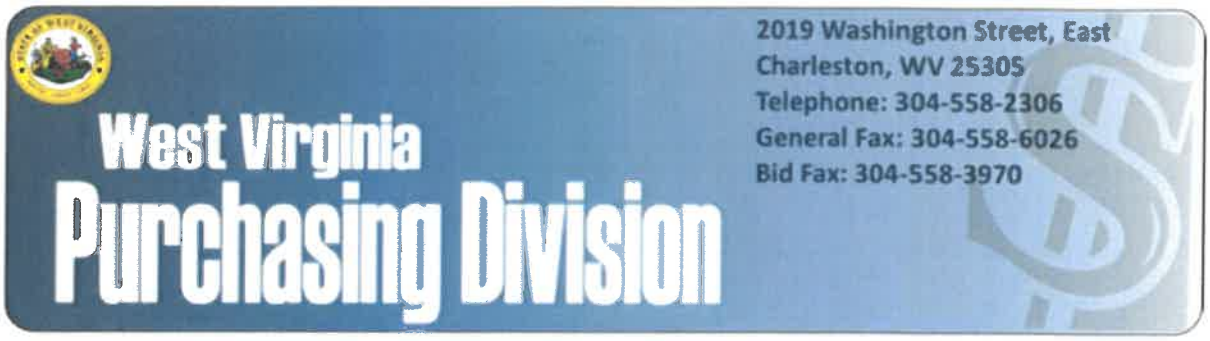
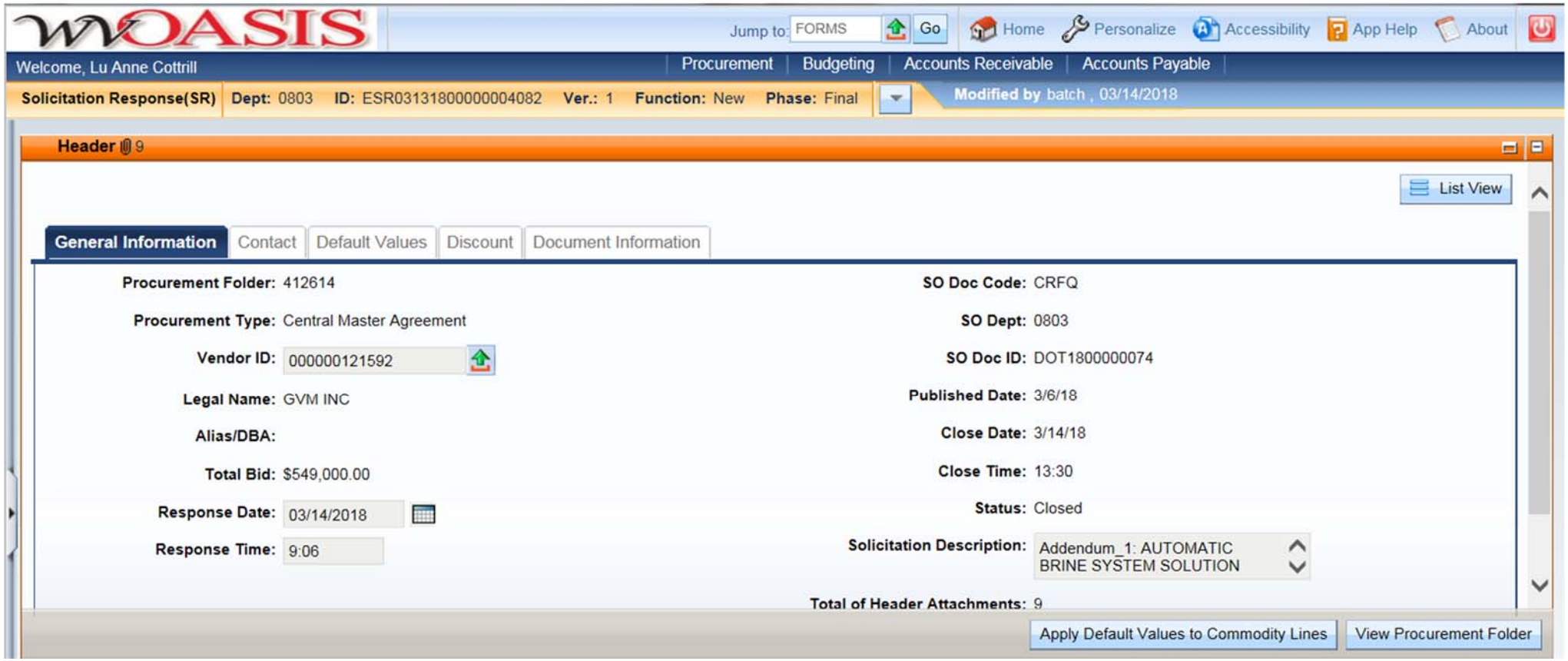


The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.


wvOASIS
Jump to: FORMS Go
Home
Personalize
Accessibility
App Help
About
Welcome, Lu Anne Cottrill
Procurement
Budgeting
Accounts Receivable
Accounts Payable
Solicitation Response(SR) Dept: 0803 ID: ESR03131800000004082 Ver.: 1 Function: New Phase: Final
Modified by batch , 03/14/2018
Header 9
List View
General Information
Contact
Default Values
Discount
Document Information
Procurement Folder: 412614
Procurement Type: Central Master Agreement
Vendor ID: 000000121592
Legal Name: GVM INC
Alias/DBA:
Total Bid: $549,000.00
Response Date: 03/14/2018
Response Time: 9:06
SO Doc Code: CRFQ
SO Dept: 0803
SO Doc ID: DOT1800000074
Published Date: 3/6/18
Close Date: 3/14/18
Close Time: 13:30
Status: Closed
Solicitation Description: Addendum_1: AUTOMATIC BRINE SYSTEM SOLUTION
Total of Header Attachments: 9
Apply Default Values to Commodity Lines
View Procurement Folder

Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder : 412614

Solicitation Description : Addendum_1: AUTOMATIC BRINE SYSTEM SOLUTION EQUIPMENT

Proc Type : Central Master Agreement

Date issued	Solicitation Closes	Solicitation Response	Version
	2018-03-14 13:30:00	SR 0803 ESR03131800000004082	1

VENDOR

000000121592

GVM INC

Solicitation Number: CRFQ 0803 DOT1800000074

Total Bid : $549,000.00 **Response Date:** 2018-03-14 **Response Time:** 09:06:40

Comments:

FOR INFORMATION CONTACT THE BUYER

Mark A Atkins

(304) 558-2307
mark.a.atkins@wv.gov

Signature on File **FEIN #** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM	1.00000	EA	$79,500.000000	$79,500.00

