



Water Pollution Control Plant
 1202 Musser Street
 Muscatine, IA 52761-1645
 (563) 263-2752
 Fax (563) 263-3720

WATER & RESOURCE RECOVERY FACILITY

MEMORANDUM

To: Greg Jenkins, Interim City Administrator

CC: Nancy Lueck, Finance Director
 Cinda Hilger, Secretary

From: Jon Koch, WRRF Director

Date: May 15, 2020

Re: Odor Control Units

INTRODUCTION: The Water and Resource Recovery Facility (WRRF) staff have received two quotes for two (2) industrial ionizing odor control units to be placed in the laboratory and at the High Strength Waste (HSW) storage tank. The low quote was from Aerisa, Inc. for \$13,000.00 for two (2) model 5500 AerScrubber units.

BUDGET: This is not a budgeted item but is listed on the Extras List for the HSW Project. This list is for items needed for completing the project and were to be purchased as the project progressed. There are funds remaining in the HSW Project for this purchase.

BACKGROUND: The nature of the high strength industrial waste received is that it is a very odorous material. While the WRRF staff is certainly accustomed to foul odors, HSW produces odors that cause nausea and headaches. In small doses outside they are tolerable, but the HSW storage tanks are directly up wind from the air intake for the Muscatine Environmental Laboratory (MEL) where people work and cannot retreat to fresh air. The issue is getting worse as more commercial waste is being brought in adding to the odor problem. Another unit will be added to blow into the headspace of the HSW storage tank to reduce odors leaving the plant. A third unit is being explored to remove odor from the headworks building as well to remove sewer odors for neighbors downwind of the treatment plant.

An ionizing unit was test run for two weeks in the lab and found to be very effective at removing the odor. The ionizer breaks down the molecules in the air so it is also effective at destroying mold, bacteria and viruses. It will also protect expensive electronics from corrosion. The second bid from Trans-Tech Energy and Environmental, Inc. was for \$20,430.00.

RECOMMENDATION/RATIONALE: Staff recommends issuing a PO to Aerisa, Inc. in the amount of \$13,000.00 for the purchase of two (2) model 5500 AerScrubbers to be installed in the MEL and the HSW storage tank at the WRRF.

BACKGROUND: Two quotes

"I remember Muscatine for its sunsets. I have never seen any on either side of the ocean that equaled them" — Mark Twain

**Muscatine Organics Recycling Center
 1000 S. Houser St.
 Muscatine, IA 52761**



Air Purification System –Budgetary Proposal 20200515.1001.0

Project: Lab Odor Control

Project Location: Muscatine, IA

Date: May 15, 2020

Prepared For:

Jon Koch

City of Muscatine
Water & Resource Recovery Facility
1202 Musser St.
Muscatine, IA 52761

Aerisa

1214 W. Boston Post Road, Suite 410

Mamaroneck, NY 10543

Tel:480-302-6300 / 1-877-4-AERISA

www.aerisa.com

Representative: Jon Hager, Vessco, Inc, 612-805-6383

Factory Contact: Haluk Bafrali, hbafrali@erisa.com, 412-735-0565

Aerisa is pleased to offer the following proposal to supply an odor control system for the above referenced project. The proposal includes the scope of work including brief descriptions of the products and systems. It also details our recommended solution including pricing and terms. During installation Aerisa will coordinate with the installers, contractors, and/or end user to answer any questions relating to the installation, fine-tuning and/or maintenance of Aerisa's system.

DESIGN FEATURES

- Standard variable speed drive to adjust for lower/higher odor conditions or airflow requirements
- Modular ionizers can be scaled for future expansion
- Straight-forward, easy to maintain technology
- SCADA ready

BENEFITS

- Produces a clean air environment inside contaminated areas as opposed to only treating exhaust air
- Reduced energy consumption
- No chemicals or water required, no storage of hazardous materials and no disposal of hazardous materials
- Reduced O&M costs and daily maintenance activities versus exhaust-only scrubbers
- Reduces corrosion inside buildings
- Fast design to installation

DESIGN CONCEPT

1. **Mode of Operation Supply Air System:** The filter, fan and Aerisa ion generators are housed inside the AerSupply Air Handling Unit (AHU). Air is drawn into the AHU by the fan through the filter and past the ion generators. The ion generators transform the oxygen present in the ambient air to oxygen ions, creating an atmosphere rich with superoxide ion clusters. These oxygen clusters are into the room where they interact with the odorous pollutants on a molecular level to eliminate odors.

