

Ms. Wilhelmina Montero, P.E.
Project Manager ECSD
City of Hollywood – Department of Public Utilities
1621 North 14th Avenue
Hollywood, FL 33022

Date: March 01, 2023 Our Ref: 30110963

Subject: 4-Log Virus Treatment Design & Implementation -

Scope Amendment No. 1

Arcadis U.S., Inc. 150 South Pine Island Rd Suite 315 Plantation 33324 Phone: 954 761 3460

www.arcadis.com

FL Engineering License #7917 FL Geology License #GB564 FL Surveying License #LB7062

Dear Ms. Montero,

Arcadis U.S. Inc. (Arcadis) is pleased to present this work order (WO) amendment for the above-referenced project associated with requested modifications to the CL2/HEX (Chlorine/Hexametaphosphate) chemical storage area, hypochlorite tank replacement, addition of a 42-in blended water by pass at the ammonia feed injection point, and new raw water injector. The WO shall be performed per the terms and conditions of the Professional Services Agreement for General Engineering Consultant Services: Water Treatment Plant and Wastewater Treatment Plant Projects No. 17-1324 (Agreement) executed on November 7, 2017, by and between the City of Hollywood (City) and Arcadis.

Background

As part of Work Order ARC 22-02 (City Project No. 15-4039), Arcadis completed 60% design documents for the 4-Log Virus Treatment Design & Implementation project (4-Log Project). During review of the 60% design package, potential improvements to the facility and alternatives to the conceptual design layout previously developed were identified and recommendations were presented for the City's consideration. These additional changes are required for constructability and reduction of unintended shutdown risks during construction as well as to improve reliability and simplify maintenance in the future.

Scope of Work

Services provided under this amendment will be incorporated into the existing 4-Log Project. Specifically, the design revisions will be incorporated into the current design and submitted with the 90% design documents currently under development. Our proposed scope amendments are detailed in the following additional tasks.

Task 3-A1 – CL2/HEX Storage Chemical Storage Area

The CL2/HEX area currently contains two chemicals without separation/containment. The 60% drawings showed modifications to provide containment for the refurbished sodium hypochlorite area. Based on the quantity of storage available in the Chlorine Building and MS/RO Chemical Storage area and the small footprint of the CL2/HEX area, the City has agreed to completely removing the sodium hypochlorite storage and equipment.

Arcadis shall advance drawings and specifications to the 90% and 100% design stages including the removal of the sodium hypochlorite system (including Tank Nos. 4 and 5) from the HEX storage area and rehabilitation of the

floor and walls. Drawings will be updated to show injection points supplied from the Chlorine Building that were originally supplied from the CL2/HEX area. Design will include electrical and instrumentation plans, construction sequence and operational strategy review to confirm all plant operating modes are fully supported by the storage and equipment from the Chlorine Building and MS/RO Chemical Storage Areas after the elimination of the CL2/HEX sodium hypochlorite storage equipment and piping.

In addition, a network architecture drawing will be developed for the revised control network revised under this project including the addition of a new Storage Building SCADA Node.

Assumptions

- No improvements or modifications to HEX system including piping will be made.
- No modifications to HEX equipment/operation will be made.
- HEX piping in existing trench will remain.
- Demolition and repair activities will include concrete floor and masonry wall repairs and painting/coatings.
- Process Instrumentation Diagrams (PIDs) will be updated or removed as required.

Task 3-A2 - Hypochlorite Tank Replacements

The nine existing sodium hypochlorite storage tanks were inspected by Corrosion Probe Inc. in 2022. The tanks are approximately 18 years old and are showing varied aging conditions. Two of the tanks in the Chlorine Building storage area have been relined and one developed a leak at the end of 2022. Due to age and condition, the City has decided to replace the tanks in the Chlorine Building and MS/RO storage areas.

Arcadis shall advance drawings and specifications to the 90% and 100% design stages including the replacement of existing sodium hypochlorite storage tanks No.1, 2, and 3, in the Chlorine Storage Building and No. 6, 7, 8, and 9 in the Membrane Building Storage Area (in lieu of the rehabilitation originally scoped.) New concrete saddles will be provided for each tank. FRP tank specifications and table to be added to drawings.