Comm Code	Manufacturer	Specification	Model #
20122400			

Extended Description : AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM EQUIPMENT WITH REMOTE TRUCK FILL CAPABILITIES - SECTION 3.2.1 AND SECTION 4.1 OF THE CONTRACT SPECIFICATIONS

Comments: See Attached Exceptions

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM	2.00000	EA	$88,500.000000	$177,000.00

Comm Code	Manufacturer	Specification	Model #
20122400			

Extended Description : AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM EQUIPMENT WITH REMOTE TRUCK FILL CAPABILITIES INCLUDING ONE ADDITIVE BLENDING CAPABILITY - SECTION 3.2.2 AND SECTION 4.2 OF THE CONTRACT SPECIFICATIONS

Comments: See Attached Exceptions

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM	3.00000	EA	$97,500.000000	$292,500.00

Comm Code	Manufacturer	Specification	Model #
20122400			

Extended Description : AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM EQUIPMENT WITH REMOTE TRUCK FILL CAPABILITIES INCLUDING TWO ADDITIVE BLENDING CAPABILITY - SECTION 3.2.3 AND SECTION 4.3 OF THE CONTRACT SPECIFICATIONS

Comments: See Attached Exceptions

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM	2.00000	EA		

Comm Code	Manufacturer	Specification	Model #
20122400			

Extended Description : A PORTABLE/MOBILE AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM EQUIPMENT WITH REMOTE TRUCK FILL CAPABILITIES - SECTION 3.2.4 AND SECTION 4.4 OF THE CONTRACT SPECIFICATIONS

Comments: NO BID

West Virginia Ethics Commission

Disclosure of Interested Parties to Contracts

(Required by *W. Va. Code* § 6D-1-2)

Contracting Business Entity: GVM, Inc. **Address:** 224 East King St, East Berlin, PA 17316

Authorized Agent: N/A **Address:**

Contract Number: N/A **Contract Description:**

Governmental agency awarding contract: N/A

☐ **Check here if this is a Supplemental Disclosure**

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below *(attach additional pages if necessary)*:

1. **Subcontractors or other entities performing work or service under the Contract**
   ☒ Check here if none, otherwise list entity/individual names below.

2. **Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)**
   ☒ Check here if none, otherwise list entity/individual names below.

3. **Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)**
   ☒ Check here if none, otherwise list entity/individual names below.

Signature: Thomas Baer Date Signed: 3/13/2018

Notary Verification

State of Pennsylvania, County of Adams:

I, Thomas Baer, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 13th day of March, 2018

Linda M. Brown
Notary Public's Signature

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
LINDA M. BROWN, Notary Public
Biglerville Boro., Adams County
My Commission Expires October 11, 2020

To be completed by State Agency:

Date Received by State Agency:

Date submitted to Ethics Commission:

Governmental agency submitting Disclosure:

Revised October 7, 2017

EXHIBIT_A PRICING PAGE

Automatic Brine Solution Production System Equipment
CRFQ 0803 DOT1800000074

Line Item #	Description	Estimated Quantity	Bid Price (Per Each)	Total Price
1	Automatic Brine Solution Production System Equipment Item 3.2.1 Automatic Brine Maker with Remote Fill Capabilities	1	$ 79,500.00	$ 79,500.00
2	Automatic Brine Solution Production System Equipment Item 3.2.2 Automatic Brine Maker with Remote Fill Capabilities including One Additive Blending Capability	2	$ 88,500.00	$ 177,000.00
3	Automatic Brine Solution Production System Equipment Item 3.2.3 Automatic Brine Maker with Remote Fill Capabilities including Two Additive Blending Capability	3	$ 97,500.00	$ 292,500.00
4	Automatic Brine Solution Production System Equipment Item 3.2.4 Portable/Mobile Automatic Brine Maker with Remote Fill Capabilities	2	no bid0	#VALUE!

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Thomas Bair Vice President
(Name, Title)
Thomas Bair Vice President
(Printed Name and Title)
224 East King St.
(Address)
East Berlin, PA. 17316
(Phone Number) / (Fax Number)
TLB@GVMInc.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

GVM, Inc.
(Company)
Thomas Bair Vice President
(Authorized Signature) (Representative Name, Title)
Thomas Bair Vice President
(Printed Name and Title of Authorized Representative)
March 13, 2018
(Date)
800-458-5123 / Fax 717-259-1583
(Phone Number) (Fax Number)

SOLICITATION NUMBER: CRFQ 0803 DOT1800000074
Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as CRFQ 0803 DOT1800000074 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[X] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[ ] Other

Description of Modification to Solicitation:

1. **To publish the Agency responses to the questions submitted by Vendors during the Technical Questioning period.**

No other changes made.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.

2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

Attachment_A

Addendum_1

CRFQ DOT1800000074

Automatic Brine Solution Production System Equipment

To answer Vendor posed questions.

Question #1	Stainless Steel has a greater tensile strength than fiberglass and gets an "A" chemical resistance as it relates to Salt Brine. Would Stainless be considered as greater or equal to fiberglass construction?
Response #1	Stainless Steel grade S304 and Stainless Steel grade S316 are considered as equal to fiberglass and will be acceptable.
Question #2	In the additive blending section, is the intent to blend liquids to a blended product storage tank, directly to the trucks or both? Note: In the previous contract addendum (2-1 to #6613C018) liquid products were to be blended directly to the truck.
Response #2	Blended directly to the trucks.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFQ 0803 DOT1800000074

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[X] Addendum No. 1	[ ] Addendum No. 6
[ ] Addendum No. 2	[ ] Addendum No. 7
[ ] Addendum No. 3	[ ] Addendum No. 8
[ ] Addendum No. 4	[ ] Addendum No. 9
[ ] Addendum No. 5	[ ] Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

GVM, Inc.
Company

Thomas Bair
Authorized Signature

3/13/2018
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

WV-10
Approved / Revised
09/15/17

State of West Virginia
VENDOR PREFERENCE CERTIFICATE

Certification and application is hereby made for Preference in accordance with ***West Virginia Code***, §5A-3-37. (Does not apply to construction contracts). ***West Virginia Code***, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the ***West Virginia Code***. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. ☐ **Application is made for 2.5% vendor preference for the reason checked:**
Bidder is an individual resident vendor and has resided continuously in West Virginia, or bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia, for four (4) years immediately preceding the date of this certification; **or,**

☐ Bidder is a resident vendor partnership, association, or corporation with at least eighty percent of ownership interest of bidder held by another entity that meets the applicable four year residency requirement; **or,**

☐ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

2. ☐ **Application is made for 2.5% vendor preference for the reason checked:**
Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

3. ☐ **Application is made for 2.5% vendor preference for the reason checked:**
Bidder is a nonresident vendor that employs a minimum of one hundred state residents, or a nonresident vendor which has an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia and employs a minimum of one hundred state residents, and for purposes of producing or distributing the commodities or completing the project which is the subject of the bidder's bid and continuously over the entire term of the project, on average at least seventy-five percent of the bidder's employees or the bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years and the vendor's bid; **or,**

4. ☐ **Application is made for 5% vendor preference for the reason checked:**
Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

5. ☐ **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

6. ☐ **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. ☐ **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules*.**
Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) rescind the contract or purchase order; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: GVM, Inc **Signed:** Thomas Bair

Date: 3/13/2018 **Title:** Vice Pres.

