Enclosure 3 Work Item (WI) 802 Air Conditioning Plant Compressor Overhaul (30KHRS)

T-AKE CLASS

HVAC

ITEM NO. 802 **Category "A"**

1.0 ABSTRACT

This item describes the requirement to perform the Original Equipment Manufacturer (OEM) recommended 30,000 hour AC plant compressor overhaul.

2.0 REFERENCES

2.1 Tech Manual T9516-BQ-MMC-01A, Technical Manual For Refrigeration Plant, Air Conditioning For USNS Amelia Earhart (T-AKE 6) - Installation, Operation And Maintenance Instructions

2.2 Section GB90138A, Service Manual Rotary Screw Compressors SGC 1913 through 2824

3.0 ITEM LOCATION/DESCRIPTION

3.1 Location/Quantity

3.1.1 Location: Auxiliary Machinery Room (5-58-01)

3.1.2 Quantity: XXX (X) AC Plant Compressor(s) - Air Conditioning Plant No. X.

3.2 Item Description/Manufacturer's Data

3.2.1 Liquid Chiller Unit, York Marine AB Model No. VSM 2817E

3.2.2 Compressor, Frick (Johnson Controls) Rotary Screw Compressor, Model No. SGC 2817 T-AKE, Weight 3,000 LBS

3.3 Bill of Materials (Contractor Furnished)

Description	Part Number	Quantity
Overhauling Kit for SGC2817 AC Comp	534L0283C20	XXX
Unloader Spring	534C1360H07	XXX
Installation Gasket Kit SGC2817	IMI17000213	XXX

4.0 GOVERNMENT FURNISHED EQUIPMENT/MATERIAL/SERVICES

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ITEM NO. 802 **Category "A"**

4.1 Government Furnished Equipment (GFE): None

4.2 Government Furnished Material (GFM)

4.2.1 Refrigerant 404A, XXX Gallons

4.2.2 Solos 68 Oil, XXX Gallons

4.3 Government Furnished Services (GFS): None

5.0 NOTES

5.1 The contractor and all subcontractors, regardless of tier must consult the General Technical Requirements (GTR) to determine applicability to this work item. In performance of this work item, the contractor and all subcontractors regardless of tier must comply with the requirements of all applicable GTRs including but not limited to GTRs 1 through 7, 22, 23, 24, 28, and 29.

5.2 The contractor and all subcontractors regardless of tier are advised to review other work items under this contract, including but not limited to Work Items 002, 022, 023, and XXX to determine their effect on the work required under this work item. Many of the definitions relating to performance of this work item are found in Work Item 001.

5.3 THIS SHIP CONTAINS HIGH VOLTAGE (HV) ELECTRICAL SYSTEMS. OBEY ALL POSTED AND VERBAL INSTRUCTIONS REGARDING SAFETY AND EXCLUSION FROM HIGH VOLTAGE AREAS. AT NO TIME APPROACH, WORK ON, OR ENTER A HIGH VOLTAGE AREA WITHOUT PROPER AUTHORIZATION.

5.4 THE T-AKE CLASS ELECTRICAL COLOR CODING DOES NOT FOLLOW CONSISTENT COLOR SCHEME. THE SHIP IS KNOWN TO HAVE CURRENT CARRYING CONDUCTORS COLORED GREEN, BLUE, BLACK, AND WHITE. ASSUME ALL ELECTRICAL CABLES ARE ENERGIZED UNTIL TESTED AND PROVEN OTHERWISE. TEST ALL ELECTICAL CABLES TO ENSURE THEY ARE DE-ENERGIZED PRIOR TO WORKING ON THE ITEM.

6.0 QUALITY ASSURANCE REQUIREMENTS: None additional

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7.0 STATEMENT OF WORK REQUIRED

7.1 With assistance from the crew, pump out refrigerant and depressurize the AC Refrigeration Plant No. X using References 2.1 and 2.2 for guidance.

7.2 Tag-Out all required systems and equipment. Drain and dispose of any liquid in accordance with all federal, state, and local regulations.

7.3 Provide the services of the Original Equipment Manufacturer (OEM) representative(s) identified in paragraph 7.12.

7.4 Disconnect and remove #X plant AC compressor.

7.5 Temporarily install a hard blank with gasket and plug all opening to prevent contamination from any outside sources.

7.6 Complete 30,000 hour overhaul of the compressor using Reference 2.2 for guidance and the contractor furnished material identified in paragraph 3.3.

7.7 Perform and document a satisfactory shop test of overhauled unit to prove compressor meets OEM operational test criteria.

7.8 Reinstall compressor, ensuring proper alignment to both the motor coupling and piping attachments per the guidance provided in Reference 2.1.

7.9 Inspection/Test

7.9.1 Check unit for readiness. Verify proper operation of the evaporator expansion valve (COV01). Perform field calibration as necessary using Reference 2.1 as guidance.

7.9.2 Perform operational test. Ensure the refrigeration unit set points are properly set using References 2.1 and 2.2 as guidance.

7.9.3 Perform a Hot Alignment Measurement to ensure

proper alignment when in operation.

7.10 Reports

7.10.1 When inspection, service and testing reveal any deficiency a condition report is to be submitted to the MSCREP with recommended repairs and parts required. Submit three (3) typewritten copies and one (1) electronic copy in Portable Document Format (PDF).

7.10.2 Submit a report that includes "as released" condition of the AC plant compressors. Submit three (3) typewritten copies and one (1) electronic copy in Portable Document Format (PDF).

7.10.3 All reports and checklists are to be completed and signed by the person who carried out the inspection and maintenance work and countersigned by the Company's representative.

7.11 Painting/Lagging

7.11.1 Prepare, prime, paint and restore all new, soiled, and disturbed surfaces to match surrounding surfaces.

7.11.2 Renew lagging where damaged or disturbed.

7.12 Manufacturer's Representative

7.12.1 Provide the services of an authorized OEM representative to temporarily remove, inspect, refurbish, and test the A/C plant compressors.

7.13 Preparation of Drawings: None

8.0 GENERAL REQUIREMENTS: None additional