Assumptions

- New instrumentation (level/pressure transmitters) will be provided.
- New saddle supports will be provided.
- Tank will be replaced in-kind with respect to material, volume, and arrangement. Additional or alternative layouts and volumes changes are not anticipated.

Task 3-A3 - Ammonia Feed Bypass

During the 60% review process, the City confirmed that a bypass for the 42-inch finished water line from the Blend Tank to the ground storage tanks is desired. Under this task, Arcadis will design a bypass line to allow shut down of the 42-inch line for the installation of the static wafer mixer at the new ammonia injection point and allow for future isolation for maintenance of the mixer and injectors.

Arcadis shall prepare details and specifications at the 90% and 100% design stages to use the existing 36-inch raw water bypass as a permanent solution for by-pass/redundant line from the Blend Tank to Ground Storage Tank (GST) No. 6.

Assumptions

- 1. Modifications to existing Blend Tank inlet/outlet piping on the north and northwest corner.
- 2. New 36-42in by-pass header and isolations valves for connection to GST-6.

- 3. Design of structural supports, footings, and details for supporting the new piping extensions to by-pass water to the GST-6.
- 4. Provisions for modifications to existing GST-6 roof and internal supports for the by-pass pipe entry. The final design of the roof modifications will be delegated during construction to pre-con tank manufacturer.

Task 3-A4 - Raw Water Injector Modifications

The 30-inch raw water line injection point located in the parking area is currently approximately 15 feet below ground. When injecting 12%sodium hypochlorite, increased scaling is possible at injection points. To provide ease of access and allow maintenance of the injector, a vault is required on the 30-inch raw water line.

Arcadis shall prepare details and specifications at the 90% and 100% design stages to construct a cast in place vault and provide for the installation of a new raw water sodium hypochlorite injector for the existing 30-inch raw water line south of GST No. 2.

Assumptions

- 1. Tank shall be cast-in place design and approximately 12-ft x 12-ft in dimensions.
- 2. Include provisions for a new chemical injector and isolation valves.
- 3. Hatches, ladders, and safety appurtenances will be provided.
- 4. Sump pit will be for pump-out only.

Schedule Milestones

Arcadis' services shall recommence upon receipt of written authorization from the City, which will constitute Authorization to Proceed (ATP). With the addition of these changes, the revised milestone schedule is as follows:

Project Tasks	Estimated Dates (Amendment)
Task 1 – Project Management, Kick-off Meeting	Completed
Task 2 – 60% Design Documents	Completed
Task 3 – 90% Design Document	June 16, 2023
Task 4 – Final Bid Documents	July 31, 2023*
Task 5 – Permitting (start)	June 16, 2023
Task 6 – Bid Support	September 30, 2023

^{*} Date contingent on receipt of comments from permitting agencies.

Budget and Invoicing

The proposed lump sum fee amendment of \$114,517.00 for conducting the Scope of Work amendment described herein is shown in the table below with a breakdown of the additional estimated level of effort by task in Attachment A. The additional fee will be added to the existing 4-Log Project and Arcadis shall continue to invoice in accordance with the terms of our Agreement. The scope provided by the subconsultant can be referenced in Attachment B.

Task	Original Fee	Fee Amendment	Total Amended Fee		
Task 1 – PM, Kick-off Meeting; Data Collection	\$37,706.00	-	\$37,706.00		
Task 2 – 60% Design Documents	\$142,458.00	-	\$142,458.00		
Task 3 – 90-% Design Documents	\$75,837.00	-	\$190,354.00		
3-A1 - CL2/HEX Chemical Storage Mod	-	\$32,760.00			
3-A2 – Hypochlorite Tank Replacement	-	\$21,615.00			
3-A3 - Ammonia Feed Bypass	-	\$30,080.00			
3-A4 - Raw Water Injector Mod	-	\$30,062.00			
Task 4 – Final Bid Documents	\$35,139.00	-	\$35,139.00		
Task 5 – Permitting	\$12,760.00	-	\$12,760.00		
Task 6 – Bid Support	\$20,349.00	-	\$20,349.00		
TOTAL	\$324,249.00	\$114,517.00	\$438,766.00		

Thank you for considering Arcadis. Should you have any questions or require additional information from us, please do not hesitate to contact us. We look forward to supporting the City in this very important endeavor.

