

COB - BOSAIR FORM

10/10/2025 8:45 AM (MST)

Submitted by Judy.Cooper@pima.gov



BOARD OF SUPERVISORS AGENDA ITEM REPORT (BOSAIR)

All fields are required. Enter N/A if not applicable. For number fields, enter 0 if not applicable.

Record Number: PO WW PO2500012265

Award Type: Contract

Is a Board Meeting Date Requested? Yes

Requested Board Meeting Date: 11/04/2025

Signature Only:

NO

Procurement Director Award / Delegated Award: • N/A

Supplier / Customer / Grantor / Subrecipient: Veregy West, LLC

Project Title / Description: Guaranteed Energy Cost Savings Services - Pima County - Veregy

Purpose: Amendment: Contract No. PO2500012265, Amendment No. 1. This amendment incorporates Guaranteed Maximum Price (GMP) 1 in the amount of \$7,000,000.00 with no increase to the contract amount and revises Appendix E - Schedule of Savings to include the energy savings supporting documentation for the construction phase of the energy improvements at Corona de Tucson Wastewater Reclamation Facility. Due to limited subcontracting opportunities, a No SBE Goal has been established for GMP 1. Administering Department: Regional Wastewater Reclamation Department.

Procurement Method: Other

Insert additional Procurement Method info, if applicable: Pursuant to Cooperative Procurement No. RQ2500006417, on 05/20/25, the Board of Supervisors awarded a contract in the not-to-exceed amount of \$7,000,000.00 for a contract term from 05/20/25 to 05/19/27.

Attachment: Amendment No. 1.

Program Goals/Predicted Outcomes: The Corona de Tucson WRF consists of two 0.5 million gallons per day (MGD) bioreactors with a combined capacity to treat 1.0 MGD. In 2017, a 0.5 MGD chlorine contact basin was constructed to allow for disinfection and improvement in water quality to facilitate on-site recharge of effluent and recharge credits. The Corona de Tucson service area is experiencing increased population growth beyond 0.5 MGD daily flow requiring both bioreactors being placed into service. The increased flows now exceed the 0.5 MGD disinfection capabilities necessitating an expansion of the chlorine contact basin. Aeration equipment necessary for providing aeration to the bioreactors is compromised by deteriorated aeration header and seven antiquated

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rotary lobe blowers. This project will expand the 0.5 MGD chlorine contact basin capacity to 1.0 MGD average dry weather flow to match the combined bioreactor capacities. This project will replace the seven blowers with modern turbo blowers for improved efficiency and replacement of the compromised aeration header with an above ground header for improved serviceability. These changes will also include the installation of fine bubble diffusers and submersible mixers in each bioreactor for improved efficiency and treatment quality. Lastly, the project includes the installation of on-site photovoltaic solar for a reduction in operational cost.

Public Benefit and Impact: This project will improve treatment water quality and expand disinfection capabilities resulting in a public benefit of increased aquifer recharge capability and associated recharge credits. An additional public benefit of the project is 1GPA's performance contracting services includes a performance guarantee for energy cost savings over a 20-year period and eligible for Inflation Reduction Act (IRA) reimbursement. Performance guarantee contracting provides RWRD and its rate payers with assurances that project savings ultimately serve as ROI for the project.

Budget Pillar • Critical infrastructure & economic growth

Support of Prosperity Initiative: C-S 2. Address Climate Resilience and Environmental Justice

Provide information that explains how this activity supports the selected Prosperity Initiative Climate resiliency through GHG reductions and energy efficiency in wastewater treatment via performance-based contracting.

Metrics Available to Measure Performance: Two metrics will be used to measure performance, energy usage and water quality improvements, resulting in increased aquifer recharge.

1. FY24-25 baseline values for energy usage (kWh) and cost savings associated with solar energy will be used for measuring performance. In the event energy savings are not realized, the performance contracting firm must reimburse RWRD for energy use overages. Reconciliation occurs each year with metrics gaged against the agreed upon baseline usage prior to project execution.
2. Aquifer recharge performance improvements will be measured by the annual recharge volume and associated credits.

Retroactive: NO

Amendment / Revised Award Information

Record Number: PO WW PO2500012265

Document Type: PO

Department Code: WW

Contract Number: PO2500012265

Amendment Number: 1

Commencement Date: 11/04/2025

Termination Date: 05/19/2027

Is the Termination Date new?

NO

Classification: Expense

Adjust Level: No change

Prior Contract Number (If Applicable): N/A

Amount This Amendment:

\$0.00

Funding Source(s) required: RWRD Obligations

Funding from General Fund?

NO

Contract is fully or partially funded with Federal Funds?

NO

Department: Procurement

Name: Judy Cooper *jc*

Telephone: 520-724-3727

Add GMI Department Signatures

No

Division Manager/Procurement Officer Signature: Scott Loomis Digitally signed by Scott Loomis Date: 2025.10.16 09:16:53 -07'00' Date: _____

Procurement Director Signature: Bruce D Collins Digitally signed by Bruce D Collins Date: 2025.10.16 09:49:14 -07'00' Date: _____

Department Director Signature: *Jackson Jenkins* for Jackson Jenkins Date: 16 Oct 2025

Deputy County Administrator Signature: *[Signature]* Date: 10/20/2025

County Administrator Signature: *[Signature]* Date: 10/21/2025

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT	
PROJECT:	Guaranteed Energy Cost Savings Services – Pima County – Veregy
CONTRACTOR:	Veregy West, LLC 3312 East Broadway Road Phoenix, Arizona 85040
CONTRACT NO.:	PO2500012265
AMENDMENT NO:	1
FUNDING:	RWRD Obligations

CONTRACT TERM: 05/20/25 - 05/19/27	ORIGINAL CONTRACT AMOUNT:	\$7,000,000.00
TERMINATION PRIOR AMENDMENT: N/A	PRIOR AMENDMENT(S):	\$ -
TERMINATION THIS AMENDMENT: 05/19/27	AMOUNT THIS AMENDMENT:	\$ -
	REVISED CONTRACT AMOUNT:	\$ 7,000,000.00

CONTRACT AMENDMENT

The Parties agree to amend the above-referenced contract as follows:

1. Background and Purpose.

- 1.1. Background. On May 20, 2025, County and Veregy entered into the above referenced energy performance contract to complete the planning, design, and construction of energy improvements at the Corona de Tucson Wastewater Reclamation Facility which includes a guaranteed energy cost savings.
- 1.2. Purpose. This amendment incorporates Guaranteed Maximum Price (GMP) 1 in the amount of \$7,000,000.00 with no increase to the contract amount and revises Appendix E – Schedule of Savings to include the energy savings supporting documentation for the construction phase of the energy improvements at Corona de Tucson Wastewater Reclamation Facility. Due to limited subcontracting opportunities, a No SBE Goal has been established for GMP 1.

2. Scope of Services.

Add Section 3.1.1. “Incorporate Appendix E – Schedule of Savings, revised 09/22/25 (24 pages).”
 Add Section 3.7.1. “Incorporate Appendix I – Guaranteed Maximum Price (GMP) 1, dated 10/15/25 (12 pages).”

3. Compensation and Payment.

Add Section 4.1.1. “Incorporate Appendix I – Guaranteed Maximum Price (GMP) 1, dated 10/15/25 (12 pages) in the amount of \$7,000,000.00 with no increase to the contract amount.”

Attach: Appendix E – Schedule of Savings, revised 09/22/25 (24 pages) and Appendix I – Guaranteed Maximum Price (GMP) 1, dated 10/15/25 (12 pages)

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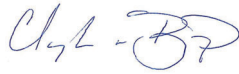
All other provisions of the Contract not specifically changed by this Amendment remain in effect and are binding upon the Parties.

APPROVED:

Rex Scott, Chair, Board of Supervisors

Date

CONTRACTOR:



Authorized Signature

Clayton Boop, Vice-President West

October 20, 2025

Date

ATTEST:

Melissa Manriquez, Clerk of the Board

Date

APPROVED AS TO FORM:



Deputy County Attorney

Cindy Nguyen
Name (Please Print)

10/17/25

Date

Appendix E - Schedule of Savings, revised 09/22/25 (24 pages)

1. Savings Summary

The total Avoided Energy, Operational and Related Capital Expenditure Costs over the Term of the Agreement are \$7,139,169 as defined by the following:

- Annual Avoided Energy Costs are not less than \$108,259 as listed below.

YEAR	GUARANTEED ENERGY SAVINGS (\$)
1	\$108,259
2	\$112,826
3	\$117,585
4	\$122,546
5	\$127,717
6	\$133,107
7	\$138,725
8	\$144,582
9	\$150,686
10	\$157,050
11	\$163,683
12	\$170,597
13	\$177,805
14	\$185,318
15	\$193,150
16	\$201,314
17	\$209,825
18	\$218,696
19	\$227,944
20	\$237,585
TOTAL SAVINGS	\$3,299,000

- Annual Avoided Operation and Maintenance Costs are not less than \$12,801 as listed below.

YEAR	O&M SAVINGS (\$)
1	\$456,462
2	\$12,801
3	\$13,377
4	\$13,979
5	\$14,608
6	\$15,266
7	\$15,953
8	\$16,671
9	\$17,421
10	\$18,205
11	\$19,024
12	\$19,880
13	\$20,775
14	\$21,709
15	\$22,686
16	\$23,707
17	\$24,774
18	\$25,889
19	\$27,054
20	\$28,271
TOTAL SAVINGS	\$828,512

Year 1 includes the expected Inflation Reduction Act rebate. Please note Inflation Reduction Act rebate is not guaranteed by VEREGY.

- Annual Avoided Related Capital Expenditure Costs are not less than \$96,000 as listed below.

YEAR	CAPITAL COST AVOIDANCE (\$)
1	\$96,000
2	\$100,320
3	\$104,834
4	\$109,552
5	\$114,482
6	\$119,633
7	\$125,017
8	\$130,643
9	\$136,522
10	\$142,665
11	\$149,085
12	\$155,794
13	\$162,805
14	\$170,131
15	\$177,787
16	\$185,787
17	\$194,148
18	\$202,884
19	\$212,014
20	\$221,555
TOTAL SAVINGS	\$3,011,657

The Term of this Agreement is for 20 years from the first (1st) day of the month following the date of Final Project Acceptance of the Work.

2. Energy Rates and Costs

2.1 Energy Rates. Actual Energy Rates are determined by reviewing current Energy Costs per unit of energy. Historically, Energy Costs have increased an average of 4.5% per year for CUSTOMER. VEREGY may escalate rates at an average of 4.5% annually or use the actual rates, whichever is greater, to determine total Avoided Energy Costs over the Term of this Agreement. The rates used for this Agreement are detailed in the table below.

Energy Rates

The table below shows Trico Electric Coop – Rate Schedule GS3 which is reflected on the bills and is the rate plan the customer is under for this facility.

**GENERAL SERVICE
SCHEDULE GS3
GENERAL SERVICE LESS THAN 12,000 KW**

STANDARD RATE GS3	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Customer Charge (\$/Customer/Mo)							
Single-Phase		\$5.54	\$0.98	\$6.33	\$14.15	\$27.00	\$27.00
Three-Phase		\$5.54	\$0.98	\$6.33	\$22.15	\$35.00	\$35.00
Billing Demand Charge* (\$/kW/Month)	\$15.00				\$3.00	\$3.00	\$18.00
Energy Charge (\$/kWh)	\$0.040100				\$0.034930	\$0.034930	\$0.075030

Note that the Trico rate schedule shows \$18.00 per kW for demand charges and \$0.07503 per kWh for energy charges. The actual electric bills show \$18.00 per kW for demand charges and \$0.08503 per kWh (which reflects a cost adjustment charge of 0.01 \$/kWh). Veregy is using actual rates instead of stated rates for savings calculations. Taxes of 6.1% have also been added to these rates to calculate savings rate. Accordingly, the table below shows the baseline rates that were used.

1	\$/kWh (Energy Rate)	0.0902
2	\$/kW (Demand Rate)	19.10
3	\$/kWh (Solar Rate)	0.0930

Please note that rates 1 and 2 were used to calculate dollar savings for all non-solar ECMs. For solar ECM, which has a small amount of demand savings built into the savings rate, rate 3 was used.

2.2 Baseline Period Energy Use and Costs. The Baseline Period is defined as the 365-day period from 25th Aug 2024 to 25th Aug 2025. The Baseline Period Energy Use and Costs for the Facilities are:

Line	Bill Start	Bill Stop	Bill Days	kWh Energy	kW Demand	Total Bill
1	25-Aug-24	25-Sep-24	31	81,600	175	\$10,364
2	25-Sep-24	24-Oct-24	29	79,680	170	\$10,089
3	24-Oct-24	23-Nov-24	30	80,280	180	\$10,348
4	23-Nov-24	24-Dec-24	31	85,440	186	\$11,336
5	24-Dec-24	25-Jan-25	32	106,080	239	\$14,224
6	25-Jan-25	25-Feb-25	31	103,200	238	\$13,934
7	25-Feb-25	24-Mar-25	27	88,920	242	\$12,725
8	24-Mar-25	25-Apr-25	32	105,720	242	\$14,263
9	25-Apr-25	25-May-25	30	95,520	235	\$13,188
10	25-May-25	25-Jun-25	31	99,120	237	\$13,559
11	25-Jun-25	25-Jul-25	30	99,600	242	\$13,696
12	25-Jul-25	25-Aug-25	31	102,000	235	\$13,769
Totals				1,127,160	2,620	\$151,496

2.3 **Baseline Adjustment.** In January 2025, the facility initiated operation of the second aeration basin. As a result, energy consumption, demand, and associated costs increased. Both basins are expected to remain in operation in future years. However, the original baseline period reflects only eight months of this operational change. To account for this, baseline adjustments were made as follows:

- The average increases observed during the eight months were **25% in kWh** and **32% in kW**.
- This equates to an additional **81,255 kWh** of energy and **228 kW** of demand on an annual basis
- The corresponding increase in total cost is **\$13,781**.

Accordingly, the adjusted baseline values are presented below.

	Annual Energy (kWh)	Annual Demand (kW)	Total cost (\$)
Original Baseline	1,127,160	2,620	\$ 151,496
Expected Increase	81,255	228	\$ 13,781
Adjusted Baseline	1,208,415	2,848	\$ 165,277

3. **Guaranteed Savings**

VEREGY guarantees to CUSTOMER that the identified Facilities will realize the total Guaranteed Savings through the combined value of all ECMs over the Term of the Agreement. The total Guaranteed Savings in each Guarantee Year is verified as specified in this Agreement, and this verification method is agreed to by VEREGY and CUSTOMER. Avoided Operational and Future Costs as given below are calculated values based on industry standard information and information provided by CUSTOMER and are agreed to values. No verification of Operational and Future Cost Savings is performed.

Energy Conservation Measures Savings Guarantee Table

#	ENERGY CONSERVATION MEASURE (ECM)	CALCULATION METHOD	ANNUAL ENERGY SAVINGS (kWh)	MONTHLY DEMAND SAVINGS (kW)	GUARANTEED ENERGY SAVINGS (\$)
1	Bioaugmentation for Nocardia Control	None	0	0	\$0
2	Upgrade Blowers	Engineered Efficiency Analysis	33,321	39	\$11,907
3	Upgrade Blower Piping	Engineered Efficiency Analysis	1,767	0	\$160
4	Upgrade Aeration System	Engineered Efficiency Analysis	360,048	23	\$37,704
5	Upgrade Disinfection System	None	0	0	\$0
6	PV Solar	Computer Simulation	627,380	0	\$58,489
TOTAL PROGRAM SAVINGS			1,022,516	62	\$108,259

The guaranteed savings are based on a factor of safety of 95% of the calculated savings.

VEREGY and CUSTOMER agree that the total Avoided Energy Costs for each ECM over the term of the Agreement will be based on an escalation factor for the costs of utilities as given in 2.1.