This unit is designed to recirculate the air in the room.

PICTURES FROM SIMILAR INSTALLATIONS

Aerisa AERscrubber





I. Project Definition

System will be located in the lab building and set up to recirculate the air in the room.

Key Benefits:

- Oxidize odorous compounds in the room.
- Stop corrosion in the room and protect electronic components.
- Provide a safe work environment for the employees.
 - Ionized air will attack molds, bacteria's and viruses.

II. Scope of Supply

One (1) Aerisa AERScrubber consisting of the following;

- Galvanized steel and painted construction
- MERV-8 pleated inlet filter
- 1 HP Direct drive fan
- Model 5550 ionizer with 5 tubes

III. Exceptions

The following is NOT provided by Aerisa:

- Any mechanical or electrical installation labor
- Equipment support pads or any concrete work
- Duct hangers or support structures
- Interconnecting ductwork not identified above
- Roof, wall or floor penetrations
- Anything else unless specifically listed and included herein

IV. Pricing

Price.....\$6,500.00

Terms: Net 30 days

Prices do not include any federal, state, or local taxes.



V. Submittals

Submittals will be provided within four (4) weeks following acceptance of order by Aerisa.

Submittal package will consist of equipment cut sheets covering all supplied equipment and general arrangement schematic drawings.

VI. Terms

Equipment will be shipped four (4) to six (6) weeks following receipt of submittal approval. Quote is valid for 90 days from date of proposal.

See also the Aerisa Terms and Conditions.

VII. Warranty

Aerisa will provide a one (1) year warranty for the air handling equipment, ionization units and controls panels. Aerisa will repair or replace, at its discretion, any piece of equipment that has failed or is not working according to the manufacturers' performance criteria except for the ionization tubes which are a required maintenance item. This warranty does not cover removal or installation labor, electrical service failures, HVAC system failures, or damages outside normal wear and tear.

We thank you for this opportunity to provide this proposal and look forward to working with you on this project. If you have any questions do not hesitate to contact me.

Respectfully submitted,

Haluk M. Bafrali

Haluk M. Bafrali
Director, Sales and Marketing
412-735-0565



TERMS & CONDITIONS

Terms and Conditions appearing in any order based on a proposal which are inconsistent herewith shall not be binding on Aerisa. The sale and purchase of equipment described herein shall be governed exclusively by the foregoing proposal and the following provisions. The terms and conditions contained herein may be modified or changed only by a written instrument executed by both parties and specifically describing such change or modification.

1. SPECIFICATIONS: Aerisa is furnishing its standard equipment as outlined in the proposal and as will be covered by final approved drawings. The equipment may not be in strict compliance with the Engineer's/Owner's plans, specifications, or addenda as there may be deviations. The equipment will, however, meet the general intention of the mechanical specifications of these documents.

2. ITEMS INCLUDED: This proposal includes only the equipment specified herein and does not include erection, installation, accessories, nor associated materials such as controls, piping, etc., unless specifically listed.

3. PARTIES TO CONTRACT: Aerisa is not a party to or bound by the terms of any contract between Aerisa's customer and any other party. Aerisa's undertakings are limited to those defined in the contract between Aerisa and its direct customers.

4. PRICE AND DELIVERY: All selling prices quoted are subject to change without notice after 30 days from the date of this proposal unless specified otherwise. Unless otherwise stated, all prices are F.O.B. Aerisa or its supplier's shipping points. All claims for damage, delay or shortage arising from such equipment shall be made by Purchaser directly against the carrier. When shipments are quoted F.O.B. job site or other designation, Purchaser shall inspect the equipment shipped, notifying Aerisa of any damage or shortage within forty-eight hours of receipt, and failure to so notify Aerisa shall constitute acceptance by Purchaser, relieving Aerisa of any liability for shipping damages or shortages.

