

APPENDIX A - TECHNICAL SPECIFICATIONS

Bulk Aqua Ammonia – Supply & Delivery

1. SCOPE OF WORK

JEA intends to enter into an agreement with a Supplier that can reliably furnish and deliver Bulk Aqua Ammonia for boiler feedwater pH control at its electric generating facilities. It is anticipated that a single award will be made to the lowest responsive and responsible bidder who meets or exceeds the specifications described below.

2. GENERAL PRODUCT REQUIREMENTS

- 2.1 Ammonia must meet the specified chemical requirements described in Paragraph 6 of the Technical Specifications.
- 2.2 JEA reserves the right to test all shipments of Ammonia. If the product does not meet the JEA required specifications, JEA retains the option of requiring the supplier to remove the product, at its own expense, and replace with a product that meets the stated specifications.
- 2.3 At JEA's sole discretion, Ammonia that has been contaminated by a Supplier during shipment will be replaced at the Supplier's expense within two (2) calendar days of notification. The Supplier will be responsible for proper disposal of such contaminated product and for any damages incurred by JEA in use of the contaminated product.

3. FACILITY LOCATIONS AND CONTACTS

- 3.1 The JEA Contract Administrator or their designated representative shall be the primary contact and provide authorization for Ammonia purchases and deliveries. To facilitate "Supplier Responsibilities", the Vendor shall, upon award, provide a company contact to the respective JEA Managers responsible for implementation.

- 3.2

<u>JEA Northside Contact:</u> Eugenia Neiberger Northside Generating Station 4377 Heckscher Drive, Jacksonville, FL 32226 904-665-7875 Office 904-665-6747 Office neibef@jea.com	<u>Tank Capacity</u> 1 x 40,000 gal. (19% NH ₄ OH)
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- 3.3

<u>JEA Brandy Branch Contact:</u> Process Chemistry Technician Brandy Branch Generating Station 15701 West Beaver St, Jacksonville, FL 32234 904-665-7654 Office 904-328-4297 Cell	<u>Tank Capacity</u> 2 x 12,000 gal. (29% NH ₄ OH)
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4. SUPPLIER RESPONSIBILITIES

- 4.1 Ammonia purchased and delivered under this specification shall meet or exceed the technical specifications. SDS documentation shall be provided for the products specified herein.
- 4.2 Ammonia that is purchased and delivered under this specification shall be requested on an “as needed” basis at the discretion of the responsible JEA Contract Administrator. There are no guaranteed minimum amounts associated with this solicitation. Supplier shall deliver the quantity ordered to the location specified within seventy-two hours (72) after receipt of order unless other arrangements are mutually agreed upon and made with the responsible JEA Contract Administrator.
- 4.3 Supplier shall furnish a Certificate of Analysis and Bill of Lading for each delivery.
- 4.4 Invoices for Ammonia purchased shall indicate the delivery location, amount of product delivered, date of delivery, product name, and Unit Price and total price of product. At a minimum, enough information shall be included to verify the accuracy of the invoice. Invoices for purchases shall be submitted monthly or as mutually agreed upon by JEA and the Supplier.

5. JEA SAFETY REQUIREMENTS FOR SUPPLIERS

- 5.1 All Supplier personnel, including subcontractors (i.e., transportation firm) who come on-site at JEA, must meet the minimum safety training qualifications as required by OSHA and JEA.
- 5.2 Supplier, and their subcontractors (i.e., transportation firm), shall supply all appropriate PPE and perform their work in accordance with OSHA and JEA Contractor Safety Management Process (CSMP). Please visit [jea.com](https://www.jea.com/about/procurement/contractor_safety/) for more information: https://www.jea.com/about/procurement/contractor_safety/.
- 5.3 In the event a safety hazard should occur, the Supplier shall provide twenty-four (24) hour emergency response and service to correct the problem.
- 5.4 Supplier shall provide equipment designed for the safe delivery and off-loading of specified material. Supplier’s tank trucks shall be equipped to safely handle and unload Ammonia including, but not limited to, compressed air supply or pump and proper fittings.
- 5.5 From time to time, JEA may request the Supplier to provide basic safety awareness training about ammonia for its employees. The requested training may take place at the electric plant site or at the Supplier’s training facility, if such a facility exists. At a minimum, the training desired should involve a basic overview of ammonia properties, first aid, types of releases, response recommendations, etc. The Supplier would be compensated for training activities by negotiating a fixed fee for the training services with the JEA Representative.

6. AMMONIA - CHEMICAL SPECIFICATIONS

- 6.1 Ammonia products shall meet the specifications of the National Formulary (NF) for Strong Ammonia Solutions, Federal Specification A-A-59370 (except for packaging) and the

Food Chemical codex. In addition, Reagent Grade Material meets the specifications for USP Reagent Grade and the American Chemical Society (ACS) Reagent chemicals.

