

REDS – HIGH VOLTAGE – WORK PACKAGE 1

Statement of Work for
Restoration of Electrical Distribution System – High Voltage- Work Package 1
Located at
NASA Ames Research Center
3/11/2013

The contractor shall furnish all labor, equipment, material and services to install, and test the specified work and all work reasonably incidental thereto, in accordance with the attached specifications and the accompanied drawings. Major work items to be performed and priced as follows:

- a. Provide temporary power sources as required.
- b. Install new relays and power monitoring devices as pre-purchased by the Government. The relays will be pre-set by the Government prior to installation.
- c. Install Arc Flash Detectors completely wired into the new switchgears. Installation shall be in accordance with manufacturer's recommendations.
- d. Provide all painting, labeling and signage as required to complete the work.
- e. Construction must be planned and executed to provide reliable temporary power arrangements, including a mobile generator. The contractor shall provide a detailed work, including estimated timelines and proposed staffing resources, and notify at least 3 weeks in advance for approval on each outage. Building-wide shutdowns must be planned for Saturdays.
- f. The contractor shall provide barriers surrounding work areas and. The contractor shall clean up and vacuum the work area at the end of each work day.
- g. Upon award of contract, the construction schedule will be reviewed with the contractor for final modifications.
- h. The contractor is to provide the following to NASA for review and approval prior to ordering: cost proposals, delivery schedule, submittals and catalog cuts.
- i. The contractor is responsible to provide a safety plan and document weekly safety meetings addressing project specific safety hazards.
- j. Preparation of record drawings is the contractor's responsibility for the work scoped above. The drawings are to be submitted, along with warranties and O&M manuals, to the Government for review and inclusion in the record set for the complete project. Final payment will not be made to the contractor until this requirement has been met.
- k. All workers on this project must gain security clearance prior to entering the facility.

- I. The proposed schedule for this work is 365 days after contract awarded.
This schedule may be modified pending verification of equipment lead times and detailed construction and outage scheduling.

Upgrade the existing six building substations by replacing the existing 6.9kV transformers and breakers with new dual voltage 13.8kVx6.9kV transformers and 15kV breakers, cables rated at 8kV with new cables rated at 15kV, and other 6.9kV rated equipment as summarized in the below:

1. Building N213E Upgrade:
 - a. Replace the existing transformer T-102 (6.9kV—480/277V) with a dual voltage transformer rated at 1000kVA, 13.8kVx6.9kV-480/277V.
 - b. Replace existing 6.9kV medium voltage (MV) switchgear with 13.8kV MV switchgear. Switchgear relays shall be replaced by Alstom equivalent relays.
 - c. Replace existing 6.9kV incoming cables from pad-mount switch number SW 446 to switchgear with 15kV EPR distribution cables.
2. Building N213W Upgrade:
 - a. Replace the existing transformer T-14 (6.9kV—480/277V) with a dual voltage transformer rated at 500kVA, 13.8kVx6.9kV-480/277V.
 - b. Replace the existing 6.9kV ACB080 with a new 13.8kV VCB. Switchgear relays shall be replaced by Alstom equivalent relays.
3. Building N243 Upgrade:
 - a. Replace the existing 6.9kV transformers T-121, T122, T123 and T124 with two dual voltage transformers rated at 1500kVA, 13.8kVx6.9kV-480/277V and one 300kVA transformer 480V-208/120V.
 - b. Replace existing 6.9kV medium voltage (MV) switchgear with 13.8kV MV switchgear. Switchgear relays shall be replaced by Alstom equivalent relays.
 - c. Replace existing 6.9kV incoming varnished cambric lead cables from pad-mount switch number SW 475 to switchgear with 15kV EPR distribution cables.
4. Building N227D Upgrade:
 - a. Replace the existing transformer T-308 (6.9kV—480/277V) with a dual voltage transformer rated at 300kVA, 13.8kVx6.9kV-480/277V.
 - b. Provide a new 13.8kV VCB492 with Alstom relays.
 - c. Provide new 15kV EPR distribution cables from the existing S&C switch 539.
5. Building N246 Upgrade:
 - a. Replace the existing transformer T-154 (6.9kV—480/277V) with a dual voltage transformer rated at 750kVA, 13.8kVx6.9kV-480/277V.
 - b. Replace existing 6.9kV medium voltage (MV) switchgear with 13.8kV MV switchgear. Switchgear relays shall be replaced by Alstom equivalent relays.

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- c. Replace existing 6.9kV incoming varnished cambric lead cables from pad-mount switch number SW 539 to switchgear with 15kV EPR distribution cables.
- 6. Building N223 Upgrade:
Upgrade the existing N223 building substation by replacing the existing 6.9kV ACB492 with a new 13.8kV VCB, cables rated at 8kV with new cables rated at 15kV, and other 6.9kV rated equipment as required.