Avoided Operational Cost Savings. Operational Savings are based on the concepts given in the table below. The operational cost savings identified below are deemed satisfied upon Agreement execution. Avoided future cost savings are determined by the cost to implement this project over the term of the project.

#	ENERGY CONSERVATION MEASURE (ECM)	OPERATING SAVINGS CONCEPT	OPERATIONAL SAVINGS
1	Bioaugmentation for Nocardia Control	Bioaugmentation reduces the occurrence of Nocardia-related foaming events. This lowers operator time spent on corrective actions and reduces the need for additional chemical or cleaning interventions, resulting in O&M savings.	\$ 500
2	Upgrade Blowers	Existing positive displacement blowers require oil changes, belt replacements, and annual belt tensioning. Turbo blowers eliminate the need for belts and oil changes, thereby reducing routine maintenance requirements and associated labor/material costs.	\$ 7,500
3	Upgrade Blower Piping	New blower piping reduces leaks, pressure losses, and mechanical stress. This decreases corrective maintenance activities, extends component life, and lowers overall O&M burden.	\$ 1,000
4	Upgrade Aeration System	Replacing existing aeration system with a fine bubble diffuser system significantly reduces moving parts, minimizing mechanical failures and extending equipment life. Fine bubble diffusers also require less operator intervention for cleaning and adjustment, leading to reduced labor hours and lower ongoing maintenance costs.	\$ 750
5	Upgrade Disinfection System	With the addition of the new chlorine contact basin, the extended contact time improves disinfection efficiency and reduces the volume of chlorine required to achieve permit compliance. This not only lowers chemical consumption but also decreases the frequency of chemical deliveries and handling by operators. In addition, newer disinfection equipment is designed for greater reliability and ease of operation, resulting in fewer call-outs and reduced operator labor.	\$ 2,500
6	PV Solar	Expected Inflation Reduction act rebate is included under Operational savings. This will be a one time payment that will be available in the year after the PV solar PTO is applied for.	\$ 444,212
TOTAL PROGRAM SAVINGS			\$ 456,462

VEREGY and CUSTOMER agree that the total Operational Savings for each ECM over the term of the Agreement will be based on an escalation factor of 4.5%

Related Capital Expenditures. Much of the Veregy program is work identified in the WWTP Capital Improvements Plan (CIP). These capital dollars are expended for implementing the Veregy program. Avoided future capital costs are determined by the cost to implement this project over the term of the project.

#	ENERGY CONSERVATION MEASURE (ECM)	CAPITAL COST AVOIDANCE SAVINGS CONCEPT	AVOIDANCE SAVINGS
2,3,4 & 5	Blowers, Blower Piping, Aeration System, and Second Chlorine Contact Basin	The WWTP's positive displacement blowers, associated air delivery piping, and coarse bubble diffusers are nearing the end of their service life and would otherwise require significant capital replacement in the near term. By including their replacement within the Veregy program, the Plant avoids these future expenditures. For purposes of this program, a fraction of the expected capital costs for replacing this equipment has been recognized and allocated over the program term as capital cost avoidance.	\$ 96,000

VEREGY and CUSTOMER agree that the total Operational Savings for each ECM over the term of the Agreement will be based on an escalation factor of 4.5%

4. Reporting

VEREGY will provide CUSTOMER with a Guaranteed Savings Reconciliation Report(s) according to the schedule below. CUSTOMER will assist VEREGY in generating the savings reconciliation report by providing VEREGY with all information requested as identified in Section 3.2 of Attachment D. Data and calculations utilized by VEREGY in the preparation of its Guaranteed Savings Reconciliation Report will be made available to CUSTOMER along with such explanations and clarifications as CUSTOMER may reasonably request.

Guaranteed Savings Reconciliation Report Schedule

	Report Delivered	Savings Represented
Report 1	90 days following end of Guarantee Year	Year 1 Savings
Subsequent Reporting Years	90 days following end of Guarantee Year	Subsequent Year Savings

The fees associated with the Guaranteed Savings Reconciliation Report are given in Section 6.1.

5. Savings Measurement & Verification Plan

VEREGY will verify the savings using the methodologies given in the table below. Calculation” means the savings have been calculated and agreed to by CUSTOMER and VEREGY. “Measurement” requires measurements to determine the actual retrofit performance. In the “Measurement” cases, the measured parameters, time of measurement and quantity of equipment to be measured are identified. The actual operation of the Facility is the responsibility of CUSTOMER. This includes properly maintaining the equipment, the future hours of operation based on a change in mission, or capacity and variations in weather or unit energy costs.

After reviewing the measurement and verification protocol options, CUSTOMER and VEREGY have agreed that measurements noted in this attachment meet CUSTOMER’S needs for verification of Energy Savings.

Measurement and Verification Methodology for Energy Conservation Measures

ECM #	ECM Description	IPMVP Option	Measurement and Verification Procedures		
			Method	Measured Parameter	Measurement Interval
2	Upgrade Blowers	Engineered Calculations	Stipulated savings based on engineered calculations		
3	Upgrade Blower Pipe	Engineered Calculations	Stipulated savings based on engineered calculations		
4	Replace Aeration System	Engineered Calculations	Stipulated savings based on engineered calculations		
6	Solar PV	B	Measurement	Energy Production kWhs	On-going thru Guarantee

The following describes the Measurement and Verification procedures, formulas, and estimated values which may be used in the calculation of the Energy Savings. 95% of calculated savings that are guaranteed are given in the Energy Conservation Measures Savings Guarantee Table.

PV Solar:

Solar savings are determined by using the anticipated kWh production based on a Helioscope & Energy Toolbase model. Veregy does include a 0.5% solar module degradation per year as stated by the manufacturer. Dollar savings are calculated by determining the solar rate as described in section 2.1 multiplying by the kWh generated.

- Solar Production = kWh * 0.005 to account for module degradation

Guaranteed Energy Production

Commencing on the Commercial Operation Date of the System, Veregy warrants that the System will have a weather-adjusted annual electricity output identified in the table below. Weather-adjustment means the irradiance measured by the System’s weather stations relative to the predicted annual irradiance of a system by the US Department of Energy’s NREL Version 1 PV Watts. Specifically, GHI and POA, which are used to measure irradiance, have baseline values that can be found in the table below. System production may also be adjusted based on disruption to system beyond Veregy Control

Month	GHI (kWh/m ²)	POA (kWh/m ²)
January	96.1	96.2
February	106.5	106.8
March	161.8	162.3
April	211.1	210.7
May	244.9	245.0
June	249.9	249.9
July	225.1	225.5
August	205.7	205.7
September	177.6	177.7
October	148.5	148.7
November	112.0	112.1
December	99.9	100.2

Production Table Summary

Year	Production
1	627,380
2	624,243
3	621,122
4	618,016
5	614,926
6	611,852
7	608,792
8	605,748
9	602,720
10	599,706
11	596,707
12	593,724
13	590,755
14	587,802
15	584,863
16	581,938
17	579,029
18	576,133
19	573,253
20	570,386

Solar savings are verified by collecting the data from the system investment grade meters installed as part of the project.

Any changes to building schedules, occupancy hours, and solar system setup are the responsibility of the Customer and may result in a baseline adjustment for the calculation of verified savings. Veregy will note these changes when found and inform the Customer. Energy savings shown in the annual report will be based on the results documented in the post-installation report. Any modification of the equipment, or changes from its intended function are the responsibility of the Customer.

Blowers, Blower Piping and Aeration Basin calculation methodology is shown in Attachment E-1.

6. On-Going Measurement and Verification Services

VEREGY will verify the savings using the methodologies given in the table in Section 5. Calculation” means the savings have been calculated and agreed to by CUSTOMER and VEREGY. “Measurement” requires measurements to determine the actual retrofit performance. In the “Measurement” cases, the measured parameters, time of measurement and quantity of equipment to be measured are identified. The actual operation of the Facility is the responsibility of CUSTOMER. This includes properly maintaining the equipment, the future hours of operation based on a change in mission, or capacity and variations in weather or unit energy costs.

After reviewing the measurement and verification protocol options, CUSTOMER and VEREGY have agreed that measurements noted in this attachment meet CUSTOMER’S needs for verification of Energy Savings.

6.1 Monitoring of PV Solar Production: Veregy will provide monthly energy usage monitoring and annual reporting for the term of this contract. Reporting will begin a year after the completion of construction. The CUSTOMER shall pay VEREGY for annual Measurement and Verification services, payable at the time reporting is delivered as defined in the table below.

YEAR	Annual M & V Fee
1	\$7,500
2	\$7,838
3	\$8,190
4	\$8,559
5	\$8,944
6	\$9,346
7	\$9,767
8	\$10,206
9	\$10,666
10	\$11,146
11	\$11,647
12	\$12,171
13	\$12,719
14	\$13,291
15	\$13,890
16	\$14,515
17	\$15,168
18	\$15,850
19	\$16,564
20	\$17,309

6.2 **Measurement and Verification Services:** The CUSTOMER may suspend the Measurement and Verification services described herein in any given year prior to the end of the twenty-year term. In the event that CUSTOMER suspends the Measurement and Verification services, then the guarantee, as described in Attachments D and E, shall be null and void. CUSTOMER may suspend said services by notifying VEREGY in writing of the same.

Attachment E-1

Calculation methodology for Blower, Blower Piping and Aeration System



Energy Savings Estimate for: Corona de Tucson WRF Energy Savings Project

Prepared by: Justin Rundle

Date: 22 Sep 25

2 Upgrade Blowers

Assumptions

- 1 An average of 2 blowers are operating per day now - one blower at night and three blowers during the day
- 2 Blower discharge pressure varies with number of blowers operating (up to 9.3 psig with three blowers operating.)
- 3 New blowers will operate at 6 psi with new diffusers

A. General Utility Data

1 Annual electric consumption for CY 2025	968,160 kWh	Electric Billing Analysis
2 Increase in electric consumed - 1st 6 months of '26	24.8%	Electric Billing Analysis
3 Adjusted baseline based on 1st 6 months of 2026	1,208,735 kWh	A.1 x (1 + A.2)
4 Increase when 2nd aeration basin (AB) went on-line	240,575 kWh	A.3 - A.1
5 Rough estimate for electric use for both ABs	481,150 kWh	A.4 x 2 basins operating
6 Percent of electric use for both basins operating	40%	A.5 / A.3
7 Annual electric demand for CY 2025	2,156 kW	Electric Billing Analysis
8 Increase in electric demand - 1st 6 months of '26	32.3%	Electric Billing Analysis
9 Adjusted baseline based on 1st 6 months of 2026	2,852 kW	A.7 x (1 + A.8)
10 Annual electric cost for CY 2025	\$124,952	Electric Billing Analysis
11 Increase in electric consumed - 1st 6 months of '26	32.1%	Electric Billing Analysis
12 Adjusted baseline based on 1st 6 months of 2026	\$165,017	A.10 x (1 + A.11)
13 Blended electric rate for 2025	\$0.129 /kWh	A.10 / A.1
14 Blended electric rate for adjusted baseline	\$0.137 /kWh	A.12 / A.3
15 Electric energy cost	\$0.085 /kWh	Trico June 2025 Electric Bill
16 Electric demand cost - winter	\$18.00 /kW	Trico March 2025 Electric Bill
17 Electric demand cost - summer	\$18.00 /kW	Trico June 2025 Electric Bill
18 Electric tax rate	6.1%	Trico June 2025 Electric Bill

B. Baseline Operation

1 Existing blowers Roots model number	68 U-RAI DSL	See Photo Below
2 Blower design pressure from As-Built Drawings	6.5 psig	See Table from As-Built Drawing
3 Blower design flow from As-Built Drawings	575 scfm	See Table from As-Built Drawing
4 Blower speed from Roots table for Lines 2 & 3	1,777 rpm	Data extrapolation from Roots table
5 BPH for specified blowers	21.0 bhp	Data extrapolation from Roots table
6 Blower actual discharge pressure during site visit	9.3 psig	See photo below
7 BHP for roots blower at 6.0 psi and 1750 rpm	18.7 bhp	From Roots table below
8 BHP for roots blower at 9.0 psi and 1777 rpm	28.7 bhp	Data extrapolation
9 SCFM output for each blower (from tables)	565 scfm	Average between 6 psi and 9 psi
10 Estimated standard cubic feet of air per year	148,482 K scf	B.9 x 60 x 12 x 365 / 1,000
11 Motor efficiency	92.4%	From motor nameplate
12 Estimated belt drive efficiency	93%	Estimated by Engineer (typical)
13 Estimated VFD efficiency	97%	Estimated by Engineer (typical)
14 Total drive efficiency	83%	B.11 x B.12 x B.13
15 Average kW used by each blower	21.2 kW	(B.7 + B.8) / 2 x 0.746 kW per hp / B.14
16 Blower efficiency - total kW per K cfm	37.6 kW/Kscfm	B.15 / (B.9 / 1,000)
17 Blower efficiency - total kW per K cfm per psi	4.17 kW/Kscfm/psi	B.15 / (B.9 / 1,000) / 9 psi
18 Percent of time blowers operate	50%	SCADA photos for cumulative run time
19 Numbers of blowers normally operating	2	Assumption No. 1
20 kWh used by blowers each year	185,965 kWh/yr	B.15 x B.18 x B.19 x 24 x 365

21 Estimated percent of electric use for blowers	19%	B.20 / A.1
22 HP rating for motive pumps	10 hp	As-built drawings
23 Estimate motor loading for motive pumps	70%	Lightly loaded based Line A.6
24 Estimated motor efficiency	90%	Nameplate not available - estimate
25 Estimated kW on loaded motor	5.8 kW	B.22 x B.23 / B.24
26 Number of motive pumps operating 24/7	4	From operators - always running
27 Estimated kWh per year for motive pumps	203,310 kWh	B.25 x B.26 x 24 hr/dy x 365 dy/yr
28 Estimated percent of electric use for motive pumps	21%	B.27 / A.1
29 Estimated electric used by blowers & motive pumps	389,275 kWh	B.20 + B.27
30 Total percent of electric for blowers and pumps	40%	B.29 / A.1
31 Does this seem reasonable?	OK	Because of Line A.6, this is reasonable.