6.2 **19% Aqua Ammonia** (*Ammonium Hydroxide*), NH_4OH

Grade: Reagent Grade, blended with fully De-ionized water.

Assay: 18.5 to 19.5 wt. % NH_3

Appearance – Colorless and free from suspended matter or sediment

Delivery: The product is to be supplied by bulk tank trucks.

Residue After Ignition	Not more than 0.002%
Carbon Dioxide (CO_2)	Not more than 0.002%
Chloride (Cl)	Not more than 0.5 ppm
Phosphate (PO_4)	Not more than 2 ppm
Total Sulfur (as SO_4)	Not more than 2 ppm
Heavy Metals (as Pb)	Not more than 0.5 ppm
Iron (Fe)	Not more than 0.2 ppm
Shall be free of nitrates	

6.3 **29% Aqua Ammonia** (*Ammonium Hydroxide*), NH_4OH

Grade: Reagent Grade, blended with fully De-ionized water

Assay: not less than 28.0 or more than 30.0 wt. % NH_3

Delivery: The product is to be supplied by bulk tank trucks.

Residue After Ignition	Not more than 0.002%
Carbon Dioxide (CO_2)	Not more than 0.002%
Chloride (Cl)	Not more than 0.5 ppm
Phosphate (PO_4)	Not more than 2 ppm
Total Sulfur (as SO_4)	Not more than 2 ppm
Heavy Metals (as Pb)	Not more than 0.5 ppm
Iron (Fe)	Not more than 0.2 ppm
Shall be free of nitrates	

7. AUTHORIZATION TO PERFORM WORK

- 7.1 Ammonia provided in accordance with these Technical Specifications and Contract Documents shall be authorized **only** by the responsible JEA Contract Administrator, or his designee and a corresponding Purchase Order.

Any products and/or services provided by the Supplier at the direction, direct or otherwise, of any other agency or personnel of the JEA other than the JEA Contract Administrator may be considered as unauthorized and the Supplier may not be entitled to compensation for products and/or services performed in that circumstance.

8. DELIVERY INSTRUCTIONS

- 8.1 Delivery to each plant site shall be by tank truck. A certificate of weight, taken at the nearest certified weigh station to the JEA plant sites, shall accompany each product shipment. JEA prefers the tank trucks use the JEA Byproduct weigh station located through the back gate of NGS off of William Ostner Road.

8.2 JEA Northside Generating Station:

1. Normal delivery is a full load.
2. Delivery times are between 7:00am – 2:00pm, Monday through Friday, except Federal Holidays defined in section 2 of the solicitation (unless Plant emergency dictates otherwise).
3. Prior to deliveries, Supplier shall email the Contract Administrator to confirm scheduled delivery date & approximate time.
4. Supplier must provide a minimum of thirty (30) minutes of notice before delivery by contacting (904) 665-7875.
5. Delivery is required via the Northside Generating Station rear gate (4433 William Ostner Road).
6. Two- and one-half-hour turnaround on-site prior to any demurrage charges. Demurrage charges will only be paid if delays are directly caused by JEA actions.

8.3 JEA Brandy Branch Generating Station:

1. Normal delivery is full load.
2. Delivery times are between 7:00am – 2:00pm, Monday through Friday, except Federal Holidays (unless Plant emergency dictates otherwise).
3. Email to confirm scheduled delivery date & approximate time.
4. Supplier must provide a minimum of thirty (30) minutes of notice before delivery by contacting (904) 665-7654.
5. Two and one-half hour turnaround on-site prior to any demurrage charges. Demurrage charges will only be paid if delays are directly caused by JEA actions.

9. UNACCEPTABLE SERVICE

- 9.1 In the event that any item purchased and delivered under the terms and conditions of this Solicitation is deemed unacceptable for good and valid cause by either the JEA or any government agency which the JEA is subject to, for reasons which are reasonably under the control of the Supplier, the Supplier shall re-accomplish that purchase and delivery, **totally at their own expense**, and in a timely manner.

10. EMERGENCY CONTACT

- 10.1 The Supplier shall provide name, address, and telephone numbers (work, home, and cell) for those individual(s) who can be contacted in the event of an emergency.

11. REPORTS

- 11.1 Supplier shall submit semi-annual statements of usage to the JEA Contract Administrator. The report shall contain the following information for each order placed:
- A. Department name
 - B. Delivery location
 - C. Type of Chemical
 - D. Quantity

- E. Total Price
- F. Purchase Date

The report shall be sorted by department and totals identified for each department and for JEA as a whole.