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February 5, 1979

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TO WHOM IT MAY CONCERN:

Following is information on the loss and damage of facilities and equipment at the University of Rhode Island SEAREX Atmospheric Sampling Facility located on Bokandretok Island, Enewetak Atoll. Enewetak Atoll was struck by Typhoon Alice on the morning of January 5, 1979. The high winds in this storm, which were over 100 knots (see article in the Honolulu Star Bulletin and Advertiser attached), and the high tides caused extensive damage to many structures on the atoll. A number of buildings and other structures, not associated with the University of Rhode Island's project, were completely destroyed. The following descriptions refer only to the University of Rhode Island facilities.

For a period during the storm all of Bokandretok was under at least two feet of water. A portable laboratory facility (built by Porta-Kamp, Inc.) was carried about 100 yards by the water and deposited in some bushes. The structural integrity of the building remained, however, and loss in the building was restricted to an air conditioner, dehumidifier, and some power tools. These losses were due to seawater corrosion. A Sears Roebuck metal building on a concrete foundation was completely carried away by the storm as were all the electrical fixtures and deck frames inside it. The concrete foundation for a second Sears building which had not yet been constructed, was also carried away. The 60 foot sampling tower suffered relatively little damage. There was considerable undermining of the concrete foundation of the tower, and one guy wire (out of 16) came off. One guy anchor, out of eight, came loose and the entire set of four guy wires on the west side of the tower suffered considerable abrasion damage at and near ground level due to the movement of both large and small pieces of loose coral against them by the sea. These four guys must be replaced. The armored submarine cable bringing electrical power across the reef from Enewetak Island to Bokandretok Island was broken in three places by the storm, and the armored covering was abraded through in a number of additional places. This underwater cable cannot be spliced and must be replaced. In addition, 2000 feet of No. 1 cable which was used to run power underground from the transformer box at the end of the submarine cable on Bokandretok to the tower and three support buildings, was also broken in a number of places and abraded down to the bare wire in many others by the action of seawater and coral during the storm.

The following were totally destroyed or rendered unusable by the storm, either through action of the wind or high and rapidly moving water and coral. All costs represent initial purchase costs.

| ITEM | COST |
|--------------------------------------|-----------|
| 1. Two Sears Deck Frames | \$ 109.90 |
| 2. Four Guy Cables | 393.00 |
| 3. 3100 ft. number 6 Submarine Cable | 12,338.00 |
| 4. 2000 ft. number 1 Cable | 789.42 |

REPOSITORY *WEL*
COLLECTION *DOE/NV*
BOX No *1234*
SEAREX - Jan 1978 -
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| <u>ITEM</u> (Cont'd) | <u>COST</u> (Cont'd) |
|---|----------------------|
| 5. 720 Board Feet Lumber, 2"x6"x18' | \$ 295.20 |
| 6. Two Turnbuckles | 52.00 |
| 7. One 12,500 BTU Air Conditioner | 319.00 |
| 8. One Dehumidifier | 219.00 |
| 9. Eleven cubic yards Concrete | 385.00 |
| 10. One Sears Roebuck Combination Building | 399.00 |
| 11. Ten High Voltage Signs | 24.00 |
| 12. Twelve 12-foot Aluminum Masts | 225.00 |
| 13. One Circular Saw | 64.99 |
| 14. One Reversible Drill | 49.98 |
| 15. Two Rock Anchors | 45.00 |
| 16. Electrical Service Box (3-phase, 12 circuit breakers) | 38.00 |
| 17. Four Circuit Breakers | 15.44 |
| 18. One Fluorescent Overhead Fixture | 43.50 |
| 19. One Fluorescent Light Bulb | 3.15 |
| 20. One Incadescent Overhead Fixture | 8.20 |
| 21. One Incadescent Light Bulb | .35 |
| 22. Two Outlets | 3.00 |
| 23. Two Switches | 3.40 |
| 24. Four Junction Boxes | 2.40 |
| 25. Four Box Covers | 1.08 |
| 26. Fifty feet number 12 3-wire cable | 12.80 |
| 27. Misc. Connectors and Feed Thrus | 4.50 |
| | <hr/> |
| TOTAL: | \$15,844.31 |



Robert A. Duce
Professor

RAD/vec

cc: R. Cayer
B. Ray
V. Chisholm