C. Proposed Operations

1 Proposed Turbomax Turbo blower	MAX020-C060S	40 hp turbo blower
2 SCFM discharge volume at Standard Conditions	335 scfm	See Turbomax table below, Point E
3 Blower inlet plus discharge pressure	6.7 psi	See Turbomax table below, Point E
4 kW consumption by blower	11.4 kW	See Turbomax table below, Point E
5 Blower Efficiency - total kW per K cfm	34.0 kW/Kscfm	C.4 / (C.2 / 1,000)
6 Overall Blower Efficiency - kW per K cfm per psi	5.08 kW/Kscfm/psi	C.4 / (C.2 / 1000) / C.3
7 New operating pressure across blower	6.0 psi	Estimated by Engineer
8 Estimated avg operating pressure - existing blowers	7.5 psi	Between 6 and 9 psig
9 Operating pressure savings	1.5 psi	C.8 - C.7
10 Assume new blowers operate at "normal" pressures		due to fine bubble diffusers
11 Ratio of blower efficiencies	91%	C.5 / B.16
12 New blower use at lower operating pressure	168,427 kWh	B.20 x C.11
13 Blower savings due to lower operating pressure	17,538 kWh	B.20 - C.12
14 Total demand for existing blowers	63.7 kW	B.15 x (B.19 + 1) (3 blowers operating)
15 Estimated demand for new blowers - 2 operating	22.8 kW	C.4 x B.19 (2 blowers operating)
16 Estimated demand savings for new blowers	40.9 kW	C.14 - C.15

D. Savings Summary

1 Energy (kWh) reduction	17,538 kWh/yr	C.12
2 Energy (kWh) savings	\$1,582 /yr	D.1 x A.15 x (1 + A.18)
3 Demand (kW) reduction	40.9 kW	C.15
4 Demand (kW) savings	\$9,370 /yr	D.3 x 12 x (A.16+A.17)/2 x (1+A.18)
5 Total savings - electric energy and demand	\$10,952 /yr	C.2 + C.4

E. Savings Summary after Baseline Adjustment

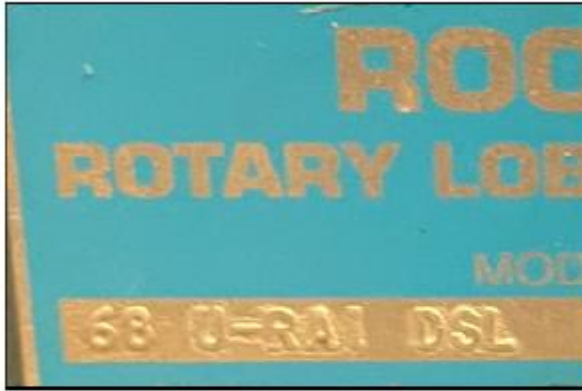
1 Because two basins are now operating, six blowers are operating, so savings is double baseline calculations.		
2 Baseline adjustment for kWh - six blowers operating	100%	Double from three to six blowers
3 Adjusted kWh consumption savings	35,075 kWh/yr	D.1 x (1 + E.2)
4 Adjusted kWh cost savings	\$3,163	D.2 x (1 + E.2)
5 Baseline Adjustment for kW	0%	Blowers alternate - no demand increase
6 Adjusted kW consumption savings	40.9 kW	D.3 x (1 + E.5)
7 Adjusted kW cost savings	\$9,370 /yr	D.4 x (1 + E.5)
8 Total savings - after baseline adjustment	\$12,533 /yr	E.4 + E.7

F. Savings Summary

1 The data in this table is taken directly from information above.

	Elec Energy	
	<u>kW-hrs</u>	<u>kW / mo</u>
Adjusted Baseline Operation	1,208,735	238

Proposed Operation	1,173,660	197
Savings	35,075	41
Savings percent	3%	17%



Supporting Data ECM-1 - Blower are operating at about 9.3 psi, base on photo from site visit

AERATION BLOWER No. of blowers provided Flow rate Pressure Duty = 100% continuous duty Hp	unit scfm psig unit hp	7 575 6.5 6 25
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Supporting Data ECM-2 - Blower Design Table from As-Built Drawings
575 standard CFM (sea level, 68 def F, 36% RH) at 6.5 psig

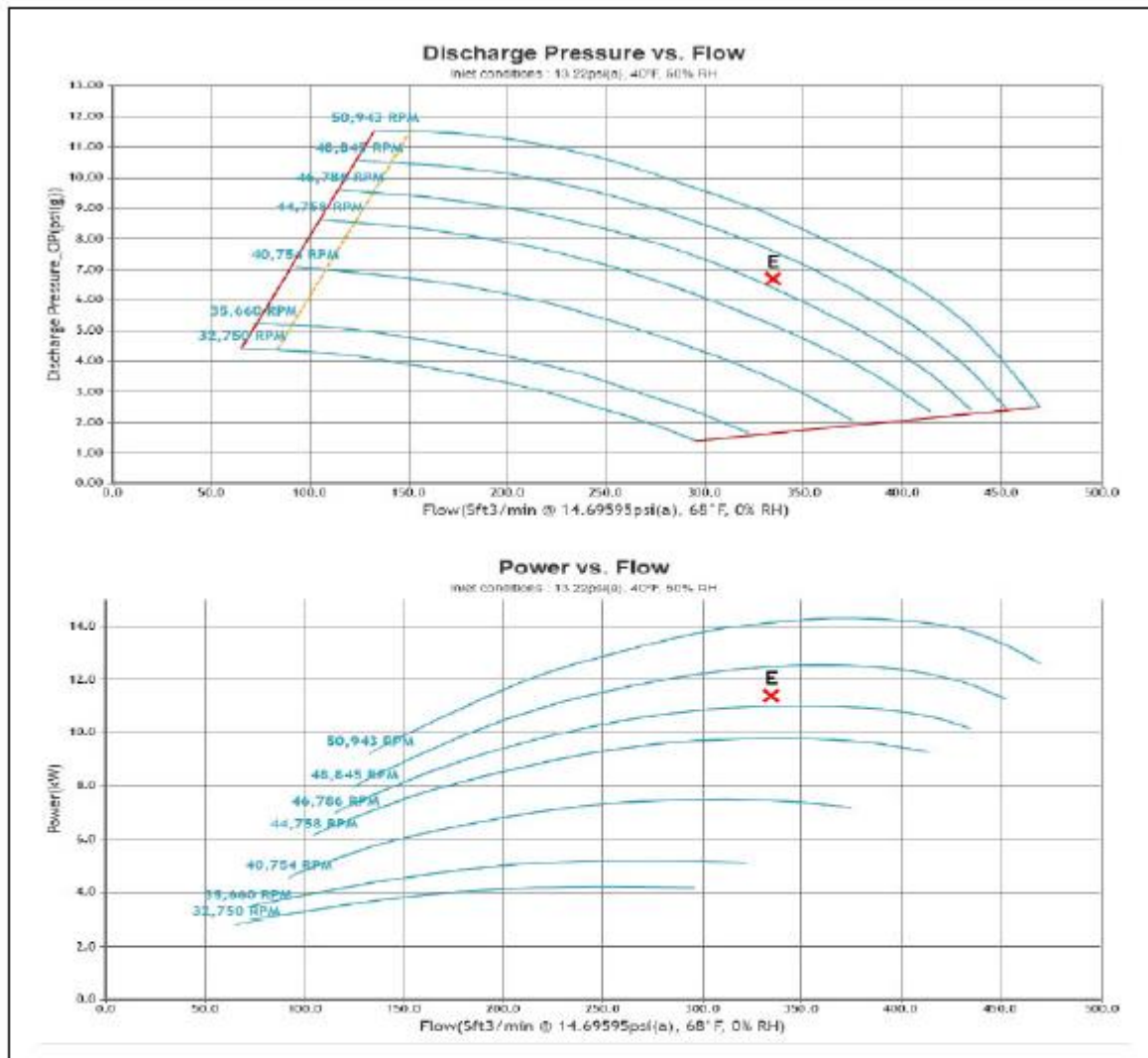
PERFORMANCE TABLE: ROOTS Universal URAI																										
Frame Size	Speed	4 PSI		5 PSI		6 PSI		7 PSI		8 PSI		9 PSI		10 PSI		12 PSI		14 PSI		15 PSI		VACUUM DATA				
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	INHG	CFM	BHP		
22	2950	31	0.9	29	1.1	27	1.3	26	1.5	24	1.7	23	1.9	21	2.1								13	20	1.3	
	3550	40	1.0	38	1.3	37	1.5	35	1.8	34	2.0	32	2.3	31	2.5	28	3.0						14	20	1.7	
	5275	68	1.6	66	2.0	64	2.4	63	2.7	61	3.1	60	3.5	58	3.8	56	4.6						15	53	2.8	
24	2950	68	1.7	66	2.1	63	2.5	60	2.9														14	48	2.8	
	3550	88	2.0	85	2.5	82	3.0	79	3.5														14	67	3.4	
	5275	143	3.1	140	3.9	137	4.6	134	5.4														15	119	8.5	
32	1750	54	1.4	51	1.7	48	2.1	45	2.4	43	2.8	41	3.1	38	3.5	36	4.1						13	37	2.2	
	2950	106	2.4	103	3.0	102	3.6	99	4.2	97	4.7	93	5.3	90	5.9	89	7.1	87	7.8	86	8.2	84	8.8	15	84	4.3
	3550	135	3.0	132	3.7	129	4.4	126	5.1	124	5.8	122	6.5	120	7.2	118	8.0	114	9.3	113	10.0	111	10.6	16	100	5.6
33	1750	75	1.9	71	2.4	67	2.9	64	3.3	61	3.8	58	4.3	56	4.7	51	5.7						13	53	3.0	
	2950	149	3.3	145	4.1	141	4.9	138	5.7	135	6.5	132	7.3	130	8.1	125	9.7						15	119	5.9	
	3550	195	4.1	192	5.0	189	6.0	185	6.9	179	7.9	168	8.8	167	9.8	162	11.7						15	156	7.2	
38	1750	132	3.9	126	3.9	121	4.7	117	5.5														14	95	5.4	
	2950	264	6.6	248	6.8	244	8.1	239	9.4														15	212	9.8	
	3550	316	8.7	310	8.3	305	9.9	300	11.5														15	273	11.8	
42	1750	78	1.9	74	2.4	71	2.8	69	3.3	66	3.7	64	4.2	61	4.7	57	5.6	55	6.0				14	55	3.2	
	2950	150	3.3	147	4.1	144	4.9	141	5.7	138	6.5	135	7.2	134	8.0	130	9.6	128	10.3	125	11.1	124	11.9	16	121	6.2
	3550	187	4.1	183	5.1	180	6.0	177	7.0	175	7.9	172	8.8	170	9.8	166	11.6	164	12.6	162	13.5	160	14.4	16	157	7.6
45	1750	161	3.8	155	4.7	150	5.6	145	6.6	140	7.5	136	8.4	132	9.3								14	121	6.4	
	2950	306	6.7	300	8.2	295	9.8	290	11.3	285	12.9	281	14.4	277	16.0								16	253	12.5	
	3550	379	8.2	373	10.1	368	12.0	363	13.9	358	15.7	354	17.6	349	19.5								16	326	15.2	
47	1750	215	5.0	208	6.2	201	7.4	195	8.6														14	155	8.4	
	2950	407	8.8	399	10.8	392	12.9	386	14.9														15	348	15.4	
	3550	502	10.9	495	13.2	488	15.5	482	18.3														15	444	19.8	
53	1170	113	2.7	108	3.4	103	4.1	99	4.8	96	5.4	92	6.1	88	6.8	82	8.1	195	13.3	193	14.3		13	85	4.3	
	1750	189	4.2	184	5.2	180	6.2	175	7.2	172	8.2	168	9.2	165	10.3	159	12.3	301	22.1	298	23.8		15	151	7.5	
	2650	334	7.4	329	9.0	325	10.7	321	12.3	317	14.0	313	15.6	310	17.2	304	20.5	301	22.1	298	23.8	295	25.4	16	291	13.4
56	1170	195	4.6	190	5.7	185	6.9	179	8.0	176	9.1	164	10.2	158	11.4	150	13.6						14	148	7.0	
	1750	324	7.0	316	8.7	310	10.4	304	12.1	298	13.8	292	15.5	287	17.2	270	20.5	273	22.2				15	266	12.6	
	2650	567	12.2	560	15.0	553	17.7	547	20.5	541	23.2	536	26.0	530	28.7	521	34.2	517	37.0				16	501	22.4	
58	1170	268	6.7	260	8.4	251	10.0	243	11.7														14	277	11.4	

65	1170	223	5.2	216	6.4	208	7.7	202	8.9	196	10.2	190	11.5	185	12.7	175	16.2	171	16.5	166	17.7	15	414	18.4		
	1750	486	10.3	477	12.8	469	15.2	461	17.7													16	297	16.1		
	2050	842	18.0	832	22.0	824	26.0	816	30.0													18	445	20.6		
68	1170	365	8.0	358	9.9	351	11.8	344	13.7	339	15.6	333	17.4	328	19.3	319	23.1	313	24.9	309	26.8	305	28.7	16	297	16.1
	1750	513	11.4	506	13.9	499	16.4	492	19.0	486	21.5	481	24.0	475	26.5	465	31.6	461	34.1	456	36.6	452	39.1	18	445	20.6
	2050	894	17.8	881	21.8	868	25.9	855	29.9	843	34.0	830	38.0	818	42.1	797	50.2	790	54.2	783	58.3		16	715	32.8	
615	1170	670	15.4	647	19.1	625	22.9	607	26.7													11	501	20.5		
	1750	1009	23.4	1076	29.1	1066	34.7	1036	40.4													12	809	33.7		
	2050	1543	32.4	1520	40.0	1499	47.6	1489	55.2													12	1433	46.0		
76	1170	383	8.6	383	10.6	374	12.7	367	14.8	359	16.8	352	18.9	346	21.0	333	26.1	328	27.2	322	29.2	317	31.3	16	319	16.4
	1750	628	13.4	618	16.5	609	19.6	601	22.7	594	25.8	587	28.9	580	32.0	568	38.1	562	41.2	557	44.3	552	47.4	16	543	24.9
	2050	749	16.2	740	19.8	731	23.4	723	27.0	716	30.6	709	34.3	702	37.9	690	45.1	684	48.7	679	52.4	673	56.0	16	694	29.5
711	1170	730	15.5	723	19.2	716	23.0	707	26.8	696	30.5	675	34.3	665	38.1								15	623	27.9	
	1750	1166	23.9	1151	29.5	1130	35.2	1125	40.8	1114	46.4	1100	52.0	1090	57.7								16	1035	46.0	
	2050	1387	29.6	1372	35.2	1359	41.8	1347	48.4	1335	55.0	1324	61.6	1314	68.2								16	1256	53.1	
718	1170	1224	25.0	1202	31.1	1183	37.2															12	1122	36.3		
	1750	1920	38.2	1898	47.4	1879	56.5															12	1818	54.8		
	2050	2280	46.5	2258	56.2	2239	66.9															12	2178	64.7		

Supporting Data ECM-3 - Root Blower Catalog Cut Sheet
 Note for URAI 68 - at 9.0 psi, bhp is 27.8 at 535 scfm

MAX FINDER		COMPRESSOR DATA SHEET					
Ver 0.0.3							
General information							
Project	Pima County Corona de Tucson	Model	MAX20-C060S				
Name	Amber Roberts	C-Number	X20-C060SSP000				
Agency	Lonestar (Lonestar)	Quantity	Total 5(Duty:5& Stand-by:0)				
Process	Activated Sludge	Date	2025-08-02 02:13:52				
Operating Conditions							
Operating point		A	B	C	D	E	F
		1	2	3	4	5	7
Atmospheric pressure	psi(a)	13.42	13.42	13.42	13.42	13.42	13.42
Elevation	ft	2490	2490	2490	2490	2490	2490
Inlet pressure loss	psi	0.20	0.20	0.20	0.20	0.20	0.20
Inlet pressure	psi(a)	13.22	13.22	13.22	13.22	13.22	13.22
Inlet temperature	°F	120.0	120.0	75.0	75.0	40.0	40.0
Relative humidity	%	60.0	60.0	50.0	50.0	50.0	50.0
System Inlet Volume Flow	ft ³ /min	419.6	187.9	378.4	169.4	352.6	157.9
Flow at Standard Conditions ^[1]	Sft ³ /min	335.0	150.0	335.0	150.0	335.0	150.0
Flow at Normal Conditions ^[2]	Nft ³ /min	312.1	139.8	312.1	139.8	312.1	139.8
Mass Flow	lb/s	0.420	0.188	0.420	0.188	0.420	0.188
Discharge pressure	psi(g)	6.50	6.50	6.50	6.50	6.50	6.50
^[1] [68°F, 14.6959psi, 0% RH] / ^[2] [1atm(a), 32°F, 0% RH]							
Performance							
Selection status		Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Rise to Surge	psi	3.98	0.62	3.49	0.52	3.22	0.46
Turn down ratio	%	71.2	35.7	69.6	32.1	68.5	29.6
Speed	rpm	5330	44708	49666	42322	47342	40740
Discharge Pressure OP	psi	6.70	6.70	6.70	6.70	6.70	6.70
Temperature rise	°F	103.1	116.1	95.4	110.4	89.8	105.5
Discharge temperature	°F	223.1	236.1	170.4	185.4	129.8	145.5
Power(shaft)	kW	12.5	6.3	11.2	5.8	10.4	5.5
Power(total)	kW	13.7	6.9	12.3	6.3	11.4	6.0

Supporting Data ECM-4 - TurboMax Blower Proposal Data
 Note for data - We only have data in kW per 100 scfm at 6.5 psi - where we will be operating with new diffusers



Supporting Data ECM-5 - TurboMax Blower Proposal Data
 Point 5 is typical operating point at full speed

