

The Arizona Border Study

*An Extension of the
Arizona National Human Exposure Assessment Survey (NHEXAS) Study
Sponsored by the Environmental Health Workgroup of the Border XXI Program*

Quality Systems and Implementation Plan for Human Exposure Assessment

The University of Arizona
Tucson, Arizona 85721

Cooperative Agreement CR 824719

Standard Operating Procedure

SOP-UA-D-32.1

Title: Operation and Maintenance of Data Scanners

Source: The University of Arizona

U.S. Environmental Protection Agency
Office of Research and Development
Human Exposure & Atmospheric Sciences Division
Exposure & Dose Research Branch

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Operation and Maintenance of Data Scanners

1.0 Purpose and Applicability

This procedure defines the steps needed to operate the data scanners that will be used in the University of Arizona component of the NHEXAS Project, the Border Study, and other Health and Environment projects.

2.0 Definitions

- 2.1 **BORDER STUDY:** An alias for “Total Human Exposure Arizona: A Comparison of the Border Communities and the State” conducted in Arizona by the University of Arizona/Battelle/Illinois Institute of Technology consortium.
- 2.2 **Form ID Box:** Unique id box used by Teleform to classify each form and page. They are located at the bottom right of each page of every form.
- 2.3 **HEALTH AND ENVIRONMENT PROJECTS (or H&E):** An umbrella title for all projects funded to M.D. Lebowitz and/or M.K. O’Rourke (or their designees) which examine purported or real relationships among environmental factors and any aspect of human health.
- 2.4 **HRP SITE:** The **H**ealth **R**elated **P**rofessions building, located at 1435 North Fremont Avenue; Tucson, AZ 85719. This is an annex of the Arizona Prevention Center and the primary site of NHEXAS Arizona, the Border Study, and other Health and Environment projects.
- 2.5 **LED:** Light Emitting Diode
- 2.6 **NHEXAS Arizona:** Acronym for **N**ational **H**uman **E**Xposure Assessment Survey, a research project conducted in Arizona by the University of Arizona/Battelle/Illinois Institute of Technology Consortium.

3.0 References

- 3.1 “Pentax Technologies: Installation & User’s Guide” Pentax Technologies Corporation. Co. 1995
- 3.2 “TeleForm Standard: User Guide Version 5” Cardiff Software. Co. 1991-1996

3.3 "Windows 95 User's Guide" Microsoft Corporation Co. 1995

4.0 Discussion

Data scanners are now a cost effective method of entering data. Bubble fields are entered with virtually 100% accuracy. Technology to recognize constrained written numeric fields are available with near 100% accuracy. Use of this technology for the entry of data is quick and accurate. Scanable forms will be used in the field, lab, sample tracking and data entry portions of the project whenever possible.

NHEXAS AZ, Border Study, and other Health and Environment project forms were developed using the Teleform program package and following procedures outlined in SOP # UA-D-30.X. This package has a dictionary feature and a feature that prints out the characteristics of each created form.

5.0 Responsibilities

The Project Data Coordinator is responsible for creating the forms, defining the database(s) and making sure all data on the forms is accurately scanned into defined databases. This responsibility may be delegated.

6.0 Materials and Reagents

Pentax Document Scanner Model Number DS10

7.0 Operation and Maintenance of Data Scanners

7.1 Operation

- a. Turn on PC and Scanner. Power to the scanner can be assured by observing that the orange LED light is lit at the front of the scanner. All scanners are plugged into the same power strip as the computer so turning on the PC always powers up the attached scanner. Start the scanning process by clicking on the Teleform Reader icon on the Win95 desktop.
- b. The Pentax scanner is automatically selected by the Teleform Reader.
- c. Always place forms face down on the form feeder platform with form id box at the bottom of the page. With forms having information on both sides of a page, only one form can be scanned at a time. Once the form feeder has scanned all of the odd pages the user flips the form over, remembering to keep the form id box at

bottom of the feeder, and Teleform automatically starts to scan in all even pages. Repeat step C for each form.

- d. If there is a paper jam press the release button, see pg.60 of Pentax User Guide, and pull out the jammed paper.

7.2 Maintenance

- a. Static electricity can be very harmful to the scanner. Therefore, discharge any static electricity you may have built up in your body by grounding yourself. This can be done by touching a large metal object.
- b. Regularly clean the window glass. This will ensure that dirt or smudges will not reduce the quality of your scanned images. Common household Windex and a soft cloth are all that is necessary to properly clean the glass. Scheduled cleanings of the scanner glass are done at the beginning of each month.
- c. To replace the lamp see page 52 in the Pentax user guide. Lamps should be changed at the first sign that clarity of the scanned in images is declining. The clarity can be checked during the verification process of Teleform covered in UA-D-34.X.
- d. The scanners are in use Mon.-Fri. 9:00am to 5:00pm. With such heavy use service for the scanners are performed by Open Technologies in Phoenix, 5869 S. Kyrene Suite #2. All service orders and results are kept by the Data Manager within the Pentax folder.

8.0 Records

Any maintenance performed on the scanners is subject to documentation as described in UA-D-1.X. Records are kept in a binder labeled "Computer Maintenance Logs" at the HRP site, University of Arizona, Tucson, AZ