5. PAYMENTS: All invoices are net 30 days. Delinquencies are subject to a 1.5 percent service charge per month or the maximum permitted by law, whichever is less on all past due accounts. Pro rata payments are due as shipments are made. If shipments are delayed by the Purchaser, invoices shall be sent on the date when Aerisa is prepared to make shipment and payment shall become due under standard invoicing terms. If the work to be performed hereunder is delayed by the Purchaser, payments shall be based on the purchase price and percentage of completion. Products held for the Purchaser shall be at the risk and expense of the Purchaser. Unless specifically stated otherwise, prices quoted are for equipment only. These terms are independent of and not contingent upon the time and manner in which the Purchaser receives payment from the owner.

6. PAYMENT TERMS: Credit is subject to acceptance by Aerisa's Credit Department. If the financial condition of the Purchaser at any time is such as to give Aerisa, in its judgment, doubt concerning the Purchaser's ability to pay, Aerisa may require full or partial payment in advance or may suspend any further deliveries or continuance of the work to be performed by the Aerisa until such payment has been received. Unless otherwise stated, payment is due as follows: **15% with purchase order, 35% on submittal approval/release for fabrication, 45% on readiness of the goods for shipment, and 5% on system startup not to exceed 30 days from delivery.**

7. ESCALATION: If shipment is, for any reason, deferred by the Purchaser beyond the normal shipment date, or if material price increases are greater than 5% from proposal date to material procurement date, stated prices set forth herein are subject to escalation. The escalation shall be based upon increases in labor and material and other costs to Aerisa that occur in the time period between quotation and shipment by Aerisa. Purchaser agrees to this potential escalation regardless of contradicting terms in the contract, except when an agreed upon escalation adder is included in the price.

(a) The total quoted revised price is based upon changes in the indices published by the United States Department of Labor, Bureau of Labor Statistics. Labor will be related to the Average Hourly Earnings indices found in the Employment and Earnings publication. Material will be related to the Metal and Metal Products Indices published in Wholesale Prices and Prices Indices.

(b) Price revision for items furnished to, and not manufactured by Aerisa, which exceed the above escalation calculation, will be passed along by Aerisa to Purchaser based upon the actual increase in price to Aerisa for the period from the date of quotation to the date of shipment by Aerisa. Any item that is so revised will be excluded from the index escalation calculations set forth in subparagraph (a) above.

8. APPROVAL: If approval of equipment submittals by Purchaser or others is required, a condition precedent to Aerisa supplying any equipment shall be such complete approval.

9. INSTALLATION SUPERVISION: Prices quoted for equipment do not include installation supervision. Aerisa recommends and will, upon request, make available, at Aerisa's then current rate, an experienced installation supervisor to act as the Purchaser's employee and agent to supervise installation of the equipment. Purchaser shall at its sole expense furnish all necessary labor equipment, and materials needed for installation.

Responsibility for proper operation of equipment, if not installed by Aerisa or installed in accordance with Aerisa's instructions, and inspected and accepted in writing by Aerisa, rests entirely with Purchaser; and any work performed by Aerisa personnel in making adjustment or changes must be paid for at Aerisa's then current per diem rates plus living and traveling expenses.

Aerisa will supply the safety devices described in this proposal or shown in Aerisa's drawings furnished as part of this order but excepting these, Aerisa shall not be required to supply or install any safety devices whether required by law or otherwise. The Purchaser hereby agrees to indemnify and hold harmless Aerisa from any claims or losses arising due to alleged or actual insufficiency or inadequacy of the safety devices offered or supplied hereunder, whether specified by Aerisa or Purchaser, and from any damage resulting from the use of the equipment supplied hereunder.

10. ACCEPTANCE OF PRODUCTS: Products will be deemed accepted without any claim by Purchaser unless written notice of non-acceptance is received by Aerisa within 30 days of delivery if shipped F.O.B. point of shipment, or 48 hours of delivery if shipped F.O.B. point of destination. Such written notice shall not be considered received by Aerisa unless it is accompanied by all freight bills for said shipment, with Purchaser's notations as to damages, shortages and conditions of equipment, containers, and seals. Non-accepted products are subject to the return policy stated below.