Energy Savings Estimate for: Corona de Tucson WRF Energy Savings Project

Prepared by: Justin Rundle

Date: 22 Sep 25

3 Upgrade Blower Piping

Assumptions

1 UG blower pipe leaks are real, as observed by operators after rain events

A. General Utility Data

1 Annual electric consumption for CY 2025	968,160 kWh	Electric Billing Analysis
2 Increase in electric consumed - 1st 6 months of '26	24.8%	Electric Billing Analysis
3 Adjusted baseline based on 1st 6 months of 2026	1,208,735 kWh	A.1 x (1 + A.2)
4 Increase when 2nd aeration basin (AB) went on-line	240,575 kWh	A.3 - A.1
5 Rough estimate for electric use for both ABs	481,150 kWh	A.4 x 2 basins operating
6 Percent of electric use for both basins operating	40%	A.5 / A.3
7 Annual electric demand for CY 2025	2,156 kW	Electric Billing Analysis
8 Increase in electric demand - 1st 6 months of '26	32.3%	Electric Billing Analysis
9 Adjusted baseline based on 1st 6 months of 2026	2,852 kW	A.7 x (1 + A.8)
10 Annual electric cost for CY 2025	\$124,952	Electric Billing Analysis
11 Increase in electric consumed - 1st 6 months of '26	32.1%	Electric Billing Analysis
12 Adjusted baseline based on 1st 6 months of 2026	\$165,017	A.10 x (1 + A.11)
13 Blended electric rate for 2025	\$0.129 /kWh	A.10 / A.1
14 Blended electric rate for adjusted baseline	\$0.137 /kWh	A.12 / A.3
15 Electric energy cost	\$0.085 /kWh	Trico June 2025 Electric Bill
16 Electric demand cost - winter	\$18.00 /kW	Trico March 2025 Electric Bill
17 Electric demand cost - summer	\$18.00 /kW	Trico June 2025 Electric Bill
18 Electric tax rate	6.1%	Trico June 2025 Electric Bill

B. Baseline Operation

1 Existing blowers Roots model number	68 U-RAI DSL	See Photo Below
2 Blower design pressure from As-Built Drawings	6.5 psig	See Table from As-Built Drawing
3 Blower design flow from As-Built Drawings	575 scfm	See Table from As-Built Drawing
4 Blower speed from Roots table for Lines 2 & 3	1,777 rpm	Data extrapolation from Roots table
5 BPH for specified blowers	21.0 bhp	Data extrapolation from Roots table
6 Blower actual discharge pressure during site visit	9.3 psig	See photo below
7 BHP for roots blower at 6.0 psi and 1750 rpm	18.7 bhp	From Roots table below
8 BHP for roots blower at 9.0 psi and 1777 rpm	28.7 bhp	Data extrapolation
9 SCFM output for each blower (from tables)	565 scfm	Average between 6 psi and 9 psi
10 Estimated standard cubic feet of air per year	148,482 K scf	B.9 x 60 x 12 x 365 / 1,000
11 Motor efficiency	92.4%	From motor nameplate
12 Estimated belt drive efficiency	93%	Estimated by Engineer (typical)
13 Estimated VFD efficiency	97%	Estimated by Engineer (typical)
14 Total drive efficiency	83%	B.11 x B.12 x B.13
15 Average kW used by each blower	21.2 kW	(B.7 + B.8) / 2 x 0.746 kW per hp / B.14
16 Blower efficiency - total kW per K cfm	37.6 kW/Kscfm	B.15 / (B.9 / 1,000)
17 Blower efficiency - total kW per K cfm per psi	4.17 kW/Kscfm/psi	B.15 / (B.9 / 1,000) / 9 psi
18 Percent of time blowers operate	50%	SCADA photos for cumulative run time
19 Numbers of blowers normally operating	2	ECM 2, Assumption No. 1
20 kWh used by blowers each year	185,965 kWh/yr	B.15 x B.18 x B.19 x 24 x 365
21 Estimated percent of electric use for blowers	19%	B.20 / A.1

C. Proposed Operations

1 Blower electric savings due to new pipe	0.50%	Estimated by Engineer
2 Estimated electric energy savings	930 kWh	B.20 x C.1
3 Estimated electric demand savings	+/- 0 kW	Estimated by Engineer

D. Savings Summary

1 Energy (kWh) reduction	930 kWh/yr	C.2
2 Energy (kWh) savings	\$84 /yr	D.1 x A.15 x (1 + A.18)
3 Demand (kW) reduction	+/- 0 kW	C.15
4 Demand (kW) savings	\$0 /yr	D.3 x 12 x (A.16+A.17)/2 x (1+A.18)
5 Total savings - electric energy and demand	\$84 /yr	C.2 + C.4

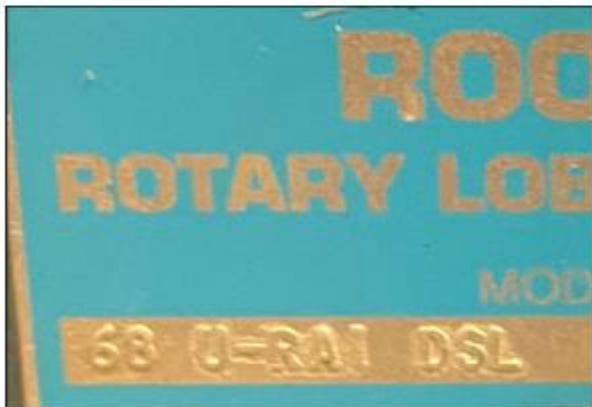
E. Savings Summary after Baseline Adjustment

1 Because two basins are now operating, six blowers are operating, so savings is double baseline calculations.		
2 Baseline adjustment for kWh - six blowers operating	100%	Double from one to two UG pipes
3 Adjusted kWh consumption savings	1,860 kWh/yr	D.1 x (1 + E.2)
4 Adjusted kWh cost savings	\$168	D.2 x (1 + E.2)

F. Savings Summary

1 The data in this table is taken directly from information above.

	<u>Elec Energy</u>	
	<u>KW-hrs</u>	<u>kW / mo</u>
Baseline Operation	1,208,735	238
Proposed Operation	1,208,875	238
Savings	1,860	0.0



Supporting Data ECM-1 - Blower are operating at about 9.3 psi, base on photo from site visit

AERATION BLOWER No. of blowers provided Flow rate Pressure Duty = 100% continuous duty Hp	unit scfm psig unit hp	7 575 6.5 6 25
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Supporting Data ECM-2 - Blower Design Table from As-Built Drawings
 575 standard CFM (sea level, 68 def F, 36% RH) at 6.5 psig

PERFORMANCE TABLE: ROOTS Universal URAI																										
Frame Size	Speed	4 PSI		5 PSI		6 PSI		7 PSI		8 PSI		9 PSI		10 PSI		12 PSI		13 PSI		14 PSI		16 PSI		VACUUM DATA		
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	
22	9900	81	0.9	59	1.1	47	1.3	36	1.5	24	1.7	19	1.9	11	2.1										18	2.0
	3500	40	1.0	29	1.3	27	1.5	20	1.8	14	2.0	12	2.3	11	2.5	28	3.0								14	2.8
	2500	60	1.6	46	2.0	64	2.4	60	2.7	61	3.1	60	3.5	58	3.8	56	4.6								15	3.0
24	2850	60	1.7	48	2.1	60	2.5	60	2.9																14	4.0
	2250	80	2.0	65	2.5	82	3.0	79	3.5																14	6.4
	2250	143	3.1	140	3.0	137	4.6	134	5.4																15	11.9
32	1750	54	1.4	51	1.7	48	2.1	45	2.4	43	2.8	41	3.1	39	3.5	35	4.1								13	3.7
	2250	118	2.4	105	3.0	109	3.6	99	4.2	97	4.7	95	5.3	93	5.9	89	7.1	87	7.6	86	8.2			84	8.8	
	2500	125	2.0	132	2.7	129	4.4	126	5.1	124	5.8	122	6.5	120	7.2	116	8.6	114	9.2	113	10.0	111	10.6	16	10.6	
33	1750	75	1.9	71	2.4	67	2.9	64	3.3	61	3.8	59	4.3	56	4.7	51	5.7								13	3.0
	2250	149	3.3	145	4.1	141	4.9	138	5.7	135	6.5	132	7.3	130	8.1	125	9.7								15	11.9
	2500	106	4.1	102	5.0	108	6.0	105	6.9	102	7.8	100	8.6	100	9.8	102	11.7								15	15.6
36	1750	139	3.2	126	3.9	121	4.7	117	5.5																14	9.6
	2250	254	5.5	248	6.8	244	8.1	239	9.4																15	21.2
	2500	216	6.7	210	8.2	205	9.9	200	11.6																15	22.8
42	1750	78	1.9	74	2.4	71	2.8	69	3.2	66	3.7	64	4.2	61	4.7	57	5.6	55	6.0						14	5.2
	2250	150	3.3	147	4.1	144	4.9	141	5.7	139	6.5	136	7.2	134	8.0	130	9.6	128	10.3	126	11.1	124	11.9	16	12.1	
	2500	107	4.1	103	5.1	100	6.0	107	7.0	105	7.9	102	8.8	100	9.8	100	11.6	104	12.6	102	13.5	100	14.4	16	15.7	
45	1750	101	3.0	100	4.7	100	5.5	100	6.3	100	7.1	100	8.0	100	8.9										14	12.1
	2250	206	6.7	200	9.2	200	11.3	200	13.3	200	15.3	200	17.3	200	19.3										16	25.0
	2500	259	8.2	253	10.1	253	12.0	253	13.9	253	15.7	253	17.6	253	19.5										16	28.6
47	1750	215	5.0	208	6.2	201	7.4	195	8.6																14	16.6
	2250	417	11.3	399	13.8	392	15.9	385	17.9																15	34.0
	2500	302	10.9	295	13.3	288	15.0	282	16.7																15	44.4
53	1750	113	2.7	108	3.4	103	4.1	99	4.8	96	5.4	92	6.1	89	6.8	82	8.1								13	8.5
	2250	219	4.2	214	5.2	208	6.2	202	7.2	197	8.2	192	9.2	186	10.2	179	12.3	176	13.3	173	14.3	170	15.3	16	16.1	
	2500	204	7.4	204	9.0	205	10.7	201	12.3	201	14.0	201	15.6	201	17.2	204	20.5	201	22.1	201	23.8	201	25.4	16	28.1	
56	1750	146	4.6	141	5.7	137	6.8	133	8.0	130	9.1	126	10.2	124	11.4	120	13.8								14	14.6
	2250	294	7.6	286	9.7	280	11.8	274	13.8	271	15.9	267	17.9	263	19.9	259	24.0	253	22.2	253	24.6	253	27.0	15	26.6	
	2500	267	12.2	260	15.0	253	17.7	247	20.5	241	23.2	236	26.0	230	28.7	221	34.2	217	37.0						16	50.1
59	1750	219	6.7	210	8.4	201	10.0	193	11.7																14	23.7
	2250	436	11.3	427	13.8	419	15.9	411	17.7																15	45.4
	2500	372	10.0	362	12.0	352	13.9	342	15.9																15	67.0
65	1750	223	5.2	215	6.4	208	7.7	202	8.9	196	10.2	190	11.5	185	12.7	175	15.2	171	16.5	166	17.7				14	17.1
	2250	385	9.0	380	9.9	381	11.0	384	13.7	389	15.5	383	17.4	380	19.3	379	23.1	373	24.9	369	26.8	365	28.7	16	28.7	
	2500	513	11.4	505	13.0	498	14.9	492	17.0	486	19.5	481	21.6	475	24.5	465	28.6	461	31.1	458	34.6	457	38.1	16	44.5	
68	1750	358	11.3	345	13.0	334	14.7	324	16.3	314	18.3	305	20.3	297	23.0	291	24.4	274	26.4	267	28.4				14	27.5
	2250	517	17.7	504	19.5	493	21.7	483	24.0	474	26.8	465	29.0	456	32.8	447	36.0	437	38.0	428	42.9				15	47.0
	2500	384	17.3	371	21.8	360	25.9	350	29.9	341	34.0	332	38.0	323	42.1	314	50.2	304	54.2	293	58.2				16	71.5
71	1750	609	16.4	587	19.1	566	22.2	547	25.7																11	18.1
	2250	1049	22.4	1016	24.1	1006	24.7	1006	24.4																12	38.9
	2500	1003	19.4	1000	21.0	1000	17.6	1000	18.2																12	44.3
76	1750	263	8.6	260	10.6	264	12.7	267	14.8	269	16.8	269	18.9	269	21.0	263	25.1	260	27.2	257	29.2	217	31.3	15	33.0	
	2250	628	13.4	619	16.5	609	19.4	601	22.7	604	25.8	607	29.0	609	32.0	600	38.0	601	41.2	603	44.3	603	47.4	16	54.0	
	2500	749	16.2	740	19.8	731	23.4	723	27.0	716	30.6	709	34.3	702	37.9	690	45.1	684	48.7	678	52.4	623	56.0	16	68.4	
77	1750	758	15.5	729	19.2	710	23.0	691	26.7																15	27.9
	2250	1516	28.9	1511	28.5	1508	28.2	1505	28.2																16	103.6
	2500	1307	20.6	1302	20.2	1299	19.8	1296	19.8																16	120.6
78	1750	1224	25.0	1202	31.1	1183	37.2																		12	122.3
	2250	1920	30.2	1890	47.4	1870	56.5																		12	101.0
	2500	2200	45.5	2250	66.2	2220	86.9																		12	217.0

Supporting Data ECM-3 - Root Blower Catalog Cut Sheet
 Note for URAI 68 - at 9.0 psi, bhp is 27.8 at 535 scfm



Ver 0.0.3

COMPRESSOR DATA SHEET

General information

Project	Pima County Corona de Tucson	Model	MAX20-C060S
Name	Amber Roberts	C-Number	X20-C060S5P000
Agency	Lonestar (Lonestar)	Quantity	Total 5(Duty:5& Stand-by:0)
Process	Activated Sludge	Date	2025-08-02 02:13:52

Operating Conditions

Operating point		A	B	C	D	E	F
		1	2	3	4	5	7
Atmospheric pressure	psi(a)	13.42	13.42	13.42	13.42	13.42	13.42
Elevation	ft	2490	2490	2490	2490	2490	2490
Inlet pressure loss	psi	0.20	0.20	0.20	0.20	0.20	0.20
Inlet pressure	psi(a)	13.22	13.22	13.22	13.22	13.22	13.22
Inlet temperature	°F	120.0	120.0	75.0	75.0	40.0	40.0
Relative humidity	%	60.0	60.0	50.0	50.0	50.0	50.0
System Inlet Volume Flow	ft3/min	419.6	187.9	378.4	169.4	352.6	157.9
Flow at Standard Conditions ^[1]	Sft3/min	335.0	150.0	335.0	150.0	335.0	150.0
Flow at Normal Conditions ^[2]	Nft3/min	312.1	139.8	312.1	139.8	312.1	139.8
Mass Flow	lb/s	0.420	0.188	0.420	0.188	0.420	0.188
Discharge pressure	psi(g)	6.50	6.50	6.50	6.50	6.50	6.50

