swagelock; G & H.

Mary	_	_		Pro-				mau	3195	1 1	E 3									
Column	Sppir	Take	Page	Pipe	Area	SYS#	E/B/S	Grp#	ion Qty	Unit	Size 1 Size 2	Unit		AW		107	2002			PRICING
Column	Sort	Off	no.	System	Auges (10000000		0	ess		dia. dia. L	ength	Description	Details	Notes	Pipe	Lining	Coating S	pec Vendor	Unit Price EXTENSION
10 10 10 10 10 10 10 10		Order	82000	96503000				686	55/67	EA	(inch) (inch)	(ft) Area	Control of the Contro	18565000	843,0488	Material	- 000073			
10 10 10 10 10 10 10 10														02		J	100	-	1	
10 10 10 10 10 10 10 10					Gas Purification System		E		- 10	6 EA	0.25			la .			N NG E	(UNCO 1	5010 RGUS	S
20 10 10 10 10 10 10 10			51-160		Gas Purification System		E			4 EA	0.25						NNG	(UNCO 1	5010 RGUS	\$
The content of the			51-100						12	-					En subsubsub		NNGE	(UNCO 1	5010 RGUS	5
March Marc					PASWAS Pump Station				- 00						58 for testing		NNG	(UNCO 1	5010 RGUS	3 9 9
March Marc									33								N NG F	(UNCO 1	5010 RGUS	5 5
Second Column									33	3 EA				2&3/ 5M-112			NNGE	(UNCO 1	5010 RGUS	S S
Part	8258	9026	Spec 11177-3	Non-Potable Water			E	30	18	8 EA	0.5	1					N NG E	(UNCO 1	5010 RGUS	\$ \$
March Marc			41-53	MBR Filtrate	Pipe Gallery		E		33	2 EA			90 Threaded Elbow			316 SST- SCH. 10S	N NG B	(UNCO 1	5010 RGUS	\$ \$
10 10 10 10 10 10 10 10							E		13	2 EA							N NG E	(UNCO 1	5010 RGUS	\$
10 10 10 10 10 10 10 10										3 EA				411.00			NNG	(UNCO 1	5010 RGUS	5 5
March Marc									2	4 EA							NNG	(UNCO 1	5010 RGUS	3 3
Column C									14	8 EA		_		3/ 1-33			NNG	(UNCO 1	5010 RGUS	3 3
10 10 10 10 10 10 10 10	0.00			THOS.				-		8 EA						010 001 0011 101 012		101100	FERGUS	SSS
10 10 10 10 10 10 10 10	8218			N/A			Е	30	96	9 EA				2&3/ 5M-112		318 SST- SCH. 40/ STD	N NG E	(UNCO 1	5010 RGUS	5 5
March Color March Marc				Non-Potable Water	RAS/WAS Pump Station		E	30	18	8 EA	0.5		Threaded Union				NNGE	(UNCO 1	5010 RGUS	\$
Column C							E			B EA							N NG E	(UNCO 1	5010 RGUS	\$
Column C						82-SS	Е	30		1 EA	0.75						N NG E	(UNCO 1	5010 RGUS	\$
Column							E	30		1 EA	0.75	_		-			N NG B	(UNCO 1	5010 RGUS	5 5
Application									-	Z EA		_		4/1.22			NING	(UNCO 1	FO10 RGUS	3 3
10 10 10 10 10 10 10 10	0200			THE STATE OF THE S				30	-	8 FA				4/ 1-00		310 331-30H. 4W 31L	, NO.	(UNCO I	FERGUS	3 3 3
10 10 10 10 10 10 10 10	7918			ALP			S	28	1.5 128	8 EA				NOTE#2/ 4M-11		304 SST- SCH. 10S	N NG E	(UNCO 1	5010 RGUS	\$ \$
The content of the				ALP						8 EA	0.75						N NG E	(UNCO 1	5010 RGUS	\$ \$
10 10 10 10 10 10 10 10	8209	2248	5M-41, -43, -45, -46, -54		W3- NON INSULATED W3 ACID DIGSTR BLDG	82-SS			3	2 EA	0.75		Threaded Tee			316 SST- SCH. 40/ STE	N NG E	(UNCO 1	5010 RGUS	\$
19							E	30	24	4 EA	0.75			4/ 1-33			NNGE	(UNCO 1	5010 RGUS	\$ \$
The content of the										1 EA	-	_					NNG	(UNCO 1	5010 RGUS	5 5
March Marc				3/W					-	4 FA							NNG	(UNCO 4	5010 RGUS	3 8
March Marc				PI						8 EA	1				 		NNG	(UNCO 1	5010 RGUS	S
Second				W3					1.5	1 EA	1						NNG	(UNCO 1	5010 RGUS	S
10 10 10 10 10 10 10 10						88-SS			0.3	4 EA	1					318 SST- SCH. 40/ STD	N NG E	(UNCO 1	5010 RGUS	\$ \$
10	8166	3826	3M-11, -18	PI	PI- SLUDGE LEVEL BOX @ PRIM CLARIFIERS	123-SS	S	30	20	O EA	1		90 Threaded Elbow			316 SST- SCH. 40/ STE	NNG	(UNCO 1	5010 RGUS	\$ \$
Color 1985										6 EA	1						NNG	(UNCO 1	5010 RGUS	\$
Part									12	2 EA	1			***************************************			NNG	(UNCO 1	5010 RGUS	5 5
The color					STANDARD DETAIL 105 3 3/A410				- 18	# EA							NNGE	(UNCO 1	5010 RGUS	3 3
100 100			A STATE OF THE STA						- 1	2 FA				10F/ W-10			NNG	(UNCO 1	5010 RGUS	3 3
The color of the										5 FA							N NG B	(UNCO 1	5010 RGUS	S
10 10 10 10 10 10 10 10					Existing Foul Air PS to New Liquid Drainer MH, 4 on M-12				16	4 EA	1						N NG E	(UNCO 1	5010 RGUS	\$ \$
Column C					Gas Purification System to Flare		В	29		4 EA	1		90 Threaded Elbow				N NG B	(UNCO 1	5010 RGUS	\$
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.									- 1	B EA	31						N NG B	(UNCO 1	5010 RGUS	5 5
100 100									20	O EA	1	- 6					NNGE	(UNCO 1	5010 RGUS	\$
March Marc			Market State Co. 1						- 18	D EA	11	_					N NG B	(UNCO 1	5010 RGUS	5 5
Column C										R EA	1	41.					N NG B	(UNCO 1	5010 RGUS	3 8 8
10.000 10.00										B EA	1						N NG E	(UNCO 1	5010 RGUS	5 5
1962 1964	7839	7128	31-40/41/42	W4		16-DO	E	30		9 EA	1		90 Threaded Elbow			316 SST- SCH. 40/ STD	N NG B	(UNCO 1	5010 RGUS	\$ \$
Column							E		20	O EA	1						N NG E	(UNCO 1	5010 RGUS	\$ \$
March Marc							E		24	4 EA	1						NNG	(UNCO 1	5010 RGUS	\$ \$
March Marc									100	D EA	1	_					NNG	(UNCO 1	5010 RGUS	3 5
1.00 1.00									71	3 FA	1						NNG	(UNCO 1	5010 RGUS	5 5
110 110	8155	10500	5M-83, 5I-67	W3		22-AB			50	O EA	(1)						N NG E	(UNCO 1	5010 RGUS	5 5
10 10 10 10 10 10 10 10	8110	8186			Potable Water from BG to 3ea showers first flr Dewtr up to second floor to shower lav and wo		E	30		1 EA	1		90 Threaded Elbow			316 SST- SCH. 40/ STE	NNGE	(UNCO 1	5010 RGUS	5 5