Sincerely,

Arcadis U.S., Inc.

Leah Richter P.E. Area Manager

Email: leah.richter@arcadis.com Direct Line: 954.525.2499

Lead K. Richten

CC. Dan Garcia, P.E.

Enclosures:

Attachment A: Detailed Fee Break-Down Attachment B: Subconsultant proposal

This proposal and its contents shall not be duplicated, used, or disclosed — in whole or in part — for any purpose other than to evaluate the proposal. This proposal is not intended to be binding or form the terms of a contract. The scope and price of this proposal will be superseded by the contract. If this proposal is accepted and a contract is awarded to Arcadis as a result of — or in connection with — the submission of this proposal, Arcadis and/or the client shall have the right to make appropriate revisions of its terms, including scope and price, for purposes of the contract. Further, client shall have the right to duplicate, use or disclose the data contained in this proposal only to the extent provided in the resulting contract.

	Contract Labor Category	Hours		Billing Rate (\$ / hr)	ost		Fee / Task	Total Fee
						Arcadis Labor \$	97.040.00	114,51
						ubconsultant Costs \$	01,010100	
						ner Direct Expenses \$		
					Oti	Contingency \$		
Task 3-A1 - CL2/HEX Chemical Storage Mod						\$		
abor Subtotal						\$ 10,280.00	32,300.00	
Leah Richter, PE	Company Officer		\$	280.00 \$		a 10,200.00		
Dan Garcia, PE	Project Manager	12	\$	240.00 \$	2,880.00			
Stephanie Bishop, PE	Senior Engineer	16	\$	180.00 \$	2,880.00	•		
Nhi Ngo, PE	Project Engineer 2	24	\$	130.00 \$	3,120.00	•		
Sam Hobi, PE	Principal Engineer	2-7	\$	240.00 \$	0,120.00	•		
Shantanu Dandane	Project Engineer 2		\$	130.00 \$		•		
Andrea Guzman	Chief Technician	8	\$	150.00 \$	1,200.00	•		
Chris Matthews, PE	Technical Expert		\$	240.00 \$	1,200.00	•		
Sandra Demma	Administrative 3	2	\$	100.00 \$	200.00	•		
Candra Bennina	Administrative o		۳	\$	200.00	•		
Subcontractor Labor Subtotal				Ψ		\$ 22,480.00		
McKim & Creed			\$	7,810.00 \$	22,480.00	* 22,100.00		
-			\$	- \$	-	•		
Other Direct Expenses	<u> </u>		Ψ	- Ψ		\$ 200.00		
Travel			\$	- \$	-	ψ 200.00		
Printing			<u> </u>	- ¥		•		
Miscellaneous Expenses	-		\$	200.00 \$	200.00	•		
Task 3-A2 – Hypochlorite Tank Replacement			<u> </u>	200.00 φ	200.00	s	21,615.00	
abor Subtotal						\$ 19,000.00	£1,013.00	
Leah Richter, PE	Company Officer		\$	280.00 \$		+ 13,000.00		
Dan Garcia, PE	Project Manager	12	\$	240.00 \$	2.880.00	•		
Stephanie Bishop, PE	Senior Engineer	24	\$	180.00 \$	4,320.00	•		
Nhi Ngo, PE	Project Engineer 2	32	\$	130.00 \$	4,160.00	•		
Sam Hobi, PE	Principal Engineer	8	\$	240.00 \$	1,920.00	•		
Shantanu Dandane	Project Engineer 2	24	\$	130.00 \$	3,120.00			
Andrea Guzman	Chief Technician	16	\$	150.00 \$	2,400.00			
Chris Matthews, PE	Technical Expert	10	\$	240.00 \$	2,400.00			
Sandra Demma	Administrative 3	2	\$	100.00 \$	200.00			
Subcontractor Labor Subtotal	Administrative 5		ą	100.00 \$	200.00	\$ 2,615.00		
McKim & Creed	-		\$	2,615.00 \$	2,615.00	\$ 2,013.00		
MCKIIII & Creed	-		\$	2,013.00 \$	2,013.00			
Other Direct Expenses	<u> </u>		Ψ	- 4		s -		
Travel	-		\$	- \$	-			
Printing			Ψ	\$		•		
Miscellaneous Expenses	_		\$	- \$		•		
Task 3-A3 - Ammonia Feed Bypass			<u> </u>	<u> </u>		s	30,080.00	
abor Subtotal						\$ 29,120.00	00,000.00	
Leah Richter, PE	Company Officer		\$	280.00 \$		¥ 25,120.00		
Dan Garcia, PE	Project Manager	22	\$	240.00 \$	5,280.00	•		
Stephanie Bishop, PE	Senior Engineer	36	\$	180.00 \$	6,480.00			
Nhi Ngo, PE	Project Engineer 2	56	\$	130.00 \$	7,280.00			
Sam Hobi, PE	Principal Engineer	8	\$	240.00 \$	1,920.00			
Shantanu Dandane	Project Engineer 2	28	\$	130.00 \$	3,640.00	•		
Andrea Guzman	Chief Technician	16	\$	150.00 \$	2,400.00			
Chris Matthews, PE	Technical Expert	8	\$	240.00 \$	1,920.00			
Sandra Demma	Administrative 3	2	\$	100.00 \$	200.00	•		
			~	\$	-	•		
Subcontractor Labor Subtotal				Ψ		\$ 960.00		
McKim & Creed	-		\$	960.00 \$	960.00	- 500.00		