11. TAXES: Any federal, state, or local sales, use or other taxes applicable to this transaction, unless specifically included in the price, shall be for Purchaser's account.

12. TITLE: The equipment specified herein, and any replacements or substitutes therefore shall, regardless of the manner in which affixed to or used in connection with realty, remain the sole and personal property of Aerisa until the full purchase price has been paid. Purchaser agrees to do all things necessary to protect and maintain Aerisa's title and interest in and to such equipment; and upon Purchaser's default, Aerisa may retain as liquidated damages any and all partial payments made and shall be free to enter the premises where such equipment is located and remove the same as its property without prejudice to any further claims on account of damages or loss which Aerisa may suffer from any cause.

13. INSURANCE: From date of shipment until the invoice is paid in full, Purchaser agrees to provide and maintain at its expense, but for Aerisa's benefit, adequate insurance including, but not limited to, builders risk insurance on the equipment against any loss of any nature whatsoever.

14. SHIPMENTS: Any shipment of delivery dates recited represent Aerisa's best estimate but no liability, direct or indirect, is assumed by Aerisa for failure to ship or deliver on such dates.

Aerisa shall have the right to make partial shipments; and invoices covering the same shall be due and payable by Purchaser in accordance with the payment terms thereof. If Purchaser defaults in any payment when due hereunder, Aerisa may, without incurring any liability therefore to Purchaser or Purchaser's customers, declare all payments immediately due and payable with maximum legal interest thereon from due date of said payment, and at its option, stop all further work and shipments until all past due payments have been made, and/or require that any further deliveries be paid for prior to shipment.

If Purchaser requests postponements of shipments, the purchase price shall be due and payable upon notice from Aerisa that the equipment is ready for shipment; and thereafter any storage or other charge Aerisa incurs on account of the equipment shall be for the Purchaser's account.

If delivery is specified at a point other than Aerisa or its supplier's shipping points, and delivery is postponed or prevented by strike, accident, embargo, or other cause beyond Aerisa's reasonable control and occurring at a location other than Aerisa or its supplier's shipping points, Aerisa assumes no liability in delivery delay. If Purchaser refuses such delivery, Aerisa may store the equipment at Purchaser's expense. For all purposes of this agreement such tender of delivery or storage shall constitute delivery.

Orders specifically including freight or other transportation charges are based on rates in effect on date of acceptance of these terms and conditions and on the routing of shipment arranged by Aerisa. Aerisa will ship goods in accordance with Purchaser's routing whenever such routing will not result in an increase in freight or other transportation charges. In the event of such increases, the payment of any additional freight or other transportation charges is guaranteed by Purchaser to Aerisa's satisfaction. The goods shall be packaged for shipment at the lowest acceptable rate by common or other carrier, or any other method deemed necessary or advisable by Aerisa. Marking shall be in accordance with ordinary commercial practice at place of shipment, unless otherwise designated by Purchaser and accepted by Aerisa.

15. WARRANTY: AERISA WARRANTS EQUIPMENT IT SUPPLIES ONLY IN ACCORDANCE WITH THE WARRANTY EXPRESSED IN THE ATTACHED COPY OF "AERISA WARRANTY" AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS WHICH IS MADE A PART HEREOF. SUCH WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, WHETHER WRITTEN, ORAL, EXPRESSED, IMPLIED OR STATUTORY. AERISA SHALL NOT BE LIABLE ANY CONTINGENT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES FOR ANY REASON WHATSOEVER.

16. PATENTS: Aerisa agrees that it will, at its own expense, defend all suits or proceedings instituted against Purchaser and pay any award of damages assessed against it in such suits or proceedings, so far as the same are based on any claim that the said equipment or any part thereof constitutes an infringement of any apparatus patent of the United States issued at the date of this Agreement, provided Aerisa is given prompt notice in writing of the institution or threatened institution of any suit or proceeding and is given full control of the defense, settlement, or compromise of any such action; and Purchaser agrees to give Aerisa needed information, assistance, and authority to enable Aerisa so to do. In the event said equipment is held or conceded to infringe such a patent, Aerisa shall have the right at its sole option and expense to a) modify the equipment to be non-infringing, b) obtain for Purchaser the license to continue using said equipment, or c) accept return of the equipment and refund to the Purchaser the purchase price thereof less a reasonable charge for the use thereof. Aerisa will reimburse Purchaser for actual out-of-pocket expenses, exclusive of legal fees, incurred in preparing such information and rendering such assistance at Aerisa's request. The foregoing states the entire liability of Aerisa, with respect to patent infringement; and except as otherwise agreed to in writing, Aerisa assumes no responsibility for process patent infringement.

