



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

State of West Virginia  
 Request for Quotation

Proc Folder: 82124

Doc Description: AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM EQUIPMENT

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2015-04-03	2015-04-28 13:30:00	CRFQ 0803 DOT1500000079	1

**BID RECEIVING LOCATION**  
 BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR**  
 Vendor Name, Address and Telephone Number:  
 Cargill, Inc. - Deicing Technology Business Unit  
 24950 Country Club Blvd., Suite 450  
 North Olmsted, OH 44070  
 866-900-7258

04/27/15 09:47:17  
 WV Purchasing Division

**FOR INFORMATION CONTACT THE BUYER**  
 Misty DeLong  
 (304) 558-8802  
 misty.m.delong@wv.gov

Signature X *Mildred Lindsey* FEIN # 41-0177680 DATE April 20, 2015

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

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM	1.00000	EA	\$79,140.00	\$79,140.00

Comm Code	Manufacturer	Specification	Model #
20122400	Cargill		AccuBrine® RTF

**Extended Description :**  
ITEM 3.3.1 AUTOMATIC BRINE MAKER WITH REMOTE FILL CAPABILITIES

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM	1.00000	EA	\$89,140.00	\$89,140.00

Comm Code	Manufacturer	Specification	Model #
20122400	Cargill		AccuBrine® ABS

**Extended Description :**  
ITEM 3.3.2 AUTOMATIC BRINE MAKER WITH REMOTE FILL CAPABILITIES INCLUDING ONE ADDITIVE BLENDING CAPABILITY

INVOICE TO		SHIP TO	
ALL STATE AGENCIES VARIOUS LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	AUTOMATIC BRINE SOLUTION PRODUCTION SYSTEM	1.00000	EA	\$95,140.00	\$95,140.00

<b>Comm Code</b>	<b>Manufacturer</b>	<b>Specification</b>	<b>Model #</b>
20122400	Cargill		AccuBrine® ABS2

**Extended Description :**

ITEM 3.3.3 AUTOMATIC BRINE MAKER WITH REMOTE FILL CAPABILITIES INCLUDING TWO ADDITIVE BLENDING CAPABILITY

<b>DOT1500000079</b>	<b>Document Phase</b> Final	<b>Document Description</b> AUTOMATIC BRINE SOLUTION PRODU CTION SYSTEM EQUIPMENT	<b>Page 4</b> of 4
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**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions



#### **SPECIFICATION CLARIFICATION**

- 1.) We will connect to WVD0H installed electric receptacle and water service in the heated structure for the control panel per the attached installation check lists.**
- 2.) Please see attached technical specifications sheets for each model quoted.**

## INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. **REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.
2. **MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.
3. **PREBID MEETING:** The item identified below shall apply to this Solicitation.

A pre-bid meeting will not be held prior to bid opening.

A NON-MANDATORY PRE-BID meeting will be held at the following place and time:

A MANDATORY PRE-BID meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. **VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are non-binding. Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: April 13, 2015

Submit Questions to: Misty Delong

2019 Washington Street, East

Charleston, WV 25305

Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)

Email: Misty.M.Delong@wv.gov

5. **VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.
6. **BID SUBMISSION:** All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile. The bid delivery address is:

Department of Administration, Purchasing Division

2019 Washington Street East

Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

**SEALED BID:**

**BUYER:** Misty DeLong

**SOLICITATION NO.:** CRFQ DOT150000079

**BID OPENING DATE:** April 28, 2015

**BID OPENING TIME:** 1:30 PM, EST.

**FAX NUMBER:** 304-558-3970

In the event that Vendor is responding to a request for proposal, and chooses to respond in a manner other than by electronic submission through wvOASIS, the Vendor shall submit one original technical and one original cost proposal plus NA convenience copies of each to the Purchasing Division at the address shown above. Additionally, if Vendor does not submit its bid through wvOASIS, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

**BID TYPE:** (This only applies to CRFP)

Technical

Cost

7. **BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: April 28, 2015 at 1:30 PM, EST.

Bid Opening Location: Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

8. **ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, 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.



9. **BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.
10. **ALTERNATES:** Any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.
11. **EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.
12. **COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.
13. **REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.
14. **UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.
15. **PREFERENCE:** Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Vendor Preference Certificate form has been attached hereto to allow Vendor to apply for the preference. Vendor's failure to submit the Vendor Preference Certificate form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.
16. **SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the

same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

**17. WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

**18. ELECTRONIC FILE ACCESS RESTRICTIONS:** Vendor must ensure that its submission in wvOASIS can be accessed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately opened and/or viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires, and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening if those documents are required with the bid.

## GENERAL TERMS AND CONDITIONS:

1. **CONTRACTUAL AGREEMENT:** Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.
  
2. **DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.
  - 2.1. **"Agency" or "Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
  - 2.2. **"Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.
  - 2.3. **"Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.
  - 2.4. **"Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.
  - 2.5. **"Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.
  - 2.6. **"Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
  - 2.7. **"State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
  - 2.8. **"Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. **CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

**Term Contract**

**Initial Contract Term:** This Contract becomes effective on Award and extends for a period of one (1) year(s).

**Renewal Term:** This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Renewal of this Contract is limited to two (2) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed 24 months in total. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

**Delivery Order Limitations:** In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

**Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within \_\_\_\_\_ days.

**Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within \_\_\_\_\_ days. Upon completion, the vendor agrees that maintenance, monitoring, or warranty services will be provided for one year thereafter with an additional \_\_\_\_\_ successive one year renewal periods or multiple renewal periods of less than one year provided that the multiple renewal periods do not exceed \_\_\_\_\_ months in total. Automatic renewal of this Contract is prohibited.

**One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

**Other:** See attached.

4. **NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.
  
5. **QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.
  - Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.
  
  - Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.
  
  - Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.
  
  - One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.
  
6. **PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.
  
7. **EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.
  
8. **REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

**BID BOND:** All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

**PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of \_\_\_\_\_. The performance bond must be received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

**LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable.

**MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

**INSURANCE:** The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:

**Commercial General Liability Insurance:** In the amount of \$1,000,000.00  
\_\_\_\_\_ or more.

**Builders Risk Insurance:** In an amount equal to 100% of the amount of the Contract.

The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

**LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

**9. WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

**10. LITIGATION BOND:** The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or \$5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.

**11. LIQUIDATED DAMAGES:** Vendor shall pay liquidated damages in the amount of NA for NA. This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy.

- 12. ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part. Vendor's signature on its bid signifies acceptance of the terms and conditions contained in the Solicitation and Vendor agrees to be bound by the terms of the Contract, as reflected in the Award Document, upon receipt.
- 13. FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.
- 14. PAYMENT:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.
- 15. TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
- 16. CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-7.16.2.
- 17. TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.
- 18. APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.
- 19. COMPLIANCE:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable law.
- 20. PREVAILING WAGE:** On any contract for the construction of a public improvement, Vendor and any subcontractors utilized by Vendor shall pay a rate or rates of wages which shall not be less than the fair minimum rate or rates of wages (prevailing wage), as established by the West Virginia Division of Labor under West Virginia Code §§ 21-5A-1 et seq. and available at <http://www.sos.wv.gov/administrative-law/wagerates/Pages/default.aspx>. Vendor shall be responsible for ensuring compliance with



prevailing wage requirements and determining when prevailing wage requirements are applicable. The required contract provisions contained in West Virginia Code of State Rules § 42-7-3 are specifically incorporated herein by reference.

21. **ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.
22. **MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary, no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). No Change shall be implemented by the Vendor until such time as the Vendor receives an approved written change order from the Purchasing Division.
23. **WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.
24. **SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.
25. **ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.
26. **WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.
27. **STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.
28. **BANKRUPTCY:** In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

**29. CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.

**30. DISCLOSURE:** Vendor's response to the Solicitation and the resulting Contract are considered public documents and will be disclosed to the public in accordance with the laws, rules, and policies governing the West Virginia Purchasing Division. Those laws include, but are not limited to, the Freedom of Information Act found in West Virginia Code §§ 29B-1-1 et seq. and the competitive bidding laws found West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq.

If a Vendor considers any part of its bid to be exempt from public disclosure, Vendor must so indicate by specifically identifying the exempt information, identifying the exemption that applies, providing a detailed justification for the exemption, segregating the exempt information from the general bid information, and submitting the exempt information as part of its bid but in a segregated and clearly identifiable format. Failure to comply with the foregoing requirements will result in public disclosure of the Vendor's bid without further notice. A Vendor's act of marking all or nearly all of its bid as exempt is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor's act of marking a bid or any part thereof as "confidential" or "proprietary" is not sufficient to avoid disclosure and WILL NOT BE HONORED. A legend or other statement indicating that all or substantially all of the bid is exempt from disclosure is not sufficient to avoid disclosure and WILL NOT BE HONORED. Additionally, pricing or cost information will not be considered exempt from disclosure and requests to withhold publication of pricing or cost information WILL NOT BE HONORED.

Vendor will be required to defend any claimed exemption for nondisclosure in the event of an administrative or judicial challenge to the State's nondisclosure. Vendor must indemnify the State for any costs incurred related to any exemptions claimed by Vendor. Any questions regarding the applicability of the various public records laws should be addressed to your own legal counsel prior to bid submission.

**31. LICENSING:** In accordance with West Virginia Code of State Rules §148-1-6.1.7, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

- 32. ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.
- 33. VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein. Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.
- 34. PURCHASING CARD ACCEPTANCE:** The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.
- Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.
- 35. VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but

not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing. Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

- 36. INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.
- 37. PURCHASING AFFIDAVIT:** In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of \$1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.
- 38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by and extends to other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). This Contract shall be extended to the aforementioned Other Government Entities on the same prices, terms, and conditions as those offered and agreed to in this Contract. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.
- 39. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.
- 40. REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:
- Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

- Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at [purchasing.requisitions@wv.gov](mailto:purchasing.requisitions@wv.gov).

- 41. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision.

The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

- 42. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
- c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater.

For the purposes of this section, the cost is the value of the steel product as delivered to the project; or

- d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

**43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL:** In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products.

This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

**CERTIFICATION AND SIGNATURE PAGE**

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained 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.

Cargill, Inc. - Deicing Technology Business Unit  
(Company)

Mildred Lindsey  
(Authorized Signature) (Representative Name, Title)

Materials Transportation Specialist  
Phone: 866-900-7258 Fax: 440-716-0550 April 20, 2015  
(Phone Number) (Fax Number) (Date)

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: CRFQ DOT15000079**

**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)

- |                                         |                                          |
|-----------------------------------------|------------------------------------------|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> 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 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.

Cargill, Inc. - Deicing Technology Business Unit  
Company

Mildred Lindsey  
Authorized Signature

April 20, 2015  
Date

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



REQUEST FOR QUOTATION  
Automatic Brine Solution Production System Equipment

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SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways to establish an open-end contract for Automatic Brine Solution Production System Equipment.

The intent of this request is to provide for the purchase and installation for any of three various sizes of new and unused Automatic Brine Solution Production System Equipment which shall be capable of producing brine, without the intervention of an operator after the initial system start and automatically monitor and control brine concentration during production.

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.

2.1 **“Contract Item” or “Contract Items”** means the list of items identified in Section 3 and 4 and on the Pricing Pages.

2.2 **“Pricing Pages”** means the schedule of prices contained in wvOASIS and totals attached hereto as Exhibit A and used to evaluate the Solicitation responses.

2.3 **“Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.4 **“WVDOH”** used throughout this Solicitation means the West Virginia Division of Highways.

2.5 **“Automatic Brine Makers” or “Brine Makers”** used throughout this Solicitation means Automatic Brine Solution Production System Equipment.

2.6 **“Contractor” or “Vendor”** used throughout this Solicitation and in any cited sections of the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, adopted latest edition, as modified by all subsequent annual Supplemental Specifications, are interchangeable.

3. **GENERAL REQUIREMENTS:**

- 3.1 **Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

REQUEST FOR QUOTATION  
Automatic Brine Solution Production System Equipment

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- 3.2 Pre-Service:** The WVDOH may or may not provide a heated room for placement of the automatic brine maker; however, whether the brine maker itself is located in a heated room or not, the control system will be located in a heated room. This will be determined by the WVDOH once the need arises to purchase an automatic brine maker. The location and size of the heated room will be provided to the vendor on the Delivery Order.

Whether inside a heated room or not, the vendor shall install the automatic brine maker by hooking up all lines and plumbing, preparing the unit for immediate use. The automatic brine maker shall be completely serviced, all equipment installed and all adjustments made which are required to prepare the unit ready for immediate and continuous use upon delivery.

The WVDOH will provide electrical and water service to the placement area of the automatic brine maker. If a heated room is used, all electrical and plumbing inside the heated room to the automatic brine maker shall be provided by the vendor and included in the vendor's bid cost.

- 3.3 Contract Items:** Listed below are three brine makers being pursued with this Solicitation:

- 3.3.1 An Automatic Brine Maker with Remote Truck Fill Capabilities**
- 3.3.2 An Automatic Brine Maker with Remote Truck Fill Capabilities including One Additive Blending Capability**
- 3.3.3 An Automatic Brine Maker with Remote Truck Fill Capabilities including Two Additive Blending Capability**

**4. EQUIPMENT REQUIREMENTS:**

- 4.1 An Automatic Brine Maker with Remote Truck Fill Capabilities** shall make the salt act as a filter bed as the water moves down through to the sump area and filter screen. The automatic brine production system shall be capable of producing 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.

<b>4.1.1 List of Minimum Requirements for the Salt Hopper:</b>
The salt hopper shall have a minimum capacity of five cubic yards.
The salt hopper shall hold a minimum .75 cubic yards of sediment

**REQUEST FOR QUOTATION**  
**Automatic Brine Solution Production System Equipment**

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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.
The vessel shall have structural integral ribs allowing minimal 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.

<b>4.1.2 List of <u>Minimum</u> Requirements for the Control System:</b>
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, 7 ½

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**Automatic Brine Solution Production System Equipment**

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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.
In the event that 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 be capable of displaying 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.

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**Automatic Brine Solution Production System Equipment**

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<b>4.1.3 List of <u>Minimum</u> Requirements for the Mechanical Components:</b>
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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.
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The electric pump motor shall be thermally protected 3 HP 220 volt single phase or a variable speed motor drill.
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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.
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All fittings and valves shall be manifold type glass filled polypropylene.
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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.
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All exposed electric components shall be rated at NEMA 12X.
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All fasteners shall be constructed of stainless steel.
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- 4.2 An Automatic Brine Maker with Remote Truck Fill Capabilities including One Additive Blending Capability** shall make the salt act as a filter bed as the water moves down through to the sump area and filter screen. The automatic brine production system shall be capable of producing 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); flushing out all sediment collected in the bottom of the vessel with salt level full in the tank; producing a blended product by injecting one additive with a ratio between 1 and 100%. 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.

<b>4.2.1 List of <u>Minimum</u> Requirements for the Salt Hopper:</b>
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The salt hopper shall have a minimum capacity of five cubic yards.
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The salt hopper shall hold a minimum .75 cubic yards of sediment without interfering with the brine outlet.
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The minimum inside dumping width shall be no less than 120 inches.
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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.
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The vessel shall have structural integral ribs allowing minimal flex with the salt hopper from full to empty.
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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.
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Whether full or empty, the salt hopper shall be able to be cleaned by a
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**Automatic Brine Solution Production System Equipment**

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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.

<b>4.2.2 List of Minimum Requirements for the Control System:</b>
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, 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.
In the event that the concentration is below the minimum desired

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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 be capable of displaying 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.

<b>4.2.3 List of <u>Minimum</u> Requirements for the Mechanical Components:</b>
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

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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.

<b>4.2.4 List of <u>Minimum</u> Requirements for the Single Additive Injection System:</b>
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.
The system shall include a diaphragm pump and automation controls to inject a predetermined ratio of micro ingredient between a ratio of 1:1,000 and 1:10,000 units. Set up shall be configured via the operator display.

- 4.3 An Automatic Brine Maker with Remote Truck Fill Capabilities including Two Additive Blending Capability** shall make the salt act as a filter bed as the water moves down through to the sump area and filter screen. The automatic brine production system shall be capable of producing 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); flushing out all sediment



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collected in the bottom of the vessel with salt level full in the tank; producing a blended product by injecting two additives with a ratio between 1 and 100%. 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.

**4.3.1 List of Minimum Requirements for the Salt Hopper:**

The salt hopper shall have a minimum capacity of five 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.

The vessel shall have structural integral ribs allowing minimal 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.

**4.3.2 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

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<p>an operator to manually test the brine concentration is not acceptable.</p>
<p>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.</p>
<p>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.</p>
<p>The system shall include a 256-color LCD touch screen display, 7 ½ diagonal.</p>
<p>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.</p>
<p>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.</p>
<p>Once the brine is at the desired concentration (+or-3% of target concentration), the brine will be diverted to storage tanks.</p>
<p>In the event that 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.</p>
<p>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.</p>
<p>The system shall be capable of displaying the storage tank volume.</p>
<p>The system shall monitor total gallons of water used, salt used and brine produced daily and seasonally for record keeping.</p>
<p>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.</p>
<p>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.</p>
<p>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.</p>
<p>Electric components mounted onto the control panel shall have UL rated conduit protecting connections and wiring outside of the enclosure.</p>
<p>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.</p>

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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.