-			\$	- \$	- 50.00			
Other Direct Expenses	_ -		<u> </u>	- ψ		\$		
Travel	-		\$	- \$	-			
Printing			Ψ	\$		•		
Miscellaneous Expenses			\$	- \$		•		
			Ť	- ψ			30,062.00	
						\$ 28,640.00	00,002.00	
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ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE	Project Manager	12	\$	240.00 \$	2,880.00	•		
ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE Stephanie Bishop, PE	Project Manager Senior Engineer	24	\$	240.00 \$ 180.00 \$	4,320.00	•		
ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE Stephanie Bishop, PE Nhi Ngo, PE	Project Manager Senior Engineer Project Engineer 2	24 36	\$ \$	240.00 \$ 180.00 \$ 130.00 \$	4,320.00 4,680.00	· ·		
ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE Stephanie Bishop, PE Nhi Ngo, PE Sam Hobi, PE	Project Manager Senior Engineer Project Engineer 2 Principal Engineer	24 36 20	\$ \$ \$	240.00 \$ 180.00 \$ 130.00 \$ 240.00 \$	4,320.00 4,680.00 4,800.00	· · ·		
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ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE Stephanie Bishop, PE Nhi Ngo, PE Sam Hobi, PE Shantanu Dandane Andrea Guzman	Project Manager Senior Engineer Project Engineer 2 Principal Engineer Project Engineer 2 Chief Technician	24 36 20 60 20	\$ \$ \$ \$ \$	240.00 \$ 180.00 \$ 130.00 \$ 240.00 \$ 130.00 \$ 150.00 \$	4,320.00 4,680.00 4,800.00 7,800.00 3,000.00			
ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE Stephanie Bishop, PE Nhi Ngo, PE Sam Hobi, PE Shantanu Dandane Andrea Guzman Chris Matthews, PE	Project Manager Senior Engineer Project Engineer 2 Principal Engineer Project Engineer 2 Conject Engineer 2 Conject Engineer 2 Conject Engineer 3 Technical Expert	24 36 20 60 20 4	\$ \$ \$ \$ \$	240.00 \$ 180.00 \$ 130.00 \$ 240.00 \$ 130.00 \$ 130.00 \$ 240.00 \$ 240.00 \$	4,320.00 4,680.00 4,800.00 7,800.00 3,000.00 960.00			
ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE Stephanie Bishop, PE Nhi Ngo, PE Sam Hobi, PE Shantanu Dandane Andrea Guzman	Project Manager Senior Engineer Project Engineer 2 Principal Engineer Project Engineer 2 Chief Technician	24 36 20 60 20	\$ \$ \$ \$ \$	240.00 \$ 180.00 \$ 130.00 \$ 240.00 \$ 130.00 \$ 240.00 \$ 150.00 \$ 240.00 \$ 100.00 \$	4,320.00 4,680.00 4,800.00 7,800.00 3,000.00 960.00 200.00			
ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE Stephanie Bishop, PE Nhi Ngo, PE Sam Hobi, PE Shantanu Dandane Andrea Guzman Chris Matthews, PE Sandra Demma	Project Manager Senior Engineer Project Engineer 2 Principal Engineer Project Engineer 2 Conject Engineer 2 Conject Engineer 2 Conject Engineer 3 Technical Expert	24 36 20 60 20 4	\$ \$ \$ \$ \$	240.00 \$ 180.00 \$ 130.00 \$ 240.00 \$ 130.00 \$ 130.00 \$ 240.00 \$ 240.00 \$	4,320.00 4,680.00 4,800.00 7,800.00 3,000.00 960.00			
ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE Stephanie Bishop, PE Nhi Ngo, PE Sam Hobi, PE Shantanu Dandane Andrea Guzman Chris Matthews, PE Sandra Demma	Project Manager Senior Engineer Project Engineer 2 Principal Engineer Project Engineer 2 Chief Technician Technical Expert Administrative 3	24 36 20 60 20 4	\$ \$ \$ \$ \$ \$ \$	240.00 \$ 180.00 \$ 130.00 \$ 240.00 \$ 130.00 \$ 150.00 \$ 150.00 \$ 240.00 \$ \$ 100.00 \$	4,320.00 4,680.00 4,800.00 7,800.00 3,000.00 960.00 200.00	\$ 690.00		
ask 3-A4 - Raw Water Injector Mod abor Subtotal Leah Richter, PE Dan Garcia, PE Stephanie Bishop, PE Nhi Ngo, PE Sam Hobi, PE Shantanu Dandane Andrea Guzman Chris Matthews, PE Sandra Demma	Project Manager Senior Engineer Project Engineer 2 Principal Engineer Project Engineer 2 Conject Engineer 2 Conject Engineer 2 Conject Engineer 3 Technical Expert	24 36 20 60 20 4	\$ \$ \$ \$ \$ \$	240.00 \$ 180.00 \$ 130.00 \$ 240.00 \$ 130.00 \$ 130.00 \$ 150.00 \$ 240.00 \$ 150.00 \$ 690.00 \$	4,320.00 4,680.00 4,800.00 7,800.00 3,000.00 960.00 200.00	\$ 690.00		
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PLANNERS