**Check any combination of preference consideration(s) indicated above, which you are entitled to receive.*

EXCEPTION *

4.1.1 List of Minimum Requirements for the Salt Hopper:	
The salt hopper shall have a minimum capacity of 4.5 cubic yards.	
The salt hopper shall hold a minimum .75 cubic yards of sediment without interfering with the brine outlet.	
The minimum inside dumping width shall be no less than 120 inches.	
The salt hopper shall be constructed of 16,000-pound tensile strength fiberglass and isophthalic resin with all inside surfaces coated with a ceramic resin .050 inches thick.	* STAINLESS STEEL
The vessel shall have structural integral ribs allowing flex with the salt hopper from full to empty.	* NOT NEEDED
The salt hopper shall be capable of being cleaned via flush components of the unit and any disassembly of components for cleaning is not acceptable.	
Whether full or empty, the salt hopper shall be able to be cleaned by a process of opening the sump outlet cap and water flush valves. If the salt hopper is empty, the inside floor panel should have the capability of being removed for cleaning by attached lifting straps or some other form of easily removing the inside floor panel.	* 4" DIAMeter EACH END
There shall be a fresh water flushing system to force sediment to and out of the sump.	
All valves, bulkhead fittings, etc. one-inch and larger shall be manifold type fittings.	
There shall be a pressure transducer connected to the PLC to activate brine pump on and off and water flow into the salt tank. These levels shall be adjustable from the HMI Interface and be adjustable to within one-inch increments.	
The transducer shall have an air capillary to the inside of the salt hopper.	* NOT USED
The vessel shall have two-inch male cam-lock type fittings and on/off ball valves for hose connections (fresh water, brine return, brine outlet to pump).	
There shall be reinforced forklift pockets for moving the salt tank.	
304 stainless steel is required for all metallic items as it is the most corrosion resistant of the 300 series of stainless steel.	

4.1.2 List of Minimum Requirements for the Control System:	
Brine pumped from the salt tank shall be monitored for salt concentration by a sensor which shall monitor the brine for temperature and automatically compensate brine concentration accordingly. Any need for an operator to manually test the brine concentration is not acceptable.	
All brine exiting the salt tank shall pass over the brine concentration sensor that monitors brine between 0.0 and 27.0 percent concentration by	* CONDUCTIVITY SENSOR

weight.	
The system shall come complete with the ability to access the HMI (operator interface) via Internet. The system shall have the ability for the operator to view the brine maker's functions, remotely, via internet connection.	
The system shall include a 256-color LCD touch screen display, minimum 7 ½ diagonal.	* EXCEED 12" DIAGONAL
The information on the display screen shall include, but not be limited to: 1) actual brine production concentration in the form of percentage of sodium chloride concentration by weight. 2) gallons of fresh water used to make brine.	* NO * NO
If the brine concentration is above the target, the brine shall be returned to the salt tank until the correct amount of water is automatically added and the brine reaches the desired concentration.	
Once the brine is at the desired concentration (+or-3% of target concentration), the brine will be diverted to storage tanks.	
If the concentration is below the minimum desired concentration, the system shall automatically divert the brine to the salt tank for a second pass through the salt bed to achieve the desired concentration.	
The system shall be configured to accept a signal from a pressure transducer located in a storage tank to automatically stop brine production when the tank is full or when production batch is complete.	
The system shall display the storage tank volume.	
The system shall monitor total gallons of water used, salt used and brine produced daily and seasonally for record keeping.	* BRINE PRODUCTION ONLY
Electric valves or pneumatic operated, industrial diaphragm valves shall include manual overrides for operation of the system in the event of an electrical component failure.	
In the event of a component failure, the system shall automatically shut down and inform the operator of the specific failure along with a corrective measure. This includes how to manually override the problem and provide a part number.	* NO
The system shall be designed with a manual valve counterpart to the electric valve valves or pneumatic operated, industrial diaphragm valves to run parallel for a redundant manual control system.	* NO
Electric components mounted onto the control panel shall have UL rated conduit protecting connections and wiring outside of the enclosure.	
Individual components over 10amps shall have circuit breakers so if the machine is not working, the operator may quickly assess by checking the breaker and if tripped, flip the breaker and be back in brine production. This will also provide more protection in the water environment. Components less than 10amps shall be fuse protected from inside of the	

control panel. Fuses shall illuminate when diagnostic LED detects fuse fault.
All wetted parts on the control panel except for the pump shall be manifold type glass filled polypropylene rated for 150 psi or schedule 80 PVC pipe and fittings rated for 270 psi.

4.1.3 List of Minimum Requirements for the Mechanical Components:	
The pump shall be constructed of cast 304 stainless steel with a stainless-steel shaft and impeller. 304 stainless-steel is required as it is the most corrosion resistant of the 300 series of stainless-steel.	
The electric pump motor shall be thermally protected 3 HP 220-volt single phase or a variable speed motor drill.	* EXCEED 7.5HP
The pump shall be capable of delivery 5,000 gallons per hour of salt brine to storage tanks with a dynamic head of 45 feet.	
All fittings and valves shall be manifold type glass filled polypropylene.	
Wetted steel components shall be kept to a minimum; all steel components shall be constructed of 304 stainless steel. 304 stainless-steel is required as it is the most corrosion resistant of the 300 series of stainless steel.	
All exposed electric components shall be rated at NEMA 12X.	* NEMA 4
All fasteners shall be constructed of stainless-steel.	

4.2 **An Automatic Brine Maker System with Remote Truck Fill Capabilities including One Additive Blending Capability, Item 3.2.2** shall make the salt act as a filter bed as the water moves down through to the sump area and filter screen. The System shall produce, at a minimum, 5,000 gallons of brine per hour (based on available water supply of 6,000 gallon/hour and storage tank configuration static discharge of 45 ft. head pressure). The system shall be capable of remotely filling trucks with brine. The system shall be able to record truck fill data, truck flow rates and individual user ID passwords identifying volume and blend ratios via RFID card reader system or alpha numeric keypad system.

