HOLMES & NARVER, INC. JOBSITE PROCEDURE	SUBJECT: PRESERVATION OF SCIENTIFIC STATIONS	Number: 4-116 Issue: 1
Issued By The Resident Manager	EFFECTIVE: February 12, 1959	Page 1 of 6

INDEX TO PARAGRAPHS

I PURPOSE

A. To establish the responsibility and outline the method for the preservation of scientific stations at the Eniwetok Proving Ground.

II DEFINITIONS

A. SCIENTIFIC STATION

A Scientific Station is defined as any structure or piece of equipment that exists for the express use of experiments by the Client and was constructed to the User's specifications.

B. COCOONING

Cocooning is defined as a term used to indicate a method of preserving a structure, tool or piece of equipment by means of wrapping and then spraying with a liquid plastic to keep out all moisture.

C. #506 RUST PREVENTATIVE

#506 Rust Preventative is defined as a viscous preparation with an oil base which is used to preserve metal.

D. MOTHBALLING

Mothballing is defined as a term used to indicate a method for the preservation of a structure, tool or piece of installed equipment.

E. INSTALLED EQUIPMENT

Installed Equipment is defined as equipment which is considered to be a fundamental and essential part of a Scientific Station and is usually designated on engineering prints and drawings as necessary to the completeness of a Station according to User's specifications. In addition, such equipment is considered to be directly related to

Supersedes: Jobsite Procedure F-9, Issue 2, dated April 1, 1957	Signed:

to operational activities and may be removable or non-removable. (NOTE: For additional information refer to Jobsite Procedure 1-317.)

III RESPONSIBILITY

A. The Engineering Division is responsible for:

1. The technical direction of a program for the preservation of Scientific Stations and associated equipment.

2. The maintenance and retention of a system for the periodic inspection of mothballed stations to ensure adequate preservation of the Stations and a record of associated equipment.

3. The maintenance of records on all matters pertaining to the preservation and maintenance of Scientific Stations.

B. The Construction/Maintenance Division is responsible for furnishing the labor, equipment and material needed to physically accomplish the preservation and maintenance of Scientific Stations.

C. The Supply Division is responsible for supporting the Preservation Program by identifying and inventorying equipment for which that Division is accountable.

IV METHOD

A. Initial Activity

1. The Engineering Division initiates the process of preserving Scientific Stations by issuing a "Work Order - Construction & Maintenance", Form 1 F-1, after the work is approved and authorized by the AEC.

2. The Construction & Maintenance Division, upon receipt of a "Work Order - Construction & Maintenance", assigns personnel to that particular job; arranges for the provision of equipment and material; and coordinates the work with the other Divisions.

3. The other Divisions, when informed by the Construction & Maintenance Division of a specific work schedule, assign personnel to accompany the work crews for the purpose of ensuring compliance with the Program.

B. Actual Preservation Activity

(NOTE: The method detailed below, in Sub-Paragraphs, 1 through 9, is based on Engineering Division recommendation. It also represents the minimum standards acceptable for the successful completion of the Preservation Program.)

1. All debris and extraneous or surplus material is removed from the inside of the Station, as well as from the area immediately surrounding the Station, and "deep-sixed".

2. After the Station is "broom-clean" and before the mothballing process begins, a "Check List of Items in Scientific Stations (Mothballed)", Form 1 F-22, is completed by the Engineering Division's representative, who tags each item as it is listed.

3. All installed equipment is to remain in the Station, with the exception of equipment which is damaged beyond repair; equipment which is to be removed for repair and subsequently returned to the Station; or equipment which is to be removed according to the User's specific request.

4. For cocooned equipment, a readily visible humidity indicator is placed behind a thin transparent plastic window in the package.

5. Preservation of specific equipment is accomplished in the following manner:

   (a) Air Conditioning Systems:

      i Pump down the entire refrigeration system, isolating the freon in the condensers and leave between 15 to 20 pounds pressure as a holding charge on all the refrigerant lines, cooling coils and compressors.

      ii Close the suction and liquid line shut-off valves at each cooling coil.

      iii Close the suction and discharge service valves on the compressors. Close line shut-off valves between compressors and installation having two compressors piped in for parallel operation.

      iv Drain and clean salt water condensers. Check condition of condenser heads and obtain necessary data for replacement, if needed. Blow out and drain salt water lines, where possible. A water soluble oil solution is used to flush out the condensers and salt water lines to help prevent future corrosion. Renew zinc plugs where they are used.

      v A corrosion preventative, or "Vaseline", is applied to both compressor fly wheel and motor pulley belt grooves and then wrapped for protection. Belts are wrapped or stored in plastic bags and tied to the compressor.

vi Clean temperature and humidity controls and wrap with mastic tape. Leave these items mounted on the wall.

vii Blow out condensate and drain lines extended from the cooling coils.

viii Remove salt water pumps, overhaul if necessary, grease, and place by point of installation after wrapping with water-proof paper and tagging the items.

ix After removing rust and corrosion, paint compressors, bases supply and exhaust fans, pipe hangers and angle iron framework.