**4.3.3 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.

**4.3.4 List of Minimum Requirements for the Two Additives Injection System:**

The control system shall be capable of automatically injecting a pre-determined ratio of brine and two additives into the finished product tank (0 to 100%). Additives shall be mixed as the trucks are being loaded.

There shall be two additive storage tank volume sensors to determine if enough volume of each 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 additives 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 two additional modular plumbing modules for recirculation of two additive storage tanks.

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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.
The system shall include a diaphragm pump and automation controls to inject a predetermined ratio of micro ingredient between a ratio of 1:1,000 and 1:10,000 units. Set up shall be configured via the operator display.

**5. CONTRACT AWARD:**

- 5.1 Contract Award:** The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest cost per item as shown on the Pricing Pages.
- 5.2 Pricing Pages:** Vendors may bid any or all items on the Pricing Page. Price shall be FOB to any WVDOH location in the State of WV. The WVDOH location will be identified on a Delivery Order at the time of need.

The Pricing Page contains a list of three automatic brine makers as described in Sections 3.3 and Section 4. The actual number of units to be ordered by the WVDOH during the term of this contract is unknown at this time. Vendors are strongly cautioned that there may or may not be a need for any of the three automatic brine makers on the Solicitation during the term of this contract.

Vendor should electronically enter the information into the Pricing Pages through wvOASIS, if available, or as an electronic document. In most cases, the Vendor can request an electronic copy of the Pricing Pages for bid purposes by sending an email request to the following address: [crystal.g.rink@wv.gov](mailto:crystal.g.rink@wv.gov).

- 5.3 Equipment Information:** Vendors should submit some form of equipment documentation describing; in detail, the style/model of the automatic brine maker(s) being bid with their bid. This is for informational purposes. Vendor shall be available to provide additional information on the equipment bid upon request by the WVDOH.

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**6. ORDERING AND PAYMENT:**

- 6.1 Ordering:** Vendor shall accept orders through wvOASIS, regular mail, facsimile, e-mail, or any other written forms of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.
- 6.2 Payment:** Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia. The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract.

**7. DELIVERY AND RETURN:**

- 7.1 Delivery Time:** Vendor shall deliver the automatic brine maker to the specific WVDOH District site, identified on the Delivery Order, within sixty (60) calendar days of the date of the Delivery Order or an alternative delivery date that has been established between the WVDOH and the vendor. This date shall be noted on the Delivery Order. Vendor shall deliver emergency orders within an established acceptable time frame after the Delivery Order has been issued. Vendor shall ship all orders in accordance with the agreed schedule and shall not hold orders until a minimum delivery quantity is met. If the vendor is unable to furnish material in accordance with the agreed delivery schedule, the WVDOH District Engineer/Manager shall be advised in writing within five (5) working days of the reason for failure to conform to the delivery requirements.

The WVDOH shall provide a loader with forks, or forklift and operator to unload the brine maker at the time of delivery.

- 7.2 Late Delivery:** The Agency placing the order under this Contract must be notified in writing within five (5) days if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

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- 7.3 Delivery Payment/Risk of Loss:** Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.
- 7.4 Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.
- 7.5 Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within thirty days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.
- 8. WARRANTY:** The awarded vendor(s) shall provide a copy of the manufacturer's standard warranty and service policy to the WVDOH upon delivery of the automatic brine maker. A standard warranty of less than one year is not acceptable.
- 9. SERVICE MANUALS, PARTS LISTS AND TRAINING:** Two copies of the parts list, service and maintenance manuals and operator's manual shall be furnished with the automatic brine maker at the time of delivery. The vendor is required to provide on-site training on operation and maintenance of each automatic brine maker purchased.
- 10. VENDOR DEFAULT:** The following shall be considered a vendor default under this Contract.
- 10.1.** Failure to provide Contract Items in accordance with the requirements contained herein.

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**10.1.1** Failure to comply with other specifications and requirements contained herein.

**10.1.2** Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.

**10.1.3** Failure to remedy deficient performance upon request.

**10.2** The following remedies shall be available to Agency upon default.

**10.2.1** Immediate cancellation of the Contract.

**10.2.2** Immediate cancellation of one or more release orders issued under this Contract.

**10.2.3** Any other remedies available in law or equity.

**11. MISCELLANEOUS:**

**11.1 No Substitutions:** Vendor shall supply only Contract Items submitted in response to the Solicitation. Vendor shall not supply substitute items without Purchasing Division approval.

**11.2 Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

**11.3 Reports:** Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

**11.4 Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

**REQUEST FOR QUOTATION**  
**Automatic Brine Solution Production System Equipment**

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**Contract Manager:** Tom Blackman\_\_\_\_\_

**Telephone Number:** 866-900-7258\_\_\_\_\_

**Fax Number:** 440-716-0550\_\_\_\_\_

**Email Address:** Accubrine\_service@cargill.com



POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, That Cargill, Incorporated, a Corporation duly organized and existing under the laws of the State of Delaware, and having its Home Office in the City of Minneapolis, Minnesota, has made, constituted and appointed, and does by these presents, constitute and appoint:

Dawn Bekoscke	Chris Gampfer	Amanda Montanez
Tom Blackman	Nadine Gilbert	Lisa O'Neal
Stacey Bruzda	Kenneth G. Howe	Aileen Orlando
David Bryden	Gail Hubbell	Angele Peterson
Pamela S. Burcewicz	Brittney Ingold	Stewart Petrick
Deseree Caver	Robin Kiewatt	John Petryszyn
Carol Chandler	Mary Kleiner	Sean M. Riley
Jean Davis	Amanda Knaus	Tameka Roby
Elaine Dembinski	Denise A. Koch	Tamara Roy
Tony DiPietro	Sarah Liederbach	Christine M. Rupert
Adam Donegan	Mildred Lindsey	Anne Sarley
Ken Ellen	Alison Marincek	Ashley Sliffe
Ron Erjavec	Richard Maxfield	Jennifer Tyminski
Joshua D. Evcic	Bill Miller	Danielle Wilford
Courtney Fugate	Brett Miller	Roger Wilson

each its true and lawful Attorneys-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, seal, acknowledge and deliver bids, bid bonds, contracts, performance bonds, and such other documents as may be necessary or required in connection with the bid, sale or delivery of mineral rock salt, solar salt, salt chemical mixtures, evaporated salt, and/or road deicing salt, to any state, county, city, municipality, or corporate body with which the Company may do business and to bind the Corporation thereby as fully and to the same extent as if such documents were signed by an officer of Salt, sealed with the Corporate Seal of the Corporation and duly attested by its Assistant Corporate Secretary, hereby ratifying and confirming all the said Attorney(s)-in-Fact may do in the premises.

IN WITNESS WHEREOF, Cargill, Incorporated has caused these presents to be signed by its President, Cargill Deicing Technology, and its Assistant Corporate Secretary, and its Corporate Seal to be hereunto affixed this 6th day of March, 2015.

Cargill, Incorporated

By:   
Richard Maxfield, President, Cargill Deicing Technology

Attest:   
Jay Kroese, Assistant Corporate Secretary

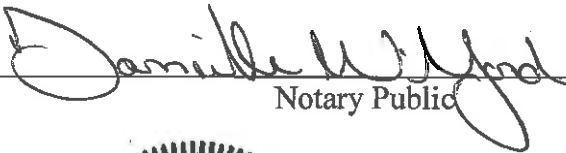
STATE OF OHIO

) ss

COUNTY OF LORAIN

On April 17, 2015 before me, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared Mildred Lindsey known to me to Attorney-in-Fact of CARGILL, INCORPORATED, the Corporation described in and that executed the within and fore-going instrument, and known to me to be the person who executed the said instrument in behalf of the said corporation; and he duly acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year stated in the certificate above.

  
Notary Public



DANIELLE WILFORD  
NOTARY PUBLIC - OHIO  
MY COMMISSION EXPIRES 4-20-2016



AccuBrine® automated brine maker

Manufacturer Warranty Terms

## One-Year Limited Brine Maker Warranty

Cargill Deicing Technology (CDT) warrants to customers who purchase, for use in the United States, new AccuBrine® automated brine makers from CDT's authorized distributors or from CDT ("original purchasers") that the AccuBrine® automated brine maker ("Brine Maker") will be free from defects in material and workmanship for a period of one (1) year beginning after the completion date of installation and customer training by a CDT authorized distributor or CDT personnel, and that CDT will repair any defect in material or workmanship, and repair or replace any defective part, subject to the conditions, limitations, and exclusions set forth herein. CDT will cover all parts and labor for the first year of qualified repairs and replacements for original purchasers.

### Conditions, Limitations, Exclusions

This warranty is subject to the additional following conditions, limitations, and exclusions:

**To obtain warranty service, the following conditions must be met:**

- The original purchaser must complete the warranty registration form included with the shipped Brine Maker after installation and training by an authorized distributor or CDT personnel.
- The original purchaser must notify CDT or an authorized distributor of the need for warranty service within five (5) business days of discovering any defect in material or workmanship and/or any defective part.
- Warranty service must be performed by CDT or an authorized CDT service representative.

**This warranty is subject to the following limitations:**

- This warranty applies only if the Brine Maker is put to ordinary, reasonable, brine making uses.
- CDT may from time to time change the design of its products. Nothing contained in the warranty shall be construed as obligating CDT to incorporate such designs into previously manufactured products, nor shall such changes be construed as an admission that previous designs were defective.
- This warranty applies only if the Brine Maker was originally installed by a CDT authorized distributor or CDT personnel and such authorized distributor or personnel provided customer training.
- CDT will send warranty parts standard ground shipping. If customer requires expedited shipping services, they will be responsible for all charges relating to those services.

**The following items are excluded from this warranty:**

- Parts that are not from the original manufacturer are not covered by this warranty. Any defect resulting from an individual or entity's misuse, alteration, improper adjustment, neglect, or accident – including but not limited to any damage caused to any components by vehicles or other mobile equipment striking any component of the Brine Maker – is not covered by this warranty. If the Brine Maker must be stored prior to installation and customer training by a CDT authorized distributor or CDT personnel, this warranty does not cover any damage to the Brine Maker or its components resulting from the purchaser's neglect or failure to use due care in storing or handling the Brine Maker – this includes, but is not limited to, storing the Brine Maker control panel indoors in a clean, dry environment warmer than 32°F (0°C) and cooler than 90°F (32°C). Any failure to comply with the requirements set forth herein will void the warranty.



AccuBrine® automated brine maker

Manufacturer Warranty Terms

## Disclaimer of Further Warranty

EXCEPT AS OTHERWISE PROVIDED IN THIS DOCUMENT, CDT MAKES NO WARRANTIES OF MERCHANTABILITY, QUALITY, FITNESS FOR A PARTICULAR PURPOSE, CAPACITY, DESCRIPTION OR OTHERWISE – WHETHER EXPRESS, IMPLIED, STATUTOR, OR ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR USAGE OF TRADE. THERE ARE NO ORAL AGREEMENTS OR WARRANTIES COLLATERAL TO OR AFFECTING THE SUPPLY AGREEMENT.

This One (1) Year Limited Brine Maker Warranty is specifically intended for the original purchases of AccuBrine® automated Brine Makers. CDT expressly disclaims any warranty of any type to any subsequent purchasers of the automated Brine Makers.

If applicable state law provides that an implied warranty of merchantability, an implied warranty of fitness for a particular purpose, or any other implied warranty applies to CDT, then any such implied warranty is limited to the duration of this warranty.

## Limitation of Remedy and Damages

CDT's liability under this warranty, and under any implied warranty required by law, is limited to repair of any defect in workmanship, and repair or replacement of any defective part, shall in no event exceed the purchase price of the product. CDT shall in no event be liable for incidental, special, or consequential damages (including lost profits) whether the claim is based on contract, tort, strict liability or any other theory.

***Intent***

It is the intent of this document to provide specifications for a downward flow automatic brine production system(s) where the salt acts as a filter bed as the water moves down through to sump area and filter screen. The automatic brine production system(s) shall be capable of producing 5,000 gallons of brine per hour, (based on available water supply of 6,000 gallon /hr and storage tank configuration, static discharge of 45ft. / head pressure and salt quality), is capable of producing a blended product by injecting up to two additives each with a ratio between 0 and 100%. The system is capable of remotely filling trucks with brine, blend or additive liquids, and recording truck fill data via a numerical password entry system. The system is capable of flushing all sediment collected in the bottom of the salt tank without removing salt. Complete automation of producing brine without the intervention of an operator after initial system start, and automatically monitor and control brine concentration during production.

<b>1. Salt Hopper</b>	<b><i>Unit Complies with Requirements of Section 1. Salt Hopper</i></b>	
	<b>Yes</b>	<b>No</b>
1.1 The salt hopper shall have a minimum capacity of 5 cubic yards.		
1.2 The salt hopper shall hold approximately .75 cubic yards of sediment without interfering with brine outlet.		
1.3 Minimum inside dumping width shall be no less than 120" inches.		
1.4 The hopper shall be constructed of 16,000 lb tensile strength fiberglass and isophthalic resin.		
1.5 All inside surfaces shall be coated with a ceramic resin .050" thick.		
1.6 Vessel shall have structural integral ribs to limit flex to within 1" from full to empty.		
1.7 Overall thickness of fiberglass and resin in the salt tank shall be .35" thick, structural areas such as ribs, corners and floor shall have additional layers of woven fiberglass matt for an overall thickness of .50"		

<p>1.8 Sediment collection area shall have a 15 degree slope towards a 12"X 12" sump to promote debris clean out.</p>		
<p>1.9 For ease and expediency of cleaning, the system shall be capable of being cleaned via a flush mechanism not to exceed (15) minutes and to be accomplished without disassembly of any components of the unit. Units requiring any disassembly of components for clean out shall be deemed unacceptable.</p>		
<p>1.10 For ease and expediency of cleaning accumulated sediment, the system shall be capable of being cleaned with the salt hopper full of salt by a process of opening sump outlet cap and water flush valves. Any salt tanks that require dumping of the hopper or trap doors for clean out shall be deemed unacceptable.</p>		
<p>1.11 There shall be a fresh water flushing system to force sediment to sump and out of sump.</p>		
<p>1.12 There shall be a 4" stainless steel bulkhead fitting and 4" ball valve for clean out.</p>		
<p>1.13 There shall be no air gaps in the vessel areas between sloped floor and mounting feet.</p>		
<p>1.14 Areas with a void shall be filled with high-density foam rated for compression strength of 3 PSI with fiberglass coating on the exterior.</p>		
<p>1.15 All Valves, bulkhead fittings, etc. 1" and larger shall be manifold type fittings.</p>		
<p>1.16 There shall be a pressure transducer connected to the PLC to activate brine pump on and off and water flow into salt tank. These levels shall be adjustable from the HMI Interface and be adjustable to within 1 Gallon increments.</p>		
<p>1.17 Transducer shall have an air capillary to the inside of salt hopper.</p>		
<p>1.18 Vessel shall have 2" male cam-lock type fittings and on/off ball valves for hose connections (fresh water, brine return, brine outlet to pump).</p>		

1.19 There shall be reinforced forklift pockets for moving the salt tank.		
1.20 All metallic items shall be 304 stainless steel.		
1.21 Salt tank shall have a stainless steel debris screen located above the sump and sediment collection area.		
1.22 The screen shall have 3/16" diameter perforations.		
1.23 To allow for maximum flow, the debris screen shall have 60 square feet of surface area.		
1.24 Debris screen shall be capable of supporting 10,000 lb of salt evenly distributed across the total area.		
1.25 Screen frame shall have six permanently attached 3/8" diameter stainless steel eyebolts connected to a poly sling for ease of removal and shall be removed in one piece.		
<b>2. Control System</b>	<b>Unit Complies with Requirements of Section 2. Control System</b>	
	<b>Yes</b>	<b>No</b>
2.1 The control system shall be a continuous brine production system to be located inside a climate controlled building.		
2.2 Main panel shall be constructed of 304 brushed stainless steel with valve labels and valve functions etched into the panel.		
2.3 The Brine concentration sensor shall monitor the brine for temperature and automatically compensate brine concentration accordingly.		
2.4 Brine pumped from the salt tank shall be monitored for salt concentration.		