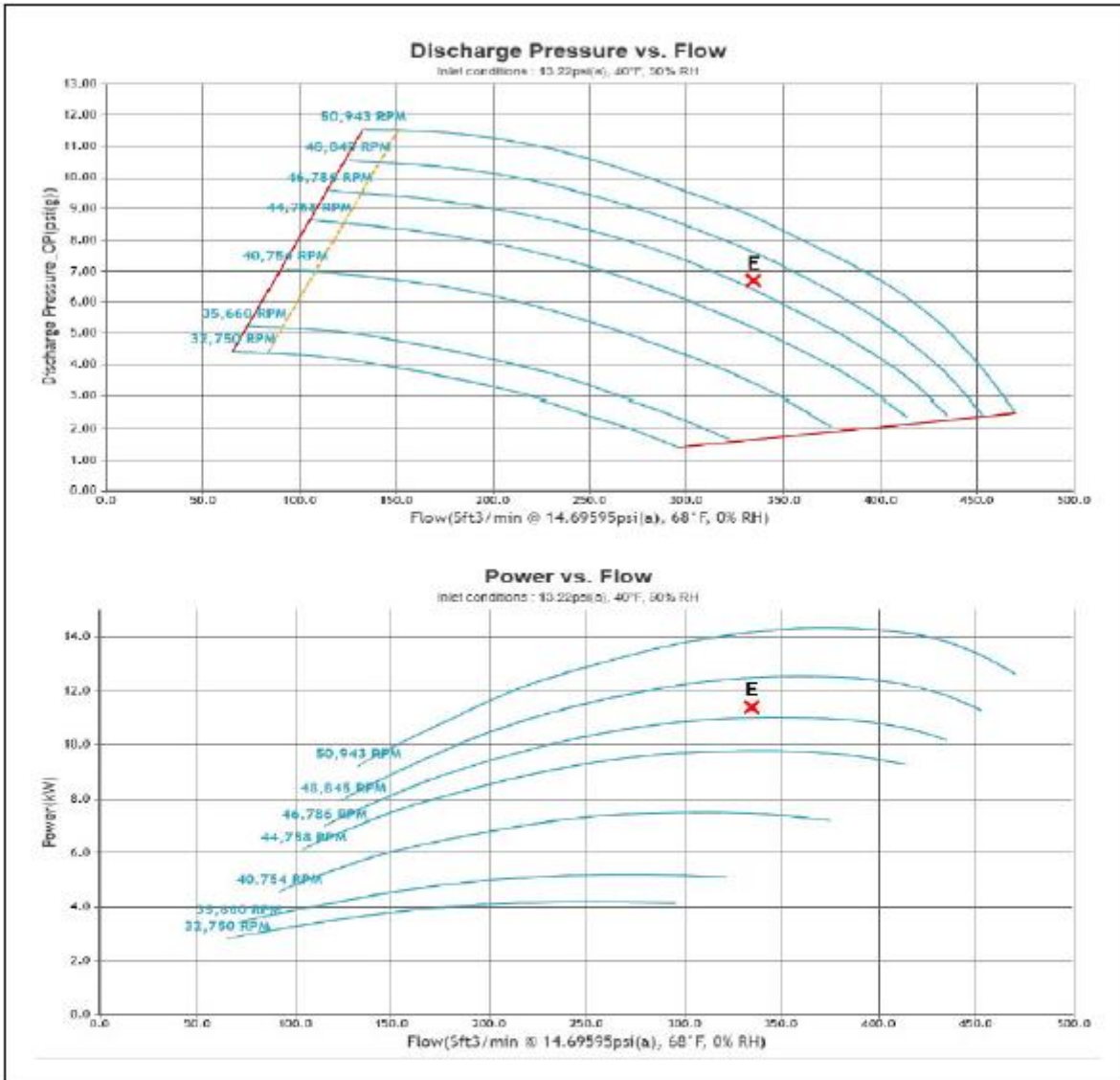
[1] [68°F, 14.6959psi, 0% RH] / [2] [1atm(a), 32°F, 0% RH]

Performance

Selection status		Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Rise to Surge	psi	3.98	0.62	3.49	0.52	3.22	0.46
Turn down ratio	%	71.2	35.7	69.6	32.1	68.5	29.6
Speed	rpm	53301	44708	49666	42322	47342	40740
Discharge Pressure OP	psi	6.70	6.70	6.70	6.70	6.70	6.70
Temperature rise	°F	103.1	116.1	95.4	110.4	89.8	105.5
Discharge temperature	°F	223.1	236.1	170.4	185.4	129.8	145.5
Power(shaft)	kW	12.5	6.3	11.2	5.8	10.4	5.5
Power(total)	kW	13.7	6.9	12.3	6.3	11.4	6.0

Supporting Data ECM-4 - TurboMax Blower Proposal Data

Note for data - We only have data in kW per 100 scfm at 6.5 psi - where we will be operating with new diffusers



Energy Savings Estimate for: Corona de Tucson WRF Energy Savings Project

Prepared by: Justin Rundle

Date: 22 Sep 25

4 Replace Aeration System

Assumptions

- 1 Blower pressures will reduce with fine bubble diffusers and CdT has coarse bubbles now

A. General Utility Data

1 Annual electric consumption for CY 2025	968,160 kWh	Electric Billing Analysis
2 Increase in electric consumed - 1st 6 months of '26	24.8%	Electric Billing Analysis
3 Adjusted baseline based on 1st 6 months of 2026	1,208,735 kWh	A.1 x (1 + A.2)
4 Increase when 2nd aeration basin (AB) went on-line	240,575 kWh	A.3 - A.1
5 Rough estimate for electric use for both ABs	481,150 kWh	A.4 x 2 basins operating
6 Percent of electric use for both basins operating	40%	A.5 / A.3
7 Annual electric demand for CY 2025	2,156 kW	Electric Billing Analysis
8 Increase in electric demand - 1st 6 months of '26	32.3%	Electric Billing Analysis
9 Adjusted baseline based on 1st 6 months of 2026	2,852 kW	A.7 x (1 + A.8)
10 Annual electric cost for CY 2025	\$124,952	Electric Billing Analysis
11 Increase in electric consumed - 1st 6 months of '26	32.1%	Electric Billing Analysis
12 Adjusted baseline based on 1st 6 months of 2026	\$165,017	A.10 x (1 + A.11)
13 Blended electric rate for 2025	\$0.129 /kWh	A.10 / A.1
14 Blended electric rate for adjusted baseline	\$0.137 /kWh	A.12 / A.3
15 Electric energy cost	\$0.085 /kWh	Trico June 2025 Electric Bill
16 Electric demand cost - winter	\$18.00 /kW	Trico March 2025 Electric Bill
17 Electric demand cost - summer	\$18.00 /kW	Trico June 2025 Electric Bill
18 Electric tax rate	6.1%	Trico June 2025 Electric Bill

B. Baseline Operation

1 Blower have been replaced - use adjusted baseline from those calcs		
2 New blower energy consumption	168,427 kWh	ECM No. 2, Line C.12
3 New blower demand	22.8 kW	ECM No. 2, Line C.15
4 HP rating for motive pumps	10 hp	As-built drawings
5 Estimate motor loading for motive pumps	70%	Lightly loaded based Line A.6
6 Estimated motor efficiency	90%	Nameplate not available - estimate
7 Estimated kW on loaded motor	5.8 kW	B.22 x B.23 x 0.746 kW / hp / B.24
8 Number of motive pumps operating 24/7	4	From operators - always running
9 Estimated kWh per year for motive pumps	203,310 kWh	B.7 x B.8 x 24 hr/dy x 365 dy/yr
10 Estimated percent of electric use for motive pumps	21%	B.9 / A.1
11 Total electric for blowers and pumps	371,737 kWh	B.2 + B.9

C. Proposed Operations

1 Proposed model for mixers - Landia	POP-I 9.0 HP 180	From Landia proposal
2 Stated motor capacity in HP	9 hp	From Landia proposal
3 Estimate motor loading for motive pumps	75%	Estimated by Engineer
4 Assumed motor efficiency	90%	Nameplate not available - estimate
5 Estimated kW per mixer	5.6 kW	C.2 x C.3 x 0.746 kW/hp / C.4
6 Number of mixers operating 24/7	2 units	Both units operating in each basin
7 Estimated kWh per year for mixers	98,024 kWh	C.5 x C.6 x 24 hr/dy x 365 dy/yr

8 Estimated annual kWh savings due to mixers	105,285 kWh	B.9 - C.7
9 Estimated kW savings for mixing	12.0 kW	B.7 x B.8 - C.5 x C.6
10 Diffuser efficiency for fine bubbles diffusers	3.35 kg/kWh	Avg of EPA Diffuser Manual Below (Avg of 2.43 to 4.26 is 3.35)
11 Diffuser efficiency for coarse bubbles diffusers	1.68 kg/kWh	Avg of EPA Diffuser Manual Below (Avg of 1.22 to 2.13 is 1.68)
12 Efficiency gain using fine bubble over coarse	50%	C.11 / C.10
13 kWh used currently with coarse bubble diffusers	168,427 kWh	Line B.2
14 Energy savings by using fine bubble diffusers	84,214 kWh	C.12 x C.13
15 Estimated blower kW savings	0	Already calculated in previous ECM
16 Total energy savings - mixing and blowers	189,499 kWh	C.5 + C.11
17 Percent electric savings by mixer / fine bubble	20%	C.16 / A.1

D. Savings Summary

1 Energy (kWh) reduction	189,499 kWh/yr	C.17
2 Energy (kWh) savings	\$17,090 /yr	D.1 x A.15 x (1 + A.18)
3 Demand (kW) reduction	12.0 kW	C.9 + C.16
4 Demand (kW) savings	\$2,754 /yr	D.3 x 12 x (A.16+A.17)/2 x (1+A.18)
5 Total savings - electric energy and demand	\$19,844 /yr	C.2 + C.4

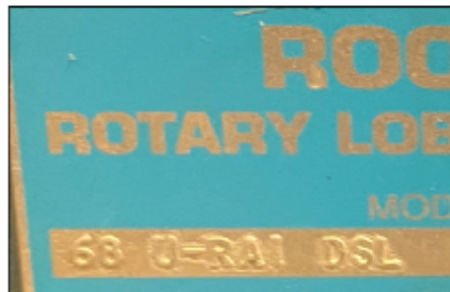
E. Savings Summary after Baseline Adjustment

1 Because two basins are now operating, six blowers are operating, so savings is double baseline calculations.		
2 Baseline adjustment for kWh - six blowers operating	100%	Double from three to six blowers
3 Adjusted kWh consumption savings	378,998 kWh/yr	D.1 x (1 + E.2)
4 Adjusted kWh cost savings	\$34,180	D.2 x (1 + E.2)
5 Baseline Adjustment for kW	100%	Double from four to eight mixers
6 Adjusted kW consumption savings	24.0 kW	D.3 x (1 + E.5)
7 Adjusted kW cost savings	\$5,509 /yr	D.4 x (1 + E.5)
8 Total savings - after baseline adjustment	\$39,689 /yr	E.4 + E.7

F. Savings Summary

1 The data in this table is taken directly from information above.

	Elec Energy	
	kWh-hrs	kW / mo
Adjusted Baseline Operation	1,208,735	238
Proposed Operation	829,737	214
Savings	378,998	24
Savings percent	31%	10%



Supporting Data ECM-1 - Blower are operating at about 9.3 psi, base on photo from site visit

TECHNICAL BULLETIN 127		ENERGY CONSUMPTION AND TYPICAL PERFORMANCE	
		PAGE 3	
GENERAL OXYGEN TRANSFER EFFICIENCIES ¹			
Mechanical Aeration Systems			
	<u>#/Hp Hr</u>	<u>Kg/KWH</u>	
Rotors (brush aerators) surface aeration	2.5 to 3.5	1.52 to 2.13	
Slow speed surface	3.0 to 3.5	1.82 to 2.13	
High speed splash surface aeration	2.5 to 3.25	1.52 to 1.98	
Induced surface aeration (Aire O2 type)	1.0 to 1.5	0.61 to 0.91	
Combination Systems			
Submerged Turbine (turbine mixer and compressors)	1.5 to 2.5	0.91 to 1.52	
Jets (pumps with compressors)	2.0 to 3.5	1.22 to 2.13	
Diffused Aeration			
Coarse bubble system			
Static tubes	2.0 to 3.0	1.22 to 2.13	
Wide band grid	2.5 to 3.5	1.52 to 2.13	
Misc. coarse bubble	2.0 to 3.0	1.22 to 2.13	
Traditional Fine Pore Aeration			
Ceramic disc or ceramic dome grid	5 to 7	3.04 to 4.26	
Flexible Membrane Disc or Tubes Grid at Conventional Flow Rates	4 to 7	2.43 to 4.26	
Advanced Technology Membrane Fine Pore Aeration	up to 12	7.30	
<small>¹ For your reference, the data supplied in the enclosed oxygen transfer table is taken from several sources including the US EPA Fine Pore Aeration Manual, the clean water test results done at Los Angeles County by the US EPA and LA County Sanitation District, plus published data on rotors and surface aerators.</small>			
<small>Technical Bulletin are prepared as a service of Environmental Dynamics Inc. of Columbia, Missouri, USA</small>		<small>Revised 10/80</small>	

Supporting Data ECM-4 - Comparison of Diffuser Efficiencies

Technical Data Sheet	
Article no. 1128305 Submersible Mixer Model POP-I 9.0 HP - 180	
Manufacturer.....	LANDIA
Type.....	POP-I
Propeller revolutions.....	173 rpm
Propeller diameter.....	38 inches
Motor series.....	132
Weight.....	460 lb.
Electrical cable.....	10 × AWG 10
Controls.....	Thermal sensors 120° C
<i>Option</i>	<i>Seal control</i>
Exterior seal set.....	3 pcs of Nitrile lip seals plus coated stainless steel wear bush
Interior seal set (motor/oil chamber).....	Mechanical shaft seal
Motor housing and gear casing.....	silicon carbide/silicon carbide
Propeller.....	Cast iron AISI A48-40B
<i>Option</i>	<i>Stainless steel AISI 304</i>
Bolts and screws.....	Stainless steel AISI 316
Surface coating.....	Painted
<i>Option</i>	<i>2-component coating</i>
Motor:	
Manufacturer.....	LANDIA
Type.....	DM 9.8
Rated effect.....	9.0 HP
Revolutions.....	865 rpm
Phases, voltage, frequency.....	3 × 460 V, 60 Hz
Start current direct.....	61 A
Rated operating current.....	13.5 A
Power factor cos φ.....	0.74
Cage class.....	IP 68
<i>Option</i>	<i>Class I, Group C & D</i>
Insulation class.....	F
Minimum voltage required.....	430 V

Supporting Data ECM-5 - Proposed mixers are 9.0 hp, per Landia submittal



Summary of the GMP

CONSTRUCTION		AMOUNT
	CONSTRUCTION COSTS:	
	Cost of Construction	\$ 4,790,381
	Cost of Design	\$ 240,000
	Veregy Contingency	\$ 145,000
	Subtotal Direct Construction Costs	\$ 5,175,381
	INDIRECT CONSTRUCTION COSTS:	
	General Conditions	\$ 446,137
	Overhead	\$ 621,046
	Insurance	\$ 77,631
	Payment & Performance Bonds	\$ 69,561
	Subtotal Direct Construction Cost + Gen Cond, Overhead, Bonds, Insurance	\$ 6,389,756
	Construction Fee (As a % of Subtotal above or to exclude any items above)	\$ 549,374
	Subtotal Direct Construction Cost + Gen Cond, Overhead, Bonds, Insurance and Fee	\$ 6,939,130
	Arizona Gross Receipts Tax	\$ 21,357
	Subtotal Direct Construction Cost + Gen Cond, Overhead, Bonds, Insurance, Fee and Tax	\$ 6,960,487
	GUARANTEED MAXIMUM PRICE (GMP)	\$ 6,960,487
	OTHER PROJECT COSTS:	
	County Contingency	\$ 39,513
	TOTAL CONTRACT COST	\$ 7,000,000