#19 0 3472 (12) ## 2 comes of the case of the face does of the case of the cas							E	30	- 16	4 EA	1						NNGE	(UNCO 1	5010 RGUS	\$
### 052 March Marc						25-PS	E	30		BEA	1			Hose Bibb Det 1A/M-10	*****		NNG	(UNCO 1	5010 RGUS	\$ \$
## 11									10	7 EA	4				Add 14		NNG	(UNCO 1	5010 RGUS	3
110 100 101									- 3	7 EA	1						NNG	(UNCO 1	5010 RGUS	S
16.5 10.00 MASS, 6.55 MS 1.00 MASS, 6.55 MS MS MS MS MS MS MS				W3		36-PS			- 5	7 EA	1						NNG	(UNCO 1	5010 RGUS	S
100 100			5M-83, 5I-87	W3	Gas Ph Dig 1-4 U-Tube assembly Flush Water	22-AB	E	30	10	6 EA	1		Threaded Tee	A-20-12-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		316 SST- SCH. 40/ STE	NNGE	(UNCO 1	5010 RGUS	\$
## PROFESSION OF CASES PROF. 221: Enterwise of Fire Sources ## PROF. 281: Decorating Bulling ## PR									- 3	4 EA	1			1-1-1			NNGE	(UNCO 1	5010 RGUS	\$
Property				THE CONTRACTOR OF THE CONTRACT			_	44	28	8 EA	31		TO THE SECOND STORM	1CF/ M-10			N NG E	(UNCO 1	5010 RGUS	\$
1778 1779 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780 1770 1780									**	O EA	1						N NG B	(UNCO 1	5010 RGUS	
1726 2501 174 17									- 4	4 EA	1						N NG F	(UNCO 1	5010 RGUS	S
## Some of Trock led Blow ## Some of Trock l	7736	6551	CY-11	3W	3W - Warehouses (Add 9)	MC-128			10	6 EA	1	1	45 Threaded Elbow			PVC- SCH. 80	N NG B	(UNCO 1	5010 RGUS	\$
2206 SM-1, 43, 46, 46 W3					4" S corner of Truck load throughout the entire building		E	30	14	4 EA	1			Hose Bibb Det 1C/M-10			NNG	(UNCO 1	5010 RGUS	S
1972 1978 1979									1.5	Z EA							NNGE	(UNCO 1	5010 RGUS	2
1820 1428 1520 1520										1 EA					-		NNG	(UNCO 1	5010 RGUS	5
December					MBR System				A1	n EA	100	-					NNG	(UNCO 1	5010 RGUS	s all
20225 20226 2022				AND AND DESCRIPTION OF THE PERSON OF T					-	2 EA	1						NNG	(UNCO 1	5010 RGUS	S S S
Best	20225	20225								4 EA	1		Threaded Coupling					34.	FERGUS	S
2321 3877 SM-44 - 51 DOF DOF-DOF-FLUSHING & CID DISTR 127-5S E 30 A 5 A 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 400 SB Bib Det 156A-10 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 400 SB Bib Det 156A-10 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 400 SB Bib Det 156A-10 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 400 SB Bib Det 156A-10 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 400 SB Bib Det 156A-10 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1 1 Threaded Tee 400 SB Bib Det 156A-10 318 SST-SCH. 40/ STD N No. (UINCC 15910 ROUS S 1				W1		88-SS				1 EA	(1)		Threaded Tee					(UNCO 1	5010 RGUS	\$
Sazg 1965 34-6 MSC Sampling Ports on Tanks 13-00 E 30 B EA 1				PI					16	B EA	1							(UNCO 1	5010 RGUS	\$ 100
1815 17 1816 18				MISC					- 14									(UNCO 1	-	3
18319 9114 4-91 1931 53T; SCH, 40/STD NG 4UNCC 18010 RGUS 5										6 EA	2030				1			(UNCO 1		S
Sample 1916 14-11									5	1 EA	1						NNG	(UNCO 1	5010 RGUS	\$
8320 9125 15000-24 Instrument Air MBR System MB-10 E 30 10 EA 1 Threaded Tee Hose Bibb Det 15/Ai-10 Add 14 316 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S 80.00 10 EA 1 Threaded Tee Hose Bibb Det 15/Ai-10 Add 14 316 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S 80.00 10 EA 1 Threaded Tee Hose Bibb Det 15/Ai-10 Add 14 316 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S 80.00 10 EA 1 Threaded Tee Hose Bibb Det 15/Ai-10 Add 14 316 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S S 10 EA 1 Threaded Tee Hose Bib Det 15/Ai-10 Add 14 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S S E 30 17 EA 1 Threaded Tee Hose Bib Det 15/Ai-10 Add 14 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S S E 30 17 EA 1 Threaded Tee Hose Bib Det 15/Ai-10 Add 14 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S S E 30 17 EA 1 Threaded Tee Hose Bib Det 15/Ai-10 Add 14 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S S E 30 10 EA 1 Threaded Tee Hose Bib Det 15/Ai-10 Add 14 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S S E 30 10 EA 1 Threaded Tee Hose Bib Det 15/Ai-10 Add 14 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S S E 30 10 EA 1 Threaded Tee Hose Bib Det 15/Ai-10 Add 14 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S E 30 1 EA 1 Threaded Tee Hose Bib Det 15/Ai-10 Add 14 SST-SCH. 40/ STD N NG QUNCC 15010 RGUS S E 30 1 EA 1 E	8319	9116	41-81		MBR System	MB-10				6 EA	1					316 SST- SCH. 40/ STD	NNG	(UNCO 1	5010 RGUS	S
867 8517 5M-148-157 W3 4°S corner of Truck load throughout the entire building 38-PS E 30 17 EA 1 Threaded Tee Hose Bibb Det 1E/M-10 316 SST-SCH. 40/ STD N NG (UNCC 15010 RGUS) \$ 18058 8530 5M-148-157 W3 4°S corner of Truck load throughout the entire building 38-PS E 30 7 EA 1 Threaded Tee Hose Bibb Det 1B/M-10 316 SST-SCH. 40/ STD N NG (UNCC 15010 RGUS) \$ 18058 S	8320	9125	15000-24	Instrument Air	MBR System	MB-10	E	30	10		1		Threaded Tee	The same of the sa	Approximate the second	318 SST- SCH. 40/ STD	NNG	(UNCO 1	5010 RGUS	5