ADDITIONAL SCOPE OF SERVICES TO ARCADIS-US INC. FOR HOLLYWOOD FOUR-LOG VIRUS TREATMENT DESIGN

To: Tung Nguyen P.E. PMP Arcadis-US West Palm Office 2081 Vista Parkway West Palm Beach, FL 33411

12/06/2022

Arcadis (Client) has requested updated additional engineering services from McKim & Creed, Inc., (Consultant) to provide electrical and control design documents for the Hollywood WTP Four-Log Virus Disinfection Implementation project located at Hollywood, Florida. This scope aligns with a scope provided to the City (Owner) by Arcadis.

As such the following additional engineering services will be provided:

Design Services:

- Provide engineering service for the electrical and controls redesign of the LS/CL2
 Hex Chemical Storage Area, Hypochlorite Storage Building, Ammonia Feed
 Bypass line, and the Raw Water Injector Modifications. Coordinate with Arcadis
 staff as required for new design.
- Attend one (1) design coordination meeting with Arcadis (Virtual).
- Prepare 100% detailed electrical & instrumentation plans and specifications for the 4 Log Disinfection design based on new Arcadis design drawings.
 - Provide revised design drawings showing the removal of the existing Sodium Hypo system from the HEX room.
 - Provide revised design drawings showing the replacement of tanks and addition of pumps for the Sodium Hypo system in the Chlorine Storage Building.
 - Provide revised I&C specification section 40 60 05, to accommodate scope changes for the control system integrator.
 - Provide new and/or revised P&ID design drawings for the Ammonia
 Feed Bypass line piping & valve modifications.
 - Provide new and/or revised P&ID design drawings for the Raw Water Injector piping & valve modifications.
- Prepare 100% Opinion of Probable Construction Cost for Electrical & Instrumentation.
- Submit 100% plans and specifications to Arcadis for comment.
- Attend 100% comment review meeting with Owner (Virtual).
- Submit Final Signed & Sealed design documents incorporating Owner's comments.

