SCOPE OF WORK

ACID AND CAUSTIC PIPING REPLACEMENT

Northside Generating Station
Jacksonville, Florida

January 15, 2026

Revision	Description	Date
0	Issue for Bid	01-15-2026
1	2.0-SOW-Acid pipe schedule 40	01-27-2026
2	BOM Details-Caustic pipe fitting are socketweld	01-27-2026
3	Schedule 3.2.2.- Pre-bid 02-04-2026 @ 10:00 A.M.	01-27-2026

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1.0 Background and Objective

Northside Generating Station utilizes sulfuric acid and sodium hydroxide to treat the steam unit condensate in the polishers, as well as prepare deionized water. The sulfuric acid is 97% concentration, and the sodium hydroxide is 50% concentration, and 2 tanks at either end of the turbine building store each of these chemicals. The tanks on the west side of the turbine building feed the piping to each of the 3-steam unit's polisher which remove salt from the units' condensate, requiring approximately 750' each of piping. The tank on the east side of the plant supplies the demineralization building where deionized water used for plant processes and condensate makeup is produced. Piping from the Unit 1 polisher to the demineralization building is another approximately 500' of piping. The full lengths of chemical piping are approximately 1500' each.

Much of the chemical piping is not the proper material due to past failures necessitating quick repairs to bring the water treatment equipment back into operation. These repairs also create weak spots in the system for additional piping and fitting leaks. Currently the two tanks are not linked due to previous piping failures requiring valving out the lengths of piping between the turbine building and the demineralization building. Repairing this piping and restoring these connections would increase equipment reliability.

The objective will be to replace the corroded and leaking piping for the acid and caustic lines. This includes the Piping in the Demineralization Building and extends through the turbine building supplying all 3 steam units.

2.0 Scope of Work

Piping replacement will be completed by general contractor:

- The piping extends from:
    - The tanks on the east side of the turbine building to the transfer pumps in the demineralization building – approximately 200' each.
    - The tank on the west side of the turbine building to each of the 3 steam unit polisher systems– approximately 800' each.
    - The end of the turbine building at the unit 1 polisher, to the demineralization building – approximately 500' each.
- The sulfuric acid piping will be replaced with of 1 ½" Schedule 40 - 316 Stainless Steel Teflon lined pipe, all fittings and valves are flanged with socket weld connections, 150 lb/B16.5, 316 Stainless Steel.
- The sodium hydroxide piping will be replaced in kind with 1" Schedule 80 - Carbon Steel pipe and all fittings and valves are flanged with socket weld connections, 150 lb/B16.3 malleable iron.
- Low point drains will be added at each unit's polishers adding an additional 9 valves each to the system for a total of 27 manual globe valves and 4 check valves each.

- The heat tracing on the caustic lines will be removed and replaced after the piping is replaced.

BOM High Level Details:

Sulfuric Acid Piping:

- 1 ½" 316 Stainless Steel Teflon Lined Pipe Schedule 80
- All fittings and valves are flanged with socket welds, 150 lb/B16.5, 316 Stainless Steel
- 27 manual globe valves
- 4 check valves

Sodium Hydroxide:

- 1" Carbon Steel with Heat Tracing Schedule 80
- All fittings and valves are flanged with socket weld connections, 150 lb/B16.3 malleable iron.
- 27 manual globe valves
- 4 check valves

Piping routes from the chemical tanks on the east side of the plant into the demin building.

- 97% Sulfuric Acid Tank Supply: Approx 100' of 1 ½"
- 97% Sulfuric Acid Vent Supply: Approx 90' of 1"
- 50% Sodium Hydroxide Tank Supply: Approx 75' of 1"
- 50% Sodium Hydroxide Vent Supply: Approx 60' of 1"

From chemical tanks on the west side of the turbine building throughout the first floor of the turbine building with lines to polishers at each of the 3 steam units

- 97% Sulfuric Acid: Approx 750' of 1 ½"
- 50% Sodium Hydroxide: Approx 750' of 1"

Connection from turbine building line to the demin building:

- 97% Sulfuric Acid: Approx 500' of 1 ½"
- 50% Sodium Hydroxide: Approx 500' of 1"

3.0 General Requirements

3.1 Contractor Safety Management Process

3.1.1 Contractors shall adhere to JEA's Contractor Safety Management Process which may be accessed online via the following link:

https://www.jea.com/About/Procurement/Contractor_Safety/

3.2 Schedule

3.2.1 Bids are due by 12:00 PM on Tuesday, February 24, 2025.

3.2.2 A pre-bid meeting and mandatory site-walk will be held 10:00 A.M. at NGS on February 04, 2026. Please RSVP at least 24 hours in advance with **Hans Connell, 386-983-6313, connhe@jea.com.**

3.2.3 A Purchase Order is expected to be awarded to the successful bidder by March 16, 2026.

3.2.4 JEA requires substantial completion of the project by September 30, 2026.

4.0 Reference Drawings and Documents

The following reference drawings are provided as Attachment A to this SOW:

JEA Control No.	Dwg No.	Description
204036	M30WD01	JEA Plant Schematic – D – Treatment Plant Acid
204038	M30WE01	JEA Plant Schematic – E – Treatment Plant Caustic

ATTACHMENT A