4.2.1 List of Minimum Requirements for the Salt Hopper:	
The salt hopper shall have a minimum capacity of 4.5 cubic yards.	* 7.6 cuyd
The salt hopper shall hold a minimum .75 cubic yards of sediment without interfering with the brine outlet.	
The minimum inside dumping width shall be no less than 120 inches.	
The salt hopper shall be constructed of 16,000-pound tensile strength fiberglass and isophthalic resin with all inside surfaces coated with a ceramic resin .050 inches thick.	* S.S. TANK

The vessel shall have structural integral ribs allowing flex with the salt hopper from full to empty.
The salt hopper shall be capable of being cleaned via flush components of the unit and any disassembly of components for cleaning is not acceptable.
Whether full or empty, the salt hopper shall be able to be cleaned by a process of opening the sump outlet cap and water flush valves. If the salt hopper is empty, the inside floor panel should have the capability of being removed for cleaning by attached lifting straps or some other form of easily removing the inside floor panel.
There shall be a fresh water flushing system to force sediment to and out of the sump.
All valves, bulkhead fittings, etc. one-inch and larger shall be manifold type fittings.
There shall be a pressure transducer connected to the PLC to activate brine pump on and off and water flow into the salt tank. These levels shall be adjustable from the HMI Interface and be adjustable to within one-inch increments.
The transducer shall have an air capillary to the inside of the salt hopper.
The vessel shall have two-inch male cam-lock type fittings and on/off ball valves for hose connections (fresh water, brine return, brine outlet to pump).
There shall be reinforced forklift pockets for moving the salt tank.
304 stainless-steel is required for all metallic items as it is the most corrosion resistant of the 300 series of stainless-steel.

4.2.2 List of Minimum Requirements for the Control System:
Brine pumped from the salt tank shall be monitored for salt concentration by a sensor which shall monitor the brine for temperature and automatically compensate brine concentration accordingly. Any need for an operator to manually test the brine concentration is not acceptable.
All brine exiting the salt tank shall pass over the brine concentration sensor that monitors brine between 0.0 and 27.0 percent concentration by weight.
The system shall come complete with the ability to access the HMI (operator interface) via Internet. The system shall have the ability for the operator to view the brine maker's functions, remotely, via internet connection.
The system shall include a 256-color LCD touch screen display, minimum 7 ½ diagonal.
The information on the display screen shall include, but not be limited to: 1) actual brine production concentration in the form of percentage

of sodium chloride concentration by weight. 2) gallons of fresh water used to make brine.
If the brine concentration is above the target, the brine shall be returned to the salt tank until the correct amount of water is automatically added and the brine reaches the desired concentration.
Once the brine is at the desired concentration (+or-3% of target concentration), the brine will be diverted to storage tanks.
If the concentration is below the minimum desired concentration, the system shall automatically divert the brine to the salt tank for a second pass through the salt bed to achieve the desired concentration.
The system shall be configured to accept a signal from a pressure transducer located in a storage tank to automatically stop brine production when the tank is full or when production batch is complete.
The system shall display the storage tank volume.
The system shall monitor total gallons of water used, salt used and brine produced daily and seasonally for record keeping.
Electric valves or pneumatic operated, industrial diaphragm valves shall include manual overrides for operation of the system in the event of an electrical component failure.
In the event of a component failure, the system shall automatically shut down and inform the operator of the specific failure along with a corrective measure. This includes how to manually override the problem and provide a part number.
The system shall be designed with a manual valve counterpart to the electric valve valves or pneumatic operated, industrial diaphragm valves to run parallel for a redundant manual control system.
Electric components mounted onto the control panel shall have UL rated conduit protecting connections and wiring outside of the enclosure.
Individual components over 10amps shall have circuit breakers so if the machine is not working, the operator may quickly assess by checking the breaker and if tripped, flip the breaker and be back in brine production. This will also provide more protection in the water environment. Components less than 10amps shall be fuse protected from inside of the control panel. Fuses shall illuminate when diagnostic LED detects fuse fault.
All wetted parts on the control panel except for the pump shall be manifold type glass filled polypropylene rated for 150 psi or schedule 80 PVC pipe and fittings rated for 270 psi.

4.2.3 List of Minimum Requirements for the Mechanical Components:
The pump shall be constructed of cast 304 stainless-steel with a stainless-

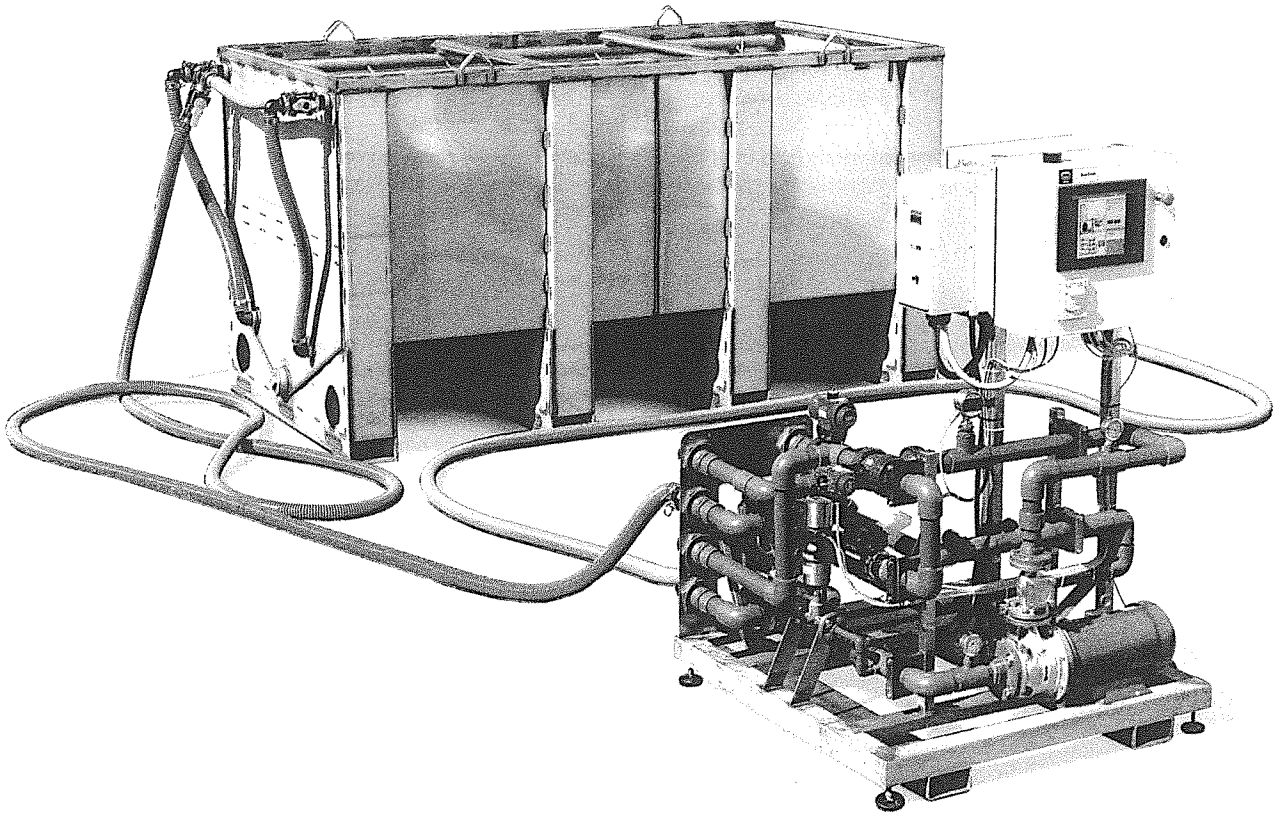
steel shaft and impeller. 304 stainless-steel is required as it is the most corrosion resistant of the 300 series of stainless-steel.
The electric pump motor shall be thermally protected 3 HP 220-volt single phase or a variable speed motor drill.
The pump shall be capable of delivery 5,000 gallons per hour of salt brine to storage tanks with a dynamic head of 45 feet.
All fittings and valves shall be manifold type glass filled polypropylene.
Wetted steel components shall be kept to a minimum; all steel components shall be constructed of 304 stainless-steel. 304 stainless-steel is required as it is the most corrosion resistant of the 300 series of stainless-steel.
All exposed electric components shall be rated at NEMA 12X.
All fasteners shall be constructed of stainless-steel.