8505 850 854 854 854 855 854 855 854 855					4" S comer of Dwtr to S comer of Truck load out w/ 2" branches to Dwtr second fir hose bibbs		E		10	100	1				Add 14		NNG	(UNCO 1	5010 RGUS	\$
8609 8544 844 197 916 8454 197 916 197 198 1									- 17	-							NNGE	(UNCO 1	5010 RGUS	\$ 1
ADD 67-AB 4 EA 1 90 Threaded Elbow 1									3	7 EA		_	Threaded Tee					(UNCO 1	5010 RGUS	5
8184 428 61 4432 1.2, 2 6M-41, -435P-40, -42P-01 W1 W1-POTABLE WATER ACID DIGSTR BLDG 88-SS E 30 2 EA 1 0.5 Reducer Bushing 316 SST- SCH. 40/ STD N NG UNCC 15010 RGUS S 147-SS E 30 11 EA 1 0.5 Reducer Bushing 5/-30 N/A STANDARD DETAIL- 6/ 1-30 148-SS E 30 11 EA 1 0.5 Reducer Bushing 5/-30 N/A STANDARD DETAIL- 6/ 1-30 148-SS E 30 11 EA 1 0.75 Reducer Bushing 6/-30 N/A STANDARD DETAIL- 6/ 1-30 N/A STANDARD DETAIL- 6/-30 N/A STANDARD DETAIL -6/-30 N/A STANDARD DETAIL -6/-3								30		4 FA				nose bidd Det 1C/M-10		310 331- 3UH, 40/ STE	N NG B	ONCO 1	FERGUS	
8189 4432 1.2.3/5M-112							F	30		2 EA					1	316 SST- SCH 40/ STC	NNG	(UNGO 1	5010 RGUS	S
8181 445 5/1-30 N/A STANDARD DETAIL- 6/1-30 148-SS E 30 25 EA 1 0.5 Reducer Bushing 6/1-30 316 SST. SCH. 40/ STD N NG (UNCC) 15010 RGUS \$ 8182 445 (6/1-30 N/A STANDARD DETAIL- 6/1-30 146-SS E 30 11 EA 1 0.75 Reducer Bushing 6/1-30 N/A 316 SST. SCH. 40/ STD N NG (UNCC) 15010 RGUS \$ 8180 447 (6/1-33 N/A STANDARD DETAIL- 6/1-33 N/A STANDARD DETAIL 6/1-33 N/A STANDARD DETAIL- 6/1-33 N/A STANDARD	8189	4432	1,2,3/ 5M-112	N/A	STANDARD DETAIL- 1,2,3/ 5M-112	147-SS	E	30	1	1 EA	1 0.5					316 SST- SCH. 40/ STE	N NG E	(UNCO 1	5010 RGUS	S
8183 4462 4/1-33 N/A STANDARD DETAIL-4/1-33 150-SS E 30 24 EA 1 0.75 Reducer Bushing 4/1-33 N N G (IUNCO 1501 In RGUS \$ 8180 4470 5/1-33 N/A STANDARD DETAIL-5/1-33 151-SS E 30 4 EA 1 0.5 Reducer Bushing 5/1-33 N N G (IUNCO 15010 RGUS \$ 8270 7329 I-30 Detail 5 Instruments Material for Pressure Gauges W diaphragm seals-10 total 32-DO E 30 16 EA 1 0.5 Reducer Bushing 5/1-33 150 EA 1 0.5 Reduc							E	30	28	5 EA	1 0.5						NNG	(UNCO 1	5010 RGUS	5
8180 4470 51 i 33 NA STANDARD DETAIL - 6/ i -33 151-SS E 30 4 EA 1 0.5 Reducer Bushing 5/ i -33 N NG I (UNCC) 1501 ill RGUS4 S 8270 7329 I -30 Detail 5 Instruments Material for Pressure Gauges vidaphragm seals - 10 total 32-DO E 30 16 EA 1 0.5 Reducer Bushing 316 SST - SCH. 40/ STD N NG 4 (UNCC) 1501 instruments Material for Pressure Gauges wild diaphragm seals - 10 total 32-DO E 30 10 EA 1 0.5 Reducer Bushing N NG 4 (UNCC) 1501 instruments									- 1	1 EA							N NG E	(UNCO 1	5010 RGUS	S
8270 7329 I-30 Detail 5 Instruments Material for Pressure Gauges-16 total 32-DO E 30 16 EA 1 0.5 Reducer Bushing 310 SST - SCH. 40/ STD N NG UNICC 15010 Reducer Bushing 8271 7334 I-30 Detail 5 Instruments Material for Pressure Gauges-9 wild alphragm seals-10 total 32-DO E 30 10 EA 1 0.5 Reducer Bushing 310 SST - SCH. 40/ STD N NG UNICC 15010 RGUS 3 7359 ILSHL/LSLL Instruments Main/Developed and pressure Gauges-10 total 35-DO 30 19 EA 1 0.5 Reducer Bushing 310 SST - SCH. 40/ STD N NG UNICC 15010 RGUS 3									24	4 EA	1 0.75							(UNCO 1	5010 RGUS	5
8271 7334 I-30 Detail 5 Instruments Material for Pressure Gauges w/ diaphragm seals-10 total 32-DO E 30 10 EA 1 0.5 Reducer Bushing 8272 7359 LSH/LSL/LSLL Instruments Main/Dewatering and Centrate 35-DO 30 19 EA 1 0.5 Reducer Bushing				THE RESIDENCE OF THE PARTY OF T					4	8 FA				u/ 1500			AND RESIDENCE PROPERTY.	And in column 2 is not to see the column 2 is no	5010 RGUS	S
8272 7359 LSH/LSL/LSLL Instruments Main/Dewatering and Centrate 35-DO 30 19 EA 1 0.5 Reducer Bushing 316 SST- SCH. 40/ STD N NG 3 (UNCO 15010 RGUS S 10 15010									10	0 EA					1			(UNCO 1	5010 RGUS	S
							_		11	9 EA								(UNCO 1	5010 RGUS	\$
								30	4	4 EA								(UNCO 1	5010 RGUS	S

r Take Page	Pipe	Area	SYS#	E/B/	/S Grp#	ion		Section 1	ize 1 Size 2	Unit		()							PRICING
Off no.	System				0	ess			dia. dia. l nch) (inch)		Description	Details	Notes	Pipe Material	Lining	Coatin	Spec Section		Unit Price
Older								EA (icn) (inch)	(it) Alea				material			Section		
7366 PDI/PDIT and PI's	Instruments	Main/Dewatering and Centrate	35-DO	-	30		26 E	A	1 0.5		Reducer Bushing	U Dibb D-444M440		316 SST- SCH. 40/ STE	NNG	E (UNCC	0 15010	RGUS	\$
8 8228 5P-21, 23 0 8266 5P-21, 23	W3 W4	Non-pot PW from BG to bibbs first fir Dwtr to bibbs second floor Non-pot PW from BG hose bibbs frst fir dwtr to second floor bibbs. Connect to my bid item 19	24-PS 25-PS		30		8 E	A	1		Reducer Bushing Reducer Bushing	Hose Bibb Det 1A/M-10 Hose Bibb Det 1A/M-10		316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	S
8437 5M-122,123	W3	4" S corner of Dwtr to S corner of Truck load out w/ 2" branches to Dwtr second fir hose bibbs	33-PS		30		10 E	A	1		Reducer Bushing	Hose Bibb Det 1E/M-10	Add 14	316 SST- SCH. 40/ STE	NNG	B (UNCO	O 15010	RGUS	S