17. SURFACE PREPARATION AND PAINTING: Motors, gear motors, and other components not manufactured by Aerisa will be painted with that manufacturer's standard paint system.

18. CANCELLATION, SUSPENSION, OR DELAY: After acceptance by Aerisa, this proposal, or Purchaser's order based on this proposal, shall be a firm agreement and is not subject to cancellation, suspension, or delay except upon payment by Purchaser of appropriate charges which shall include all costs incurred by Aerisa to date of cancellation, suspension, or delay plus a reasonable profit. Additionally, all charges related to storage and/or resumption of work, Aerisa's plant or elsewhere, shall be for Purchaser's sole account; and all risks incidental to storage shall be assumed by Purchaser.

19. RETURN OF PRODUCTS: No products may be returned to Aerisa without Aerisa's prior written permission. Said permission may be withheld by Aerisa at its sole discretion.

20. FORCE MAJEURE: Neither party shall be liable to the other party for failure to perform any of its obligations hereunder (except for the payment of money) due to Act of God, accident, fire, flood, riot, war, sabotage, explosion, strike, labor disturbance, national defense requirements, governmental law, ordinance, rule or regulations, whether valid or invalid, extraordinary failure of equipment or apparatus, inability to obtain electricity or other type of energy, raw material, labor, equipment or transportation, or any similar or different contingency beyond the party's reasonable control which would make performance impractical whether or not the contingency is of the same class as those enumerated above. The party invoking Force Majeure shall provide the other party with an estimate as to when the Force Majeure condition will end. The minimum term of this agreement shall be extended by the duration of any Force Majeure period.

21. DATA: All bids, purchase orders, drawings, specifications, and related data provided by Aerisa shall be the sole property of Aerisa. No drawings or specifications provided by Aerisa shall be used for construction purposes. All drawings, specifications, data, and materials provided by Aerisa shall remain the sole property of Aerisa. Any such drawings or material provided by Aerisa for the use of the Purchaser shall be limited to general arrangement and similar drawings that are unique to this contract and shall not include drawings of components (or modifications thereof) manufactured, fabricated or supplied to or by Aerisa. All such drawings and materials are proprietary, and the information contained therein shall be considered confidential. The Purchaser hereby specifically agrees to maintain this confidentiality and take all reasonable measures to insure that others involved in the project maintain the confidentiality of the information provided.

22. VIDEOTAPING: Videotaping of Aerisa's employees or representatives by or on the behalf of the Purchaser will require execution of a separate videotaping agreement.

23. BACKCHARGES Aerisa will not approve or accept backcharges for labor, materials, or other costs incurred by Purchaser or others in modification, adjustment, service, or repair of Aerisa-furnished materials unless such back charge has been authorized in advance in writing by a Aerisa employee, by a Aerisa purchase order, or work requisition signed by Aerisa.



24. INDEMNIFICATION: Purchaser agrees to indemnify Aerisa from all costs incurred, including but not limited to court costs and reasonable attorney fees, from enforcing any provisions of this contract, including but not limited to breach of contract or costs incurred in collecting monies owed on this contract.

25. ENTIRE AGREEMENT: This proposal expresses the entire agreement between the parties hereto superseding any prior understandings, and is not subject to modification except by a writing signed by an authorized officer of each party.

26. EXTENDED STORAGE: Extended storage instructions will be part of information provided to shipment. If equipment installation and start-up is delayed more than 30 days, the provisions of the storage instructions must be followed to keep WARRANTY in force.