**AccuBrine® automated brine maker  
RTF Model Technical Specification**

<p>2.5 Brine concentration sensor shall be a TOROIDAL type conductivity sensor.</p>		
<p>2.6 All brine exiting the salt tank shall pass over the brine concentration sensor that monitors sodium chloride brine concentration by weight.</p>		
<p>2.7 System shall include a 256-color LCD touch screen display (7" diagonal 16:9 wide screen). Information on the display screen shall include, but not be limited to:</p>		
<p>2.7.1 Display gallons of fresh water used to make brine.</p>		
<p>2.7.2 HMI screen will have a central screen for process access.</p>		
<p>2.7.3 HMI will show graphic illustration of liquid flow.</p>		
<p>2.8 Calibration shall be performed from the HMI interface located on the face of the machine. Programming parameters shall be password protected.</p>		
<p>2.9 The programmable logic controller (PLC) shall have a non-volatile memory with SD Flashcard back up of</p>		
<p>2.10 As the brine concentration is pumped from the salt tank, the brine shall be monitored for the desired concentration. Systems requiring an operator to manually test brine concentration will be deemed unacceptable.</p>		
<p>2.11 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.</p>		



<p>2.13 Once brine is at the desired the brine is to be diverted to storage tanks.</p>		
<p>2.14 In the event that the concentration is below the minimum desired concentration, the system shall automatically divert brine to the salt tank for subsequent passes through the salt bed to achieve the desired concentration.</p>		
<p>2.15 The control system shall be configured to accept a signal from a pressure transducer located in a storage tank to automatically stop brine production when tank is full, or when production batch is complete. This circuit shall be capable of displaying storage tank volume.</p>		
<p>2.16 Control system shall monitor total gallons of water used, salt used, and brine produced daily and seasonally for record keeping.</p>		
<p>2.17 The control system will allow the customer to set a customized recirculation schedule based on wall clock timing. The pump "on" and "off" times shall be programmable to desired parameters via the HMI.</p>		
<p>2.18 Electrical control panel shall be UL listed.</p>		
<p>2.19 The system shall be completely self-diagnostic to include the pump, electrical valves and input signals from other electrical components.</p>		
<p>2.20 All electric valves and sensors shall communicate with the controller to confirm the current state.</p>		
<p>2.21 In the event of a component failure, the system shall automatically shut down and inform the operator of the specific failure</p>		

2.22 All wetted parts on control panel except for pump shall manifold type glass filled polypropylene rated for 150 psi.		
2.23 Electric components mounted onto control panel shall have UL rated conduit protecting connections and wiring outside of the enclosure.		
2.24 Individual components shall have circuit breakers. Circuit Breakers shall have diagnostic tieback to the PLC to alert operator of faulted conditions.		

3. Mechanical Components	<i>Unit Complies with Requirements of Section 3. Mechanical Components</i>	
	Yes	No
3.1 Pump shall be constructed of cast 304 stainless steel with a stainless steel shaft and impeller.		
3.2 Electric pump motor shall be thermally protected 3 HP 220 Volt single phase.		
3.3 Pump seals shall be constructed of silicon carbide.		
3.4 Pump shall be rated for 100 gpm @ 45 ft of head		
3.5 All fittings and valves shall be manifold type glass filled polypropylene.		
3.6 Wetted Steel components shall be kept to a minimum; all steel components shall be constructed of 304-grade stainless steel.		
3.7 All fasteners shall be constructed of stainless steel.		



**AccuBrine® automated brine maker  
RTF Model Technical Specification**

<b>4. Warranty</b>	<b>Unit Complies with Requirements of Section 4. Warranty</b>	
	<b>Yes</b>	<b>No</b>
4.1 A full parts and labor warranty shall be provided for the first year starting after installation and training are complete.		
<b>5. Site Preparation</b>	<b>Unit Complies with Requirements of Section 5. Site Preparation</b>	
	<b>Yes</b>	<b>No</b>
5.1 The customer will provide electric and water service to the machine per the Brine 008 Checklist specifications.		
<b>6. Features</b>	<b>Unit Complies with Requirements of Section 6. Features</b>	
	<b>Yes</b>	<b>No</b>
6. Features		
6.1 Roll Tarp Cover		
6.1.1 A roll tarp with arches and roll mechanism shall be installed onto brine maker to keep heat in and debris out.		
6.1.2 Tarp shall be easily operated by one person to open top of brine maker for normal operation.		
6.2 Fully Automated, Remote Mounted, Truck Fill Package.		

<p>6.2.1 Package shall be four electric ball valves, mounted onto an expandable modular panel.</p>		
<p>6.2.2 The system shall include a remote mounted NEMA 4X control panel with HMI Interface</p>		
<p>6.2.3 In the event that the system is producing brine at the same time as filling trucks, the system shall automatically stop the brine making process and divert to the truck fill process.</p>		
<p>6.3 Truck Fill Data Logging.</p>		
<p>6.3.1 The system shall include an HMI Interface, mounted in a NEMA 4X enclosure.</p>		
<p>6.3.2 Data recorded shall include Numeric identification, Date, Time, Quantity of material loaded, and material type.</p>		
<p>6.3.3 System shall be integrated into brine production system with automated truck filling system.</p>		
<p>6.4 Air purge system</p>		
<p>6.4.1 Air purge system shall divert compressed air through the water supply line leading to the salt tank. System shall be configured to automatically purge water from line via an electric valve each time the machine stops production. The purge "ON" time shall be configured via HMI (air supply to be supplied via purchasing agency).</p>		
<p>6.5 Storage tank pressure transducer assembly.</p>		
<p>6.5.1 An analog pressure sensor and interconnect kit to integrate into automation process. The sensor shall be capable of communicating with the automation process to shut off brine production when storage tank is full, and will indicate storage tank volumes.</p>		
<p>6.6 Warning Beacon</p>		
<p>6.6.1 The control system shall be capable of activating a remote mounted strobe lamp. Lamp shall blink quickly when a machine fault has occurred or blink slowly when low salt level is detected.</p>		
<p>6.6.2 Lamp, control relay and automation logic shall be supplied.</p>		

<b>6.7 Control panel 230 volt electrical service cable.</b>			
6.7.1	The system shall come pre-wired for electric service supply to include 10' of SOOW type cord with pre installed 1430P type plug. This will mate to customer supplied L1430R receptacle.		
<b>6.8 Hose Kit</b>			
6.8.1	The system shall come complete with 200' of 2" EPDM rubber suction discharge hose, 10' of 2" pressure hose, Stainless Steel T-Bolt type hose clamps and (3) Type C cam lock couplings.		
<b>6.9 LAN Access</b>			
6.9.1	The system shall come complete with the ability to access the HMI (operator interface) and PLC via Internet, all set up and operation data shall be capable of being viewed remotely via the display. Integration with customer's network will be the responsibility of the end user.		
6.10	4 drain kit		
6.10.1	A 4" valve, hose barbs and cam lever couplings shall be supplied to drain the salt tank of liquid and sediment.		
<b>7. Options</b>		<b>Options Available and Unit Complies with Requirements of Section 7. Options</b>	
		<b>Yes</b>	<b>No</b>
7.1	2" Storage tank fitting kit		
7.1.1	Manifold type fitting kit with tank flange, valve, tee, hose clamps, and hose barbs (note: One kit required for each hose installed on each storage tank)		
7.2	300 GPM Pump Kit		
7.2.1	The system shall come complete with an additional transfer pump rated for 300 GPM @ 65 ft. of Head pressure. Constructed of a cast steel and stainless steel impeller. Inlet and outlet size is 3 inches in diameter.		
7.2.2	Pump will come with a mounting base that is designed for		



<p>the specific motor frame of the pump. Hardware will be included to anchor the base to a concrete floor and to attach the motor/pump to the mounting base.</p>		
<p>7.2.3 Controls to include circuit protection, service disconnect, automation controls, Service disconnect, Circuit breaker, Aux relay, starter contactor with thermal overload pre-wired and mounted into a NEMA 4X enclosure.</p>		
<p>7.2.4 Pump shall be a 3 phase 230 V/AC. Includes controls for circuit protection, service disconnect, automation controls, auxiliary relay, starter contactor with thermal overload pre-wired and mounted into a NEMA 4X enclosure.</p>		
<p>7.3 3" Storage tank fitting kit</p>		
<p>7.3.1 3" Manifold type fitting kit with tank flange, valve, tee, hose clamps, and hose barbs (note: One kit required for each hose installed on each storage tank)</p>		

**Intent**

It is the intent of this document to provide specifications for a downward flow automatic brine production system(s) where the salt acts as a filter bed as the water moves down through to sump area and filter screen. The automatic brine production system(s) shall be capable of producing 5,000 gallons of brine per hour, (based on available water supply of 6,000 gallon /hr and storage tank configuration, static discharge of 45ft. / head pressure, and salt quality), is capable of producing a blended product by injecting up to two additives each with a ratio between 0 and 100%. The system is capable of remotely filling trucks with brine, blend or additive liquids, and recording truck fill data via a numerical password entry system. The system is capable of flushing all sediment collected in the bottom of the salt tank without removing salt. Complete automation of producing brine without the intervention of an operator after initial system start, and automatically monitor and control brine concentration during production.

1. Salt Hopper	Unit Complies with Requirements of Section 1. Salt Hopper	
	Yes	No
1.1 The salt hopper shall have a minimum capacity of 5 cubic yards.		
1.2 The salt hopper shall hold approximately .75 cubic yards of sediment without interfering with brine outlet.		
1.3 Minimum inside dumping width shall be no less than 120" inches.		
1.4 The hopper shall be constructed of 16,000 lb tensile strength fiberglass and isophthalic resin.		
1.5 All inside surfaces shall be coated with a ceramic resin .050" thick.		
1.6 Vessel shall have structural integral ribs to limit flex to within 1" from full to empty.		
1.7 Overall thickness of fiberglass and resin in the salt tank shall be .35" thick, structural areas such as ribs, corners and floor shall have additional layers of woven fiberglass matt for an overall thickness of .50"		

<p>1.8 Sediment collection area shall have a 15 degree slope towards a 12"X 12" sump to promote debris clean out.</p>		
<p>1.9 For ease and expediency of cleaning, the system shall be capable of being cleaned via a flush mechanism not to exceed (15) minutes and to be accomplished without disassembly of any components of the unit. Units requiring any disassembly of components for clean out shall be deemed unacceptable.</p>		
<p>1.10 For ease and expediency of cleaning accumulated sediment, the system shall be capable of being cleaned with the salt hopper full of salt by a process of opening sump outlet cap and water flush valves. Any salt tanks that require dumping of the hopper or trap doors for clean out shall be deemed unacceptable.</p>		
<p>1.11 There shall be a fresh water flushing system to force sediment to sump and out of sump.</p>		
<p>1.12 There shall be a 4" stainless steel bulkhead fitting and 4" ball valve for clean out.</p>		
<p>1.13 There shall be no air gaps in the vessel areas between sloped floor and mounting feet.</p>		
<p>1.14 Areas with a void shall be filled with high-density foam rated for compression strength of 3 PSI with fiberglass coating on the exterior.</p>		
<p>1.15 All Valves, bulkhead fittings, etc. 1" and larger shall be manifold type fittings.</p>		
<p>1.16 There shall be a pressure transducer connected to the PLC to activate brine pump on and off and water flow into salt tank. These levels shall be adjustable from the HMI Interface and be adjustable to within 1 Gallon increments.</p>		
<p>1.17 Transducer shall have an air capillary to the inside of salt hopper.</p>		
<p>1.18 Vessel shall have 2" male cam-lock type fittings and on/off ball valves for hose connections (fresh water, brine return, brine outlet to pump).</p>		





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1.19 There shall be reinforced forklift pockets for moving the salt tank.		
1.20 All metallic items shall be 304 stainless steel.		
1.21 Salt tank shall have a stainless steel debris screen located above the sump and sediment collection area.		
1.22 The screen shall have 3/16" diameter perforations.		
1.23 To allow for maximum flow, the debris screen shall have 60 square feet of surface area.		
1.24 Debris screen shall be capable of supporting 10,000 lb of salt evenly distributed across the total area.		
1.25 Screen frame shall have six permanently attached 3/8" diameter stainless steel eyebolts connected to a poly sling for ease of removal and shall be removed in one piece.		

<b>2. Control System</b>	<b>Unit Complies with Requirements of Section 2. Control System</b>	
	<b>Yes</b>	<b>No</b>
2.1 The control system shall be a continuous brine production system to be located inside a climate controlled building.		
2.2 Main panel shall be constructed of 304 brushed stainless steel with valve labels and valve functions etched into the panel.		
2.3 The Brine concentration sensor shall monitor the brine for temperature and automatically compensate brine concentration accordingly.		
2.4 Brine pumped from the salt tank shall be monitored for salt concentration.		
2.5 Brine concentration sensor shall be a TOROIDAL type conductivity sensor.		
2.6 All brine exiting the salt tank shall pass over the brine concentration sensor that monitors sodium chloride brine concentration by weight.		
2.7 System shall include a 256-color LCD touch screen display (7" diagonal 16:9 wide screen). Information on the display screen shall include, but not be limited to:		
2.7.1 Display gallons of fresh water used to make brine.		
2.7.2 HMI screen will have a central screen for process access.		

<p><b>2.7.3 HMI will show graphic illustration of liquid flow.</b></p>		
<p><b>2.8 Calibration shall be performed from the HMI interface located on the face of the machine. Programming parameters shall be password protected.</b></p>		
<p><b>2.9 The programmable logic controller (PLC) shall have a non-volatile memory with SD Flashcard back up of programming.</b></p>		
<p><b>2.10 As the brine concentration is pumped from the salt tank, the brine shall be monitored for the desired concentration. Systems requiring an operator to manually test brine concentration will be deemed unacceptable.</b></p>		
<p><b>2.11 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.</b></p>		
<p><b>2.13 Once brine is at the desired the brine is to be diverted to storage tanks.</b></p>		
<p><b>2.14 In the event that the concentration is below the minimum desired concentration, the system shall automatically divert brine to the salt tank for subsequent passes through the salt bed to achieve the desired concentration.</b></p>		
<p><b>2.15 The control system shall be configured to accept a signal from a pressure transducer located in a storage tank to automatically stop brine production when tank is full, or when production batch is complete. This circuit shall be capable of displaying storage tank volume.</b></p>		
<p><b>2.16 Control system shall monitor total gallons of water used, salt used, and brine produced daily and seasonally for record keeping.</b></p>		

<p>2.17 The control system will allow the customer to set a customized recirculation schedule based on wall clock timing. The pump “on” and “off” times shall be programmable to desired parameters via the HMI.</p>		
<p>2.18 The system shall be completely self-diagnostic to include the pump, electrical valves and input signals from other electrical components.</p>		
<p>2.19 All electric valves and sensors shall communicate with the controller to confirm the current state.</p>		
<p>2.20 In the event of a component failure, the system shall automatically shut down and inform the operator of the specific failure</p>		
<p>2.21 All wetted parts on control panel except for pump shall manifold type glass filled polypropylene rated for 150 psi.</p>		
<p>2.22 Electric components mounted onto control panel shall have UL rated conduit protecting connections and wiring outside of the enclosure.</p>		
<p>2.23 Individual components shall have circuit breakers. Circuit Breakers shall have diagnostic tieback to the PLC to alert operator of faulted conditions.</p>		



<b>3. Mechanical Components</b>	<b>Unit Complies with Requirements of Section 3. Mechanical Components</b>	
	<b>Yes</b>	<b>No</b>
3.1 Pump shall be constructed of cast 304 stainless steel with a stainless steel shaft and impeller.		
3.2 Electric pump motor shall be thermally protected 3 HP 220 Volt single phase.		
3.3 Pump seals shall be constructed of silicon carbide.		
3.4 Pump shall be rated for 100 gpm @ 45 ft of head		
3.5 All fittings and valves shall be manifold type glass filled polypropylene.		
3.6 Wetted Steel components shall be kept to a minimum; all steel components shall be constructed of 304-grade stainless steel.		
3.7 All fasteners shall be constructed of stainless steel.		
<b>4. Warranty</b>	<b>Unit Complies with Requirements of Section 4. Warranty</b>	
	<b>Yes</b>	<b>No</b>
4.1 A full parts and labor warranty shall be provided for the first year starting after installation and training are complete.		
<b>5. Site Preparation</b>	<b>Unit Complies with Requirements of Section 5. Site Preparation</b>	

	Yes	No
5.1 The customer will provide electric and water service to the machine per the Brine 008 Installation Checklist specifications .		
<b>6. Features</b>	<b>Unit Complies with Requirements of Section 6. Features</b>	
	<b>Yes</b>	<b>No</b>
6. Features		
6.1 Roll Tarp Cover		
6.1.1 A roll tarp with arches and roll mechanism shall be installed onto brine maker to keep heat in and debris out.		
6.1.2 Tarp shall be easily operated by one person to open top of brine maker for normal operation.		
6.2 Fully Automated, Remote Mounted, Truck Fill Package.		
6.2.1 Package shall be four electric ball valves, mounted onto an expandable modular panel.		
6.2.2 The system shall include a remote mounted NEMA 4X control panel with HMI Interface		
6.2.3 In the event that the system is producing brine at the same time as filling trucks, the system shall automatically stop the brine making process and divert to the truck fill process.		
6.3 Truck Fill Data Logging.		
6.3.1 The system shall include an HMI Interface, mounted in a NEMA 4X enclosure.		
6.3.2 Data recorded shall include Numeric identification, Date, Time, Quantity of material loaded, and material type.		
6.3.3 System shall be integrated into brine production system with automated truck filling system.		