8518 5M-148-157 2 8531 5M-148-157	W3 W3	4* S corner of Truck load throughout the entire building 4* S corner of Truck load throughout the entire building	36-PS 36-PS		30		17 E	A	1		Reducer Bushing Reducer Bushing	Hose Bibb Det 1E/M-10 Hose Bibb Det 1B/M-10		316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	S
8 8545 5M-148-157	W3	4° S comer of Truck load throughout the entire building	38-PS		30		7 E	A	1		Reducer Bushing	Hose Bibb Det 1C/M-10		316 SST- SCH. 40/ STE	NNG	B (UNCC	O 15010	RGUS4	s
8581 I-30 6 8585 I-33	N/A	Pressure Guage w/ diaphragm seal	37-PS 38-PS		30		19 E	A	1 0.75	-	Reducer Bushing			318 SST- SCH. 40/ STE 318 SST- SCH. 40/ STE	NNG	E (UNCC	0 15010	RGUS	5
ADDED FROM REVIEW- ALFREDO	N/A	Pressure Guage/Switch combo STANDARD DETAIL- 4I/33	ADDED- WML AB	3	30	(6)	6 E		1 0.75		Reducer Bushing Reducer Bushing			310 331- 30H. 40/ 311	NNG	B (UNCC	O 15010	ERGUS	S
9115 41-61	Instrument Air	MBR System	MB-10		30		62 E		1 0.5		Threaded Reducing Coupling	g		316 SST- SCH. 40/ STE		E (UNC	O 15010	RGUS	S
1736 5M-44, -51 2 2656 5M-41, -435P-40, -42P-01	W3	W3- INSTRUMENT FLUSH @ ACID DIGSTR STANDPIPE W1- POTABLE WATER ACID DIGSTR BLDG	73-SS 88-SS		30		6 E		1		Threaded Union Threaded Union		START DROP TO EVAP COOLING	316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS4	S
3 3821 3M-11, -16	PI	PI- SLUDGE LEVEL BOX @ PRIM CLARIFIERS	123-SS		30 30		18 E	A	1		Threaded Union			316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	S
3868 5M-44, -51 5 4019 5M-14, -19, -20, -21, -30	DOF W3	DOF- DOF FLUSHING @ ACID DIGSTR W3- W3 LOOP @ THCK BLDG	127-SS 132-SS				8 5	A	1	_	Threaded Union Threaded Union			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	S
3 4077 5M-12, -13, -18, -20	AHP	AHP- AHP LOOP @ THCK BLDG	133-SS	E	30 29		20 E	Â	1		Threaded Union	Table 1		316 SST- SCH. 10S	NNG	E (UNCC	O 15010	RGUS	\$
4407 1CF, 2, 3/ M-10	N/A	STANDARD DETAIL- 1CF, 2, 3/ M-10	144-SS	E	30	2	14 E	A	1		Threaded Union	1CF/ M-10		316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	S
3 4431 1,2,3/5M-112 9 5184 CY-09	N/A 3W	STANDARD DETAIL-1,2,3/5M-112 POC 308 to Dewatering Building	147-SS MC-43		30		11 E	A	1		Threaded Union Threaded Union	2&3/ 5M-112		316 SST- SCH. 40/ STE HDPE	NNG	B (UNCC	O 15010	RGUS	5
5492 CY-05	CD - Chemical Drain	Existing Foul Air PS to New Liquid Drainer MH, 4 on M-12	MC-59	В	32	à	2 E	A	1		Threaded Union			HDPE	NNG	E (UNCC	O 15010	RGUS	s
5949 CY-09, 11 2 5965 CY-09	Digester Gas (DG)	Gas Purification System to Flare	MC-87 MC-88		29		2 E	A	1		Threaded Union			316 SST- SCH. 10S 316 SST- SCH. 10S	NNG	E (UNCC	0 15010	RGUS	S
5965 CY-09 5 5982 CY-06, 08, 09	Air High Pressure (AHP) Air High Pressure (AHP)	POC 131 to Trucking Loading Thickening Bld to Existing Blower & Digester Building	MC-89		29		10 E	A	1		Threaded Union Threaded Union			316 SST- SCH. 10S	N NG	E (UNCC	O 15010	RGUS	S
6000 CY-10, 11	Air High Pressure (AHP)	POC 512 to Blower Building	MC-90	В	29		6 E	Α	1		Threaded Union			316 SST- SCH. 10S	N NG	E (UNCO	O 15010	RGUS	S
6 8525 CY-05 8 8549 CY-11	3W 3W	3W - Main Odor Control Facility to POC 468 3W - Warehouses (Add 9)	MC-127 MC-128		12		4 E	A	1	4	Threaded Union Threaded Union			PVC- SCH. 80 PVC- SCH. 80	N NG	E (UNCC	O 15010	RGUS	5
9112 41-61	Instrument Air	MBR System	MB-10		30		10 E		1	•	Threaded Union			318 SST- SCH. 40/ STE	NNG	E (UNC	O 15010	RGUS	S
9119 41-61	Instrument Air	MBR System	MB-10		30		8 E	A	1		Threaded Union			316 SST- SCH. 40/ STE	NNG	E (UNCC	0 15010	RGUS	\$
8 9127 15000-24 7 10502 5M-83, 5I-67	Instrument Air W3	MBR System Gas Ph Dig 1-4 U-Tube assembly Flush Water	MB-10 22-AB		30		10 E	A A	1		Threaded Union Threaded Union			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	S
2 20152 ADDED FROM REVIEW- ALFREDO	DG	Threaded Nipple x 90 x nipple x tee x nipple x PRV	ADD 55-AB				1 E	A	1		90 Threaded Elbow			and the second			FI	ERGUS	S
5 2654 5M-41, -435P-40, -42P-01 2649 5M-41, -435P-40, -42P-01	W1	W1- POTABLE WATER ACID DIGSTR BLDG W1- POTABLE WATER ACID DIGSTR BLDG	88-SS 88-SS		30 30		-		.25	110	90 Mipt x Mipt Elbow 90 Threaded Elbow		HTR BLOW OFF	318 SST- SCH. 40/ STE 318 SST- SCH. 40/ STE		1	0 15010	RGUS	5
2652 5M-41, -435P-40, -42P-01	W1	W1-POTABLE WATER ACID DIGSTR BLDG	88-SS		30		3 E	A	.25		Threaded Union		HIR BLOW OFF	316 SST- SCH. 40/ STE			O 15010	RGUS	S
3429 5M-19, -21, -23, -30, -31	W4	W4- WATER FOR POLYMER @ THICKENING BLDG	112-SS	E	30		20 E		1.5		90 Threaded Elbow			316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	S
8 4046 5M-14, -19, -20, -21, -30 8 9495 5M-160	W3 Glycol	W3- W3 LOOP @ THCK BLDG Gas Purification System	132-SS MB-20		30		10 E		1.5	-	90 Threaded Elbow 90 Threaded Elbow			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	B (UNCC	O 15010	RGUS	S
