

The Children's Total Exposure to Persistent Pesticides and Other Persistent Organic Pollutants (CTEPP) Study

Field Operations

Battelle
Columbus, OH 43201
Contract No. 68-D-99-011

Standard Operating Procedure

CTEPP-SOP-2.11

Title: Field Operations

Source: Battelle

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

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STANDARD OPERATING PROCEDURE (SOP)
FOR FIELD OPERATIONS

Prepared by: _____	Date: _____
Reviewed by: _____	Date: _____
Approved by: _____	Date: _____
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Approved by: _____	Date: _____

1.0 Scope and Applicability

This standard operating procedure (SOP) describes the method for field sampling activities in North Carolina (NC) and Ohio (OH). The SOP provides guidelines for the field staff.

2.0 Summary of Method

This SOP summarizes the field sampling activities to be used by the field team members in NC and OH.

3.0 Definition

Not applicable.

4.0 Cautions

Not applicable.

5.0 Responsibilities

5.1 The CTEPP Task Order Leader (TOL) and Field Team Leader (FTL) oversee the field operation and ensure that field operation procedures are followed by all field staff.

5.2 The field staff follows the SOP.

6.0 Apparatus and Materials

6.1 Materials

6.1.1 Field Notebook

6.1.2 Field sampling equipment and study materials

7.0 Procedure

7.1 Safety procedures

7.1.1 Operating a personal car or a rental car

Always wear a seatbelt and follow traffic regulations (e.g., do not exceed the local speed limit). The project will not pay for a speeding ticket. It is the driver's responsibility to check the condition of the car and ensure it is safe to operate. Always put the gear selector into "Park" if automatic transmission or into gear (not in "Neutral") if manual transmission and set the parking brake when parking the car.

7.1.2 In case of an emergency

If the field staff encounter a medical emergency, carry out the following steps until the Emergency Management Services (EMS) arrives:

- Follow basic Cardiopulmonary Resuscitation (CPR)/first-aid guidelines
- If appropriate, arrange transportation to the nearest medical facility. If the injury is minor, the subject can be transported to the nearest hospital emergency room by car. If the injury is major, an ambulance will be summoned.
- When an emergency ambulance is needed, call 911 (where available) or the local operator and ask for emergency medical transportation. Field staff will be provided with a phone card and cell phone. In addition, the field staff may call the CTEPP 1-800 hot line. Use the nearest residential, business, or pay phone for the emergency call.
- Tell the dispatcher or operator the location of the emergency.
- Continue to administer CPR or first aid as needed.
- After the emergency has been handled, notify the following people:
 1. Christopher Lyu, FTL: (919) 544-3717 or (919) 544-9154 ext. 117
 2. Charles Knott (if cannot reach C. Lyu): (919) 544-3717 or (919) 544-9154 ext.

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3. Jane Chuang, TOL: (614) 424-5222

* NOTE: Use the CTEPP toll-free number to call the Durham Office (1-877-810-9530)

- The TOL will notify the EPA Task Order Project Officer about the incident.

7.1.3 In case of an injury or accident

In case of a work-related injury or accident in the field, the field staff should follow the procedure in 7.1.2 for an emergency. In addition, the following steps should be followed:

- File an Occupational Injury or Illness Report if applicable.
- File an Accident/Incident Analysis Report if applicable.

7.1.4 Working in a difficult neighborhood

If the field staff is working in a difficult neighborhood (e.g., neighborhood with high crime rate), extra precaution should be used. The field staff should observe the following safety measures:

- Only work in the area during daylight hours.
- If appropriate, notify the local police department or sheriff about the field activities in the neighborhood.
- Look out for any signs of trouble.
- At least two staff members are assigned to the field work. Always work together as a team.
- Leave the area immediately if concerned about personal safety. Use good judgment.

- In case of an emergency, follow the procedure in 7.1.2.

7.1.5 In case of severe weather conditions

If severe weather conditions arise while in the field, use good judgment and follow these steps as appropriate:

- If driving, pull over to a shoulder or exit the highway and stop at a nearby gas station or shopping center. Seek a safe shelter immediately.
- If working at the sampling site, seek temporary shelter in the participant's house or day care center.
- If conditions are wet, be very careful when handling electronic equipment. Make sure the power cable is unplugged when working on the equipment. Keep hands dry when plugging in the power cable.
- Depending on the actual conditions, sampling activities may resume if the severe weather conditions no longer exist.
- Call the FTL (Christopher Lyu) or the TOL (Jane Chuang) whenever possible to report the situation. The telephone numbers are listed in 7.1.2.

