

National Human Exposure Assessment Survey (NHEXAS)

Maryland Study

Quality Systems and Implementation Plan for Human Exposure Assessment

Emory University
Atlanta, GA 30322

Cooperative Agreement CR 822038

Standard Operating Procedure

NHX/SOP-G08

Title: Training of Interviewers

Source: Harvard University/Johns Hopkins University

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

Notice: The U.S. Environmental Protection Agency (EPA), through its Office of Research and Development (ORD), partially funded and collaborated in the research described here. This protocol is part of the Quality Systems Implementation Plan (QSIP) that was reviewed by the EPA and approved for use in this demonstration/scoping study. Mention of trade names or commercial products does not constitute endorsement or recommendation by EPA for use.

1. Title of Standard Operating Procedure

Harvard University/Johns Hopkins University Standard Operating Procedure:
G08 Training of Interviewers, Rev. 1.0

2. Overview and Purpose

The field team for the NHEXAS Phase I Field Study consists of one Field Interviewer, a phlebotomist, and two Field Technicians, designated FT1 and FT2.

- The interviewer will visit the respondent's home on Day 1 and Day 8 to explain the consent form and incentive information; administer questionnaires; teach the target individual how to use the personal air sampler; and collect water, food, dermal wipe, and urine samples.
- The phlebotomist will visit the home on Day 2 to take blood samples and to pick up a urine sample and the personal air monitor.
- FT1 will visit the home on Day 1 and Day 8 to set up and take down equipment for sampling indoor and outdoor air for metals, pesticides, and PAHs.
- FT2 will visit the home only on Day 1, to sample dust and soil and to draw plans of the house and yard.

All personnel are responsible for the labeling and handling of the samples they take until they deliver the samples to the Field Coordination Center (FCC) and formally transfer custody to the Field Coordinator (FC) or his designate.

Field Technicians and Interviewers will be trained together so that they are familiar with all tasks and can change positions if necessary.

This SOP outlines the responsibilities of the Field Interviewer (FI) before, during, and after sampling at residences; and the training system that will teach FIs what they need to know to handle these responsibilities. The overall responsibilities of the FI are:

- To collect data and samples that are representative of the respondent and residence, by carefully following the defined procedures.
- To label and record all samples and observations accurately, and deliver them to the appropriate recipients.
- To behave professionally with respondents, colleagues, and the public.

3. Discussion

This and the related SOPs, G07 "Training of Technicians," G09 "Training of Laboratory Technicians," G10 "Training of Phlebotomists," G11 "Training of Field Coordination Center Staff," and the appropriate field and laboratory SOPs will be the basis for field and laboratory manuals to be used by staff. For details such as how to test an air sampler, refer to the appropriate

SOPs.

Qualifications for Field Interviewer positions include a bachelor's degree in a scientific, engineering, technical, or medical/social field. Experience in field surveys or sampling is preferred. A second language (appropriate to the population being surveyed) is advantageous.

Field Interviewers will be trained professionals from Westat, who will receive further training in procedures specific to this investigation.

4. Personnel Responsibilities

4.1 Planning Training Curriculum

Harvard and Westat personnel will plan the curriculum for the 1-week training session.

4.2 Hiring Field Interviewers

Candidates for positions will be interviewed and selected by Westat.

4.3 Training Field Interviewers

Training for interviewers and technicians will take place at the Westat offices in Rockville, MD. Training will be by Harvard and Westat engineers familiar with all aspects of the field instrumentation. The training will be supplemented by actual field sampling in residences occupied by Harvard or Westat staff members.

4.4 Audits

During the 15-month survey period, audits will be performed by HSPH, JHU, and/or Westat personnel, and by an independent entity. See Section 8.2.

5. Required Equipment and Materials

Field Manual (including SOPs)

Sampling equipment including questionnaires and refrigerator (listed in SOP for each medium)

Labels, logsheets, forms, ID labels

6. Responsibilities of Interviewers

Table 1 shows the field interviewer's responsibilities organized by medium (air, dust, etc.) and time (before Visit 1 of each Cycle, etc.). TI = target individual.

Indoor and outdoor air, dust, and soil sampling are handled entirely by the field technicians, and blood by the phlebotomist; interviewers have no responsibilities for these media. FCC staff will prepare sample kits and prepare and ship samples. The interviewer will inspect the sample kits for which s/he is responsible before going to the field.

Table 1 Responsibilities -- Field Interviewer

Medium	Visit 1 (Day 1)			Visit 2 (Day 2)			Visit 3 (Day 8)		
	Before	During	After	Before	During	After	Before	During	After
Intro- duction	Get forms.	Introduce team, get signature on consent form, explain incentive plan	Deliver to Field Coordination Center (FCC)						
Question- naires	Prepare question- naires.	Administer Descriptive and Baseline Questionnaires	Deliver to FCC	--	--	--	Prepare question- naire.	Administer Followup Questionnaire	Deliver to FCC.
Activity Diary, Food Checklist	Prepare question- naires.	Instruct Target Individual (TI) on activity diary and food checklist	--	--	--	--	--	Collect and examine activity diary and food checklist	Deliver to FCC.
Personal Air	--	Instruct TI on use of sampler	--	--	--	--	--	--	--
Duplicate Diet, Food Diary Followup	Prepare question- naires.	Instruct TI on duplicate diet	--	--	--	--	--	Pick up duplicate food, administer food diary followup.	Deliver to FCC.
Dermal Wipe	Prepare sample kit.	Dermal wipe: metals.	Deliver sample to FCC.	--	--	--	Prepare sample kit.	Dermal wipe: pesticides.	Deliver sample to FCC.
Water	Prepare sample kit.	Ask respondent to point out water supplies. Take samples.	Deliver samples to FCC.	--	--	--	--	--	--
Urine	Prepare sample cups.	Instruct TI on sample collection	--		(phleboto- mist will collect Day 2 sample)		Collect Day 8 sample	--	Deliver to transfer site or JHU

7. Curriculum

7.1 Contact with respondents

At each residence, the Interviewer will introduce FT1 and FT2 to the respondent and present an overview of each Technician's tasks and the code of conduct.