297 2M-32, -33, -34	W3	W3- WATER TO SCRNING WASH COMPCT @ HW	17-SS	E	12		1 E	A	1.5 1		Reducer Bushing			PVC- SCH. 80	NING	(BEPOX	Y 15010	RGUS	S
5 2640 5M-41, -435P-40, -42P-01	W1	W1- POTABLE WATER ACID DIGSTR BLDG	88-SS 88-SS		30		2 E		1.5 0.75		Reducer Bushing			318 SST- SCH. 40/ STE 318 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	5
2638 5M-41, -435P-40, -42P-01 3436 5M-19, -21, -23, -30, -31	W4	W1- POTABLE WATER ACID DIGSTR BLDG W4- WATER FOR POLYMER @ THICKENING BLDG	112-SS		30		2 E		1.5		Threaded Tee Threaded Cap			318 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	5
9497 5M-160	Glycol	Gas Purification System	MB-20	В	30		6 E		1.5	-	Threaded Coupling			316 SST- SCH. 40/ STE	NNG	B (UNCO	O 15010	RGUS	S
2636 5M-41, -435P-40, -42P-01 3430 5M-19, -21, -23, -30, -31	W1 W4	W1- POTABLE WATER ACID DIGSTR BLDG W4- WATER FOR POLYMER @ THICKENING BLDG	88-SS 112-SS		30		10 E		1.5	41	90 Mipt x Mipt Elbow Threaded Union			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE		E (UNCC	O 15010	RGUS	9
4044 5M-14, -19, -20, -21, -30	W3	W3- W3 LOOP @ THCK BLDG	132-SS	E	30	8	10 E		1.5		Threaded Union	1,00,000		316 SST- SCH. 40/ STE	NNG	E (UNC	O 15010	RGUS4	S
5412 CY-11	NG	POC 322 to Flares	MC-53		8		5 E	A	2	· ·	Threaded Coupling	Sch 40		HDPE	N NG	E (UNCO	0 15010	RGUS	5
2 8114 5M-124,133-134,137 2 9103 4I-61	LO Instrument Air	Lube oil from Cent 1-5 to lube pmp/storage unit MBR System	21-PS MB-10		30		23 E	A	2	-	Threaded Coupling Threaded Coupling			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	B (UNCC	O 15010	RGUS	S
9 20219 ADDED FROM REVIEW- ALFREDO	W3	TH x TH SST 22 1/2 deg elbow	ADD 57-AB		-		8 E	A	2		45 Threaded Elbow						F	ERGUS	S
998 2M-50, -51, -52, -53 3 1847 5M-47, -48, -51, -52	DG DG	W3- HW FINE SCREENS HOSE STATIONS DG- ACID PHASE DIGESTER GAS	49-SS 70-SS	E	20		4 E	A	2 1.5		Reducer Bushing Reducer Bushing	5/ 5M-112		316 SST- SCH. 10S	N NG	BUNCO	15010	RGUS	S
1735 5M- 44, -51	W3	W3- INSTRUMENT FLUSH @ ACID DIGSTR STANDPIPE	73-SS		29 30		2 E	A	2 1		Reducer Bushing	3/ 3W-112		316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	S
2273 5M-41, -43, -45, -48, -54	W3	W3- NON INSULATED W3 ACID DIGSTR BLDG	82-SS		30		2 E	A	2 1		Reducer Bushing			316 SST- SCH. 40/ STE	NNG	B (UNCC	O 15010	RGUS	S
2631 5M-41, -435P-40, -42P-01 3 2634 5M-41, -435P-40, -42P-01	W1 W1	W1- POTABLE WATER ACID DIGSTR BLDG W1- POTABLE WATER ACID DIGSTR BLDG	88-SS 88-SS		30 30		1 5	7.3	2 1 1.5		Reducer Bushing Reducer Bushing			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	B (UNCC	O 15010	RGUS	S
3 2643 5M-41, -435P-40, -42P-01	W1	W1- POTABLE WATER ACID DIGSTR BLDG	88-SS	E	30	8	1 E	A	2 0.75		Reducer Bushing			318 SST- SCH. 40/ STE	NNG	B (UNC	O 15010	RGUS	S
4034 5M-14, -19, -20, -21, -30 4042 5M-14, -19, -20, -21, -30	W3 W3	W3- W3 LOOP @ THCK BLDG	132-SS 132-SS		30		5 E	A	2 1.5	-	Reducer Bushing			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	B (UNCC	0 15010	RGUS	S
4042 5M-14, -19, -20, -21, -30 4080 5M-14, -19, -20, -21, -30	W3	W3- W3 LOOP @ THCK BLDG W3- W3 LOOP @ THCK BLDG	132-SS		30		2 E	A	2 1	7	Reducer Bushing Reducer Bushing			316 SST- SCH. 40/ STE	NNG	E (UNC	O 15010	RGUS	S
4645 CY-02, 05, 08, 10, 11	Sump Pump Discharge (SPD)		MC-4		4		4 E	A	2 1		Reducer Bushing			D	MICE	STOP	15010	RGUS	S
7271 5i-150 & 5M-168 8043 CY-09 5i-135 5M-128,127,129	W3	Plant Water to support nozzles at top of tanks. W4 from SW comer of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor	29-DO 19-PS		30		16 E		2 1		Reducer Bushing Reducer Bushing	Hose Bibb Det 1A/M-10	Add 14	316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE		E (UNCC	O 15010	RGUS4	S
8057 CY-09 5I-135 5M-126,127,129	W4	W4 from SW corner of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor	19-PS		30		2 E	A	2		Reducer Bushing	Hose Bibb Det 1B/M-10	Add 14	316 SST- SCH. 40/ STE	NNG	- Contract of the last	O 15010	RGUS	S
8071 CY-09 5I-135 5M-128,127,129 8226 5P-21, 23	W4	W4 from SW corner of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor	19-PS 24-PS		30		8 E	A	2		Reducer Bushing	Hose Bibb Det 1F/M-10	Add 14	316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE		1	O 15010	RGUS	\$
8262 5P-21, 23	W3 W4	Non-pot PW from BG to bibbs first fir Dwtr to bibbs second floor Non-pot PW from BG hose bibbs frst fir dwtr to second floor bibbs. Connect to my bid item 19	25-PS	E	30		1 E	A	2		Reducer Bushing Reducer Bushing			316 SST- SCH. 40/ STE		E (UNC		RGUS	S
8352 5P-26	W3	Truck Loading non-potable water	29-PS		30		4 E	A	2		Reducer Bushing	Hose Bibb Det 1A/M-10		316 SST- SCH. 40/ STE				RGUS	S
10509 SM-83, 5I-67 20209 ADDED FROM REVIEW-ALFREDO	W3	Gas Ph Dig 1-4 U-Tube assembly Flush Water TH x TH SST Red. Bushing (2x1.5)	22-AB ADD 57-AB	E	30		8 E		2 1.5	-	Reducer Bushing Reducer Bushing		 	318 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	ERGUS	S