7.2 Security procedures

The field staff should observe the following security procedures while working in the field:

- Make sure equipment and study materials are packed appropriately and secured in the car before driving the car. Think about what will happen to the equipment and personal safety if the vehicle stops quickly or emergency procedures are used.
- When driving, always keep the doors locked.
- When unloading the equipment, always stop the engine and remove the key from the car. If away from the car for more than 10 minutes, lock the doors of the car. This is especially important when working in a difficult neighborhood (See 7.1.4). It may be best to lock the door every time you leave the car.
- Do not lock the key in the car. Make it a habit to always put the car key in a pocket.
- Do not leave any personal valuables in the car; if this is necessary, lock them in the glove box or put them in a box with cover and lock the doors.

7.3 Dress code

Dress properly according to the weather conditions and the work requirements (e.g., lifting and moving equipment, outdoor activities, walking in muddy field, etc.). Dress professionally and comfortably.

7.4 Field sampling procedures

7.4.1 Pre-sampling preparation

The assigned project staff prepares the needed equipment and study materials for each participant according to the daily checklist. Sample containers are labeled. The Quality Control (QC) manager will conduct a 100% verification check on ID labeling.

7.4.2 Daily checks

Each day the field staff reviews the daily checklist for study materials, equipment, and task assignments of the day. The field staff ensures that needed equipment and materials are loaded in the car before leaving for the sampling site.

7.4.3 Use Field Notebook

The Field Notebook is designed to document the field sampling activities for each study subject. There is one Field Notebook for each participant. The Field Notebook includes the following materials in a three-ring binder:

- Daily Sampling Activities Records
- Field Sample ID Log
- Air Sampling Field Data Log
- House/Building Characteristics Observation Survey (Form #2 or #3)
- Pre-monitoring Questionnaire (Form #4 or #5)
- Post-monitoring Questionnaire (Form #6 or #7)

7.4.3.1 Daily Sampling Activities Records

The Daily Sampling Activities Records serve as a checklist for the daily sampling tasks. In addition to the daily sampling tasks, it includes the subject ID number, sampling date, appointment time with subject, time arrived at the sampling site, time left the sampling site. The field staff who completed the task should put his/her initial next to the task. Record any problems or specific notes about the daily sampling tasks.

7.4.3.2 Participant Sample/Data Collection Checklist

The Participant Sample/Data Collection Checklist is used to document the assigned sample ID number for each of the field samples. This document is prepared by the assigned project staff at least one day before the field sampling date. When the project staff label the sample containers, three identical ID labels are used for each sample; one is attached to the sample container and the other two are attached to the sample bag (See exceptions in 7.4.3.2.1).

7.4.3.2.1 Exceptions

For the following samples, all 3 sample ID labels are attached to the sample container. No sample ID label is attached to the bag.

- Solid food (adult & child)
- Liquid food (adult & child)
- Drinking water

For the following samples, 1 sample ID labels is attached to the sample container (2 samples use the same ID). One sample ID label is attached to the bag.

- Dermal (hand) wipe (adult & child)

For the following samples, all 3 sample ID labels are attached to the bag.

- Used vacuum bag

Reason for the Exceptions

The exceptions are needed due to the logistics and sample container conditions.

7.4.3.3 Air Sampling Field Data Log

The Air Sampling Field Data Log is used to document the conditions of air sampling. It includes the following information:

- Subject ID number
- Date the air monitors were set up
- Box number of the air pumps (if applicable)
- Date and time temperature (indoor/outdoor), air flow readings from the air pump (XAD), and the weather condition are recorded each day. Notes should be recorded for any special conditions.

7.4.3.4 House/Building Characteristics Observation Survey (Form #2 or #3)

The House/Building Characteristics Observation Survey are completed by the field staff on Day 1 and Day 3 of the field sampling. Detailed instructions are given in CTEPP-SOP-2.22 (Procedures for Recording Data Collection Forms).

7.4.3.5 Pre-monitoring Questionnaire (Form #4 or #5)

The Pre-monitoring Questionnaire are completed by the field staff on Day 1 of the field sampling. Detailed instructions are given in SOP-2.21 (Procedures for the Collection of Personal Interview Data).

7.4.3.6 Post-monitoring Questionnaire (Form #6 or #7)

The Post-monitoring Questionnaire are completed by the field staff on Day 3 of the field sampling. Detailed instructions are given in SOP-2.21 (Personal Interview Procedures).

8.0 Records

The Field Notebook is a key document of the CTEPP study. The original records are stored in a secured file room. Field data are entered into a computer database. Electronic files are stored in the field sampling folders and archived on a CD ROM after the project is completed. All electronic files are protected by passwords. Only authorized project personnel are allowed to access the files. All records will be archived for three years after the completion of the study.

9.0 Quality Control and Quality Assurance

The Field Notebooks should be reviewed and verified by the Field QA Officer, the FTL, and the TOL through internal field audits and quality control audits.

10.0 Reference

Not applicable.