<p><b>6.4 Air purge system</b></p>		
<p><b>6.4.1</b> Air purge system shall divert compressed air through the water supply line leading to the salt tank. System shall be configured to automatically purge water from line via an electric valve each time the machine stops production. The purge "ON" time shall be configured via HMI (air supply to be supplied via purchasing agency).</p>		
<p><b>6.5 Storage tank pressure transducer assembly.</b></p>		
<p><b>6.5.1</b> An analog pressure sensor and interconnect kit to integrate into automation process. The sensor shall be capable of communicating with the automation process to shut off brine production when storage tank is full, and will indicate storage tank volumes.</p>		
<p><b>6.6 Single Additive Injection System</b></p>		
<p><b>6.6.1</b> The control system shall be capable of automatically injecting a predetermined ratios of brine and one additive into the finished product tank (0 to 100%).</p>		
<p><b>6.6.2</b> There shall be one additive storage tank volume sensors to determine if enough volume of each additive is available to produce desired volume ratio batch.</p>		
<p><b>6.6.3</b> 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.</p>		
<p><b>6.6.4</b> Tank volume Sensors shall be solid state.</p>		
<p><b>6.6.5</b> There shall be actuated valves to divert brine or additive into the processing pump</p>		
<p><b>6.6.6</b> Processing shall be graphically displayed onto HMI (operator display).</p>		
<p><b>6.6.7</b> Process shall be fully automated with self-diagnostics.</p>		
<p><b>6.7 Modular Plumbing Module</b></p>		
<p><b>6.7.1</b> The sub-panel shall come equipped with one additional modular plumbing module for recirculation of one additive storage tanks.</p>		
<p><b>6.7.2</b> Modules shall include electric ball valve, and electric circuitry.</p>		
<p><b>6.7.3</b> Modules shall be mounted onto the stainless steel</p>		

	modular panel.		
6.7.4	Electric valves shall be controlled via the automation process where the operator may select a desired wall clock time for desired recirculation intervals.		
6.8	Micro Ingredient Injection		
6.8.1	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.		
6.9	Warning Beacon		
6.9.1	The control system shall be capable of activating a remote mounted strobe lamp. Lamp shall blink quickly when a machine fault has occurred or blink slowly when low salt level is detected.		
6.9.2	Lamp, control relay and automation logic shall be supplied.		
6.10	Control panel 230 volt electrical service cable.		
6.10.1	The system shall come pre-wired for electric service supply to include 10' of SOOW type cord with pre-installed 1430P type plug. This will mate to customer supplied L1430R receptacle.		
6.11	Hose Kit		
6.11.1	The system shall come complete with 300' of 2" EPDM rubber suction discharge hose, 10' of 2" pressure hose, Stainless Steel T-Bolt type hose clamps and (3) Type C cam lock couplings.		
6.12	LAN Access		
6.12.1	The system shall come complete with the ability to access the HMI (operator interface) and PLC via Internet, all set up and operation data shall be capable of being viewed remotely via the display. Integration with customer's network will be the responsibility of the end user.		
6.13	4 drain kit		
6.13.1	A 4" valve, hose barbs and cam lever couplings shall be supplied to drain the salt tank of liquid and sediment.		



<b>7. Options</b>	<b>Options Available and Unit Complies with Requirements of Section 7. Options</b>	
	<b>Yes</b>	<b>No</b>
<b>7.1 2" Storage tank fitting kit</b>		
<b>7.1.1 Manifold type fitting kit with tank flange, valve, tee, hose clamps, and hose barbs (note: One kit required for each hose installed on each storage tank)</b>		
<b>7.2 300 GPM Pump Kit</b>		
<b>7.2.1 The system shall come complete with an additional transfer pump rated for 300 GPM @ 65 ft. of Head pressure. Constructed of a cast steel and stainless steel impeller. Inlet and outlet size is 3 inches in diameter.</b>		
<b>7.2.2 Pump will come with a mounting base that is designed for the specific motor frame of the pump. Hardware will be included to anchor the base to a concrete floor and to attach the motor/pump to the mounting base.</b>		
<b>7.2.3 Controls to include circuit protection, service disconnect, automation controls, Service disconnect, Circuit breaker, Aux relay, starter contactor with thermal overload pre-wired and mounted into a NEMA 4X enclosure.</b>		
<b>7.2.4 Pump shall be a 3 phase 230 V/AC. Includes controls for circuit protection, service disconnect, automation controls, auxiliary relay, starter contactor with thermal overload pre-wired and mounted into a NEMA 4X enclosure.</b>		
<b>7.3 3" Storage tank fitting kit</b>		
<b>7.3.1 3" Manifold type fitting kit with tank flange, valve, tee,</b>		



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hose clamps, and hose barbs (note: One kit required for each hose installed on each storage tank)		
7.3.2 3" Manifold type fitting kit with tank flange, valve, tee, hose clamps, and hose barbs (note: One kit required for each hose installed on each storage tank)		

***Intent***

It is the intent of this document to provide specifications for a downward flow automatic brine production system(s) where the salt acts as a filter bed as the water moves down through to sump area and filter screen. The automatic brine production system(s) shall be capable of producing 5,000 gallons of brine per hour, (based on available water supply of 6,000 gallon /hr and storage tank configuration, static discharge of 45ft. / head pressure and salt quality), is capable of producing a blended product by injecting up to two additives each with a ratio between 0 and 100%. The system is capable of remotely filling trucks with brine, blend or additive liquids, and recording truck fill data via a numerical password entry system. The system is capable of flushing all sediment collected in the bottom of the salt tank without removing salt. Complete automation of producing brine without the intervention of an operator after initial system start, and automatically monitor and control brine concentration during production.

<b>1. Salt Hopper</b>	<b>Unit Complies with Requirements of Section 1. Salt Hopper</b>	
	<b>Yes</b>	<b>No</b>
1.1 The salt hopper shall have a minimum capacity of 5 cubic yards.		
1.2 The salt hopper shall hold approximately .75 cubic yards of sediment without interfering with brine outlet.		
1.3 Minimum inside dumping width shall be no less than 120" inches.		
1.4 The hopper shall be constructed of 16,000 lb tensile strength fiberglass and isophthalic resin.		
1.5 All inside surfaces shall be coated with a ceramic resin .050" thick.		
1.6 Vessel shall have structural integral ribs to limit flex to within 1" from full to empty.		
1.7 Overall thickness of fiberglass and resin in the salt tank shall be .35" thick, structural areas such as ribs, corners and floor shall have additional layers of woven fiberglass matt for an overall thickness of .50"		

<p>1.8 Sediment collection area shall have a 15 degree slope towards a 12"X 12" sump to promote debris clean out.</p>		
<p>1.9 For ease and expediency of cleaning, the system shall be capable of being cleaned via a flush mechanism not to exceed (15) minutes and to be accomplished without disassembly of any components of the unit. Units requiring any disassembly of components for clean out shall be deemed unacceptable.</p>		
<p>1.10 For ease and expediency of cleaning accumulated sediment, the system shall be capable of being cleaned with the salt hopper full of salt by a process of opening sump outlet cap and water flush valves. Any salt tanks that require dumping of the hopper or trap doors for clean out shall be deemed unacceptable.</p>		
<p>1.11 There shall be a fresh water flushing system to force sediment to sump and out of sump.</p>		
<p>1.12 There shall be a 4" stainless steel bulkhead fitting and 4" ball valve for clean out.</p>		
<p>1.13 There shall be no air gaps in the vessel areas between sloped floor and mounting feet.</p>		
<p>1.14 Areas with a void shall be filled with high-density foam rated for compression strength of 3 PSI with fiberglass coating on the exterior.</p>		
<p>1.15 All Valves, bulkhead fittings, etc. 1" and larger shall be manifold type fittings.</p>		
<p>1.16 There shall be a pressure transducer connected to the PLC to activate brine pump on and off and water flow into salt tank. These levels shall be adjustable from the HMI Interface and be adjustable to within 1 Gallon increments.</p>		
<p>1.17 Transducer shall have an air capillary to the inside of salt hopper.</p>		
<p>1.18 Vessel shall have 2" male cam-lock type fittings and on/off ball valves for hose connections (fresh water, brine return, brine outlet to pump).</p>		



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1.19 There shall be reinforced forklift pockets for moving the salt tank.		
1.20 All metallic items shall be 304 stainless steel.		
1.21 Salt tank shall have a stainless steel debris screen located above the sump and sediment collection area.		
1.22 The screen shall have 3/16" diameter perforations.		
1.23 To allow for maximum flow, the debris screen shall have 60 square feet of surface area.		
1.24 Debris screen shall be capable of supporting 10,000 lb of salt evenly distributed across the total area.		
1.25 Screen frame shall have six permanently attached 3/8" diameter stainless steel eyebolts connected to a poly sling for ease of removal and shall be removed in one piece.		



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<b>2. Control System</b>	<i>Unit Complies with Requirements of Section 2. Control System</i>	
	<i>Yes</i>	<i>No</i>
2.1 The control system shall be a continuous brine production system to be located inside a climate controlled building.		
2.2 Main panel shall be constructed of 304 brushed stainless steel with valve labels and valve functions etched into the panel.		
2.3 The Brine concentration sensor shall monitor the brine for temperature and automatically compensate brine concentration accordingly.		
2.4 Brine pumped from the salt tank shall be monitored for salt concentration.		
2.5 Brine concentration sensor shall be a TOROIDAL type conductivity sensor.		
2.6 All brine exiting the salt tank shall pass over the brine concentration sensor that monitors sodium chloride brine concentration by weight.		
2.7 System shall include a 256-color LCD touch screen display (7" diagonal 16:9 wide screen).		
2.7.1 Display gallons of fresh water used to make brine.		
2.7.2 HMI screen will have a central screen for process access.		

<p><b>2.7.3 HMI will show graphic illustration of liquid flow.</b></p>		
<p><b>2.8 Calibration shall be performed from the HMI interface located on the face of the machine. Programming parameters shall be password protected.</b></p>		
<p><b>2.9 The programmable logic controller (PLC) shall have a non-volatile memory with SD Flashcard back up of programming.</b></p>		
<p><b>2.10 As the brine concentration is pumped from the salt tank, the brine shall be monitored for the desired concentration. Systems requiring an operator to manually test brine concentration will be deemed unacceptable.</b></p>		
<p><b>2.11 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.</b></p>		
<p><b>2.13 Once brine is at the desired the brine is to be diverted to storage tanks.</b></p>		
<p><b>2.14 In the event that the concentration is below the minimum desired concentration, the system shall automatically divert brine to the salt tank for subsequent passes through the salt bed to achieve the desired concentration.</b></p>		
<p><b>2.15 The control system shall be configured to accept a signal from a pressure transducer located in a storage tank to automatically stop brine production when tank is full, or when production batch is complete. This circuit shall be capable of displaying storage tank volume.</b></p>		



<p>2.16 Control system shall monitor total gallons of water used, salt used, and brine produced daily and seasonally for record keeping.</p>		
<p>2.17 The control system will allow the customer to set a customized recirculation schedule based on wall clock timing. The pump “on” and “off” times shall be programmable to desired parameters via the HMI.</p>		
<p>2.18 Electrical control panel shall be UL listed.</p>		
<p>2.19 The system shall be completely self-diagnostic to include the pump, electrical valves and input signals from other electrical components.</p>		
<p>2.20 All electric valves and sensors shall communicate with the controller to confirm the current state.</p>		
<p>2.21 In the event of a component failure, the system shall automatically shut down and inform the operator of the specific failure</p>		
<p>2.22 All wetted parts on control panel except for pump shall manifold type glass filled polypropylene rated for 150 psi.</p>		
<p>2.23 Electric components mounted onto control panel shall have UL rated conduit protecting connections and wiring outside of the enclosure.</p>		
<p>2.24 Individual components shall have circuit breakers. Circuit Breakers shall have diagnostic tieback to the PLC to alert operator of faulted conditions.</p>		



<b>3. Mechanical Components</b>	<b>Unit Complies with Requirements of Section 3. Mechanical Components</b>	
	<b>Yes</b>	<b>No</b>
3.1 Pump shall be constructed of cast 304 stainless steel with a stainless steel shaft and impeller.		
3.2 Electric pump motor shall be thermally protected 3 HP 220 Volt single phase.		
3.3 Pump seals shall be constructed of silicon carbide.		
3.4 Pump shall be rated for 100 gpm @ 45 ft of head		
3.5 All fittings and valves shall be manifold type glass filled polypropylene.		
3.6 Wetted Steel components shall be kept to a minimum; all steel components shall be constructed of 304-grade stainless steel.		
3.7 All fasteners shall be constructed of stainless steel.		
<b>4. Warranty</b>	<b>Unit Complies with Requirements of Section 4. Warranty</b>	



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	Yes	No
4.1 A full parts and labor warranty shall be provided for the first year starting after installation and training are complete.		
<b>5. Site Preparation</b>	<b>Unit Complies with Requirements of Section 5. Site Preparation</b>	
	Yes	No
5.1 The customer will provide electric and water service to the machine per the Brine 008 Installation Checklist specifications.		
<b>6. Features</b>	<b>Unit Complies with Requirements of Section 6. Features</b>	
	Yes	No
6. Features		
6.1 Roll Tarp Cover		
6.1.1 A roll tarp with arches and roll mechanism shall be installed onto brine maker to keep heat in and debris out.		
6.1.2 Tarp shall be easily operated by one person to open top of brine maker for normal operation.		
6.2 Fully Automated, Remote Mounted, Truck Fill Package.		
6.2.1 Package shall be four electric ball valves, mounted onto an expandable modular panel.		
6.2.2 The system shall include a remote mounted NEMA 4X control panel with HMI Interface		

<p><b>6.2.3</b> In the event that the system is producing brine at the same time as filling trucks, the system shall automatically stop the brine making process and divert to the truck fill process.</p>		
<p><b>6.3 Truck Fill Data Logging.</b></p>		
<p><b>6.3.1</b> The system shall include an HMI Interface, mounted in a NEMA 4X enclosure.</p>		
<p><b>6.3.2</b> Data recorded shall include Numeric identification, Date, Time, Quantity of material loaded, and material type.</p>		
<p><b>6.3.3</b> System shall be integrated into brine production system with automated truck filling system.</p>		
<p><b>6.4 Air purge system</b></p>		
<p><b>6.4.1</b> Air purge system shall divert compressed air through the water supply line leading to the salt tank. System shall be configured to automatically purge water from line via an electric valve each time the machine stops production. The purge "ON" time shall be configured via HMI (air supply to be supplied via purchasing agency).</p>		
<p><b>6.5 Storage tank pressure transducer assembly.</b></p>		
<p><b>6.5.1</b> An analog pressure sensor and interconnect kit to integrate into automation process. The sensor shall be capable of communicating with the automation process to shut off brine production when storage tank is full, and will indicate storage tank volumes.</p>		
<p><b>6.6 Two Additive Injection System</b></p>		
<p><b>6.6.1</b> The control system shall be capable of automatically injecting a predetermined ratios of brine and two additives into the finished product tank (0 to 100%).</p>		
<p><b>6.6.2</b> There shall be two additive storage tank volume sensors to determine if enough volume of each additive is available to produce desired volume ratio batch.</p>		
<p><b>6.6.3</b> 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.</p>		
<p><b>6.6.4</b> Tank volume Sensors shall be solid state.</p>		

6.6.5	There shall be actuated valves to divert brine or additive into the processing pump		
6.6.6	Processing shall be graphically displayed onto HMI (operator display).		
6.6.7	Process shall be fully automated with self-diagnostics.		
<b>6.7 Modular Plumbing Module</b>			
6.7.1	The sub-panel shall come equipped with two additional modular plumbing modules for recirculation of two additive storage tanks.		
6.7.2	Modules shall include electric ball valve, and electric circuitry.		
6.7.3	Modules shall be mounted onto the stainless steel modular panel.		
6.7.4	Electric valves shall be controlled via the automation process where the operator may select a desired wall clock time for desired recirculation intervals.		
<b>6.8 Micro Ingredient Injection</b>			
6.8.1	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.		
<b>6.9 Warning Beacon</b>			
6.9.1	The control system shall be capable of activating a remote mounted strobe lamp. Lamp shall blink quickly when a machine fault has occurred or blink slowly when low salt level is detected.		
6.9.2	Lamp, control relay and automation logic shall be supplied.		
6.10	Control panel 230 volt electrical service cable.		
6.10.1	The system shall come pre-wired for electric service supply to include 10' of SOOW type cord with pre installed 1430P type plug. This will mate to customer supplied L1430R receptacle.		
6.11	Hose Kit		
6.11.1	The system shall come complete with 400' of 2" EPDM rubber suction discharge hose, 10' of 2" pressure hose, Stainless Steel T-Bolt type hose clamps and (3) Type C cam lock couplings.		
6.12	LAN Access		
6.12.1	The system shall come complete with the ability to access the HMI (operator interface) and PLC via Internet, all set up and operation data shall be capable of being viewed remotely via the display. Integration with customer's network will be the responsibility of the end user.		

6.13	4 drain kit		
6.13.1	A 4" valve, hose barbs and cam lever couplings shall be supplied to drain the salt tank of liquid and sediment.		
<b>7. Options</b>		<b>Options Available and Unit Complies with Requirements of Section 7. Options</b>	
		<b>Yes</b>	<b>No</b>
7.1	2" Storage tank fitting kit		
7.1.1	Manifold type fitting kit with tank flange, valve, tee, hose clamps, and hose barbs (note: One kit required for each hose installed on each storage tank)		
7.1.2	The system shall include a 3-way actuated valve to select between domestic water supply and recycled water supply, there shall be a pressure transducer assembly supplied to indicate low recycled water and to automatically switch to domestic supply when level is low.		
7.1.3	Pump shall be 230 V/AC. Includes controls for circuit protection, service disconnect, automation controls, auxiliary relay, starter contactor with thermal overload pre-wired and mounted into a NEMA 4X enclosures.		
7.2	300 GPM Pump Kit		
7.2.1	The system shall come complete with an additional transfer pump rated for 300 GPM @ 65 ft. of Head pressure. Constructed of a cast steel and stainless steel impeller. Inlet and outlet size is 3 inches in diameter.		
7.2.2	Pump will come with a mounting base that is designed for the specific motor frame of the pump. Hardware will be included to anchor the base to a concrete floor and to attach the motor/pump to the mounting base.		
7.2.3	Controls to include circuit protection, service disconnect, automation controls, Service disconnect, Circuit breaker,		



**AccuBrine® automated brine maker**  
**ABS2 Model Technical Specification**

<p>Aux relay, starter contactor with thermal overload pre-wired and mounted into a NEMA 4X enclosure.</p>		
<p>7.2.4 Pump shall be a 3 phase 230 V/AC. Includes controls for circuit protection, service disconnect, automation controls, auxiliary relay, starter contactor with thermal overload pre-wired and mounted into a NEMA 4X enclosure.</p>		
<p>7.3 3" Storage tank fitting kit</p>		
<p>7.3.1 3" Manifold type fitting kit with tank flange, valve, tee, hose clamps, and hose barbs (note: One kit required for each hose installed on each storage tank)</p>		



**AccuBrine® automated brine maker  
Site Preparation/Installation Checklist**

Thank you for the purchase of your AccuBrine® automated brine maker. Carefully read through the following list of requirements and indicate if each requirement is complete and/or available to ensure that the installation of your new equipment is as efficient as possible. Cargill Deicing Technology ("CDT") or your dealer representative will schedule your installation when all requirements are complete. Please call the AccuBrine® Support number at 1-866-900-7258, or your dealer representative with any questions.