4.2.4 List of Minimum Requirements for the Single Additive Injection System:
The control system shall be capable of automatically injecting a pre-determined ratio of brine and a single additive into the finished product tank (0 to 100%). Additives shall be mixed as the trucks are being loaded.
There shall be an additive storage tank volume sensor to determine if enough additive is available to produce desired volume ratio batch.
There shall be a blended product storage tank volume sensor to determine if enough volume is available to produce desired batch/ratio of blended product.
Tank volume sensors shall be solid state.
There shall be actuated valves to divert brine or additive into the processing pump, with manual override valves mounted onto an expandable modular panel.
Processing shall be graphically displayed on to HMI (operator display).
Process shall be fully automated with self-diagnostics.
The sub-panel shall come equipped with one additional modular plumbing module for recirculation of additive storage tank.
Modules shall include electric ball valve, manual override valve and electric circuitry.
Modules shall be mounted onto the stainless steel modular panel.
Electric valves shall be controlled via the automation process where the operator may select a desired "on" and "off" time for desired recirculation intervals.
The control system shall be capable of automatically injecting a predetermined ratio of a micro ingredient into the finished product tank or truck fill, if equipped.

*AIR ACTUATED VALVES

EZ Brine System

Stainless Steel Automated Batch Systems



EZ Brine Premier

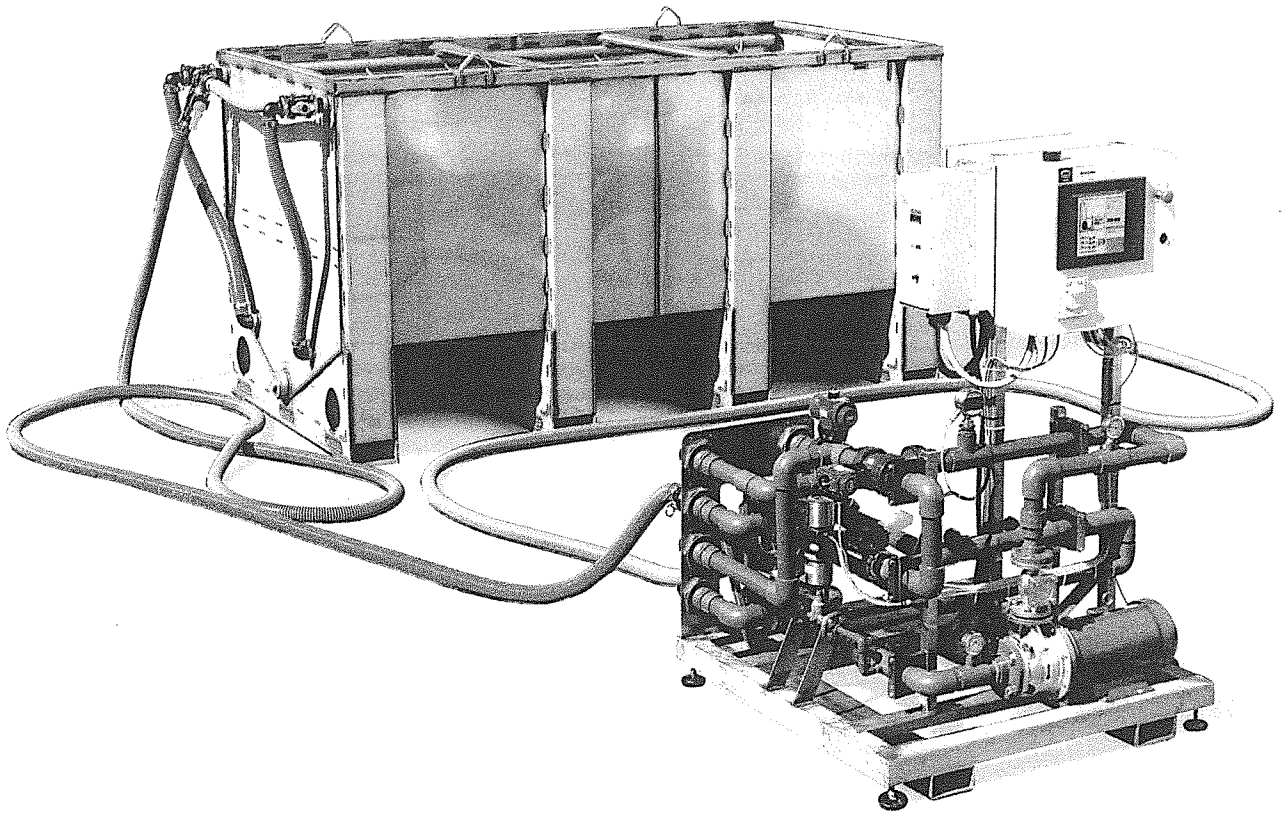
GVM's automatic EZ Brine Systems are quick, easy, and accurate solution for manufacturing salt brine and custom chemical blends. Flexible enough to meet the needs of any organization, the EZ Brine can be used as a batch system to produce blends on an as-needed basis or as a continuous manufacturing system to ensure your blend is always available. In addition to salt brine, the EZ Brine can blend up to three different micro-ingredients allowing users to produce custom blends to work at various temperatures. Additives and micro-ingredients will allow blends to work at lower temperatures and often for longer periods of time.

The programmable controller computer is simple to operate and helps to guide the user through the process. The system constantly monitors salinity and pump performance in addition to logging brine production data. Built in WiFi allows for easy remote monitoring and the built-in printer is an added convenience to quickly print logged data.