1365 Hamlet Avenue

Clearwater, FL 33756

727.442.7196

Fax 727.461.3827

Remaining original scope items of Permitting and Bid Support service to remain in place.

Compensation:

The Work described herein above will be performed for the lump sum Not to Exceed Fee Amount of \$12,075.00.

Additional work requested by City of Hollywood staff is listed below.

- City of Hollywood Water Treatment Plant Network Architecture drawings.
- I&C Design work for the installation of a new SCADA Node in the Chlorine Storage Building.

If approved and directed in writing by Arcadis, this additional work may be performed for the added fee of \$14,670.00, or as a combined total of \$26,745.00.

If directed in writing by Arcadis, additional Work (not listed above) can be performed using an hourly rate fee of \$245.00 plus expenses. Thank you for considering McKim & Creed for this project.

A.Haudricourt Senior Electrical Engineer McKim & Creed, Inc.



ARCADIS CITY OF HOLLYWOOD WTP 4-LOG VIRUS IMPROVEMENTS PROJECT SCOPE ADDITIONS MCKIM & CREED MANPOWER AND COSTS PROPOSAL 12/6/2022

R0 \$26,745.00

RU	\$26,745.00														F			
	TASK	Project	Project	I&C	Project	T			Labor	Labor	Mile	age	Airline/	Expenses line/ Meals/ Material Material		Motorial	Expenses	
	IASK	Engineer	Manager	Specialist	Engineer	Designer	Engineer	Designer	Hours	Cost	Miles	age	Car	Lodging	Cost	Markup	Sub	Sub
	Labor Code	IV	II	II	II	III	Intern	II	Total	Total	0.585	\$	\$	\$	\$	10%	Total	Total
		\$215	\$205	\$175	\$165	\$135	\$133	\$125			0.000	4	*	*	<u> </u>	,.		
1	LS/CL2 HEX Chemical Storage Area	φΣιο	φ200	ψινο	φ.σσ	φιου	φ.σσ	ψ.20										
	Removal of Sodium Hypo system from the HEX room								0	\$0.00		\$0.00				\$0	\$0.00	\$0.00
	Electrical drawing changes (E-03, E05, E-06, E07)	1			2		8		11	\$1,609.00		\$0.00				\$0	\$0.00	\$1,609.00
	I&C drawing changes (I-03, remove I-05 & I-06)	1	2				2		5	\$891.00		\$0.00				\$0	\$0.00	\$891.00
	I&C specification changes (40 60 05)		4						4	\$820.00		\$0.00				\$0	\$0.00	\$820.00
	L								0	\$0.00		\$0.00				\$0	\$0.00	\$0.00
	Addition of chemical feed pumps in the Storage Building							40	0 21	\$0.00		\$0.00 \$0.00				\$0 \$0	\$0.00	\$0.00
	Electrical drawing changes (E-02, E-05, E-06, E-07) I&C drawing changes (I-03, I-04)	1	1		4			16 8	9	\$2,875.00 \$1,205.00		\$0.00				\$0 \$0	\$0.00 \$0.00	\$2,875.00 \$1,205.00
	I&C specification changes (40 60 05)		2					U	2	\$410.00		\$0.00				\$0	\$0.00	\$410.00
	ide openiodion changes (18 00 00)		_						0	\$0.00		\$0.00				\$0	\$0.00	\$0.00
	Subtotal Hours	3	9	0	6	0	10	24	52									
	Subtotal Cost	\$645	\$1,845	\$0	\$990	\$0	\$1,330	\$3,000	\$7,810	\$7,810							\$0	\$7,810
2	Hypochlorite Tank Replacements									00.00		00.0-				A-	00.55	* 0