**Pre-installation Inspection and Storage**

To prevent warranty nullification the AccuBrine® components must be damage free at the time of installation. It is the responsibility of the customer to:

1. **Inspect the AccuBrine® components for damage. If damage has occurred contact your AccuBrine® representative immediately or call 866-900-7258.**
2. **To prevent damage to the Control Panel, the unit should be stored with the stretch wrap in tact and in clean, above freezing and dry environment. Failure to do so will nullify the warranty.**

**Customer is responsible for making sure the following items are in place prior to the commencement of an AccuBrine® installation:**

<b>Water Supply – Must be located inside the AccuBrine® Building</b>	<b>Ready - Yes or No</b>
<ul style="list-style-type: none"> <li>• <b>2" water supply line terminating within 10 Ft. of Main Control Panel. (Note: A lower GPH supply will work with the machine however, performance will decrease in GPH brine produced). The flow rate of the pump is 107 GPM @ 45 Ft. head pressure.</b></li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>Water pressure must be regulated between 40 - 60 PSI. If not, a pressure regulator must be added.</b></li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>Back flow prevention device are recommended (Note: When selecting a back flow prevention device, take into consideration that salt brine will be at an elevation above the water inlet)</b></li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>Shut off valve at water outlet.</b></li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>2" Female Pipe thread fitting is required for connection of hose between brine maker control panel and water supply.</b></li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>If the customer is installing product fill hose/pipe that elevate over a wall, or the control panel is significantly higher than the salt brine production tank or the storage tanks, check valves in the suction lines may be warranted. The pump will not create suction that will pull the liquid from the storage tanks.</b></li> </ul>	_____



**ACCUBRINE®**  
automated brine maker

**RTF**

- The customer may elect to use PVC instead hose. If the customer elects to do this:
  1. PVC piping installation will be at the expense of the customer and Cargill does not have the ability to install PVC.
  2. BM – 093 adaptors are required at each end of the pipe. This fitting is also supplied by Banjo
  3. When using PVC, the installer should use sweeping turns instead of using 90° "Right Angle" turns. 90° turns diminish the performance of AccuBrine.

**Electrical Service - Must be located inside the AccuBrine® Building**

- **Single phase option** - 230 Volt Single phase with neutral leg and grounding wire / 30 amp service with a **L14-30R receptacle** located within 5 ft. of control panel electrical enclosure.
- **3 phase option** – 30 Amp 3 Phase 208Volt/AC, 60 Hz with neutral and ground wire. Receptacle required L2130RW from Cooper Wiring Devices. Receptacle located within 5 ft. of control panel electrical enclosure.
- **Heater option** is to be installed, an additional 230 Volt Single phase with neutral leg and grounding wire / 50 amp service is required, and located within 5 ft. of the control panel. Heater elements will be wired to two 25 amp circuit breakers in the provided 50 amp service disconnect panel.
- **Recycled Water option** is to be installed, an additional 230 Volt Single phase with neutral leg and grounding wire / 30 amp service is required. This should be located within 5 ft. of the Recycled Water Pump. If the 3 phase motor option was selected, substitute the single phase service with the 3 phase service of 208 Volt Three phase with three leg wires, and neutral and grounding wires / 60 amp service.
- **300 GPM Pump option** is to be installed, an additional 208 Volt Three phase with three leg wires, neutral and grounding wires / 60 amp service is required. This should be located within 5 ft. of the 300 GPM pump control/disconnect enclosure.
- **Conduit Runs** are required to:
  - Within 2' of the yellow salt tank. This is for the pressure transducer on the yellow salt tank.
  - On RTF, ABS, and ABS2 models , a truck filling point must indentified by the customer and conduit (3/4" conduit is typical) for 9 – 16 gauge wire, plus three wire shield cable must be ran for the RFID Truck fill panel. **Please note that 18 gauge wire is preferred for the terminal lugs inside the AccuBrine®. The truck fill station should be located at an area that fits well with the customer traffic pattern.**  
Wire colors – 7 Blue, 1 Green, 1 Blue with white stripe, plus the shielded cable supplied with the machine.





- AccuBrine® requires Pressure Transducers to be installed in the storage tanks to monitor the liquid levels in the tank. Due to specific OSHA regulations, there are certain elevated tasks involved in the installation process. Cargill or its designated representatives will be unable perform without fall protection.
- Conduit runs will have to be made to the tops of all storage tanks. 2-18 S/O cable is required to Pressure Transducers

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**Air Supply Requirements**

- To properly purge the fresh water supply hose a large volume of air is needed. A minimum of 15 gallon air compressor is required. With a 1/2 inch hose to supply from the air compressor to the air purge system.

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**Customer Supplied Storage Tanks**

- **Must have two 2" NPT tank flanges and 2" shut off valves on the tanks. Place one flange at the 12 o'clock position when using a top view of the tank. Place the second flange at the 3 o'clock or 9 o'clock position. Anything less will reduce AccuBrine's performance of the AccuBrine® brine making system. (include any other details regarding what valves they have and what they need to match up to our hoses – ie. hose barbs, etc)**
- **Must have 3" tank flange and valve if off loading additive trucks into them (required for models ABS, and ABS2)**

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**Grade for Storage tanks and Brine Salt tank**

- Storage tank load will be approx 4.8 lbs per square inch. Location should be level
- Salt tank load will be approx 3 lbs per square inch. Location should be level.
- Install tie down lugs to anchor storage tanks if required.

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**Locating Control Panels**

- The AccuBrine® control panel has fresh water flowing through it during brine production. To prevent damage to the control panel piping system and the touch screen on the AccuBrine®, the entire panel it must be housed in a clean, dry, and heated environment. This can be a fabricated building or it could be as simple a garden shed. It is very important that the structure be heated to prevent freezing.
- **Allow at least 36" behind BOTH control panel and sub panel for access and maintenance.**
- **Control Panel and subpanels may be separated if necessary. This may require an additional up charge and should be decided and communicated prior to the installation.**

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Hose connections are made between Main panel, sub panels and through wall manifold to salt tank and storage tanks. The dimensions of the control panel are: 33.5" wide by 20" deep, by 71" high. The subpanel is 80.5" wide by 41" high. Overall length of control and subpanel is 114" for the RTF, ABS, and ABS2 models.

#### Salt Tank Location

- Actual Salt Tank Dimensions.
  - Top – 136"W x 75"D x 64"H (Including all external valves, hose and fittings)
  - Base – Nominal 104"W x 43"D
  - For set up, housekeeping and maintenance Cargill recommends the Salt Tank clearance should be a minimum of 36" around the salt tank.
    - Use the "Top" measurement and add 36" to the perimeter dimensions.
    - Failure to maintain the 36" clearance may affect installation of the Salt Tank. Please consult a dealer representative or Cargill if the 36" clearance cannot be maintained completely around the tank.
- The salt tank should be placed in the proximity of the control panel and storage tanks.
- 4' X 10' Raised slab for salt tank. The salt tank is elevated to allow for capturing of the wash out debris from sump of salt tank. This enables the use of a curled loader bucket to be used to capture debris when flushing AccuBrine.
- Allow 7' of overhead clearance from the top edge of the Salt tank for screen removal.
- The clearance needed to operate the tarp is 5 feet.

#### Location of Truck Filling

- Locate the truck filling station in an area that works well with your traffic pattern.
  - How does traffic flow through the customers facility?
  - Will the filling area create congestion?
  - Easy access and egress.

#### Days of Installation

- A Cargill and or a dealer representative will be on site the day of installation. The customer to have at least one of its employees will be on hand to help perform the actual installation work. Cargill recommends that this person assisting with the installation be the person who would normally operate the AccuBrine.
- The site and worker(s) must be available on the days of installation from 7:00 AM to 5:00 PM.

#### Optional/Recommended Items

- Barricade posts with cross members located around perimeter of salt tank to provide accidental contact with loader. Note: If wrapping around the sides, the minimum height from the underside of cross member to the bottom of salt tank should be no less than 76".
- 4' X 10' Raised slab for salt tank. Raise + or - 24" for ease of capturing wash out debris from sump of salt tank. This enables loader bucket to be used to capture debris when flushing out.



Training on the AccuBrine® system will be provided to the customer and its representatives after installation is complete. CDT reserves the right to charge extra installation fees in the event CDT or its designated representatives are required to return at a later date to perform further installation or training if either activity is delayed as a result of incomplete preparation work by the customer. The rate is \$150 per day plus expenses.

**Approximate times for installation per Model**

- Times listed below are typical times required per model for either a Cargill or Cargill authorized dealer to complete an install if the customer has all site prep-work done prior to the arrival of the installer: Actual installation times may vary as conditions dictate.
  - AccuBrine® Automated Brine maker : 2 days
  - RTF – 2.5 days
  - ABS – 3.5 days
  - ABS2 – 4 days

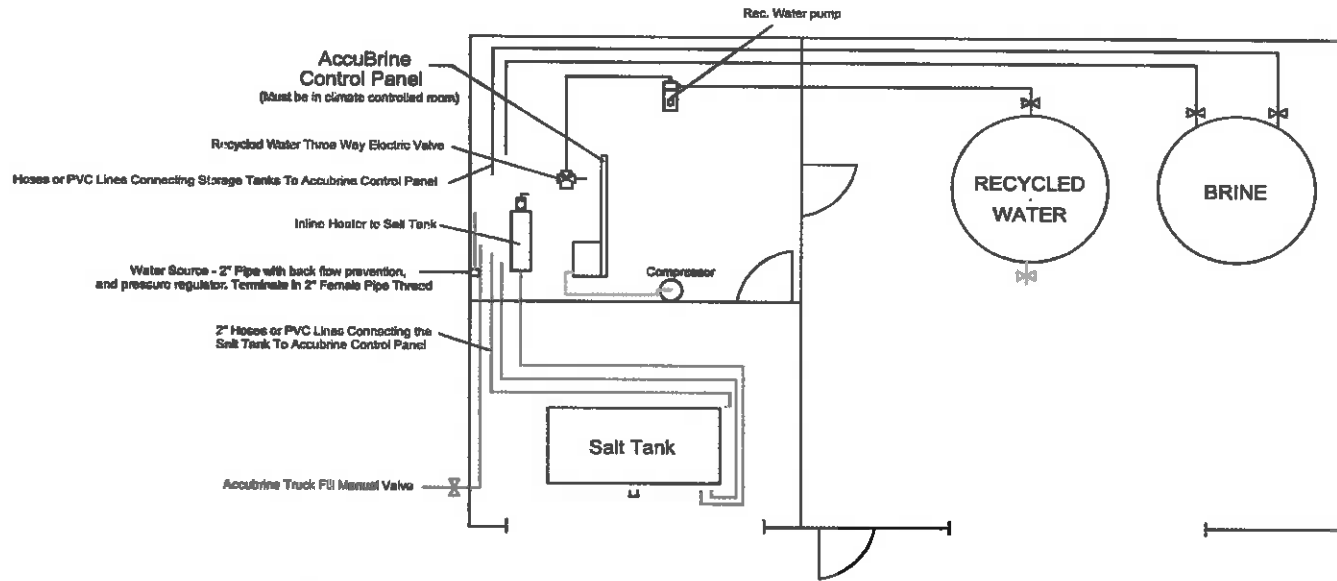
Please sign and return prior to the commencement of your AccuBrine® brine maker installation.

Organization: \_\_\_\_\_

Signed: \_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Generic Plumbing Layout - AccuBrine Model RTF



### PLUMBING - EQUIPMENT NOTES:

The locations of equipment, storage tanks and plumbing lines shown are for illustration only.

The actual locations of equipment, storage tanks and plumbing lines will be determined by the specifications of the installation site.

Salt Tank Dimensions: At Base - 100" L X 48"W, At Top - 125" X 73" X 64"H

Control Panel Dimensions: Main Control Panel - 33"L X 20"W X 71"H, Sub Panel - 60.5L X 2.5"W X 41"H Overall length with sub panel - 114"L

Recommended minimum clearances for the main control panel are: 36" behind and on both sides of panel, and 48" in front of panel.

These clearances will allow cleaning, maintenance and operation of the brinemaker.

Recommended minimum clearances around the salt tank are: 36" on all sides to allow cleanup, access, and maintenance.

— Plumbing lines from storage tanks and salt tank to control panel should be 2" corrugated hose or 2" sched. 80 PVC

If PVC pipe is used, transition to 2" flex hose at control panel and tank valves using PVC X M220 adaptors.

- If PVC pipe is used, 1-5/8" galvanized strut channel should be fastened to concrete floor every 4' to secure PVC pipe.

- Holes bored through building walls for plumbing lines should be as low as possible to facilitate flow and pump priming.

— Air supply line connecting compressor or shop air to air purge valve on control panel.

⌘ - Two 2" manual valves on Brine, Additive, and Blended product tanks will allow recirculation of these tanks, as well as load out.

### Optional features:

#### - Inline Heater for Salt Tank:

The inline heater is connected to return line of the salt tank and to the main control panel.

The location of the heater should be in the climate controlled room near main control panel.

#### - Recycled Water Pump and 3 Way Electric Valve:

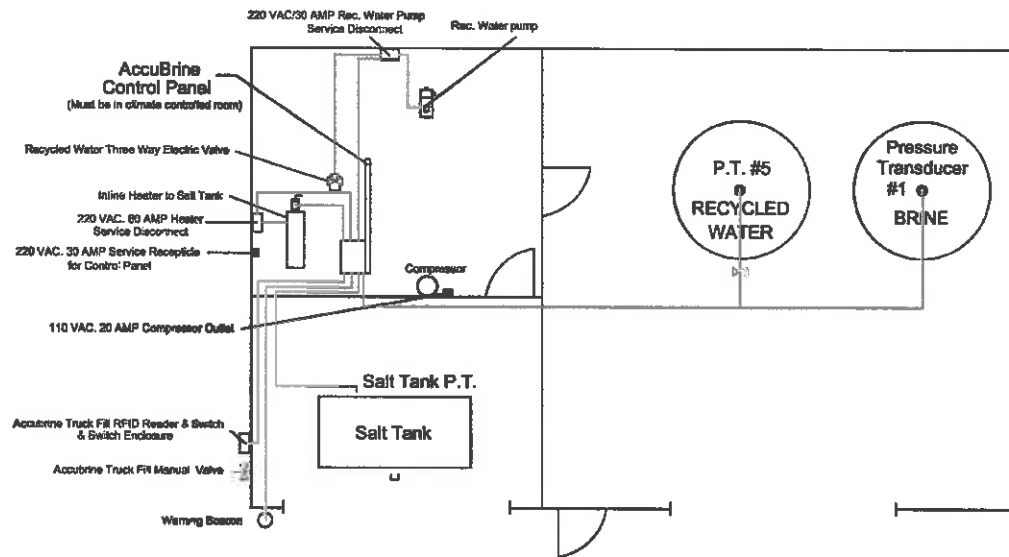
The recycled water pump is connected between the recycled water storage tank and main control panel.

The location of the pump should be in the climate controlled room near main control panel.

The three way electric valve is connected to the recycled water pump line, the fresh water source line, and to the main control panel.

The location of the valve should be in the climate controlled room near main control panel.

## Generic Wiring Layout - AccuBrine Model RTF



### WIRING NOTES:

The locations of equipment, storage tanks and conduit runs shown are for illustration only.

The actual locations of equipment, storage tanks and conduit runs will be determined by the specifications of the installation site.

Salt Tank Dimensions: At Base - 100" L X 48"W, At Top - 125" X 73" X 64"H

Control Panel Dimensions: Main Control Panel - 33"L X 20"W X 71"H, Sub Panel - 80.5L X 2.5"W X 41"H Overall length with sub panel - 114"L

Recommended minimum clearances for the main control panel are: 36" behind and on both sides of panel, and 48" in front of panel.

These clearances will allow cleaning, maintenance and operation of the brinemaker.

Recommended minimum clearances for the salt tank are: 36" on all sides to allow cleanup, access, and maintenance.

— Indicates electrical conduit from pressure transducers, pumps etc. to the control panel or disconnect boxes. These may be elevated, floor or wall level.

- Warning Beacon: Two 18Ga wires, +24 and -24 VDC, are required to connect beacon to main control panel. Beacon should be mounted where operator can clearly see it.