Schedule of Values

CONSTRUCTION		Comments	AMOUNT
	CONSTRUCTION COSTS:		
A.1	Cost of Construction		\$ 4,790,381
A.1.1	Equipment Costs (Blowers, Mixers, Diffusers and related accessories)		\$ 676,395
A.1.2	HVAC Material and Install		\$ 90,014
A.1.3	Nocardia Control		\$ 15,000
A.1.4	Borderland Budget/GMP Cost	ECMs 2,3,4 are GMP ECM 5 is Budget based on 50% CCB Drawings	\$ 2,538,795
A.1.5	Additional Painting for Blower Room		\$ 20,000
A.1.6	Veregy Solar Cost		\$ 1,087,405
A.1.7	Per Diem		\$ 112,309
A.1.8	Additional Time & Resources for Third Party Engineer		\$ 32,680
A.1.9	Additional VEE Engineering Costs for Service Water & Hydraulic Profile		\$ 35,700
A.1.10	Continued Development and Design in Phase 2		\$ 42,040
A.1.11	One Time M&V Setup Costs		\$ 18,356
A.1.12	Safety & Commissioning		\$ 48,886
A.1.13	Project Co-ordinator/Accountant/Scheduler		\$ 72,800
A.2	Cost of Design		\$ 240,000
A.3	Veregy Contingency		\$ 145,000
	Subtotal Direct Construction Costs		\$ 5,175,381
B.1	INDIRECT CONSTRUCTION COSTS:		
B.1.1	General Conditions		\$ 446,138
B.1.1.1	Project Construction Management		\$ 324,851
B.1.1.2	Mobilization/Demobilization/Warehouse Delivery Driver		\$ 15,000
B.1.1.3	Waste Removal		\$ 12,250
B.1.1.4	Misc Expenses		\$ 19,608
B.1.1.5	Warranty & Support Documentation		\$ 74,429
B.1.2	Overhead	12% of Subtotal Direct Construction Costs	\$ 621,046
B.1.3	Insurance		\$ 77,631
B.1.4	Payment & Performance Bonds	1% of contract price	\$ 69,561
	Subtotal Direct Construction Cost + Gen Cond, Overhead, Bonds, Insurance		\$ 6,389,756
	Construction Fee (As a % of Subtotal above or to exclude any items above)	8.59% of Subtotal Direct Construction Cost + Gen Cond, Overhead, Bonds, Insurance	\$ 549,374
	Subtotal Direct Construction Cost + Gen Cond, Overhead, Bonds, Insurance and Fee		\$ 6,939,130
	Arizona Gross Receipts Tax		\$ 21,357
	Subtotal Direct Construction Cost + Gen Cond, Overhead, Bonds, Insurance, Fee and Tax		\$ 6,960,487
	GUARANTEED MAXIMUM PRICE (GMP)		\$ 6,960,487
	OTHER PROJECT COSTS:		
	County Contingency		\$ 39,513
	TOTAL CONTRACT COST		\$ 7,000,000

ATTACHMENT A

SCOPE OF WORK

Table A1 summarizes the Energy Conservation Measures (ECMs) to be included in this project.

Table A1: ECM Summary

#	PROPERTY NAME	ECM 1	ECM 2	ECM 3	ECM 4	ECM 5	ECM 6
		Implement Bioaugmentation	Upgrade Blowers	Upgrade Blower Piping	Replace Aeration System	Expand Disinfection System	PV Solar
1	Pima County Corona de Tucson WWTP	X	X	X	X	X	X

ECM Descriptions

Veregy will implement the following ECMs to reduce energy consumption. Please note that Veregy shall have the right to substitute with an equivalent material/equipment/product as necessary in the construction phase.

ECM No. 1 – Implement Bioaugmentation Program

Existing Conditions – The WWTP has experienced Nocardia outbreaks in the past and is operating at a low mixed liquor suspended solids (MLSS) level to reduce the possibility of Nocardia formation.

Scope of Work - Provide wastewater influent analysis report and three months of bioaugmentation product to begin a bioaugmentation program to reduce Nocardia organisms.

Exclusions/Clarifications/Assumptions – None.

ECM No. 2 – Upgrade Blowers

Existing Conditions – The WWTP has seven blowers – three for each oxidation ditch and one standby. Three of the existing blowers are original and four have already been replaced.

Scope of Work –

The detailed scope of work is shown in the HDR Drawings and Specifications dated September 2025 that may have updates during October. The summary scope of work is -

- 1) Remove five (5) of seven (7) existing blowers.
- 2) Install five (5) new, higher efficiency turbo blowers.
- 3) Install blower piping and electrical
- 4) Coordinate existing controls with new blowers
- 5) Start-up, commissioning, and training.
- 6) Provide as-built drawings.

Exclusions/Clarifications/Assumptions –

- 1) Pipe shall be carbon steel (outdoors) or ductile iron pipe (indoors) – not schedule 10 stainless steel.
- 2) Pipe, valves, supports and misc. iron shall not be required to meet American Iron and Steel (AIS) and is excluded in the current scope of work. If a WIFA loan is procured, contract will be amended to incorporate AIS requirements, to potentially include additional costs.
- 3) Existing conduits shall be re-used for new installation.

ECM No. 3 – Upgrade Blower Piping

Existing Conditions – The WWTP has underground blower piping from the blower room to the oxidation ditches. The underground blower pipe heats and expands when blowers operate, then cools when blowers are shut down for the anoxic cycle. The expansion and contraction of the pipe has caused the bell and spigot joints to leak, as indicated from bubbles rising from puddles above the pipe after rainstorms.

Scope of Work –

The detailed scope of work is shown in the HDR Drawings and Specifications dated September 2025 that may have updates during October. The summary scope of work is -

- 1) Remove about 10% of existing blower piping to install new blower piping.
- 2) Install Trenwa trench system (or equal) from blower room to oxidation ditches.
- 3) Install blower piping in trench.
- 4) Flush and pressure test pipe, paint pipe.
- 5) Install grating above pipe.
- 6) Start up and commission
- 7) Provide as-built drawings.

Exclusions/Clarifications/Assumptions –

- 1) Pipe will be carbon steel (outdoors) or ductile iron pipe (indoors) - no stainless-steel pipe will be used for blower piping.
- 2) Pipe, valves, supports and misc. iron shall not be required to meet American Iron and Steel (AIS) and is excluded in the current scope of work. If a WIFA loan is procured, contract will be amended to incorporate AIS requirements, to potentially include additional costs.

ECM No. 4 – Upgrade Aeration System

Existing Conditions – The existing aeration system is jet aeration. Jet aeration uses pumps and blower air to produce mixing and fine bubbles. However, the Plant has coarse bubble aeration, and the basin is not mixing well. Because coarse bubbles are less efficient than fine bubbles, three and four blowers operate during the aerating cycle, and the dissolved oxygen in the basin sometimes cannot reach the set point of 2.1 mg/l because coarse bubbles are less efficient at transferring oxygen to water when compared to fine bubbles.

Scope of Work –

The detailed scope of work is shown in the HDR Drawings and Specifications dated September 2025 that may have updates during October. The summary scope of work is -

- 1) Owner will operate WWTP using one oxidation ditch and the lagoon, to allow shutting down an aeration basin for about two months.

- 2) Remove existing jet aeration piping, blower piping, and motive pumps.
- 3) Install fine bubble diffusers and mixing system.
- 4) Coordinate new equipment with existing controls.
- 5) Start up and commissioning.
- 6) Provide as-built drawings.

Exclusions/Clarifications/Assumptions –

- 1) Pipe will be carbon steel (outdoors) or ductile pipe (indoors) outside the aeration basins and PVC inside the aeration basin - no stainless-steel pipe will be used for aeration system.
- 2) Pipe, valves, supports and misc. iron shall not be required to meet American Iron and Steel (AIS) and is excluded in the current scope of work. If a WIFA loan is procured, contract will be amended to incorporate AIS requirements, to potentially include additional costs.

ECM No. 5 – Expand Disinfection System

Existing Conditions – The WWTP current has a chlorine contact basin (CCB) rated for 0.5 mgd. The plant is currently operating at about 0.45 mgd and flows are increasing, so a second CCB rated at 0.5 mgd is required.

Scope of Work –

The detailed scope of work is shown in the 90% VEE Drawings and Specifications dated Oct 2025. The summary scope of work is -

- 1) Complete full design for 0.5 mgd chlorine contact basin (CCB) and submit it to the ADEQ for permit.
- 2) Excavate and install new CCB, install piping to and from new CCB.
- 3) Upgrade piping and meter in meter pit, to improve flow hydraulics.
- 4) Install larger liquid chlorine pumps with new piping to new CCB.
- 5) Install new service water pumps and piping.
- 6) Leak test basin and pipe. Install backfill around basin and pipe.
- 7) Install shade structure, sampling equipment and other accessories at CCB.
- 8) Start up and commissioning.
- 9) Complete as-built drawings and submit Approval of Construction to the ADEQ.

Exclusions/Clarifications/Assumptions –

- 1) Reuse existing chlorine sampling equipment
- 2) Rotating chlorine feed pump skid
- 3) Existing Service Water Pump control panel to be reused
- 4) Inlet and outlet piping and valves at existing CCB to remain

ECM No. 6 – Install Solar PV

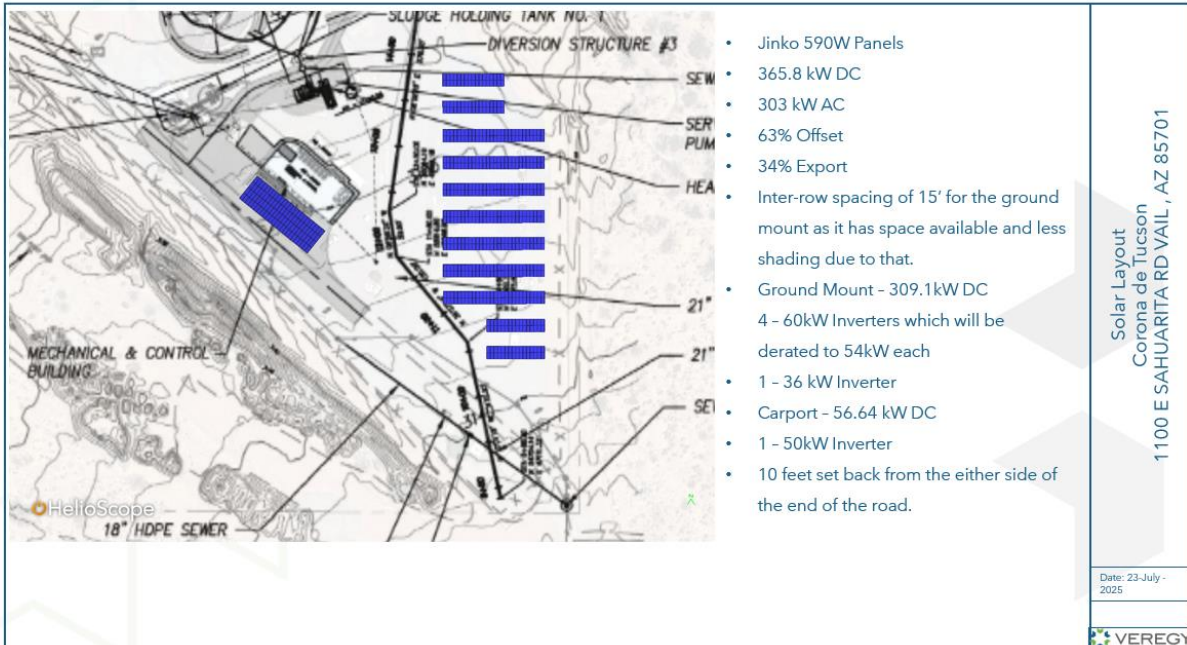
Existing Conditions – No renewable energy sources on site currently.

Scope of Work –

- 1) Install a 309.1 kW-dc ground mount solar PV system at the parking area NE of the admin building.
- 2) Install a 56.7 kW-dc solar carport just west of the existing admin building.

Layout is presented below.

Corona de Tucson - GM + Carport with Derated Inv



Exclusions/Clarifications/Assumptions –

- 1) Any unforeseen site condition including underground utilities not marked or located by private locate/blue stake are excluded.
- 2) Concrete encasement of underground conduits excluded.
- 3) Electrical code upgrades or repairs to existing code violations excluded.
- 4) Prevailing wages excluded.
- 5) Steel under decking for canopy excluded.
- 6) All spread footings for foundations excluded.
- 7) All hard dig/drilling (Drilling into water or sand is considered hard dig) excluded.
- 8) Painting of caissons excluded.
- 9) Planting of any new trees or bushes excluded.
- 10) Parking lot upgrades excluded.
- 11) Any switchgear upgrades Trico requires owned by Trico or Pima County are excluded.

Exclusions for all ECMs above

- 1) Prevailing wages.



List of Plans and Specifications used for GMP Proposal

- 1) HDR Drawings and Specifications dated September 2025
- 2) 90% VEE Drawings and Specifications dated Oct 2025

List of clarifications, assumptions and exclusions

All clarifications, assumptions and exclusions are Included under Attachment A – Scope of Work.

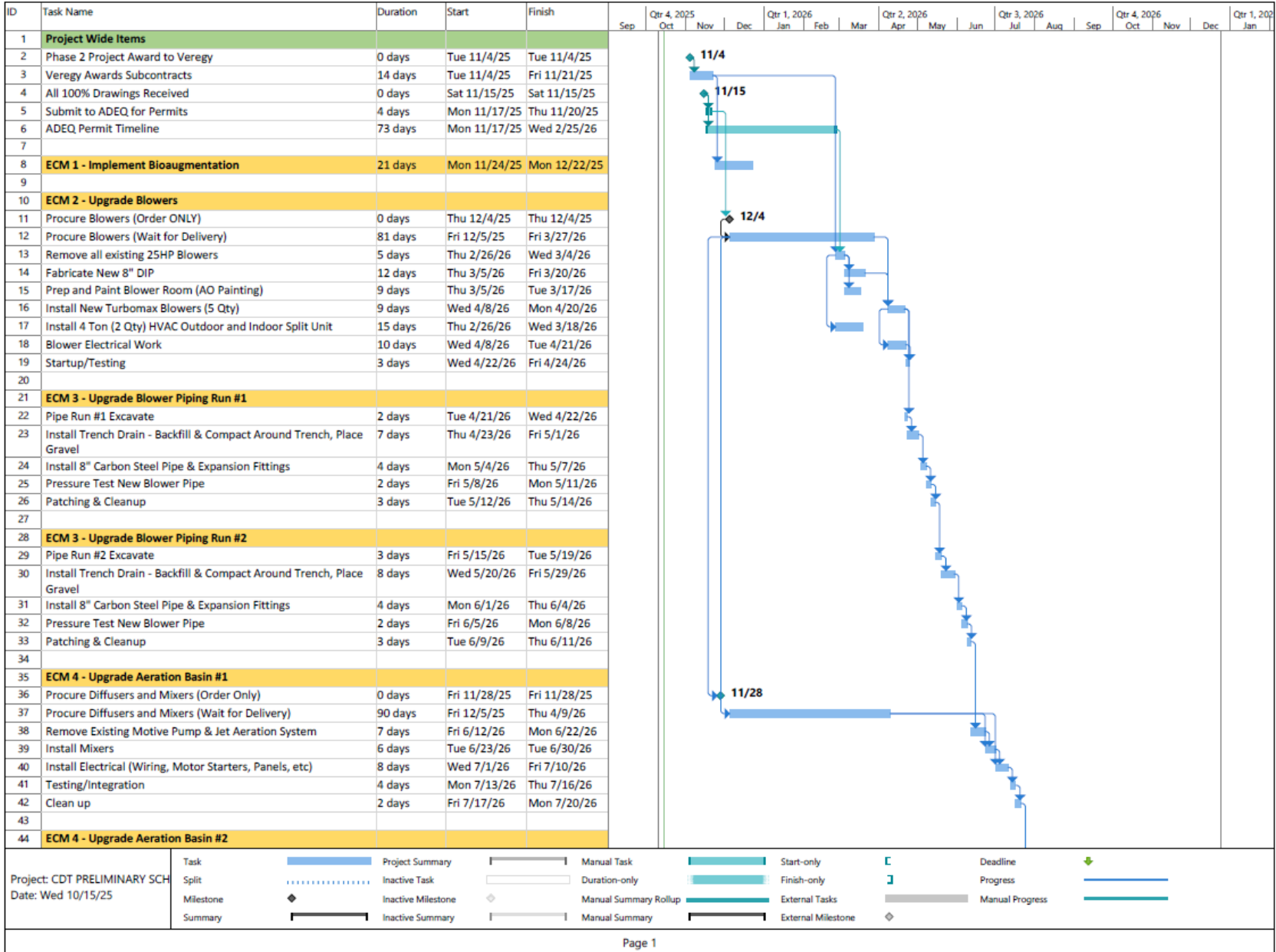
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Project Schedule

Estimated Project schedule is shown in the Gantt Chart below. Please note that this schedule is preliminary and subject to change during the construction phase. Additionally, the current schedule assumes a four-month ADEQ permitting period, which may impact the construction timeline/forecast, if adjusted. ECM 1 to 5 will be dependent on one another since they relate to operation of the wastewater plant, while ECM 6, which is PV solar, will have its separate schedule and no dependency on ECM 1 to 5. As a result, the schedules have been separated for ease of viewing. Estimated Cost per line item are also shown. Please note that estimated costs assumes that Veregy Contingency Amount will be spent, while County Contingency Amount won't be spent. County contingency is called out as a separate line item (with no associated dates) in the schedule below.