27. LIABILITY: Professional liability insurance, including but not limited to, errors and omissions insurance, is not included. In any event, liability for errors and omissions shall be limited to the lesser of \$100,000USD or the value of the particular piece of equipment (not the value of the entire order) supplied by Aerisa against which a claim is sought.

28. ARBITRATION NEGOTIATION: Any controversy or claim arising out of or relating to the performance of any contract resulting from this proposal or contract issued, or the breach thereof, shall be settled by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator(s) may be entered to any court having jurisdiction.

TRANS-TECH ENERGY AND ENVIRONMENTAL, INC.

534 Canyon View Drive
Golden, CO 80403
Phone 720-379-8284
Mobile: 412-337-1055
Fax 720-696-6780

d.tulenko@trans-tech.org
www.trans-tech.org

Quote Number 21200127-1

Quote Date 01/27/2020

Description: 70-E5-120 110 VAC Ionizer for Laboratory
1-2 PPM H2S Ave 5 PPM Peak
Quoted to: 40X60X10 or 24,000 FT3 at 3-6 AC/Hr.

Joh Koch
Plant Supervisor
Muscatine Water Pollution Control Plant
1202 Musser Street
Muscatine, IA 52761

Payment Terms:
100 percent within 30 days of hardware delivery to customer dock

Customer ID Good Thru

Muscatine 06/30/2020

Quantity	Item	Description
1	70-E5-120 110 VAC Ionizer Five (5) E Tube Shelf Mounted Recirculation Style Unit	P/N 1613-0006 180 Watt 110 VAC Five E Style Tubes Treats up to 14,000 Cubic Ft. Commercial Applications
5	Spare E Style Ion Tubes	BTNA P/N 1617-0012 E Style Ion Tubes
2	Tube Maintenance Kits	BTXNA P/N 1620-0005
1	70E5 14/10 inch reducer for directing ions	BTXNA P/N 1613-0007
1	Installation	Not included
1	On Site System Startup	Not included
1	Design Engineering	Included

Freight Included N/A

Grand Total \$20,430.00

Signed 

Dennis Tulenko
President

Item	Justification	Cost est	Status	Apprvd
T42 Turbo Separator	Depackaging machine	\$336,945	-Verbal order-June 2019 -Approved drawings, Lana will check them soon and move it to the shop 8-5-19	7/3/19
Koala Consulting	Project management, much cheaper than Stanley to perform minimal tasks i.e. paper work, pay submittals, RFI, change orders outside Stanley contract	\$18,500	Conducted pre-con On-going work	
Terra Con	Concrete testing, outside contract	\$4,500	Done	
Lighting	Lighting in the recycling center was not included in the contract, very poor lighting, damaged lights, needed for product placement in machine	\$107,000 entire facility (Transfer, Recycle, offices, maint., outside). \$70,000 (Transfer, Recycle, outside) \$36,164.85	7/30/19 met with auditor, cost for entire facility by them (PQL). \$65K for equipment, will be seeking others for install cost compare. \$215 per light, \$2K rebate, save \$24K/yr.	01/16/20
Ventilation/heating	The recycling center ventilation is in need of an overhaul, upgrade. It has not been evaluated or worked on for years. Probably functional but needs work	\$20,000 \$40-\$50K (deferred for now). Add back in per budget discussion? \$25,000 radiant heat 2/4/20 \$5,000 exhaust repair 2/4/20	7/30/19 seeking bid for radiant heat from contractor. Est \$40K-\$50K. Save \$5K-\$7K/mo during the winter 2/3/20 est radiant heat at \$25K 2/3/20 Exhaust system not functioning, receiving est for repair	
End loader	To move material from the tip floor into the machine, looking for used to purchase per Finance	\$70,000 est for used \$77,400 w/shipping	Updated 8/20 Updated 9/19, size needed for height of hopper is increasing cost	2/6/20 (pending)