- Pressure Transducers - 24 VDC: All transducers on salt tank and storage tanks require two 18 Ga. wires (signal, 4-20 milliamps and power, +24 VDC) to connect to main control panel.

- RFID - Truck Fill Switch Box - 24 VDC: Seven (7) 18 Ga. wires ( includes one spare) and one (1) three conductor shielded communication cable are required to connect to main control panel.

### Optional features:

#### - In-line Heater for Salt Tank:

Four (4) wires (factory installed) from heating elements on heater connect to circuit breakers in heater disconnect box.

Three (3) wires are required (three conductor communication cable) from RTD (temp. probe on heater) to connect to terminals in main control panel.

Two (2) 18 Ga. (red & white) wires are required to supply 120 VAC from main control panel to heater disconnect box.

#### - Recycled Water Pump and 3 Way Electric Valve:

Three (3) 12 Ga. wires are required (w/ ground) to connect pump motor to circuit breakers in recycled water disconnect box.

Five (5) 18 Ga. wires are required to connect the three way electric valve (red, white, blue, black, and green) to recycled water disconnect box.

Three (3) 18 Ga. wires are required to control pump and valve and run from main control panel to recycled water disconnect box.

ACCUBRINE<sup>®</sup>  
automated brine maker  
RTF



**AccuBrine® automated brine maker  
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**Pre-installation Inspection and Storage**

To prevent warranty nullification the AccuBrine® components must be damage free at the time of installation. It is the responsibility of the customer to:

1. **Inspect the AccuBrine® components for damage. If damage has occurred contact your AccuBrine® representative immediately or call 866-900-7258.**
2. **To prevent damage to the Control Panel, the unit should be stored with the stretch wrap in tact and in clean, above freezing and dry environment. Failure to do so will nullify the warranty.**

**Customer is responsible for making sure the following items are in place prior to the commencement of an AccuBrine® installation:**

<b>Water Supply – Must be located inside the AccuBrine® Building</b>	<b>Ready - Yes or No</b>
<ul style="list-style-type: none"> <li>• <b>2" water supply line terminating within 10 Ft. of Main Control Panel.</b> (Note: A lower GPH supply will work with the machine however, performance will decrease in GPH brine produced). The flow rate of the pump is 107 GPM @ 45 Ft. head pressure.</li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>Water pressure must be regulated between 40 - 60 PSI.</b> If not, a pressure regulator must be added.</li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>Back flow prevention device are recommended (Note: When selecting a back flow prevention device, take into consideration that salt brine will be at an elevation above the water inlet)</b></li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>Shut off valve at water outlet.</b></li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>2" Female Pipe thread fitting is required for connection of hose between brine maker control panel and water supply.</b></li> </ul>	_____
<ul style="list-style-type: none"> <li>• <b>If the customer is installing product fill hose/pipe that elevate over a wall, or the control panel is significantly higher than the salt brine production tank or the storage tanks, check valves in the suction lines may be warranted. The pump will not create suction that will pull the liquid from the storage tanks.</b></li> </ul>	_____



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automated brine maker

**ABS**

- The customer may elect to use PVC instead hose. If the customer elects to do this:
  1. PVC piping installation will be at the expense of the customer and Cargill does not have the ability to install PVC.
  2. BM – 093 adaptors are required at each end of the pipe. This fitting is also supplied by Banjo
  3. When using PVC, the installer should use sweeping turns instead of using 90° "Right Angle" turns. 90° turns diminish the performance of AccuBrine.

**Electrical Service - Must be located inside the AccuBrine® Building**

- **Single phase option** - 230 Volt Single phase with neutral leg and grounding wire / 30 amp service with a **L14-30R receptacle** located within 5 ft. of control panel electrical enclosure. \_\_\_\_\_
- **3 phase option** – 30 Amp 3 Phase 208Volt/AC, 60 Hz with neutral and ground wire. Receptacle required L2130RW from Cooper Wiring Devices. Receptacle located within 5 ft. of control panel electrical enclosure. \_\_\_\_\_
- **Heater option** is to be installed, an additional 230 Volt Single phase with neutral leg and grounding wire / 50 amp service is required, and located within 5 ft. of the control panel. Heater elements will be wired to two 25 amp circuit breakers in the provided 50 amp service disconnect panel. \_\_\_\_\_
- **Recycled Water option** is to be installed, an additional 230 Volt Single phase with neutral leg and grounding wire / 30 amp service is required. This should be located within 5 ft. of the Recycled Water Pump. If the 3 phase motor option was selected, substitute the single phase service with the 3 phase service of 208 Volt Three phase with three leg wires, and neutral and grounding wires / 60 amp service. \_\_\_\_\_
- **300 GPM Pump option** is to be installed, an additional 208 Volt Three phase with three leg wires, neutral and grounding wires / 60 amp service is required. This should be located within 5 ft. of the 300 GPM pump control/disconnect enclosure. \_\_\_\_\_
- **Conduit Runs** are required to:
  - **Within 2' of the yellow salt tank.** This is for the pressure transducer on the yellow salt tank. \_\_\_\_\_
  - On RTF, ABS, and ABS2 models , a truck filling point must indentified by the customer and conduit (3/4" conduit is typical) for 9 – 16 gauge wire, plus three wire shield cable must be ran for the RFID Truck fill panel. **Please note that 18 gauge wire is preferred for the terminal lugs inside the AccuBrine®. The truck fill station should be located at an area that fits well with the customer traffic pattern.** \_\_\_\_\_
  - Wire colors – 7 Blue, 1 Green, 1 Blue with white stripe, plus the shielded cable supplied with the machine. \_\_\_\_\_
  - AccuBrine ®requires Pressure Transducers to be installed in the storage tanks to monitor the liquid levels in the tank. Due to specific OSHA regulations, there are certain elevated tasks involved in the installation process. Cargill or its designated representatives will be unable perform without fall protection. \_\_\_\_\_
  - Conduit run s will have to be made to the tops of all storage tanks. 2-18 S/O cable is required to Pressure Transducers \_\_\_\_\_



**ACCUBRINE<sup>®</sup>**  
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**ABS**

**Air Supply Requirements**

- To properly purge the fresh water supply hose a large volume of air is needed. A minimum of 15 gallon air compressor is required. With a 1/2 inch hose to supply from the air compressor to the air purge system.

**Customer Supplied Storage Tanks**

- **Must have two 2" NPT tank flanges and 2" shut off valves on the tanks. Place one flange at the 12 o'clock position when using a top view of the tank. Place the second flange at the 3 o'clock or 9 o'clock position. Anything less will reduce AccuBrine's performance of the AccuBrine® brine making system. (include any other details regarding what valves they have and what they need to match up to our hoses – ie. hose barbs, etc)**
- **Must have 3" tank flange and valve if off loading additive trucks into them(required for models ABS, and ABS2)**

**Grade for Storage tanks and Brine Salt tank**

- Storage tank load will be approx 4.8 lbs per square inch. Location should be level
- Salt tank load will be approx 3 lbs per square inch. Location should be level.
- Install tie down lugs to anchor storage tanks if required.

**Locating Control Panels**

- The AccuBrine® control panel has fresh water flowing through it during brine production. To prevent damage to the control panel piping system and the touch screen on the AccuBrine®, the entire panel it must be housed in a clean, dry, and heated environment. This can be a fabricated building or it could be as simple a garden shed. It is very important that the structure be heated to prevent freezing.
- **Allow at least 36" behind BOTH control panel and sub panel for access and maintenance.**
- Control Panel and subpanels may be separated if necessary. This may require an additional up charge and should be decided and communicated prior to the installation.

Hose connections are made between Main panel and sub panels to salt tank and storage tanks. The dimensions of the control panel are: **33.5" wide by 20" deep, by 71" high. The subpanel is 80.5" wide by 41" high. Overall length of control and subpanel is 114" for the RTF, ABS, and ABS2 models.**

**Salt Tank Location**

- Actual Salt Tank Dimensions.
  - Top – 136"W x 75"D x 64"H (including all external valves, hose and fittings)
  - Base – Nominal 104"W x 43"D
  - For set up, housekeeping and maintenance Cargill recommends the Salt Tank clearance should be a minimum of 36" around the salt tank.





- Use the "Top" measurement and add 36" to the perimeter dimensions.
- **Failure to maintain the 36" clearance may affect installation of the Salt Tank. Please consult a dealer representative or Cargill if the 36" clearance cannot be maintained completely around the tank.**
- The salt tank should be placed in the proximity of the control panel and storage tanks.
- **4' X 10' Raised slab for salt tank.** The salt tank is elevated to allow for capturing of the wash out debris from sump of salt tank. This enables the use of a curled loader bucket to be used to capture debris when flushing AccuBrine.
- **Allow 7' of overhead clearance from the top edge of the Salt tank for screen removal.**
- The clearance needed to operate the tarp is 5 feet.

**Location of Truck Filling**

- Locate the truck filling station in an area that works well with your traffic pattern.
  - How does traffic flow through the customers facility?
  - Will the filling area create congestion?
  - Easy access and egress.

**Days of Installation**

- A Cargill and or a dealer representative will be on site the day of installation. The customer to have at least one of its employees will be on hand to help perform the actual installation work. Cargill recommends that this person assisting with the installation be the person who would normally operate the AccuBrine.
- The site and worker(s) must be available on the days of installation from 7:00 AM to 5:00 PM.

**Optional/Recommended Items**

- Barricade posts with cross members located around perimeter of salt tank to provide accidental contact with loader. Note: If wrapping around the sides, the minimum height from the underside of cross member to the bottom of salt tank should be no less than 76".
- **4' X 10' Raised slab for salt tank.** Raise + or - 24" for ease of capturing wash out debris from sump of salt tank. This enables loader bucket to be used to capture debris when flushing out.

Training on the AccuBrine® system will be provided to the customer and its representatives after installation is complete. CDT reserves the right to charge extra installation fees in the event CDT or its designated representatives are required to return at a later date to perform further installation or training if either activity is delayed as a result of incomplete preparation work by the customer. The rate is \$150 per day plus expenses.

**Approximate times for Installation per Model**

- Times listed below are typical times required per model for either a Cargill or Cargill authorized dealer to complete an install IF the customer has all site prep-work done prior to the arrival of the installer. Actual installation times may vary as conditions dictate.
  - AccuBrine® Automated Brine maker : 2 days



**ACCUBRINE<sup>®</sup>**

automated brine maker

- RTF – 2.5 days
- ABS – 3.5 days
- ABS2 – 4 days

**ABS**

Please sign and return prior to the commencement of your AccuBrine® brine maker installation.

Organization: \_\_\_\_\_

Signed: \_\_\_\_\_

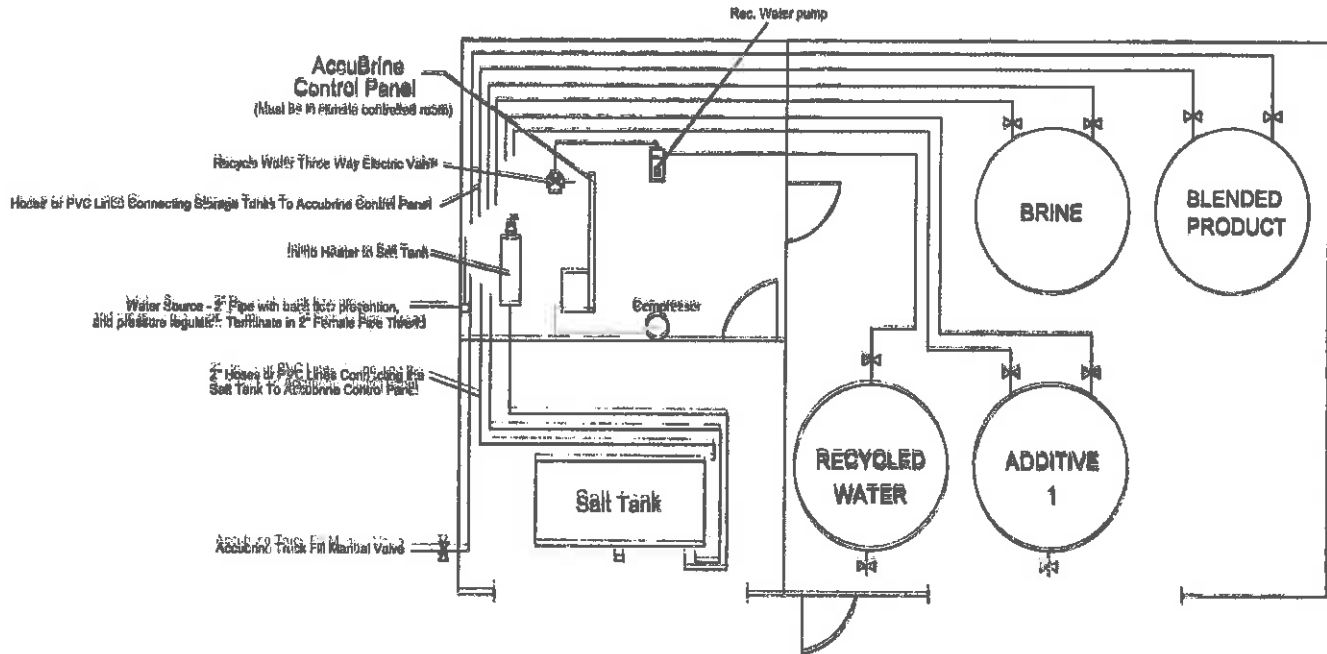
Name: \_\_\_\_\_ Date: \_\_\_\_\_



**ACCUBRINE™**  
automated brine maker

**ABS**

### Generic Plumbing Layout - AccuBrine Model ABS



**PLUMBING - EQUIPMENT NOTES:**

The locations of equipment, storage tanks and plumbing lines shown are for illustration only.

The actual locations of equipment, storage tanks and plumbing lines will be determined by the specifications of the installation site.

Salt Tank Dimensions: At Base - 100" L X 48"W, At Top - 125" X 73" X 64"H

Control Panel Dimensions: Main Control Panel - 33"L X 26"W X 71"H, Sub Panel - 60.5L X 2.5"W X 41"H Overall length with sub panel - 114"L

Recommended minimum clearances for the main control panel are: 36" behind and on both sides of panel, and 48" in front of panel.

These clearances will allow cleaning, maintenance and operation of the brinemaker.

Recommended minimum clearances around the salt tank are: 36" on all sides to allow cleanup, access, and maintenance.

Plumbing lines from storage tanks and salt tank to control panel should be 2" corrugated hose or 2" sched. 80 PVC

If PVC pipe is used, transition to 2" flex hose at control panel and tank valves using PVC X M220 adaptors.

- If PVC pipe is used, 1-5/8" galvanized strut channel should be fastened to concrete floor every 4' to secure PVC pipe.

- Holes bored through building walls for plumbing lines should be as low as possible to facilitate flow and pump priming.

Air supply line connecting compressor or shop air to air purge valve on control panel.

Two 2" manual valves on Brine, Additive, and Blended product tanks will allow recirculation of these tanks, as well as load out.

Additive tanks should have a 3" manual valve for filling additive tanks from supplier.

**Optional features:**

- **Inline Heater for Salt Tank:**

The inline heater is connected to return line of the salt tank and to the main control panel.

The location of the heater should be in the climate controlled room near main control panel.

- **Recycled Water Pump and 3 Way Electric Valve:**

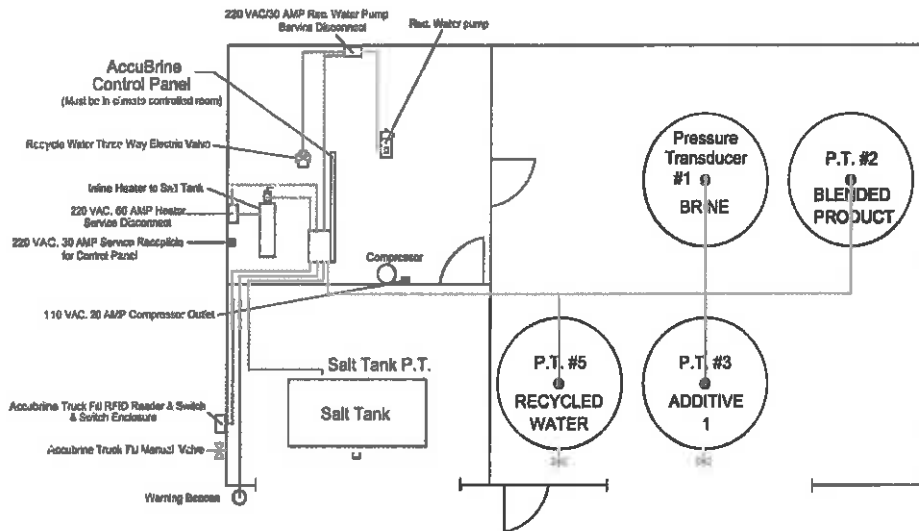
The recycled water pump is connected between the recycled water storage tank and main control panel.

The location of the pump should be in the climate controlled room near main control panel.

The three way electric valve is connected to the recycled water pump line, the fresh water source line, and to the main control panel.

The location of the valve should be in the climate controlled room near main control panel.

**Generic Wiring Layout - AccuBrine Model ABS**



**WIRING NOTES:**

The locations of equipment, storage tanks and conduit runs shown are for illustration only.

The actual locations of equipment, storage tanks and conduit runs will be determined by the specifications of the installation site.