(b) Communications Equipment:

i A desiccant is placed inside the components of communications and associated equipment, including telephone switchboards and teletype equipment, and then cocooned. When equipment is packed in weather-proof containers, a desiccant is placed inside the container. (NOTE: All work on teletype equipment is performed by teletype maintenance personnel.)

ii Coaxial cables having an air dielectric are sealed and pressurized with an inert gas, 2 to 3 PSI. The ends of solid dielectric coaxial cables are taped with plastic electrical tape.

iii After removing rust and corrosion, paint previously painted surfaces.

iv The unpainted metal surfaces of spare parts for test equipment, and miscellaneous tools, are protected by a thin coat of "Vaseline"; packed in weather-proof containers with a desiccant placed inside; and then cocooned.

(c) Miscellaneous Electrical Equipment:

i Electrical contacts, including moving parts of equipment, are protected by a thin coat of "Vaseline".

ii Cabinets or boxes relative to the electrical system, are wrapped in weather-proof paper and secured with masking tape.

iii After removing rust and corrosion, cabinets or boxes are painted with one coat of zinc oxide paint.

(d) Metal Blast Doors and Other Ferrous Metal Items:

i Sandblast to remove rust from unpainted metal surfaces and from painted metal surfaces where the rust has started to develop under the paint. (NOTE: Doors usually show rust within a month after being painted.)

ii After rust and corrosion is removed, one coat of red lead or zinc-chromate primer is applied to metal blast doors and other ferrous metal items.

iii After the sandblasting and painting is completed, a coat of #506 Rust Preventative is applied. (NOTE: Check with the Engineering Division if further information is desired.)

6. Material or equipment left in a Station, or removed for storage or repair, is tagged with a linen tag. Each tag is dated, given an identification number, and stamped by the Engineering Inspector. The Supply Division's representative, in addition to the tagging process mentioned above, identifies and marks, as per Sub-Paragraph III-C, above, all installed equipment which is to remain in the Station and all equipment removed for storage or repair.

7. Equipment, if not protected by being located inside an enclosed Station, is wrapped with weather-proof paper and securely taped or tied.

8. Inside of an enclosed Station with a door, or near a Station not enclosed, a sign, which reads as follows, is posted in full view of anyone entering the Station:

"The wrapping on equipment and any or all of this equipment will not be removed or disturbed in any manner without the written approval of H&N Management."

A sign, which reads as follows, is also posted on the door of all enclosed Stations:

"This door must be kept closed."

9. After all work is completed, the entire Station is jointly inspected by the Construction & Maintenance Division's supervisor and the Engineering Division's representative.

Upon concurring with the Engineering Division's representative, Form 1 F-21, "Master List of Scientific Stations (Mothballed)", is filled out and signed by the Construction & Maintenance Division's supervisor.

C. Final Activity

1. The "Master List of Scientific Stations (Mothballed)" is maintained as a permanent record by the Engineering Division. This list gives the site, station number, date mothballed, date door is closed and properly secured and by whom, and condition of interior of station, i.e., poor, fair, good or excellent.

2. A compilation of the "Check List of Items in Scientific Stations (Mothballed)" is maintained for all Stations by the Engineering Division. In addition, the Supply Division maintains a permanent file on all equipment which is identified and inventoried. Once a Station is mothballed and secured, no item may be changed, substituted or removed without approval from H&N Management.

3. In the event removal of any item is authorized, the Engineering and Supply Divisions are notified immediately so that the records maintained by each Division are promptly corrected to show the date the item is removed and by what authority.

4. Periodic inspections of the Stations are made by the Engineering Department as often as is considered necessary for proper surveillance of the Program. A representative of the Property Department, Supply Division, will accompany the Inspector so Property records can be kept current.

JPR::CFD:EWC:fam

DISTRIBUTION "B"