20222 ADDED FROM REVIEW- ALFREDO	W3	TH x TH SST Red. Bushing (2x1)	ADD 57-AB				4 E		2 1		Reducer Bushing						FI	ERGUS	S
5962 CY-09 5979 CY-06, 08, 09	Air High Pressure (AHP) Air High Pressure (AHP)	POC 131 to Trucking Loading Thickening Bld to Existing Blower & Digester Building	MC-88 MC-89		29		2 E	A	2 1		Threaded Reducing Coupling Threaded Reducing Coupling	g		316 SST- SCH. 10S 316 SST- SCH. 10S	NNG	B (UNCC	0 15010	RGUS	5
5997 CY-10, 11	Air High Pressure (AHP)	POC 512 to Blower Building	MC-90	В	29	9	3 E	A	2 1		Threaded Reducing Coupling	g		316 SST- SCH. 10S	NNG	E (UNCC	O 15010	RGUS	\$
9107 41-61	Instrument Air	MBR System	MB-10	E	30		22 E	A	2 1		Threaded Reducing Coupling			316 SST- SCH. 40/ STD	NNG	E (UNCC	0 10010	RGUS	S
4643 CY-02, 05, 08, 10, 11 5415 CY-11	Sump Pump Discharge (SPD) NG	Headworks to Plant Drain Pump Station POC 322 to Flares	MC-4 MC-53		8		20 E	A	2	_	90 Threaded Elbow 90 Threaded Elbow	Sch 40		D HDPE	N NG	STOP	0 15010 O 15010	RGUS(S
7002 31-40/41/42	SAMPLE	At Demisters to support PDI's	2-DO	E	30	<u> </u>	6 E	A	2		90 Threaded Elbow		Upstream BFT's	316 SST- SCH. 40/ STI	N NG	E (UNCC	O 15010	RGUS	S
7011 31-40/41/42	Stilling Well	Adjacent to BFT's	4-DO		30		18 E	A	2		90 Threaded Elbow			316 SST- SCH. 40/ STE	NNG	E (UNCC	0 15010	RGUS	5
7053 3I-44 & 3M-43 7056 3I-44 & 3M-43	P-Trap	At Demisters to support PDI's Below Demisters	9-DO 9-DO	E	30 30		8 E	A A	2		90 Threaded Elbow 90 Threaded Elbow			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS(S
7089 31-45	MISC	Small bore at Carbon Scrubbers	13-DO	E	30	2	48 E	A	2		90 Threaded Elbow			316 SST- SCH. 40/ STE	NNG	E (UNC	O 15010	RGUS	S
7092 3I-45 7101 3I-44	MISC DRAIN	P Trap at Tank Drain	13-DO 14-DO		30		30 E	A	2		90 Threaded Elbow 90 Threaded Elbow			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE				RGUS	S
7182 5I-180 & 5M-175	D	P Trap at Fans P-Traps at Demister and Fans	22-DO	E	30	N. Comments	18 E	A	2		90 Threaded Elbow			316 SST- SCH. 40/ STE			O 15010	RGUS	S
7202 5I-180 & 5M-176/177	D	P-Traps at Tanks	24-DO	E	30	(18 E	A	2		90 Threaded Elbow			318 SST- SCH. 40/ STE	NNG	E (UNCO	O 15010	RGUS	5
7218 5I-180 & 5M-176/177 7254 5I-150 & 5M-168	MISC W3	Small bore at Carbon Scrubbers Tank level control	25-DO 27-DO	E	30	5.	12 E	A	2		90 Threaded Elbow 90 Threaded Elbow			316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE		E (UNCC	O 15010	RGUS	S
7270 5I-150 & 5M-168	W3	Plant Water to support nozzles at top of tanks.	29-DO	E	30	i.		A	2		90 Threaded Elbow		1000	316 SST- SCH. 40/ STE	NNG	E (UNC	O 15010	RGUS	S
8049 CY-09 5I-135 5M-128,127,129	W4	W4 from SW comer of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor	19-PS	E	30		2 E	A	2		90 Threaded Elbow	Hose Bibb Det 1A/M-10	Add 14	316 SST- SCH. 40/ STE	NNG	E (UNCO	0 15010	RGUS	5
8063 CY-09 5I-135 5M-126,127,129 8077 CY-09 5I-135 5M-126,127,129	W4 W4	W4 from SW comer of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor W4 from SW comer of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor	19-PS 19-PS	E	30	3	2 E	A	2		90 Threaded Elbow 90 Threaded Elbow	Hose Bibb Det 1B/M-10 Hose Bibb Det 1F/M-10	Add 14 Add 14	316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE	NNG	E (UNCC	O 15010	RGUS	S
8111 5M-124,133-134,137	LO	Lube oil from Cent 1-5 to lube pmp/storage unit	21-PS		30		20 E	Α	2		90 Threaded Elbow			316 SST- SCH. 40/ STE	NNG	-		RGUS	S
8224 5P-21, 23	W3	Non-pot PW from BG to bibbs first fir Dwtr to bibbs second floor	24-PS	E	30		25 E	A	2		90 Threaded Elbow			316 SST- SCH. 40/ STE		E (UNCC	0 15010	RGUS	S
8260 5P-21, 23 8358 5P-26	W4 W3	Non-pot PW from BG hose bibbs frst fir dwtr to second floor bibbs. Connect to my bid item 19 Truck Loading non-potable water	25-PS 29-PS	E	30		16 E	A	2		90 Threaded Elbow 90 Threaded Elbow	Hose Bibb Det 1A/M-10		316 SST- SCH. 40/ STE 316 SST- SCH. 40/ STE		E (UNCC	O 15010	RGUS	S
8835 4M-55	Off-Spec Filtrate	Pipe Gallery	MB-3	E	29		4 E	A	2		90 Threaded Elbow			316 SST- SCH. 10S	NNG	E (UNC	O 15010	RGUS	S
8883 4M-57 9104 4I-81	Drain Instrument Air	Pipe Gallery MBR System	MB-4 MB-10	E	29 30		4 E	A A	2		90 Threaded Elbow 90 Threaded Elbow			316 SST- SCH. 10S 316 SST- SCH. 40/ STE	NNG	E (UNCC	0 15010	RGUS	S
9387 5M-160	Vessel Drain	Gas Purification System	MB-17		29		8 E	A	2		90 Threaded Elbow			316 SST- SCH. 40/ STL	NNG	E (UNCC	O 15010	RGUS	S
9466 51-165	Non-Potable Water	Gas Purification System	MB-18	E	30	1	4 E	Α	2		90 Threaded Elbow			316 SST- SCH. 40/ STE	NNG	E (UNC		RGUS	S
10510 5M-83, 5I-67	W3	Gas Ph Dig 1-4 U-Tube assembly Flush Water	22-AB	E	30	2	12 E	A	2		90 Threaded Elbow	2	1	316 SST- SCH. 40/ STI	NNG	B (UNCC	O 15010	RGUS(5

Sppir	Take	Page	Pipe	Area	SYS#	E/B/S	Grp #	ion O	ty Unit	Size 1	Size 2	Unit								$\neg \tau$		PRICI	ING
Sort	Off	no.	System	ALEW .	313#		1.0	ess	LF	235	dia.			Description	Details	Notes	Pipe	Lining	Coatin	Spec T	Vendor	1100	e EXTENSION
Order			- Soyakiii									(ft)	Area	Description	Deans	, ious	Material			Section		\$	