- Produces up to 6,000 gal. of brine per hour (depending on water source)
- Built in computer for easy programing, remote monitoring, & data logging
- Mix brine & up to 3 micro-ingredients, injected on a continuous basis, as programmed by the user
- Automatic monitoring of components & solution
- Continuous or batch style production
- 304 SS mix tank, with skid-style base & adjustable leveling feet
- 7.6 cu yd salt capacity v-bottom tank, 120 x 63.5 x 65 in. (L x W x H)
- 120 in. wide top opening for easy loading
- Top mounted spray bars for rapid saturation of salt
- All controls mounted in a NEMA 4 rated enclosure, watertight & corrosion resistant
- Baldor 7.5 hp motor with 3600 rpm centrifugal 316 SS Goulds pump

EZ BRINE SYSTEM

STAINLESS STEEL AUTOMATED BATCH SYSTEMS



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EZ Brine Premier

GVM, INC.

Functions

Brine Rejection

The Brine Premium primary function is to monitor the conductivity of the brine solution. Conductivity of the brine is directly proportional to its concentration. Brine that meets the acceptable conductivity range will be sent to the brine storage tank or a tanker. Brine that is outside of this configurable range will be diverted back to the salt bed and will recirculate through the system until it reaches the correct range.

Blending

While the system is pumping brine within specification, the concentration is closely monitored and in conjunction with the water injection control system, will maintain the that concentration.

Level Transmission

The brine system uses a pressure transmitter to determine the water level of the salt bed. As the brine is depleted in the salt bed, the level system will signal the water supply valve to open and close in order to maintain a level that will not dilute the solution and maintain throughput.

Items

Valves

The system comes equipped with three air actuated three-way valves (AA2W), two air actuated two way valves (AA2W), one control valve and one additional air actuated two-way valve for each micro ingredient addition. The following is a listing of valve names and their purpose:

Divert Valve [AV2] (AA3W)
The Divert valve switches between sending in-spec brine to the storage tank and recirculating brine back to the salt bed that doesn't meet the correct conductivity.

Water Supply Valve [AV3] (AA2W)
The water supply valve allows for the brine tank to refill with water when the level drops below a predetermined level.

this point the water valve will close. This will continue throughout production. If the level is allowed to reach low level, the pump will turn off. The pump will restart when level reaches medium.

This may occur if there is a temporary water supply problem.

Touchscreen

The touchscreen is the source of all operation of the Brine Premium system.

Estop

The E-stop is positioned on the main control panel, where the operator will be controlling the system. When the E-stop is pressed, the entire system will shut down. The pump will turn off, valves will switch to fail safe positions and flow will stop. Once power is returned to the system, the screen will display an alarm. Acknowledge the alarm to continue operation.

Connections

There are three types of connections to be made to the Brine Premium system: electrical, pneumatic and hose/pipe.

Electrical

The Brine Premium system is powered by 240-volts single phase or 480 volts 3 phase. The required voltage must be specified when ordering the system. The main control panel is powered by 24DCV power supply located in this panel.

Pneumatic

The valves on the Brine Premium system are air actuated and require a pressurized air source [minimum 80 PSI, maximum 100PSI] to function. Connect individual ¼" air lines both the supply and exhaust lines at the bottom of the control panel.

Hose/Pipe

There are 10 hose/pipe connections to the Premium Brine system. Each of these connections are 2" Camlock connections. The following is a list of the connections and where they must be connected (refer to the process drawing for the following connection locations):

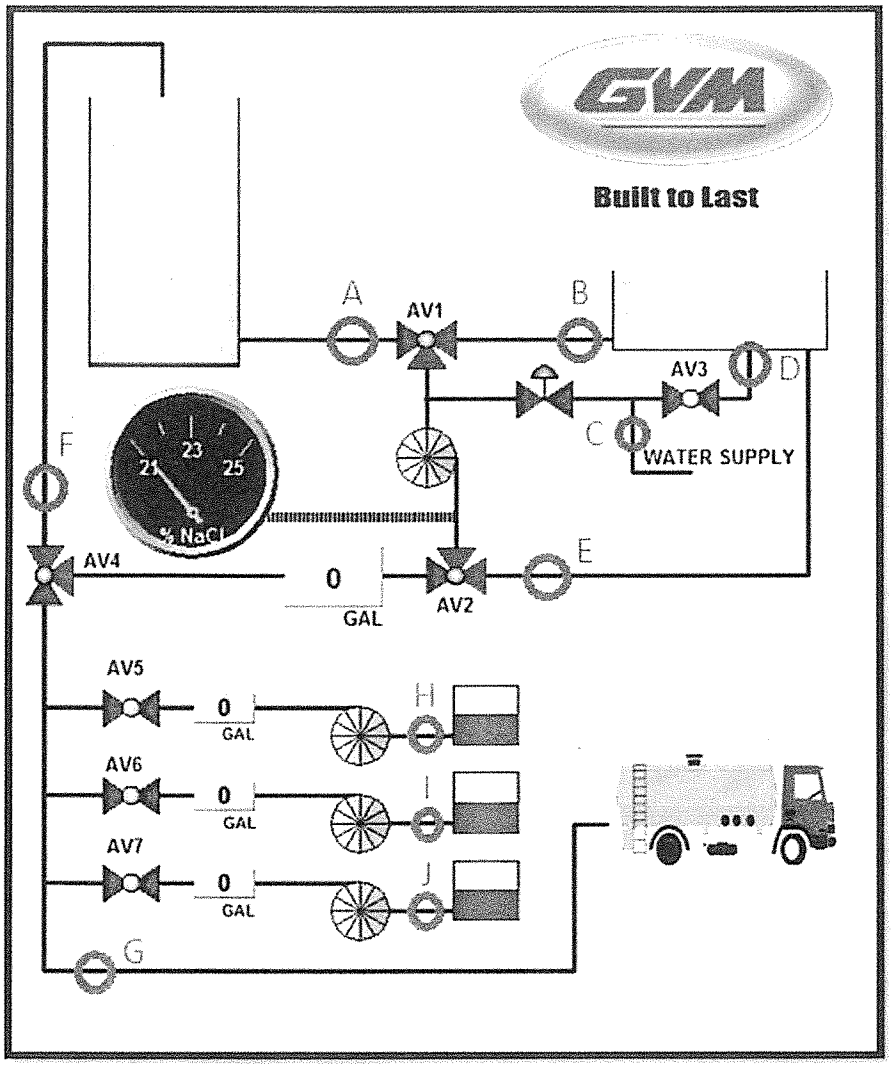

Figure 1: Connections

The data entry section is on the upper right of the screen. The data entry screen changes depending on the mode selected. It is composed of one or more data fields that can be populated with data. The data entry section also contains the operable buttons ([START], [STOP], [RESET], and [PRINT]) relative to the mode selected. Lastly, the data entry screen contains the drop-down menu for the modes of operation.