7.1.1 Behavior

- Maintain the privacy and confidentiality of respondents.
- Be courteous and professional.
- If it is necessary to move any of the respondents' possessions to set up equipment or take a sample, ask permission, move the items carefully, and leave them in plain sight.

7.1.2 Conversation

- Be prepared to answer questions about the survey, including confidentiality (see SOP "Confidentiality Assurance").
- Avoid conversation on unrelated topics, especially controversial topics.
- Do not give advice on environmental or health concerns, even if asked by the respondent. You will have a list of information sources to give out if they have questions.

7.1.3 Appearance

- Clothing should be neat and clean. Do not wear clothing or pins that express personal opinions or advertise products.
- Wear photo ID badge.

7.2 Sample Handling

7.2.1 Labeling, logsheets, and forms

- Trainees will learn the labeling and tracking system, and practice the procedures. For general information, see SOPs "Identification Numbers for Samples and Forms" and "Chain of Custody and Sample Tracking." For labeling of samples for each medium, see the SOP for that medium.
- How to assemble and prepare the labels and forms that will be needed for each field visit.
- How to use field log codes for problems such as timer failure and for any

circumstances that might affect the representativeness of a sample.

- How to log in samples and records after a visit.

- How to use a bar code reader.

7.2.2 Storage and shipping

- How to handle each type of sample until it is delivered to the field coordination center. See SOPs G04 "Chain of Custody and Sample Tracking" and G05 "Storage and Shipping of Samples." The SOP for each medium describes any special requirements (e.g., chilling) and tells where samples go for analysis.

7.3 Equipment Preparation

7.3.1 General

- How to pack the sample kit for each visit, and check the list.
- What to do on site if equipment breaks or is missing.

7.3.2 Containers and seals

- What containers and seals are needed for each visit.
- How to prepare, label, and pack them.
- What to do with unused ones after a visit.

7.4 Questionnaires, Activity Diary, and Food Checklist

- How to encourage the respondent to provide complete and accurate information.
- How to mark responses.
- How to instruct respondent to use the activity diary and food checklist
- How to answer questions and avoid confusion.

7.5 Duplicate Diet

- How to instruct respondent to collect duplicate diet samples
- How to ask the respondent about any problems, e.g., food not collected.

7.6 Urine Samples

- How to instruct respondent to collect urine samples.
- How to handle sample after collection.

7.7 Dermal Wipe

- How to take dermal wipe samples.
- How to handle samples after collection, including special handling for pesticide sample.

7.8 Water

- How to collect and acidify water samples.
- How to handle samples after collection.

7.9 Personal Air Sampler (Personal Exposure Monitor, PEM)

- How to instruct respondent to use PEM:
 - Child/adult, right/left-handed person, day/night procedures, sports, bathing.
 - How to reassure child worried about being teased by schoolmates about PEM.
 - What to do if something seems to go wrong with PEM.
 - Safety precautions: keep hair away, don't block holes, don't crimp hose.

8. Quality Assurance Procedures

8.1 Testing

8.1.1 During training

- Trainees will be tested on skills such as administering a questionnaire and explaining how to use the PEM.
- At end of training, trainees will be evaluated while performing actual field sampling at the residence of a Harvard or Westat staff member.

8.1.2 During survey

- During the early weeks of the survey, instructors will accompany field staff, evaluate their performance, and provide any help needed.

8.2 Audits

During the 15-month survey period, the following audits will be performed:

- internal audits every six months by HSPH, JHU, and/or Westat personnel
- one performance audit by an independent entity

9. References

Harvard University/Johns Hopkins University Standard Operating Procedures:

- G02 Confidentiality Assurance
- G03 Identification Numbers for Samples and Forms
- G04 Chain-of-Custody and Sample Tracking
- G05 Storage and Shipping of Samples
- G06 Problem Management
- G07 Training of Technicians
- G09 Training of Laboratory Technicians
- G10 Training of Phlebotomists
- G11 Training of Field Coordination Center Staff
- F01 Field Sampling -- General Information
- F03 Collection, Storage, and Shipment of Personal Air Samples for Metal Analysis
- F06 Collection, Storage, and Shipment of Dermal Wipe Samples for Metal and Pesticide Analysis
- F07 Collection, Storage, and Shipment of Drinking or Tap Water Samples for Metal and Pesticide Analysis
- F08 Collection, Storage, and Shipment of Duplicate Diet Samples for Metal, Pesticide, and PAH Analysis
- F09 Administration and Analysis of Food Checklist and Purchase of Mini-Market Basket Food
- F10 Collection, Storage, and Shipment of Urine Samples for Metal, Pesticide, and Creatinine Analysis
- F12 Duplicate Sampling
- D01 Data Flow Procedures