				W3- INSTRUMENT FLUSH @ ACID DIGSTR STANDPIPE	73-SS	Е	30		5 EA	2			8	90 Threaded Elbow			316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS(S	
8175	4045	5M-14, -19, -20, -21, -30		W3- W3 LOOP @ THCK BLDG	132-SS	E	30		10 EA	2		- 1	8	90 Threaded Elbow			318 SST- SCH. 40/ STD	N NG	E (UNC	O 15010	RGUSC ?	S	41 - 1
				W4 from SW comer of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor	19-PS 21-PS	E	30	_	10 EA	2	-	_	- 4	45 Threaded Elbow	Hose Bibb Det 1F/M-10	Add 14	316 SST- SCH. 40/ STD 316 SST- SCH. 40/ STD	N NG	B (UNC	0 15010	RGUSO S	5	
				Lube oil from Cent 1-5 to lube pmp/storage unit HWS/W3- BOOSTER PUMP DISCHARGE	54-SS	E		1	1 EA	2			1	90 Threaded Elbow Threaded Cap			304 SST- SCH. 10S	NNG	HONC	15010	RGUS4	2	
	8365		W3	Truck Loading non-potable water	29-PS	Ē		•	16 EA	2			8	90 Threaded Elbow			316 SST- SCH. 40/ STD	N NG	(UNC	O 15010	RGUS	S	
				Headworks to Plant Drain Pump Station	MC-4	В			4 EA	2				Threaded Tee			D	MIC E	STOR	15010	RGUS4	S	
	5414		NG	POC 322 to Flares	MC-53	В	8		3 EA	2			7	Threaded Tee	Sch 40	A SA	HDPE	N NG	E (UNC	0 15010	RGUS(5	
8323				On BFT's	5-DO	E	30		18 EA	2					At BFT's	At BFT's	316 SST- SCH. 40/ STD	NNG	E (UNC	O 15010 F	RGUS(8	5	
8324 8325	7103	5I-180 & 5M-175		P Trap Pipe to Matt's Drains P-Traps at Demister and Fans	14-DO 22-DO	E		_	8 EA	2	-	-	-	Threaded Tee Threaded Tee			316 SST- SCH. 40/ STD 316 SST- SCH. 40/ STD	NNG	B (UNC	0 15010	RGUSO S	5	
8326	7204	5I-180 & 5M-176/177	D	P-Traps at Tanks	24-DO				3 EA	2				Threaded Tee			316 SST- SCH. 40/ STD	N NG	B (UNC	O 15010	RGUS	S	
8146	7269		W3	Plant Water to support nozzles at top of tanks.	29-DO	E	30		20 EA	2			1	Threaded Tee	N	# 15-70 - 511 (E)	316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS(\$	
8060			W4	W4 from SW corner of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor	19-PS	E			2 EA	2				Threaded Tee	Hose Bibb Det 1A/M-10	Add 14	316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS(5	
8061	8056			W4 from SW corner of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor	19-PS	E	30		2 EA	2					Hose Bibb Det 1B/M-10	Add 14	316 SST- SCH. 40/ STD	NNG	E (UNC	O 15010	RGUSO 5	5	
8062 8124				W4 from SW corner of DWB to Poly blend units 1-5 and Pols/Stru tote area 1st and 2nd floor	19-PS 21-PS	E E	30		8 EA	2			1	Threaded Tee Threaded Tee	Hose Bibb Det 1F/M-10	Add 14	316 SST- SCH. 40/ STD 316 SST- SCH. 40/ STD	N NG	H (UNC	J 15010 F	RGUSO S	5	
8063			W3	Lube oil from Cent 1-5 to lube pmp/storage unit Non-pot PW from BG to bibbs first fir Dwtr to bibbs second floor	21-PS 24-PS		30		B FA	2				Threaded Tee			316 SST- SCH. 40/ STD	N NG	UNC	O 15010	RGUS	S	
8064				Non-pot PW from BG to bibbs first fir Dwtr to bibbs second floor	24-PS	E	30		4 EA	2				Threaded Tee	Hose Bibb Det 1A/M-10		316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS	S	
8065	8261	5P-21, 23	W4	Non-pot PW from BG hose bibbs frst fir dwtr to second floor bibbs. Connect to my bid item 19	25-PS	E	30		6 EA	2			3	Threaded Tee	NAME AND ADDRESS OF THE OWNER, TH		316 SST- SCH. 40/ STD	N NG I	E (UNC	0 15010	RGUS	S	
8066	8265		W4	Non-pot PW from BG hose bibbs frst fir dwtr to second floor bibbs. Connect to my bid item 19	25-PS	E	30		B EA	2				Threaded Tee	Hose Bibb Det 1A/M-10		316 SST- SCH. 40/ STD	N NG	E (UNC	O 15010	RGUSG 5	\$	4
8067 8321	9106		W3 Instrument Air	Truck Loading non-potable water	29-PS MB-10	E	30		4 EA	2				Threaded Tee Threaded Tee	Hose Bibb Det 1A/M-10		316 SST- SCH. 40/ STD 316 SST- SCH. 40/ STD	N NG	UNC	J 15010 F	RGUSO S	5	
8154				MBR System Gas Ph Dig 1-4 U-Tube assembly Flush Water	22-AB	E	30		22 EA 4 FA	2		-		Threaded Tee			316 SST- SCH. 40/ STD	NNG	FUNC	O 15010	RGUS4	S	
8040				Non-pot PW from BG to bibbs first fir Dwtr to bibbs second floor	24-PS	E			20 EA	2			7	Threaded Coupling			318 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS	S	
8041	8259	5P-21, 23		Non-pot PW from BG hose bibbs frst fir dwtr to second floor bibbs. Connect to my bid item 19	25-PS	E	30		20 EA	2				Threaded Coupling		111	316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS(S	
8249				At Demisters to support PDI's	2-DO	E	30	-	6 EA	2			4	45 Threaded Elbow		Upstream BFT's	316 SST- SCH. 40/ STD	N NG	B (UNC	D 15010 /	RGUSO 1	S	
8250				At Demisters to support PDI's	9-DO	E	30	_	8 EA	2		_	4	45 Threaded Elbow			316 SST- SCH. 40/ STD	N NG	E (UNC	3 15010 F	RGUSO 9	5	
8215 8216				W3- INSTRUMENT FLUSH @ ACID DIGSTR STANDPIPE W1- POTABLE WATER ACID DIGSTR BLDG	73-SS	E			4 EA	2	-			Threaded Tee Threaded Tee			316 SST- SCH. 40/ STD 316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	POLICE S	8	48 9 9
8217				W3- W3 LOOP @ THCK BLDG	88-SS 132-SS	E	30		25 EA	2				Threaded Tee			316 SST- SCH. 40/ STD	N NG	BUNC	0 15010	RGUS	S	1
8232				HWS/W3- BOOSTER PUMP DISCHARGE	54-SS	E	28	1	8 EA	2				Threaded Union			304 SST- SCH. 10S			15010	RGUSO !	S PART	