The data section is on the bottom right of the screen. As processes finish, the data will be stored and entered into a table where the newest items are on the top.

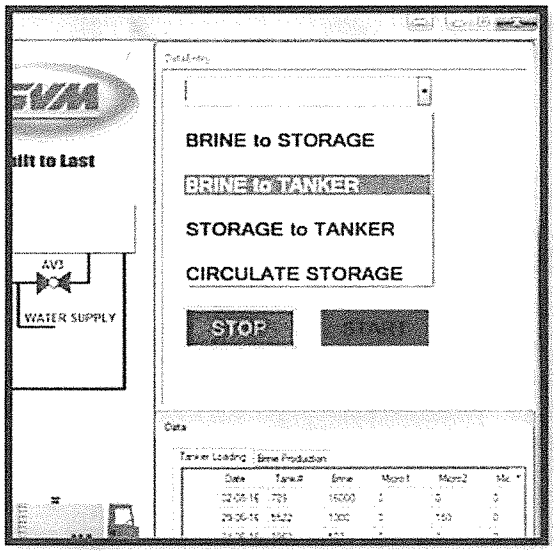

Figure 3: Mode Selection

Select an item from the drop down menu to run the process. The route selected will be highlighted on the process section of the main screen.

For each mode, data entry will be required.

Modes of operation

Brine to Storage

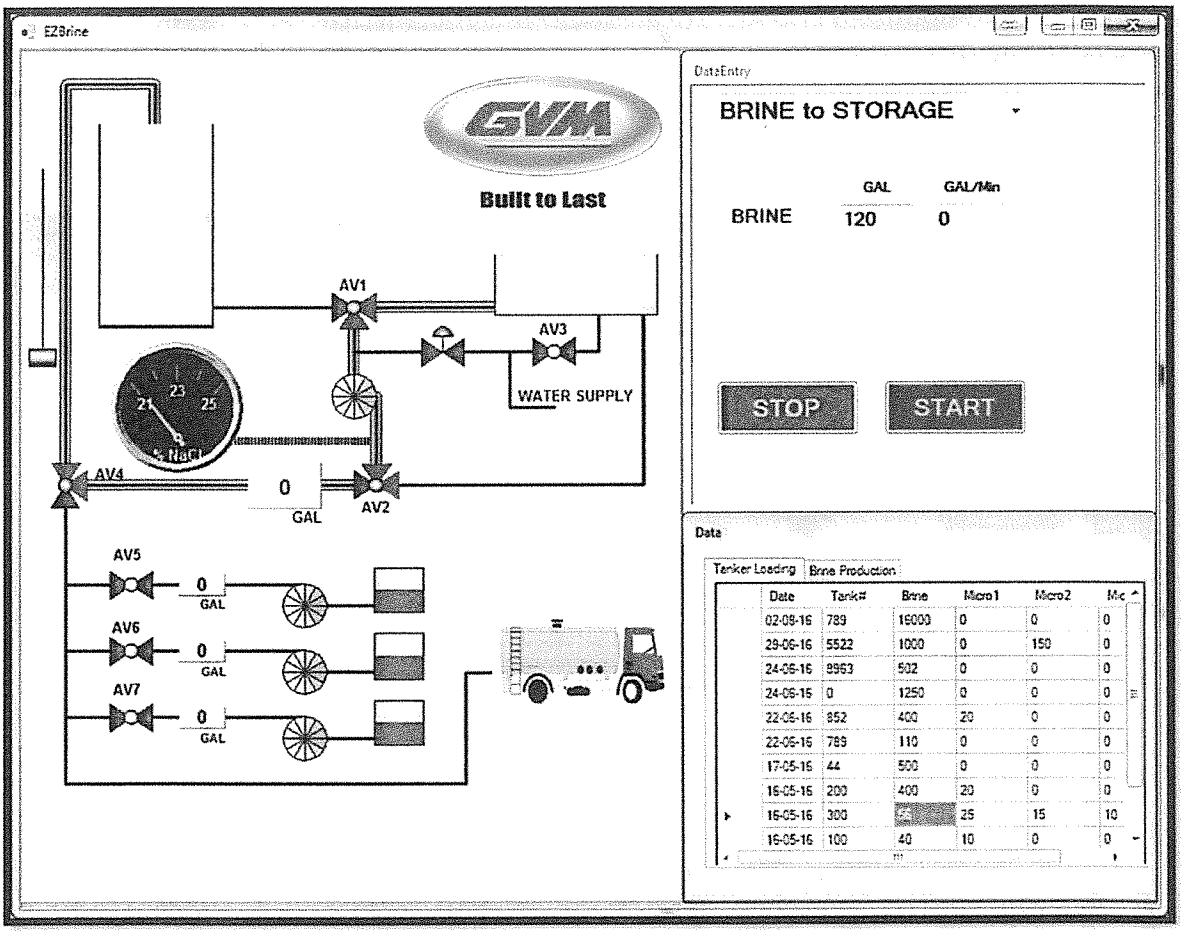

Figure 5: Brine to storage

When Brine to Storage is selected, the amount of brine to be delivered to storage is required. Once the data is entered, press [START].

The *Storage to salt tank valve (AV1)* will route from the salt tank, the *divert valve (AV2)* will route for divert flow, and the *Storage to tanker valve (AV4)* will route to storage. The pump will start after a short delay.

Brine will be delivered to storage until the set point entered is met. Once the set point is met, the pump will turn off and the valves will close.

populated. Before the process is started, enter the set points for the micro ingredients if required.

Once data entry is complete, press [START]. The *Salt bed / Storage valve (AV1)* will route from salt bed, the *Divert valve (AV2)* will begin in divert mode and the *Storage / Tanker valve (AV4)* will route to the tanker.

The pump will start after a short delay. When the conductivity of the brine meets the standard, the divert valve will switch to forward flow after a predetermined amount of time.

The acceptable range for conductivity is set in the configuration. If the conductivity of the brine is ever outside of the acceptable range, the divert valve will route to recirculating until the conductivity is back in range for a preset amount of time. If the conductivity is below specification, the system will simply recirculate until it reaches the required conductivity. If the conductivity is above set point, the system will recirculate and the output to the control valve will increase to introduce more water while recirculating.

Once the required conductivity is met, the system will wait a predetermined amount of time before the divert valve routes to forward flow once more.

After the set point (entered in the data entry stage) is achieved, the process will end. The system will wait for the user to print a ticket and reset the system. The screen will return to the main screen and the data for this run will be visible in the data table.