Fork lift	Needed to move product out of trucks, with rotating forks to dump into machine. Looking to purchase used per Finance	\$20,000 est for used \$25,774.00 including rotating forks	Asking Raymond for donation	1/16/20
Barrel loader attachment	For loading barrels with fork lift. Product from Heinz coming in barrels	\$1500	Seeking quotes, estimate from web search	
Rotating fork assembly for fork lift	To load material into the hopper from pallets and material in bins 2 nd set of rotating forks for endloader to dump Npurina bins	\$8,000 est used Included with fork lift purchase \$4,400 for endloader	Seeking quotes, estimate from web search Purchased 5/15/20	1/16/20
Security cameras	Needed for vendor proof of destruction requirements and to keep stored food from being stolen for resale or personal use. Also monitoring off-loading at the WRRF, vac pad, septage camera replacement, compatible with current system. Current server is non-functioning, needed replacement 2 years ago. Vendor specific to tie to current system.	\$34,271 \$46,111 <u>+ 3,988 (2/4/20)</u> \$50,099	Updated 7/18/19 Xfer only Updated 7/31/19 for plant and Xfer To Council 8/15/19 Approved Additional camera added 2/4/20 as machine placement dictated, unknown blind spot until placed	8/15/19
Remote access to cameras	Security of client product while in storage, at delivery and during destruction is critical. This will allow them remote access to the cameras, a requirement by most anticipated clients to the MORC	\$4,400	Additional hardware and software needed to integrate to the City system per John Kreuzenstein 2/4/20	
Door locks	Door locks in recycling center in poor condition, needed for security during and after project	\$1,100	Installed, completed	
Aggregate	Base for the truck off loading site at the	\$20,000	Rough design by City	

	WRRF. Earth work to be performed by City. May pave in the future but this saves cost of contractor performing work		engineer Paved the area under COR #5	
Pole building/Fats Oils & Grease (FOG) receiving	A building and pad are needed to house the liquid/FOG receiving bar screen for winter freeze protection. Two trucks will connect. This was removed in the project 3.0a to reduce cost to current contract 3.0b.	\$50,000 \$148,984 12/16/19 Change Order #5, paving entire area required, LCI to do work. Buidling deferred.	7/30/19 seeking bids for trough configuration 8/30/19 Leander bid \$81K 9/19/19 received alt bid \$15K for concrete.	10/31/19
Hot water wash down	Hot water is needed to clean the greasy areas around the LWR and flush the line daily to avoid costly line jetting	\$11,000 Alt quote \$7,963.60 Taking from capital budget Roughing Filter Project	8/16/19 Hotsy quote, per unit. Immediate need at LWR, future at Xfer. Seeking alt quote. 05/15/20 Landa quote, purchase to Council 5/21/20	
Flow meters and piping	Meters to measure off-loading trucks for accurate billing.	\$7,000 (deferred)	Seeking quotes	
Bollards	Bollards to protect light poles, buildings, etc from new truck traffic at WRRF, Xfer	\$1,500	Xfer done with CO #1, LWR area to be done when aggregate installed	
Safety Kleen	Remove hydraulic fluid from old baler pit to fill and repair at the Xfer	\$1,000	Estimate 7/31/19 Completed 8/08/19	
Power wash RC building	Remove dirt and debris from construction before machine is installed	\$4700	Completed 9/13/19	
Shelter/Odor Control LWR Station	The LWR requires a shelter to direct odor vapors from being taken in by the lab HVAC	\$30,000 \$6,500/ionizing unit	Phase I to Council 5/21/20 for lab, 1 unit Phase II to follow for HSW holding tank, 2	

HSW Project Equipment and Services. Items outside contractor bid known at this time and estimated costs

7/1/19

			units	
Cleaning NW Digester of sand and material	Phase II digester cleaning added due to Phase I being under budget	\$50,000-\$60,000 (high end est.)	Waiting on estimate 2/4/20	
Plumbing at DCB	Phase II plumbing in Digester Control Building due to Phase I being under budget	\$80,000-\$90,000 (high end est.)	Waiting on estimate 2/4/20	
Change Order #1		\$21,219.79	Approved 09/05/19	09/05/19
Change Order #2		\$35,642.86	To Council 10/03/19	10/03/19
Change Order #3		\$14,340.25	To Council 11/04/19	11/04/19
Change Order #4		\$20,932.66	To Council 01/02/20	01/2/20
Change Order #5	LWR paving	\$148,984.00	To Council 12/19/19	12/19/19
Total		\$1,003,564 est	Updated 05/15/20	