8233				HWS/W3- BOOSTER PUMP DISCHARGE	54-SS	E	28	1.	4 EA	2			3	Threaded Union			304 SST- SCH. 10S			15010	RGUS(5	
8234				W3- INSTRUMENT FLUSH @ ACID DIGSTR STANDPIPE	73-SS	E	30		8 EA	2			1	Threaded Union			316 SST- SCH. 40/ STD	N NG	E (UNC	O 15010	RGUS(F	5	44-1-1
8235 8236				W3- NON INSULATED W3 ACID DIGSTR BLDG W1- POTABLE WATER ACID DIGSTR BLDG	82-SS 88-SS	E	30		2 EA	2	-	-		Threaded Union Threaded Union			316 SST- SCH. 40/ STD 316 SST- SCH. 40/ STD	NNG	B (UNC	3 15010 F	RGUSQ S	5	
8237				BSD/TSD- THK SLDGE PMP DISCHARGE @ THCK BLDG	119-SS	E	30		2 FA	2				Threaded Union			316 SST- SCH. 40/ STD	N NG	BUNC	O 15010	RGUS	S	
8238			W3	W3- W3 LOOP @ THCK BLDG	132-SS	E	30		9 EA	2				Threaded Union			316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS(\$	
8239				W3- W3 LOOP @ THCK BLDG	132-SS	E	30		5 EA	2				Threaded Union			316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010 /	RGUS(1	S	
8240				W3- W3 LOOP @ THCK BLDG	132-SS	E	30		25 EA	2	1	\vdash	1	Threaded Union			316 SST- SCH. 40/ STD	N NG	B (UNC	J 15010	RGUS(5	5	
8241 8242		5M-14, -19, -20, -21, -30 5M-12, -13, -18, -20	W3	W3-W3-LOOP @ THCK BLDG AHP-AHP LOOP @ THCK BLDG	132-SS 133-SS	E	29		4 EA	2				Threaded Union Threaded Union			316 SST- SCH. 40/ STD 316 SST- SCH. 10S	N NG I	E (UNC	O 15010 F	RGUSC S	5	
8243			N/A	STANDARD DETAIL- 10/ M-07	142-SS		30	_	12 FA	2			- 1	Threaded Union	10/ M-07		316 SST- SCH. 40/ STD	N NG	HUNC	O 15010	RGUS	S	
8337				At Demisters to support PDI's	9-DO	E		-	4 EA	2				Threaded Union			316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS¢ /	S	
8338	7088	31-45	MISC	Small bore at Carbon Scrubbers	13-DO	E	30		8 EA	2			17	Threaded Union			316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS(\$	
8339	7222		MISC	Small bore at Carbon Scrubbers	25-DO	E	30		10 EA	2				Threaded Union			316 SST- SCH. 40/ STD	NNG	(UNC	J 15010 F	RGUS4 8	5	44-4-4-4
8125 8334	9099	5M-124,133-134,137 4L81		Lube oil from Cent 1-5 to lube pmp/storage unit MBR System	21-PS MB-10	E			1 FA	2		—	-	Threaded Union Threaded Union		1	316 SST- SCH. 40/ STD 316 SST- SCH. 40/ STD	NNG	BUNC	O 15010	RGUS4	S	/ 18-78-1
8335	9467			Gas Purification System	MB-18	E		2	3 EA	2		-	1	Threaded Union			316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS	S	
7997	2628	5M-41, -435P-40, -42P-01	W1	W1- POTABLE WATER ACID DIGSTR BLDG	88-SS	E	30		1 EA	2		29	8	90 Mipt x Mipt Elbow			316 SST- SCH. 40/ STD	N NG	B (UNC	0 15010	RGUS	5	
8191			DSD	DSD- ACID PHASE DIGESTER STANDPIPE	71-SS	E	30		2 EA	2.5	1		F	Reducer Bushing			316 SST- SCH. 40/ STD	N NG	E (UNC	3 15010	RGUS(S	
	5332		3W	POC 320 to Gas Phase Digesters, Acid Phase & Thickening Bld	MC-49	В	32		2 EA		2			Threaded Reducing Coupling			HDPE	N NG	(UNC	O 15010 F	RGUSO 5	5	
	5354		N/A	POC 320 to Gas Phase Digesters, Acid Phase & Thickening Bld STANDARD DETAIL- 8/ 5M-110	MC-49 146-SS	B E	30		70 FA	2.5	2		1	Threaded Reducing Coupling 90 Threaded Elbow	8/ 5M-110		HDPE 318 SST- SCH. 40/ STD	NNG	H (UNIC	O 15010 F	RGUSO S	9	
8244			HWS/W3	HWS/W3- BOOSTER PUMP SUCTION	53-SS	E	28	110	10 EA	2.5			- 1	Threaded Union	or one (110		304 SST- SCH. 10S	THO I	CONTO	15010	RGUS	S	1
7860	9614	5M-62, 70, 83 5I-60, 67	DOF	Gas Phase Digester 1-4 U-Tube Assembly	2-AB	E	30		16 EA	3	1 3			Threaded Close Nipple			316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS	\$	
	5122		3W	POC 484 to Gas Phase Digesters	MC-40	В			4 EA		2.5		1	Threaded Reducing Coupling			HDPE	N NG	E (UNC	3 15010	RGUS(S	
7816	5249	CY-10	3W	POC 301 to POC 304, between Power Center 4 & 5	MC-48	В	32		2 EA		2.5		1	Threaded Reducing Coupling			HDPE	N NG	B (UNC	J 15010	RGUS(5	5	
7844 8269			W4 Non-Potable Water	Plant Water to Nutrient Panels and Tanks. Gas Purification System	16-DO MB-18	E B	30		3 EA	3	1	-	1	Threaded Reducing Coupling 90 Threaded Elbow			316 SST- SCH. 40/ STD 316 SST- SCH. 40/ STD	NNG	H (UNC	J 15010 F	RGUSO 9	5	/////////////////////////////////////
		CONTROL OF THE PROPERTY OF THE	DOF Water	Gas Phase Digester 1-4 U-Tube Assembly	2-AB	E	30		32 EA	3			9	90 Threaded Elbow			316 SST- SCH. 40/ STD	NNG	BUNC	O 15010	RGUS	S	
8283	9448	51-160	0.01	Gas Purification System	MB-18	B E	30		B EA	3				Threaded Coupling			316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS	\$	
8149		31-40/41/42	W4	Plant Water to Nutrient Panels and Tanks.	16-DO	E			3 EA	3	- 3	- 1	1	Threaded Tee			316 SST- SCH. 40/ STD	N NG	E (UNC	0 15010	RGUS(S	
		31-40/41/42		Plant Water to Nutrient Panels and Tanks.	16-DO		30		12 EA	3			5	90 Threaded Elbow			316 SST- SCH. 40/ STD	N NG	B (UNC	J 15010	RGUS(5	
			W4	Plant Water from Nutrient Panels to BFT's	17-DO MB-18		30		18 EA	3			9	90 Threaded Elbow			316 SST- SCH. 40/ STD	N NG	UNC	J 15010 F	RGUS4 8	5	
8336	₩451	DE-100	Non-Potable Water	Gas Purification System	MB-18	В	30	10	# EA	3	17 3	- 1	7 0	Threaded Union		1	316 SST- SCH. 40/ STD	NING	UNC	15010	AGUSQ S	-	3