When Storage to Tanker is selected, the following data entry screen will appear:

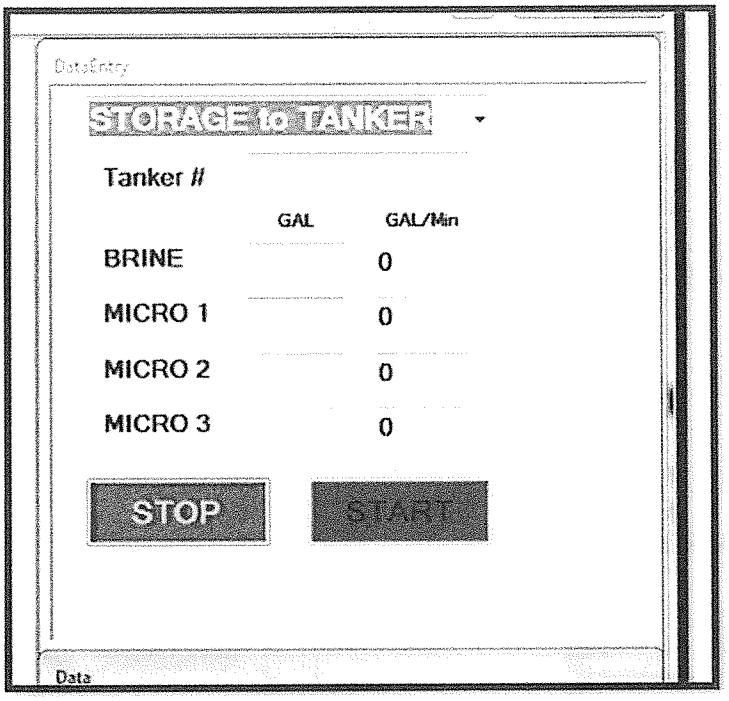

Figure 8: Data Entry

The [START] button will only become available once the Tanker # and the Brine fields are populated.

To include micro ingredients in the brine, enter the desired amounts in the respective fields.

When data entry is complete, press [START]. The *Salt bed / Storage valve (AV1)* will route from storage, the *Divert valve (AV2)* will open for forward flow and the *Storage / Tanker valve (AV4)* will route to the tanker. The pump will start after a slight delay and Brine from the storage tank will start to fill the tanker.

If micro ingredients have been selected, the valve for the micro will open and the pump will start after a slight delay. The micro ingredients will start sequentially with slight delays to avoid turning on all the motors at once.

The process will end when the Brine set point is achieved. The system will wait for the user to either print a ticket and reset the system or reset the system without printing a ticket.

start after a short delay, and the brine will be circulated until the amount of time is elapsed. To end the circulation before the allotted time, press [STOP].

Troubleshooting

The following is a list of simple troubleshooting tips:

1. [Start] has been pressed and the pump will not start.
   a. The level of the water is too low and needs to be filled.
   b. Motor overloads or breaker/fuse has tripped.
2. During production, the pump cycles between start and stop.
   a. Increase water supply to brine tank or decrease the speed of the pump.
3. During production the system cycles between forward and divert flow frequently
   a. If the conductivity is below set point, there may be a shortage of salt in the brine tank or the suction screen may be clogged.
   b. If the concentration is above set point, the water supply may be insufficient. The way to confirm this is to check the position of the control valve (there is a display on the valve to indicate the percentage the valve is open). If it is indicating 100% open it can be confirmed that there is not enough water flow to bring the concentration down. To correct this problem increase the water supply or decrease the speed of the pump.

GVM EZ Brine Premier

GVM's Brine Manufacturing Automatic, EZ Brine system is a quick, easy, and accurate solution for manufacturing salt brine and custom chemical blends. Flexible enough to meet the needs of any organization, the EZ Brine can be used as a batch system to produce blends on an as-needed basis or as a continuous manufacturing system to ensure your blend is always available. With the purchase of the blending add on, the EZ Brine can blend up to three different micro-ingredients (depending on which package is purchased) allowing users to produce custom blends to accommodate for cold snaps and drastic temperature drops.

TECHNICAL SPECIFIATIONS:

TANK: 1535 Gallon liquid capacity/7.6 cubic yards of salt capacity
The tank will be made of 304 stainless steel frame with built in forklift pockets and lifting lugs for easy transportation. Mixing components come complete with (4) 2" stainless steel spray bars, (2) mounted at the top of the tank and (2) mounted on the bottom for complete saturation.
Tank Dimensions are as follows:

- Total length 120"
- Total width 63.5"
- Total Height 65"

CONTROL/BLEND STATION FRAME:
Consists of a stainless steel 4 X 4 skid style base with adjustable levelling feet for easy indoor storage requirements.

PUMP & MOTOR ASSEMBLY:
VFD Controlled 7.5HP motor with a 3600 RPM centrifugal 316 stainless steel close coupled and frame mounted pump with 6-1/2" impeller, rated at 230gpm @ 3500rpm.

SENSORS, GUAGES & MEASURING DEVICES:
Salinity level is measured by inductive conductivity transmitter.
Mix tank levels and automatic pump stop/start are regulated by a stainless steel level transducer.
Flow control is determined by a 2" pressure regulating valve along with a 2" electronic flow meter and (1) 100PSI pressure gauge and (1) 100 PSI vacuum gauge.
(4) 2" pneumatic actuators control flow start/stop and direction to the (6) 2" PVC lines dedicated for various functions.

TRANSFER HOSES:
Easy use flow panel with labeled camlock connections for quick and easy hose hook up.
6 each: 2" Flexible PVC Hose with camlock and quick couple (cut to appropriate length for application).
1 each 3" Flexible PVC Hose with camlock and quick couple (cut to appropriate length for application).

Controls & Enclosure
12" X 12" Windows 7 programmable touch screen computer with running graphical interface, and built in WI-FI for remote operation and troubleshooting capabilities.
Data logging and receipt printout for accurate record keeping of batch making, tanker loading, and system events.
Dual NEMA 4 enclosures protecting all electrical components from the elements

BLENDING PACKAGE 1-3 AVAILABLE (ADD ON):
1each: 1hp Motor with a 3450RPM centrifugal 316 stainless steel close coupled and frame mounted pump with a 5-3/16" impeller rated at 46gpm and 3350rpm.
1each: 1" pneumatic actuator to control start and stop of flow.
1 each: 1-1/4" Hose with camlock and quick couple (cut to appropriate length for application).
Each add on complete with internal flowmeter software for accurate blend production.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: GVM Inc.

Authorized Signature: Thomas Bair Date: 3/13/2018

State of Pennsylvania

County of Adams, to-wit:

Taken, subscribed, and sworn to before me this 13th day of March, 2018

My Commission expires October 11, 2020.

AFFIX SEAL HERE

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
LINDA M. BROWN, Notary Public
Biglerville Boro., Adams County
My Commission Expires October 11, 2020

NOTARY PUBLIC Linda M. Brown