Salt Tank Dimensions: At Base - 100" L X 48"W, At Top - 125" X 73" X 64"H

Control Panel Dimensions: Main Control Panel - 33"L X 20"W X 71"H, Sub Panel - 80.5L X 2.5"W X 41"H Overall length with sub panel - 114"L

Recommended minimum clearances for the main control panel are: 36" behind and on both sides of panel, and 48" in front of panel.

These clearances will allow cleaning, maintenance and operation of the brinemaker.

Recommended minimum clearances for the salt tank are: 36" on all sides to allow cleanup, access, and maintenance.

— Indicates electrical conduit from pressure transducers, pumps etc. to the control panel or disconnect boxes. These may be elevated, floor or wall level.

- Warning Beacon: Two 18Ga wires, +24 and -24 VDC, are required to connect beacon to main control panel. Beacon should be mounted where operator can clearly see it.

- Pressure Transducers - 24 VDC: All transducers on salt tank and storage tanks require two 18 Ga. wires (signal, 4-20 milliamps and power, +24 VDC) to connect to main control panel.

- RFID - Truck Fill Switch Box - 24 VDC: Seven (7) 18 Ga. wires ( includes one spare) and one (1) three conductor shielded communication cable are required to connect to main control panel.

**Optional features:**

**- Inline Heater for Salt Tank:**

Four (4) wires (factory installed) from heating elements on heater connect to circuit breakers in heater disconnect box.

Three (3) wires are required (three conductor communication cable) from RTD (temp. probe on heater) to connect to terminals in main control panel.

Two (2) 16 Ga. (red & white) wires are required to supply 120 VAC from main control panel to heater disconnect box.

**- Recycled Water Pump and 3 Way Electric Valve:**

Three (3) 12 Ga. wires are required (w/ ground) to connect pump motor to circuit breakers in recycled water disconnect box.

Five (5) 18 Ga. wires are required to connect the three way electric valve (red, white, blue, black, and green) to recycled water disconnect box.

Three (3) 18 Ga. wires are required to control pump and valve and run from main control panel to recycled water disconnect box.



**AccuBrine® automated brine maker  
Site Preparation/Installation Checklist**

Thank you for the purchase of your AccuBrine® automated brine maker. Carefully read through the following list of requirements and indicate if each requirement is complete and/or available to ensure that the installation of your new equipment is as efficient as possible. Cargill Deicing Technology ("CDT") or your dealer representative will schedule your installation when all requirements are complete. Please call the AccuBrine® Support number at 1-866-900-7258, or your dealer representative with any questions.

**Pre-installation Inspection and Storage**

To prevent warranty nullification the AccuBrine® components must be damage free at the time of installation. It is the responsibility of the customer to:

1. Inspect the AccuBrine® components for damage. If damage has occurred contact your AccuBrine® representative immediately or call 866-900-7258.
2. To prevent damage to the Control Panel, the unit should be stored with the stretch wrap in tact and in clean, above freezing and dry environment. Failure to do so will nullify the warranty.

**Customer is responsible for making sure the following items are in place prior to the commencement of an AccuBrine® installation:**

	Ready - Yes or No
<b>Water Supply – Must be located inside the AccuBrine® Building</b>	
<ul style="list-style-type: none"> <li>• 2" water supply line terminating within 10 Ft. of Main Control Panel. (Note: A lower GPH supply will work with the machine however, performance will decrease in GPH brine produced). The flow rate of the pump is 107 GPM @ 45 Ft. head pressure.</li> </ul>	_____
<ul style="list-style-type: none"> <li>• Water pressure must be regulated between 40 - 60 PSI. If not, a pressure regulator must be added.</li> </ul>	_____
<ul style="list-style-type: none"> <li>• Back flow prevention device are recommended (Note: When selecting a back flow prevention device, take into consideration that salt brine will be at an elevation above the water inlet)</li> </ul>	_____
<ul style="list-style-type: none"> <li>• Shut off valve at water outlet.</li> </ul>	_____
<ul style="list-style-type: none"> <li>• 2" Female Pipe thread fitting is required for connection of hose between brine maker control panel and water supply.</li> </ul>	_____
<ul style="list-style-type: none"> <li>• If the customer is installing product fill hose/pipe that elevate over a wall, or the control panel is significantly higher than the salt brine production tank or the storage tanks, check valves in the suction lines may be warranted. The pump will not create suction that will pull the liquid from the storage tanks.</li> </ul>	



- The customer may elect to use PVC instead hose. If the customer elects to do this:
  1. PVC piping installation will be at the expense of the customer and Cargill does not have the ability to install PVC.
  2. BM – 093 adaptors are required at each end of the pipe. This fitting is also supplied by Banjo
  3. When using PVC, the installer should use sweeping turns instead of using 90° "Right Angle" turns. 90° turns diminish the performance of AccuBrine.

**Electrical Service - Must be located inside the AccuBrine® Building**

- **Single phase option** - 230 Volt Single phase with neutral leg and grounding wire / 30 amp service with a **L14-30R receptacle** located within 5 ft. of control panel electrical enclosure.
- **3 phase option** – 30 Amp 3 Phase 208Volt/AC, 60 Hz with neutral and ground wire. Receptacle required L2130RW from Cooper Wiring Devices. Receptacle located within 5 ft. of control panel electrical enclosure.
- **Heater option** is to be installed, an additional 230 Volt Single phase with neutral leg and grounding wire / 50 amp service is required, and located within 5 ft. of the control panel. Heater elements will be wired to two 25 amp circuit breakers in the provided 50 amp service disconnect panel.
- **Recycled Water option** is to be installed, an additional 230 Volt Single phase with neutral leg and grounding wire / 30 amp service is required. This should be located within 5 ft. of the Recycled Water Pump. If the 3 phase motor option was selected, substitute the single phase service with the 3 phase service of 208 Volt Three phase with three leg wires, and neutral and grounding wires / 60 amp service.
- **300 GPM Pump option** is to be installed, an additional 208 Volt Three phase with three leg wires, neutral and grounding wires / 60 amp service is required. This should be located within 5 ft. of the 300 GPM pump control/disconnect enclosure.
- **Conduit Runs** are required to:
  - Within 2' of the yellow salt tank. This is for the pressure transducer on the yellow salt tank.
  - On RTF, ABS, and ABS2 models , a truck filling point must identified by the customer and conduit (3/4" conduit is typical) for 9 – 16 gauge wire, plus three wire shield cable must be ran for the RFID Truck fill panel. **Please note that 18 gauge wire is preferred for the terminal lugs inside the AccuBrine®. The truck fill station should be located at an area that fits well with the customer traffic pattern.**  
Wire colors – 7 Blue, 1 Green, 1 Blue with white stripe, plus the shielded cable supplied with the machine.
  - AccuBrine ®requires Pressure Transducers to be installed in the storage tanks to monitor the liquid levels in the tank. Due to specific OSHA regulations, there are certain elevated tasks involved in the installation process. Cargill or its designated representatives will be unable perform without fall



- o Conduit runs will have to be made to the tops of all storage tanks.  
2-18 S/O cable is required to Pressure Transducers

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**Air Supply Requirements**

- To properly purge the fresh water supply hose a large volume of air is needed. A minimum of 15 gallon air compressor is required. With a 1/2 inch hose to supply from the air compressor to the air purge system.

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**Customer Supplied Storage Tanks**

- **Must have two 2" NPT tank flanges and 2" shut off valves on the tanks.**  
Place one flange at the 12 o'clock position when using a top view of the tank. Place the second flange at the 3 o'clock or 9 o'clock position. Anything less will reduce AccuBrine's performance of the AccuBrine® brine making system. (include any other details regarding what valves they have and what they need to match up to our hoses – ie. hose barbs, etc)
- **Must have 3" tank flange and valve if off loading additive trucks into them (required for models ABS, and ABS2)**

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**Grade for Storage tanks and Brine Salt tank**

- Storage tank load will be approx 4.8 lbs per square inch. Location should be level
- Salt tank load will be approx 3 lbs per square inch. Location should be level.
- Install tie down lugs to anchor storage tanks if required.

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**Locating Control Panels**

- The AccuBrine® control panel has fresh water flowing through it during brine production. To prevent damage to the control panel piping system and the touch screen on the AccuBrine®, the entire panel it must be housed in a clean, dry, and heated environment. This can be a fabricated building or it could be as simple a garden shed. It is very important that the structure be heated to prevent freezing.
- Allow at least 36" behind **BOTH** control panel and sub panel for access and maintenance.
- Control Panel and subpanels may be separated if necessary. This may require an additional up charge and should be decided and communicated prior to the installation.

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Hose connections are made between Main panel and sub panels to salt tank and storage tanks. The dimensions of the control panel are: 33.5" wide by 20" deep, by 71" high. The subpanel is 80.5" wide by 41" high. Overall length of control and subpanel is 114" for the RTF, ABS, and ABS2 models.

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### Salt Tank Location

- **Actual Salt Tank Dimensions.**
  - Top – 136"W x 75"D x 64"H (Including all external valves, hose and fittings)
  - Base – Nominal 104"W x 43"D
  - For set up, housekeeping and maintenance Cargill recommends the Salt Tank clearance should be a minimum of 36" around the salt tank.
    - Use the "Top" measurement and add 36" to the perimeter dimensions.
    - **Failure to maintain the 36" clearance may affect installation of the Salt Tank. Please consult a dealer representative or Cargill if the 36" clearance cannot be maintained completely around the tank.**
- The salt tank should be placed in the proximity of the control panel and storage tanks.
- **4' X 10' Raised slab for salt tank.** The salt tank is elevated to allow for capturing of the wash out debris from sump of salt tank. This enables the use of a curled loader bucket to be used to capture debris when flushing AccuBrine.
- Allow 7' of overhead clearance from the top edge of the Salt tank for screen removal.
- The clearance needed to operate the tarp is 5 feet.

### Location of Truck Filling

- **Locate the truck filling station in an area that works well with your traffic pattern.**
  - How does traffic flow through the customers facility?
  - Will the filling area create congestion?
  - Easy access and egress.

### Days of Installation

- A Cargill and or a dealer representative will be on site the day of installation. The customer to have at least one of its employees will be on hand to help perform the actual installation work. Cargill recommends that this person assisting with the installation be the person who would normally operate the AccuBrine.
- The site and worker(s) must be available on the days of installation from 7:00 AM to 5:00 PM.

### Optional/Recommended Items

- Barricade posts with cross members located around perimeter of salt tank to provide accidental contact with loader. Note: If wrapping around the sides, the minimum height from the underside of cross member to the bottom of salt tank should be no less than 76".
- **4' X 10' Raised slab for salt tank.** Raise + or - 24" for ease of capturing wash out debris from sump of salt tank. This enables loader bucket to be used to capture debris when flushing out.

Training on the AccuBrine® system will be provided to the customer and its representatives after installation is complete. CDT reserves the right to charge extra installation fees in the event CDT or its designated representatives are required to return at a later date to perform further installation or training if either activity is delayed as a result of incomplete preparation work by the customer. The rate is \$150 per day plus expenses.





**Approximate times for installation per Model**

- Times listed below are typical times required per model for either a Cargill or Cargill authorized dealer to complete an install **IF** the customer has all site prep-work done prior to the arrival of the installer: Actual installation times may vary as conditions dictate.
  - AccuBrine® Automated Brine maker : 2 days
  - RTF – 2.5 days
  - ABS – 3.5 days
  - ABS2 – 4 days

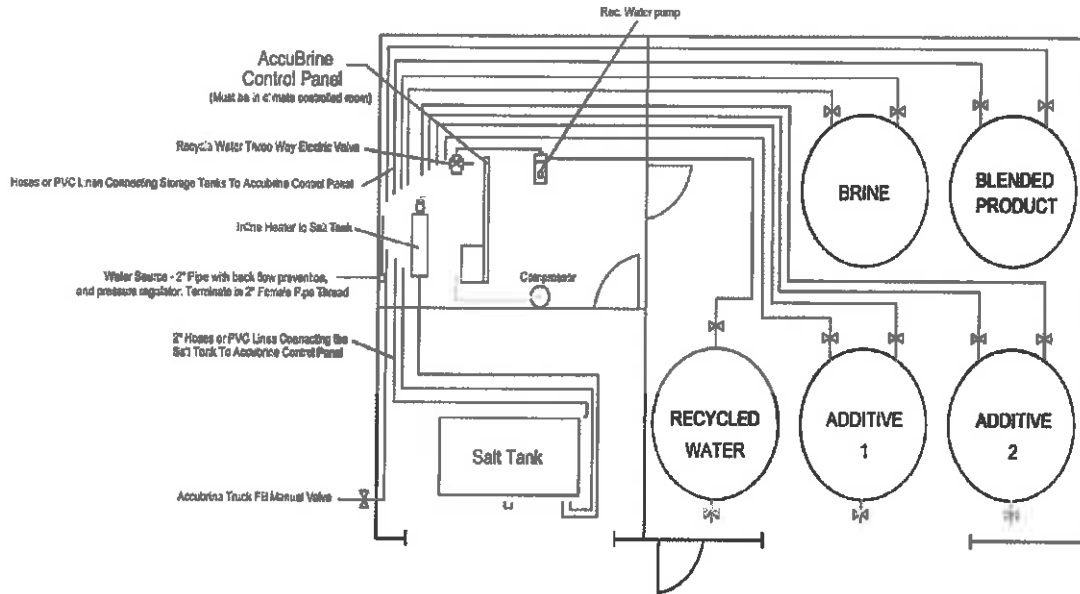
Please sign and return prior to the commencement of your AccuBrine® brine maker installation.

Organization: \_\_\_\_\_

Signed: \_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Generic Plumbing Layout - AccuBrine Model ABS2**



**PLUMBING - EQUIPMENT NOTES:**

The locations of equipment, storage tanks and plumbing lines shown are for illustration only.

The actual locations of equipment, storage tanks and plumbing lines will be determined by the specifications of the installation site.

Salt Tank Dimensions: At Base - 100" L X 48"W, At Top - 125" X 73" X 64"H

Control Panel Dimensions: Main Control Panel - 33"L X 20"W X 71"H, Sub Panel - 80.5L X 2.5"W X 41"H Overall length with sub panel - 114"L

Recommended minimum clearances for the main control panel are: 36" behind and on both sides of panel, and 48" in front of panel. These clearances will allow cleaning, maintenance and operation of the brinemaker.

Recommended minimum clearances around the salt tank are: 36" on all sides to allow cleanup, access, and maintenance.

— Plumbing lines from storage tanks and salt tank to control panel should be 2" corrugated hose or 2" sched. 80 PVC. If PVC pipe is used, transition to 2" flex hose at control panel and tank valves using PVC X M220 adaptors.

- If PVC pipe is used, 1-5/8" galvanized strut channel should be fastened to concrete floor every 4' to secure PVC pipe.
- Holes bored through building walls for plumbing lines should be as low as possible to facilitate flow and pump priming.

--- Air supply line connecting compressor or shop air to air purge valve on control panel.

- ⊗ - Two 2" manual valves on Brine, Additive, and Blended product tanks will allow recirculation of these tanks, as well as load out.
- ⊗ - Additive tanks should have a 3" manual valve for filling additive tanks from supplier.

**Optional features:**

**- Inline Heater for Salt Tank:**

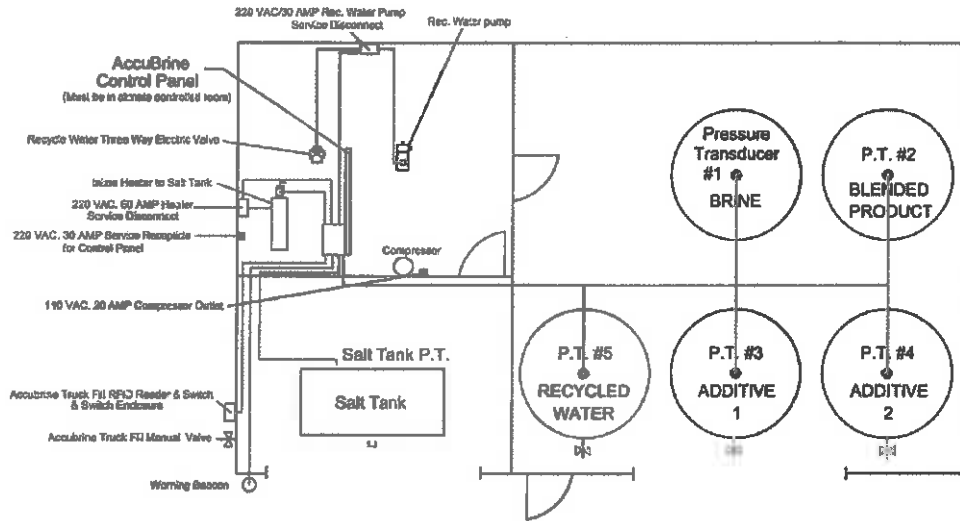
The inline heater is connected to return line of the salt tank and to the main control panel. The location of the heater should be in the climate controlled room near main control panel.

**- Recycled Water Pump and 3 Way Electric Valve:**

The recycled water pump is connected between the recycled water storage tank and main control panel. The location of the pump should be in the climate controlled room near main control panel. The three way electric valve is connected to the recycled water pump line, the fresh water source line, and to the main control panel. The location of the valve should be in the climate controlled room near main control panel.



