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USE OF AN ENVIRONMENT TEST KIT IN MINNESOTA

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The concept for a portable test kit was one that originated at the Canadian Conservation Institute and was adapted by Barbara Moore, then with the Arizona State Museum, and this author then with the Arizona Historical Society. As one component of a two year preservation outreach project, the Minnesota Historical Society assembled two test kits for loan to institutions throughout Minnesota.

The kit consists of three instruments and four other testing or monitoring components, packed in urethane foam within a hard shell suitcase that has a combination lock. The kit includes a INS (model LX-101) digital light meter reading in units of lux (from Edmund Scientific), and Elsec model 762 UV light meter, a Psychro-Dyne battery operated psychrometer (from Cole-Parmer), a copy of The Museum Environment (2nd edition), an Abbey pH pen, a humidity indicator card (from Humidial), a blue wool card (from Talas), spare batteries and an instruction manual. The manual describes the purpose and gives instructions on the use of each item in the kit. It also includes a sample form for recording temperature, humidity and light levels, a list of suppliers with addresses and phone numbers, and the phone number for MHS' object conservator should there be any questions or problems. Each borrower keeps the following items: instruction manual, pH pen, blue wool card and humidity indicator card.

The kit is shipped insured via U.S. mail or UPS to be used by each borrower for a period of one week. At the end of the loan, the kit is either returned to MHS or sent on to the next borrowing institution. Scheduling and coordination were originally handled by Preservation Outreach Project staff, and are now accomplished by MSHS' Field Services Coordinator with occasional assistance from the Conservation Department. Aside from staff time, the only expense to the borrower is the cost of return shipping and insurance.

The target audience for the kit includes small and medium size museums, special and academic libraries, and academic, city, county and court archives. It was found that larger institutions were also quite eager to avail themselves of the service. In many cases their more sophisticated staff despite their understanding of the problems, did not have access to the proper equipment.

The objectives were several: 1. Provide instruments for small institutions that might not have the resources to purchase them; 2. Enable staff to gather and use meaningful data rather than having to rely on a consultant; 3. Eliminate the fear and

aversion that minimally trained staff often feel about science or "high tech" conservation by selecting easily used instruments and providing uncomplicated, easy to follow instructions; 4. Emphasize that simple, practical, and manageable monitoring is the first step in controlling and improving environment; 5. Finally, that environmental control is a preventive conservation measure which yields significant benefits to the entire collection, not just a few items or even a specific group that is but a small part of the whole.

The program has been popular and successful. The kits are usually reserved and scheduled several months in advance. They are being used both by new users and by institutions who have previously used the kit and wish to monitor spaces during different seasons. In addition to raising awareness of conditions and educating staff, the kit has led to substantive improvements and changes and several institutions. One museum used the data gathering in a successful grant proposal to install a new exhibit lighting system. Several other institutions have installed temporary humidity control, while one secured a grant to upgrade an HVAC system.

The need for more extensive data on temperature and humidity is now being addressed with the addition of several ACR temperature/humidity dataloggers (model XT-102, from Herzog/Wheeler, Minneapolis). These self-contained units suffer no damage from frequent movement and shipping and do not require the frequent calibration as do recording hygrothermographs. The datalogger is accompanied by a form (for logging time and date installed and removed) and an instruction manual. The manual describes the importance of temperature and humidity control and makes suggestions for how to use the instrument; i.e., three weeks in one room, one week in each of three rooms, etc. It also contains a typical graph and statistical summary chart. The logger is loaned for a period of three weeks, after which it is mailed back to the conservation department. The department secretary downloads the data into a PC, and prints both graphs and field statistics. The logger is then cleared and sent to the Field Services Officer for shipment to the next institution on the schedule. The printout is sent to the objects conservator for review and comments as appropriate. In many cases a form letter can accompany the printouts discussing the problems with wide and frequent variations in temperature and/or humidity.

The dataloggers have proved very popular and, like the test kits, are booked months in advance.