	Storage Building: new Sodium Hypo Tanks & LITs Electrical drawing changes (E-02, E-05, E-06, E-07)	1			2			8	0 11	\$0.00 \$1,545.00		\$0.00 \$0.00				\$0 \$0	\$0.00 \$0.00	\$0.00 \$1,545.00
	l&C drawing changes (E-02, E-05, E-06, E-07)	1	2		2			8 2	11 4	\$1,545.00 \$660.00		\$0.00				\$0 \$0	\$0.00 \$0.00	\$1,545.00 \$660.00
	I&C specification changes (40 60 05)		2					2	2	\$410.00		\$0.00				\$0	\$0.00	\$410.00
	ido opositication changes (15 55 55)		_						0	\$0.00		\$0.00				\$0	\$0.00	\$0.00
	Subtotal Hours	1	4	0	2	0	0	10	17									
	Subtotal Cost	\$215	\$820	\$0	\$330	\$0	\$0	\$1,250	\$2,615	\$2,615							\$0	\$2,615
_	A																	
3	Ammonia Feed Bypass Piping/valve changes Raw Water Bypass line								0	\$0.00		\$0.00				\$0	\$0.00	\$0.00
	I&C drawing changes (I-10 +/- new sheet)	1	1			4			6	\$960.00		\$0.00				\$0	\$0.00	\$960.00
	ido diawing changes (1 10 17 new sheet)					7			0	\$0.00		\$0.00				\$0	\$0.00	\$0.00
	Subtotal Hours	1	1	0	0	4	0	0	6							,		
	Subtotal Cost	\$215	\$205	\$0	\$0	\$540	\$0	\$0	\$960	\$960							\$0	\$960
4	Raw Water Injector Modifications									00.00		00.00					# 0.00	A 0.00
	Piping/valve changes Raw Water Bypass line I&C drawing changes (I-10 +/- new sheet)	1	1			2			0 4	\$0.00 \$690.00		\$0.00 \$0.00				\$0 \$0	\$0.00 \$0.00	\$0.00 \$690.00
	ido diawing changes (1-10 +/- new sheet)	'	'						0	\$0.00		\$0.00				\$0	\$0.00	\$0.00
	Subtotal Hours	1	1	0	0	2	0	0	4	40.00		40.00				7-	40.00	70.00
	Subtotal Cost	\$215	\$205	\$0	\$0	\$270	\$0	\$0	\$690	\$690							\$0	\$690
_																		
5	Other/ Optional Services								0	60.00		60.00				r.o.	#0.00	#0.00
	Record Drawings upgrade Network Architecture drawings (New)	1	8	40		16			0 65	\$0.00 \$11,015.00		\$0.00 \$0.00	\$600	\$400		\$0 \$0	\$0.00 \$1,000.00	\$0.00 \$12,015.00
	Network Architecture drawings (New)	'		40		10			0	\$0.00		\$0.00	ΨΟΟΟ	\$400		\$0	\$0.00	\$0.00
	Storage Building SCADA Node design (New)	1	4			12			17	\$2,655.00		\$0.00				\$0	\$0.00	\$2,655.00
									0	\$0.00		\$0.00				\$0	\$0.00	\$0.00
	Subtotal Hours	2	12	40	0	28	0	0	82	¢12.070							£4.000	644.070
	Subtotal Cost	\$430	\$2,460	\$7,000	\$0	\$3,780	\$0	\$0	\$13,670	\$13,670							\$1,000	\$14,670
	TASK MANPOWER AND COSTS SUMMARY																	
1	LS/CL2 HEX Chemical Storage Area								\$7	,810								
2	Hypochlorite Tank Replacements									,615								
3	Ammonia Feed Bypass									960								
4	Raw Water Injector Modifications									590								
5	5 Other/ Optional Services								\$14	,670								
															Checksum			
Total Hours 161.00											\$26,745.00							
	Total Budget									\$26,745.00								
	Budget without Optional Services	\$12,0	75.00	Hours without Optional Services 79.00														