### Generic Wiring Layout - AccuBrine Model ABS2



#### WIRING NOTES:

The locations of equipment, storage tanks and conduit runs shown are for illustration only.

The actual locations of equipment, storage tanks and conduit runs will be determined by the specifications of the installation site.

Salt Tank Dimensions: At Base - 100" L X 48"W, At Top - 125" X 73" X 64"H

Control Panel Dimensions: Main Control Panel - 33"L X 20"W X 71"H, Sub Panel - 60.5L X 2.5"W X 41"H Overall length with sub panel - 114"L

Recommended minimum clearances for the main control panel are: 36" behind and on both sides of panel, and 48" in front of panel.

These clearances will allow cleaning, maintenance and operation of the brinemaker.

Recommended minimum clearances for the salt tank are: 36" on all sides to allow cleanup, access, and maintenance.

————— Indicates electrical conduit from pressure transducers, pumps etc. to the control panel or disconnect boxes. These may be elevated, floor or wall level.

- Warning Beacon: Two 18Ga wires, +24 and -24 VDC, are required to connect beacon to main control panel. Beacon should be mounted where operator can clearly see it.

- Pressure Transducers - 24 VDC: All transducers on salt tank and storage tanks require two 18 Ga. wires (signal, 4-20 milliamps and power, +24 VDC) to connect to main control panel.

- RFID - Truck Fill Switch Box - 24 VDC: Seven (7) 18 Ga. wires ( includes one spare) and one (1) three conductor shielded communication cable are required to connect to main control panel

#### Optional features:

##### - In-line Heater for Salt Tank:

Four (4) wires (factory installed) from heating elements on heater connect to circuit breakers in heater disconnect box.

Three (3) wires are required (three conductor communication cable) from RTD (temp. probe on heater) to connect to terminals in main control panel.

Two (2) 18 Ga. (red & white) wires are required to supply 120 VAC from main control panel to heater disconnect box.

##### - Recycled Water Pump and 3 Way Electric Valve:

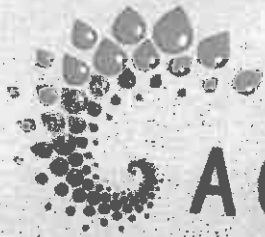
Three (3) 12 Ga. wires are required (w/ ground) to connect pump motor to circuit breakers in recycled water disconnect box.

Five (5) 18 Ga. wires are required to connect the three way electric valve (red, white, blue, black, and green) to recycled water disconnect box.

Three (3) 18 Ga. wires are required to control pump and valve and run from main control panel to recycled water disconnect box.



**ACCUBRINE®**  
automated brine maker



**ACCUBRINE®**  
automated brine maker



**KEEP ROADS SAFER BY STAYING  
AHEAD OF THE STORM.**

**Cargill**

A Cargill Deicing Technology Product

Providing customers with deicing solutions that save lives, enhance commerce and reduce environmental impact.

# BRINE PRODUCTION MADE SIMPLE, ON SPECIFICATION, AND ON BUDGET.

Brine, whether used to wet salt or as an anti-icer, is a highly effective and surprisingly economical solution for combating snow and ice issues on roadways. Now, Cargill Deicing Technology makes brine production more efficient and cost-effective than ever before with the ingenious AccuBrine® automated brine maker. Available in four configurations to suit your particular needs, the AccuBrine® automated brine maker gives you all the benefits of brine use — with none of the typical production and supply headaches.

- **Consistently achieve ideal brine concentration.**
- **Easily create “customized blends” using additives injected anywhere from 0% to 100%.**

## A CAPITAL INVESTMENT WITH A PAYBACK.

The best investments are those that pay for themselves. The AccuBrine® automated brine maker does exactly that. Municipalities and DOTs have found that costs are quickly recouped through reduced operational costs. What's more, the AccuBrine® automated brine maker is built to endure. Its low maintenance fiberglass construction is both reliable and durable.

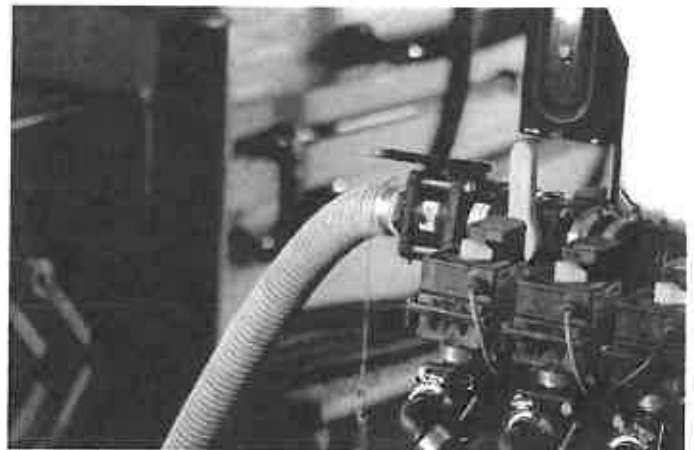
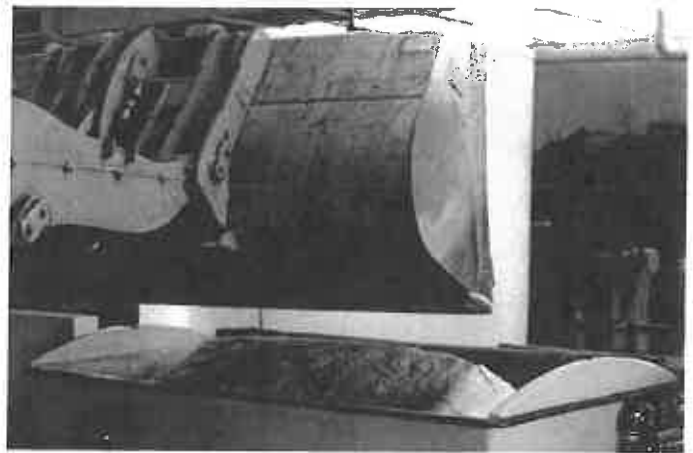
### AccuBrine® automatic brine maker features:

- **Programmable Logic Controller:** The PLC initiates the production process while a patented sensing system monitors salinity levels. Product not at desired concentration will be sent back to the salt tank.
- **Accurate Data Tracking:** The PLC tracks daily and seasonal data including production volume, water, salt and additives usage, and operator hours.
- **Rapid Cleanout:** Simply open cleaning valves and start to flush sediment through the built-in sump.



### System Includes:

- Salt tank
- Control panel
- 1 Level Sensor: Measures volume in brine storage tank.
- LAN Access: Connects the AccuBrine® to a customer's local network and allows for remote access for monitoring and operation.
- Air Purge: Automatically purges plumbing lines to help avoid freezing.
- Warning Beacon: Informs operator of system faults.
- Roll Tarp: Prevents debris from contaminating the salt tank.
- Compact physical footprint
- Dimensions:
  - Salt tank: 65.5”H x 125.5”W x 62.25”D
  - Control panel: 71”H x 33.5”W x 20”D





# ACCUBRINE®

automated brine maker

## RTF

remote truck fill

### AccuBrine® automated brine maker + the remote truck fill package

Turn your brine operation into a self-serve fill station. With the push of a single button, the remote truck fill option simplifies the process of loading finished brine into application vehicles. It eliminates the time-consuming manual labor of putting product in your truck tanks and gets you on the road applying quicker. What's more, the data-logging feature uses RFID technology to automatically track each unique truck's usage for easy inventory review — post-storm or post-season.

#### System Includes:

- Remote truck fill package
- Data-logging system
- Dimensions:
  - Salt tank: 65.5"H x 125.5"W x 62.25"D
  - Control panel: 71"H x 117"W x 20"D



# ACCUBRINE®

automated brine maker

## ABS

additive blending system

### AccuBrine® RTF + additive blending system

Create your own custom blends of salt brine and various other liquids designed to augment the performance of your particular anti-icer. Whether it is a liquid additive used to lower the freeze point of the finished product, or a corrosion inhibitor to help extend the life of the application equipment, the AccuBrine® ABS automated brine maker does it at the touch of a button.

#### System Includes:

- One additive injection system
- Recirculation feature
  - Automatically recirculates customers' finished inventory to help eliminate stratification and solids settling out of solutions.
- Dimensions:
  - Salt tank: 65.5"H x 125.5"W x 62.25"D
  - Control panel: 71"H x 117"W x 20"D



# ACCUBRINE®

automated brine maker

## ABS<sup>2</sup>

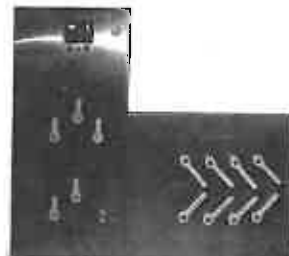
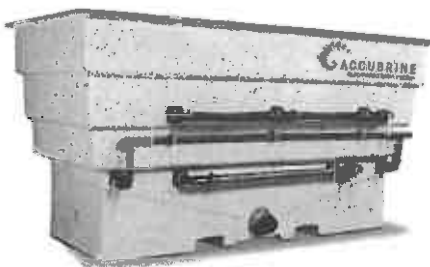
additive blending system

### AccuBrine® ABS + 2 additive blending systems

Take your customized blends to the next level. The AccuBrine® ABS<sup>2</sup> automated brine maker allows for multiple additives to be blended into your finished product. This eliminates the headaches and manual labor involved in creating customized anti-icers. It also removes any guesswork and human error from manually measuring ingredients.

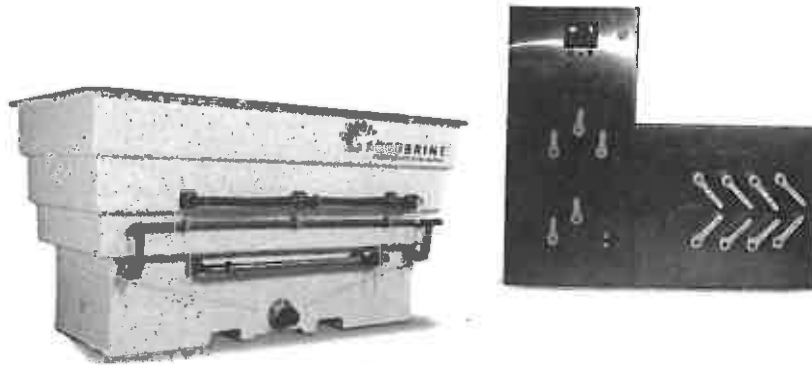
#### System Includes:

- Two additive injection system
- Dimensions:
  - Salt tank: 65.5"H x 125.5"W x 62.25"D
  - Control panel: 71"H x 117"W x 20"D

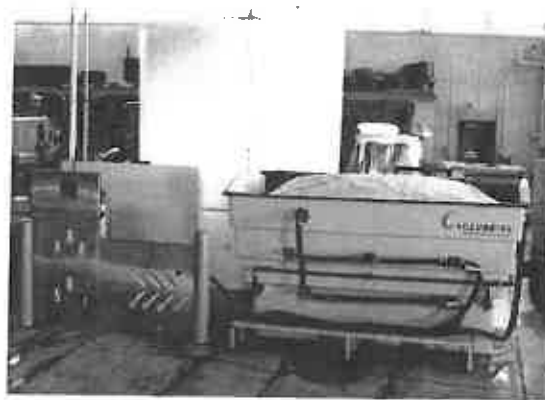


A Cargill Deicing Technology Product

Providing customers with deicing solutions that save lives, enhance commerce and reduce environmental impact.



**ACCUBRINE**  
automated brine maker



**Cargill Deicing Technology**  
24950 Country Club Blvd. Suite 450  
North Olmsted, OH 44070  
phone: 866-900-SALT (7258)

**[www.cargilldeicing.com](http://www.cargilldeicing.com)**

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The information contained herein is believed to be true and accurate. However, all statements, recommendations or suggestions are made without guarantee, express or implied, on the part of Cargill. CARGILL DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND FREEDOM FROM INFRINGEMENT and disclaims all liability in connection with the installation and use of the product described herein. All such risks are assumed by the purchaser/user/installer. The information contained herein is not and should not be construed as a clearance or permission with respect to patent rights of Cargill or any third party and is subject to change without notice.



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
05/13/2014

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 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).

<b>PRODUCER</b> Hays Companies  80 South 8th Street Suite 700 Minneapolis, MN 55402	1-612-333-3323	<b>CONTACT NAME:</b> Parvinder Jaspal or Dawn DeBuhr <b>PHONE (A/C, No. Ext):</b> 612-333-3323 <b>FAX (A/C, No):</b> 612-373-7270 <b>E-MAIL ADDRESS:</b> ddebuhr@hayscompanies.com																					
<b>INSURED</b> Cargill Incorporated, Its Subsidiaries, and Business Units *(see attached for additional named insureds) PO Box 5612, MS12  Minneapolis, MN 55440-5612	<table border="1"> <tr> <th colspan="2">INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> <tr> <td>INSURER A:</td> <td>OLD REPUBLIC INS CO</td> <td>24147</td> </tr> <tr> <td>INSURER B:</td> <td></td> <td></td> </tr> <tr> <td>INSURER C:</td> <td></td> <td></td> </tr> <tr> <td>INSURER D:</td> <td></td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> <td></td> </tr> </table>		INSURER(S) AFFORDING COVERAGE		NAIC #	INSURER A:	OLD REPUBLIC INS CO	24147	INSURER B:			INSURER C:			INSURER D:			INSURER E:			INSURER F:		
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INSURER D:																							
INSURER E:																							
INSURER F:																							

**COVERAGES**      **CERTIFICATE NUMBER: 39676735**      **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(SUBR) INSR   WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC		KWZY302354	06/01/14	06/01/15	EACH OCCURRENCE \$ 10,000,000 DAMAGE TO RENTED PREMISES (Per occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 10,000,000 GENERAL AGGREGATE \$ 50,000,000 PRODUCTS - COMP/OP AGG \$ 50,000,000 \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input checked="" type="checkbox"/> Cargo Legal		MWB301795 (AOS)	06/01/14	06/01/15	COMBINED SINGLE LIMIT (Per accident) \$ 10,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ PIP \$ Included
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$ \$
A	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 <input checked="" type="checkbox"/> N/A		MWC30235200 (AOS)	06/01/14	06/01/15	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 5,000,000 E.L. DISEASE - EA EMPLOYEE \$ 5,000,000 E.L. DISEASE - POLICY LIMIT \$ 5,000,000
A	EXCESS WORKER'S COMP.		MWX302353 (OH, USLB)	06/01/14	06/01/15	STATUTORY EXCESS 1,000,000SIR

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)  
 Workers' Compensation policy# WC049901164 (AOS) applies in West Virginia.  
 Evidence of Insurance.

**CERTIFICATE HOLDER**

West Virginia Division of Highways  
  
1900 Kanawha Blvd.  
  
Charleston, WV 25305  
  
USA

**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



# SUPPLEMENT TO CERTIFICATE OF INSURANCE

DATE  
05/13/2014

**NAME OF INSURED:** Cargill Incorporated, Its Subsidiaries, and Business Units  
\*(see attached for additional named insureds)

A partial listing of U.S. Subsidiaries and Business Units includes (but is not limited to):

Cargill AgHorizons  
Cargill Animal Nutrition (Cargill Feed & Nutrition and Cargill Premix & Nutrition)  
Cargill Case Ready  
Cargill Cocoa and Chocolate, Inc.  
Cargill Corn Milling North America  
Cargill Deicing Technology  
Cargill Dressings, Sauces & Oils  
Cargill Dry Corn Ingredients, Inc.  
Cargill Financial Services Corporation  
Cargill Food Distribution  
Cargill Grain and Oilseed Supply Chain North America  
Cargill Kitchen Solutions, Inc.  
Cargill Malt  
Cargill Meat Logistics Solutions, Inc.  
Cargill Meat Solutions Corporation  
Cargill Pork  
Cargill Pork, LLC  
Cargill Beef  
Cargill Salt  
Cargill Specialty Seeds & Oils  
Cargill Texturizing Solutions  
Cargill Turkey Production, LLC  
Cargill Value Added Meats-Food Service  
Cargill Turkey & Cooked Meats (formerly Cargill Value Added Meats - Retail)  
G & M Stevedoring Co., Inc.  
Black River Asset Management LLC  
Provimi North America, Inc.  
CarVal Investors LLC

# State of West Virginia

## VENDOR PREFERENCE CERTIFICATE N/A

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 for four (4) years immediately preceding the date of this certification; **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 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who 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 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 employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this 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) reject the bid; 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.

**Under penalty of law for false swearing (West Virginia Code, §61-5-3), 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:** Cargill, Inc. - Deicing Technology Business Unit

**Signed:** Mildred Lindsey

**Date:** April 20, 2015 \_\_\_\_\_

**Title:** Materials Transportation Specialist

STATE OF WEST VIRGINIA  
Purchasing Division

# PURCHASING AFFIDAVIT

**MANDATE:** 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 exceeds 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 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: Cargill, Inc. - Deicing Technology Business Unit

Authorized Signature: Mildred Lindsey Date: April 20, 2015

State of Ohio

County of Lorain, to-wit:

Taken, subscribed, and sworn to before me this 20 day of April, 2015.

My Commission expires April 20, 2016

NOTARY PUBLIC Danielle Wilford  
Purchasing Affidavit (Revised 07/01/2012)



DANIELLE WILFORD  
NOTARY PUBLIC - OHIO  
MY COMMISSION EXPIRES 4-20-2016