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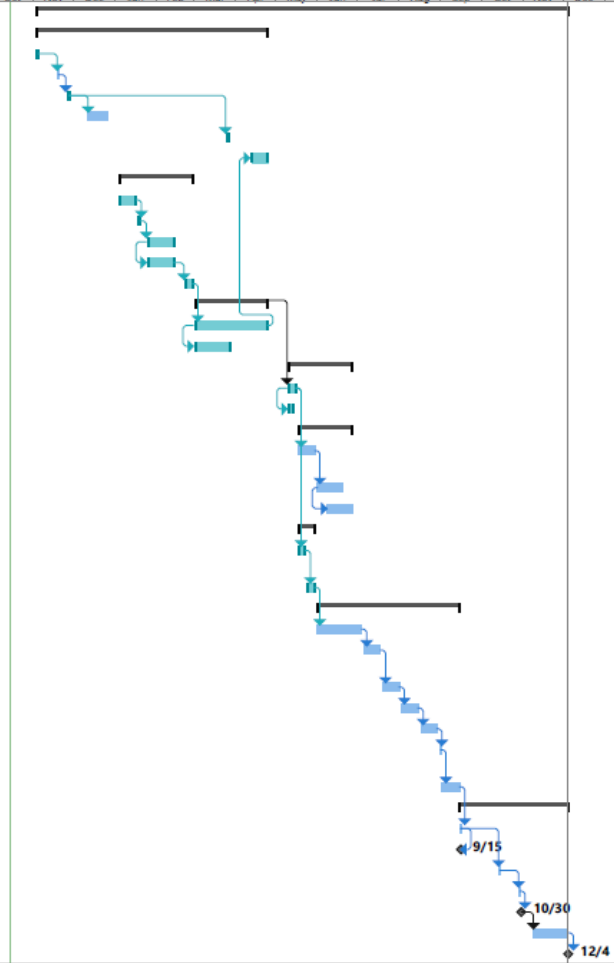
ID	Task Name	Duration	Start	Finish	Qtr 4, 2025				Qtr 1, 2026			Qtr 2, 2026			Qtr 3, 2026			Qtr 4, 2026			Qtr 1, 2027	
					Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
45	Remove Existing Motive Pump & Jet Aeration System	7 days	Tue 7/21/26	Wed 7/29/26																		
46	Install Mixers	6 days	Thu 7/30/26	Thu 8/6/26																		
47	Install Electrical (Wiring, Motor Starters, Panels, etc)	8 days	Fri 8/7/26	Tue 8/18/26																		
48	Testing/Integration	4 days	Wed 8/19/26	Mon 8/24/26																		
49	Clean up	2 days	Tue 8/25/26	Wed 8/26/26																		
50																						
51	ECM 5 - Upgrade Disinfection System																					
52	Excavate for Chlorine Contact Basin and Install Engineered Fill to Accept Concrete	5 days	Thu 8/27/26	Wed 9/2/26																		
53	Install Cast in Place CCB	22 days	Thu 9/3/26	Fri 10/2/26																		
54	Install 12" and 18" Underground Piping to and from CCB	6 days	Mon 10/5/26	Mon 10/12/26																		
55	Install New 12" Mag Meter and 12" Piping	8 days	Tue 10/13/26	Thu 10/22/26																		
56	Install new 10HP (2 Qty) New Service Water Pumps and 3" and 4" Piping to Existing Tank	7 days	Fri 10/23/26	Mon 11/2/26																		
57	Repair Houskeeping Pad & New 4GPH Chemical Feed Pumps and Piping	5 days	Tue 11/3/26	Mon 11/9/26																		
58	Install New Sampling Pipe for Composite Sampler	3 days	Tue 11/10/26	Thu 11/12/26																		
59	Install shade structures near the CCB and near the Chlorine Feed Pumps	30 days	Fri 10/23/26	Thu 12/3/26																		
60	Install all Electric	15 days	Tue 11/10/26	Mon 11/30/26																		
61	Clean Up	2 days	Fri 12/4/26	Mon 12/7/26																		
62																						
63	Project Wide Items																					
64	Final Testing	5 days	Tue 12/8/26	Mon 12/14/26																		
65	Close out	8 days	Tue 12/15/26	Thu 12/24/26																		

Project: CDT PRELIMINARY SCH
Date: Wed 10/15/25

Task		Project Summary		Manual Task		Start-only		Deadline	
Split		Inactive Task		Duration-only		Finish-only		Progress	
Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
Summary		Inactive Summary		Manual Summary		External Milestone			



ID	Task Name	Duration	Start	Finish	25	Aug	Sep	Qtr 4, 2025	Oct	Nov	Dec	Qtr 1, 2026	Jan	Feb	Mar	Qtr 2, 2026	Apr	May	Jun	Qtr 3, 2026	Jul	Aug	Sep	Qtr 4, 2026	Oct	Nov	Dec	Qtr 1, 2027	Jan	
1	Corona De Tucson Solar Project	281 days	Tue 11/4/25	Fri 12/4/26																										
2	Preconstruction and Solar Material Procurement	121 days	Tue 11/4/25	Fri 4/24/26																										
3	Operations and Customer Kickoff Meeting	1 day	Tue 11/4/25	Tue 11/4/25																										
4	Operations Site Visit	1 day	Wed 11/19/25	Wed 11/19/25																										
5	Solar Panel Order Placement	1 day	Thu 11/27/25	Thu 11/27/25																										
6	Design Release Coordination	2 wks	Fri 12/12/25	Fri 12/26/25																										
7	Solar Panel Delivery and Begin Staging Onsite Laydown Yard	1 day	Thu 3/26/26	Thu 3/26/26																										
8	Steel Fabrication and Procurement	2 wks	Mon 4/13/26	Fri 4/24/26																										
9	Design and Engineering	40 days	Mon 1/5/26	Fri 2/27/26																										
10	Architectural Design	2 wks	Mon 1/5/26	Fri 1/16/26																										
11	Preliminary Design Review with Customer	1 day	Mon 1/19/26	Mon 1/19/26																										
12	Structural / Racking Engineering	3 wks	Mon 1/26/26	Fri 2/13/26																										
13	Electrical Engineering	3 wks	Mon 1/26/26	Fri 2/13/26																										
14	Prepare Final Plan Review Submission Package	1 wk	Mon 2/23/26	Fri 2/27/26																										
15	Plan Review and Building Approvals	40 days	Mon 3/2/26	Fri 4/24/26																										
16	Trico (Utility) Interconnection Application and Plan Review	2 mons	Mon 3/2/26	Fri 4/24/26																										
17	Pima County (AHJ) Site Plan and Building Permit Plan Review	1 mon	Mon 3/2/26	Fri 3/27/26																										
18	Structural Installation	35 days	Mon 5/11/26	Fri 6/26/26																										
19	Mobilize Material, Equipment, Site Prep & Locating	5 days	Mon 5/11/26	Fri 5/15/26																										
20	Staking for Ground Mount Posts and Column Layout for Park Canopy	3 days	Mon 5/11/26	Wed 5/13/26																										
21	Ground Mount	30 days	Mon 5/18/26	Fri 6/26/26																										
22	Post Installation (Pile Driven) / Pile Load Testing / Required Structural Inspections	2 wks	Mon 5/18/26	Fri 5/29/26																										
23	Racking Assembly	3 wks	Mon 6/1/26	Fri 6/19/26																										
24	Set Solar Panels	3 wks	Mon 6/8/26	Fri 6/26/26																										
25	Parking Canopy	10 days	Mon 5/18/26	Fri 5/29/26																										
26	Drill / Set Columns / Pour and Test Concrete / Required Structural Inspections	1 wk	Mon 5/18/26	Fri 5/22/26																										
27	Set Top Steel and Solar Panels / Required Structural Inspections	1 wk	Mon 5/25/26	Fri 5/29/26																										
28	Electrical Installation	76 days	Mon 6/1/26	Mon 9/14/26																										
29	Solar Panel Stringing / Wire Management Under Structures and Canopy	5 wks	Mon 6/1/26	Fri 7/3/26																										
30	Underground Electrical (Boring/Trenching), Required Electrical Inspections and Restoration	2 wks	Mon 7/6/26	Fri 7/17/26																										
31	Install Inverters, PVAC, and DAS Panel	2 wks	Mon 7/20/26	Fri 7/31/26																										
32	Build Electrical AC Equipment Racking	2 wks	Mon 8/3/26	Fri 8/14/26																										
33	Install Electrical AC Equipment / Required Electrical Inspections	2 wks	Mon 8/17/26	Fri 8/28/26																										
34	Shutdown / Final Point of Interconnection into the SES / Electrical Testing & County Electrical Clearance (DATE TBD - WILL NEED CUSTOMER APPROVAL)	1 day	Mon 8/31/26	Mon 8/31/26																										
35	Final Wire Terminations / Site Clean Up	2 wks	Tue 9/1/26	Mon 9/14/26																										
36	System Commissioning and Project Closeout	59 days	Tue 9/15/26	Fri 12/4/26																										
37	Final AHJ Inspections	1 day	Tue 9/15/26	Tue 9/15/26																										
38	Substantial Completion	0 days	Tue 9/15/26	Tue 9/15/26																										
39	Utility Final Inspections	1 day	Wed 10/14/26	Wed 10/14/26																										
40	Utility Commissioning / Meter Set	1 day	Thu 10/29/26	Thu 10/29/26																										
41	Permission to Operate	0 days	Fri 10/30/26	Fri 10/30/26																										
42	System Commissioning / Final Punchlist / Closeout Handover	4 wks	Mon 11/9/26	Fri 12/4/26																										
43	Final Completion	0 days	Fri 12/4/26	Fri 12/4/26																										



Project: Corona de Tucson - Pre Date: Wed 10/15/25	Task	 Project Summary	 Manual Task	 Start-only	 Deadline
	Split	 Inactive Task	 Duration-only	 Finish-only	 Progress
	Milestone	◆ Inactive Milestone	◇ Manual Summary Rollup	 External Tasks	 Manual Progress
	Summary	 Inactive Summary	 Manual Summary	 External Milestone	 ◇



Cash-flow forecast

The estimated cash flow forecast for this project is presented below. Please note that these figures are preliminary and subject to change during the construction phase. Additionally, the current schedule assumes a four-month ADEQ permitting period, which may impact the construction timeline/forecast, if adjusted. The cash flow forecast assumes that Veregy Contingency Amount will be spent, while County Contingency Amount won't be spent.

Estimated Draw Schedule		
Month	Amount	Comment
Aug-25	\$ 95,000	Already invoiced for Phase 1
Sep-25	\$ 80,000	Already invoiced for Phase 1
Oct-25	\$ 65,000	Phase 1
Nov-25	\$ 866,610	Estimated for Phase 2
Dec-25	\$ 406,610	Estimated for Phase 2
Jan-26	\$ 84,228	Estimated for Phase 2
Feb-26	\$ 77,454	Estimated for Phase 2
Mar-26	\$ 249,517	Estimated for Phase 2
Apr-26	\$ 824,765	Estimated for Phase 2
May-26	\$ 663,644	Estimated for Phase 2
Jun-26	\$ 452,251	Estimated for Phase 2
Jul-26	\$ 636,800	Estimated for Phase 2
Aug-26	\$ 574,659	Estimated for Phase 2
Sep-26	\$ 639,211	Estimated for Phase 2
Oct-26	\$ 634,941	Estimated for Phase 2
Nov-26	\$ 530,785	Estimated for Phase 2
Dec-26	\$ 79,012	Estimated for Phase 2
	\$ 6,960,487	

End of Appendix I - GMP 1



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

10/14/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Marsh & McLennan Agency LLC company - St. Louis 825 Maryville Centre Dr. Suite 200 Chesterfield MO 63017	CONTACT NAME: Tamara Torbit, CIC, CISR PHONE (A/C, No, Ext): 314-594-2618 FAX (A/C, No): 888-307-1561 E-MAIL ADDRESS: tamara.torbit@marshmma.com														
	<table border="1"> <thead> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A : Tokio Marine Specialty Insuran</td> <td>23850</td> </tr> <tr> <td>INSURER B : ZURICH AMERICAN INSURANCE COMP</td> <td>16535</td> </tr> <tr> <td>INSURER C : American Guarantee and Liabili</td> <td>26247</td> </tr> <tr> <td>INSURER D : Great American Assurance Compa</td> <td>26344</td> </tr> <tr> <td>INSURER E : Upland Specialty Insurance Com</td> <td>16988</td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </tbody> </table>		INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Tokio Marine Specialty Insuran	23850	INSURER B : ZURICH AMERICAN INSURANCE COMP	16535	INSURER C : American Guarantee and Liabili	26247	INSURER D : Great American Assurance Compa	26344	INSURER E : Upland Specialty Insurance Com	16988	INSURER F :
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INSURER F :															
INSURED Veregy West, LLC (f/k/a Midstate Energy, L.L.C., d/b/a Veregy) 3312 East Broadway Phoenix AZ 85040	VEREINT-01														

COVERAGES

CERTIFICATE NUMBER: 1985225742

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:			GLO416584401	9/10/2025	9/10/2026	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS - COMP/OP AGG \$4,000,000 \$
B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			BAP391951501	9/10/2025	9/10/2026	COMBINED SINGLE LIMIT (Ea accident) \$2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 0			AUC394924401	9/10/2025	9/10/2026	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000 \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	WC328914101	9/10/2025	9/10/2026	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
D E A	Excess Liability Excess Liability Prof & Poll Liability			EXC5867883 USXSL0177525 PPK2722461	9/10/2025 9/10/2025 9/10/2025	9/10/2026 9/10/2026 9/10/2027	Aggregate Limit Limit Limit \$7,500,000 \$7,500,000 \$10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Leased & Rented Equipment - \$300,000 policy #CPP562946501 eff 9/10/25-9/10/26

Pollution/Professional Liability - Tokio Marine Specialty Insurance Company
 Limit: \$10,000,000 per incident with \$10,000,000 Total Policy Aggregate Limit

Builders Risk
 Atlantic Specialty Insurance Company
 7900261400007
 See Attached...

CERTIFICATE HOLDER

Pima County Procurement Department
 150 W Congress St, Fifth Floor
 Tuscon AZ 85701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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ADDITIONAL REMARKS SCHEDULE

AGENCY Marsh & McLennan Agency LLC		NAMED INSURED Veregy West, LLC (f/k/a Midstate Energy, L.L.C., d/b/a Veregy) 3312 East Broadway Phoenix AZ 85040	
POLICY NUMBER		EFFECTIVE DATE:	
CARRIER	NAIC CODE		

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: 25 **FORM TITLE:** CERTIFICATE OF LIABILITY INSURANCE

Effective: 9/10/25 to 9/10/26
 Limit - \$8,000,000 for all but Frame
 Frame limit - \$1,000,000
 Installation Floater - \$2,500,000

Cyber Insurance
 Coalition Insurance Solutions, Inc.
 Policy #C4MK1098964
 Effective: 9/10/25 to 9/10/26
 Limits: \$5,000,000 per event, \$5,000,000 aggregate, with \$250,000 retention

Additional Named Insureds:
 Veregy, LLC
 Veregy Consolidated, Inc.
 CTS Midco, LLC
 CTS Holdco, LLC
 Midstate Holding Corp.
 Veregy Central, LLC (f/k/a Control Technology & Solutions L.L.C., d/b/a Veregy), a Missouri Limited Liability Company
 Veregy IN, LLC (f/k/a, Johnson-Melloh Solutions LLC, d/b/a Veregy), a Delaware Limited Liability Company
 Veregy East, LLC (f/k/a Dynamix Energy Services Company, LLC, d/b/a Veregy), an Ohio Limited Liability Company
 Dynamix Engineering Ltd.
 Veregy West, LLC (f/k/a Midstate Energy, L.L.C., d/b/a Veregy), an Arizona Limited Liability
 Veregy DER & Electrical, LLC (f/k/a Urban Energy Solutions, LLC, d/b/a Veregy), an Arizona Limited Liability Company
 Four Star Mechanical, LLC
 Veregy TX, LLC (f/k/a, Four Star Fabricators And Service Company, LLC, d/b/a Veregy), a Texas Limited Liability Company
 Veregy Pacific, LLC (f/k/a Enpowered Solutions, LLC), a California Limited Liability Company

Project: Guaranteed Energy Cost Savings Services – Pima County - Veregy
 RE: 11.24.10 Cooperative Procurement Authorized- RFP #22-07P 1 Government Procurement Alliance (1GPA) Energy Performance Contracting Services - Veregy, LLC Contract #22-07P-08
 The following are additional insured for General Liability where required by written contract or agreement per attached form(s) subject to the provisions and limitations of the policy(ies) per policy terms and conditions.
 Primary Non-Contributory coverage applies to General Liability where required by written contract or agreement per policy terms and conditions.
 Waiver of Subrogation in favor of the following applies to General Liability, Automobile Liability and Umbrella/Excess where required by written contract or agreement per policy terms and conditions.
 1. Pima County
 2. Its Departments, Districts, Boards, Commissions, Officers, Officials, Agents and Employees
 Cancellation provision is amended to 30 days except for 10 day notice of cancellation for non-payment of premium per policy terms and conditions.
 Cancellation provision applies to General Liability, Automobile Liability, Workers Compensation and Umbrella/Excess per policy terms and conditions.
 Certificate holder is a Loss Payee as respects to Builders Risk/Installation where required by written contract or agreement per policy terms and conditions.



ZURICH[®]

Additional Insured – Automatic – Owners, Lessees Or Contractors

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Policy No. GLO416584401

Effective Date: 9/10/2025

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

A. Section II – Who Is An Insured is amended to include as an additional insured any person or organization whom you are required to add as an additional insured under a written contract or written agreement executed by you, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" and subject to the following:

1. If such written contract or written agreement specifically requires that you provide that the person or organization be named as an additional insured under one or both of the following endorsements:

- a. The Insurance Services Office (ISO) ISO CG 20 10 (10/01 edition); or
- b. The ISO CG 20 37 (10/01 edition),

such person or organization is then an additional insured with respect to such endorsement(s), but only to the extent that "bodily injury", "property damage" or "personal and advertising injury" arises out of:

- (1) Your ongoing operations, with respect to Paragraph 1.a. above; or
- (2) "Your work", with respect to Paragraph 1.b. above,

which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph 1., insurance afforded to such additional insured:

- (a) Only applies if the "bodily injury", "property damage" or "personal and advertising injury" offense occurs during the policy period and subsequent to your execution of the written contract or written agreement; and
- (b) Does not apply to "bodily injury" or "property damage" caused by "your work" and included within the "products-completed operations hazard" unless the written contract or written agreement specifically requires that you provide such coverage to such additional insured.

2. If such written contract or written agreement specifically requires that you provide that the person or organization be named as an additional insured under one or both of the following endorsements:

- a. The Insurance Services Office (ISO) ISO CG 20 10 (07/04 edition); or
- b. The ISO CG 20 37 (07/04 edition),

such person or organization is then an additional insured with respect to such endorsement(s), but only to the extent that "bodily injury", "property damage" or "personal and advertising injury" is caused, in whole or in part, by:

- (1) Your acts or omissions; or
- (2) The acts or omissions of those acting on your behalf,

in the performance of:

- (a)** Your ongoing operations, with respect to Paragraph **2.a.** above; or
- (b)** "Your work" and included in the "products-completed operations hazard", with respect to Paragraph **2.b.** above,

which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **2.**, insurance afforded to such additional insured:

- (i)** Only applies if the "bodily injury", "property damage" or "personal and advertising injury" offense occurs during the policy period and subsequent to your execution of the written contract or written agreement; and
 - (ii)** Does not apply to "bodily injury" or "property damage" caused by "your work" and included within the "products-completed operations hazard" unless the written contract or written agreement specifically requires that you provide such coverage to such additional insured.
- 3.** If neither Paragraph **1.** nor Paragraph **2.** above apply and such written contract or written agreement requires that you provide that the person or organization be named as an additional insured:

- a.** Under the ISO CG 20 10 (04/13 edition, any subsequent edition or if no edition date is specified); or
- b.** With respect to ongoing operations (if no form is specified),

such person or organization is then an additional insured only to the extent that "bodily injury", "property damage" or "personal and advertising injury" is caused, in whole or in part by:

- (1)** Your acts or omissions; or
- (2)** The acts or omissions of those acting on your behalf,

in the performance of your ongoing operations, which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **3.**, insurance afforded to such additional insured:

- (a)** Only applies to the extent permitted by law;
- (b)** Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured; and
- (c)** Only applies if the "bodily injury", "property damage" or "personal and advertising injury" offense occurs during the policy period and subsequent to your execution of the written contract or written agreement.

- 4.** If neither Paragraph **1.** nor Paragraph **2.** above apply and such written contract or written agreement requires that you provide that the person or organization be named as an additional insured:

- a.** Under the ISO CG 20 37 (04/13 edition, any subsequent edition or if no edition date is specified); or
- b.** With respect to the "products-completed operations hazard" (if no form is specified),

such person or organization is then an additional insured only to the extent that "bodily injury" or "property damage" is caused, in whole or in part by "your work" and included in the "products-completed operations hazard", which is the subject of the written contract or written agreement.

However, solely with respect to this Paragraph **4.**, insurance afforded to such additional insured:

- (1)** Only applies to the extent permitted by law;
- (2)** Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured;
- (3)** Only applies if the "bodily injury" or "property damage" occurs during the policy period and subsequent to your execution of the written contract or written agreement; and

(4) Does not apply to "bodily injury" or "property damage" caused by "your work" and included within the "products-completed operations hazard" unless the written contract or written agreement specifically requires that you provide such coverage to such additional insured.

B. Solely with respect to the insurance afforded to any additional insured referenced in Section A. of this endorsement, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or failure to render, any professional architectural, engineering or surveying services including:

1. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
2. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional architectural, engineering or surveying services.

C. Solely with respect to the coverage provided by this endorsement, the following is added to Paragraph 2. **Duties In The Event Of Occurrence, Offense, Claim Or Suit** of Section IV – **Commercial General Liability Conditions**:

The additional insured must see to it that:

- (1) We are notified as soon as practicable of an "occurrence" or offense that may result in a claim;
- (2) We receive written notice of a claim or "suit" as soon as practicable; and
- (3) A request for defense and indemnity of the claim or "suit" will promptly be brought against any policy issued by another insurer under which the additional insured may be an insured in any capacity. This provision does not apply to insurance on which the additional insured is a Named Insured if the written contract or written agreement requires that this coverage be primary and non-contributory.

D. Solely with respect to the coverage provided by this endorsement:

1. The following is added to the **Other Insurance** Condition of Section IV – **Commercial General Liability Conditions**:

Primary and Noncontributory insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured provided that:

- a. The additional insured is a Named Insured under such other insurance; and
- b. You are required by written contract or written agreement that this insurance be primary and not seek contribution from any other insurance available to the additional insured.

2. The following paragraph is added to Paragraph 4.b. of the **Other Insurance** Condition under Section IV – **Commercial General Liability Conditions**:

This insurance is excess over:

Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured on another policy providing coverage for the same "occurrence", offense, claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by a written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.

E. This endorsement does not apply to an additional insured which has been added to this Coverage Part by an endorsement showing the additional insured in a Schedule of additional insureds, and which endorsement applies specifically to that identified additional insured.

F. Solely with respect to the insurance afforded to an additional insured under Paragraph **A.3.** or Paragraph **A.4.** of this endorsement, the following is added to Section **III – Limits Of Insurance**:

Additional Insured – Automatic – Owners, Lessees Or Contractors Limit

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the written contract or written agreement referenced in Section **A.** of this endorsement; or
2. Available under the applicable Limits of Insurance shown in the Declarations,
whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

All other terms, conditions, provisions and exclusions of this policy remain the same.

ARIZONA STATUTORY PERFORMANCE BOND
PURSUANT TO TITLE 34, ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS THAT:

Veregy West, LLC
3312 East Broadway Road, Phoenix, AZ 85040

(hereinafter "Principal"), as Principal, and SiriusPoint America Insurance Company
1 World Trade Ctr., 285 Fulton Street, 47th Floor, Suite 47J, New York, NY 10007
(hereinafter "Surety"), a corporation organized and existing under the laws of the State of New York
with its principal office in the City of New York, holding a certificate of authority to transact
surety business in Arizona issued by the Director of Insurance pursuant to Title 20, Chapter 2, Article 1,
as Surety, are held and firmly bound unto Pima County, Arizona (hereinafter "Obligee") in the amount
of \$ * , for the payment whereof, Principal and Surety bind themselves, and their heirs,
administrators, executors, successors and assigns, jointly and severally, firmly by these presents.
*6,960,487.00

**May 20, 2025

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the ** for:

Corona de Tucson Wastewater Reclamation Facility
110 W. Sahuarita Rd, Corona de Tucson, AZ 85641

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied
at length herein.

NOW, THEREFORE, THE CONDITION OF THE OBLIGATION IS SUCH, that if the Principal faithfully
performs and fulfills all of the undertakings, covenants, terms, conditions and agreements of the contract
during the original term of the contract and any extension of the contract, with or without notice to the
Surety, and during the life of any guaranty required under the contract, and also performs and fulfills all
of the undertakings, covenants, terms, conditions and agreements of all duly authorized modifications
of the contract that may hereafter be made, notice of which modifications to the Surety being hereby
waived, the above obligation is void. Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2,
Article 2, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance
with the provisions of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if it
were copies at length in this Contract.

The prevailing party in a suit on this bond shall recover as part of the judgment reasonable attorney fees
that may be fixed by a judge of the court.

Witness our hands this 13 day of October, 2025.

Witness our hands this 13 day of October, 2025.

Veregy West, LLC
Principal

By: CL-CP



SiriusPoint America Insurance Company
Surety

By: Andrew P Thome
Andrew P Thome,
Attorney-in-Fact and Agent of Record



Address for Agent of Record:
825 Maryville Centre Drive, Suite 200
St. Louis, MO 63017
314-594-2700

ARIZONA STATUTORY PAYMENT BOND
PURSUANT TO TITLE 34, ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS THAT:
Veregy West, LLC
3312 East Broadway Road, Phoenix, AZ 85040

(hereinafter "Principal"), as Principal, and SiriusPoint America Insurance Company
1 World Trade Ctr., 285 Fulton Street, 47th Floor, Suite 47J, New York, NY 10007

(hereinafter "Surety"), a corporation organized and existing under the laws of the State of New York, with its principal office in the City of New York, holding a certificate of authority to transact surety business in Arizona issued by the Director of Department of Insurance pursuant to Title 20, Chapter 2, Article 1, as Surety, are held and firmly bound unto Pima County (hereinafter "Obligee") in the amount of \$ * , for the payment whereof, Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

*6,960,487.00 **May 20, 2025
WHEREAS, the Principal has entered into a certain written contract with the Obligee, ** for:

Corona de Tucson Wastewater Reclamation Facility
110 W. Sahuarita Rd, Corona de Tucson, AZ 85641

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THE OBLIGATION IS SUCH, that if the Principal promptly pays all monies due to all persons supplying labor or materials to the Principal or the Principal's subcontractors in the prosecution of the work provided for in the contract, this obligation is void. Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions, conditions and limitations of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if it were copied at length in this Contract.

The prevailing party in a suit on this bond shall recover as part of the judgment reasonable attorney fees that may be fixed by a judge in the court.

Witness our hands this 13 day of October, 2025.

Veregy West, LLC
Principal

By: 

SiriusPoint America Insurance Company
Surety

By: 
Andrew P Thome,
Attorney-in-Fact and Agent of Record



Address for Agent of Record:

825 Maryville Centre Drive, Suite 200
St. Louis, MO 63017
314-594-2700

**POWER OF ATTORNEY
SIRIUSPOINT AMERICA INSURANCE COMPANY
NEW YORK**

MMASTL01_0323

KNOW ALL MEN BY THESE PRESENTS: That SiriusPoint America Insurance Company (the "Company"), a New York corporation, having its principal office in the City of New York, pursuant to the following Resolution, which was adopted on August 27, 2024 by Unanimous Written Consent of the Board of the Directors of the Company, to wit:

RESOLVED, that the President, Senior Vice President, Chief Financial Officer, Secretary or the Assistant Secretary is hereby authorized to execute Powers of Attorney appointing as attorneys-in-fact selected employees of certain surety companies who shall have the power for and on behalf of the Company to execute and affix the seal of the Company to surety contracts as surety. Such authority can be executed by use of facsimile signature.

Does hereby nominate, constitute and appoint:

Andrew P. Thome, Amanda Williams, Blake Messer, Andrea McCarthy, Dana Johnnessee

Its true and lawful agent and attorney-in-fact, to make, execute, seal and deliver for and on its behalf, and its act and deed any and all bonds, contracts, agreements of indemnity and other undertakings in suretyship (NOT INCLUDING bonds without a fixed penalty or financial guarantee) and to bind the Company thereby as fully and to the same extent as of same were signed by the duly authorized officers of the Company, provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

\$63,971,000 single bond limit

All acts of said attorneys-in-fact pursuant to the authorities herein given are hereby ratified and confirmed. The President, Senior Vice President, Chief Financial Officer, Secretary or Assistant Secretary may from time to time and at any time remove such appointee and remove the power given to him or her.

The execution of such bonds or undertakings in pursuance of these presents, within one year of the date of these present, shall be binding under said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in New York, New York, in their own proper persons.

IN WITNESS WHEREOF, SiriusPoint America Insurance Company has caused its corporate seal to be hereunto affixed and these presents to be signed by its President this tenth day of October, 2024.



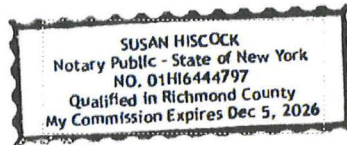
SiriusPoint America Insurance Company

Paul Mihulka
President

State of New York
County of New York

On this tenth day of October 2024, before me a Notary Public of the State of New York, in and for the County of New York, duly commissioned and qualified, came Paul Mihulka, President, of SiriusPoint America Insurance Company, to me personally known to be the individual and officer described in, and who executed the preceding instrument, and acknowledged the execution of the same, and being by me duly sworn, deposed and said that he is the officer of the said Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Company, referred to in the preceding instrument is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal.



Notary Public

My Commission expires Dec. 5, 2026

STATE OF New York
COUNTY OF New York

I, Paul Mihulka, President of SiriusPoint America Insurance Company, a New York corporation, do hereby certify that the above and foregoing is a full, true and correct copy of Power of Attorney, is still in full force and effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand, and affixed the Seal of said Company, on the 13 day of October, 20 25



Paul Mihulka
President