SPU Business Inspection Team – Use of Detection Dog Team for Source Tracing and Source Verification of PCBs

Standard Operating Guideline

Introduction:

This SOG is to assist SPU Source Control Inspectors in the use of odor detecting dog/handler team to locate or verify PCB sources, primarily found in exterior commercial building materials. Safety is always the primary concern. When working with detection dogs, it's important that the handler pays close attention to the dog, and it's changes of behavior. For this reason, there may be a lack of normal awareness for environmental concerns such as traffic, fall hazards, or interaction with the public. This activity may also require a large focus on data collection, and it may be best to have a field assistant to take on some of these responsibilities.

Source Control Team Primary Functions:

- Environmental Protection – Activities conducted by the source control members are typically focused on protection of the environment by inspecting businesses for implementation of stormwater protection best management practices. Inspections also focus on pollution sources from assets such as buildings, vaults, or equipment.
- Infrastructure Protection – PCBs have a detrimental effect on SPU owned infrastructure and assets as well as harming local waters and environmental receptors.
- Code and Rule Enforcement – Is a tool used to reach the aforementioned activities.

Primary Work Location:

- Wharf Building (4201 21st Ave W) acts as the primary office location.

Specialized equipment or documentation necessary to carry out the work:

Canine Team

- Dog safety gear -- booties, high visibility vest, leash, and longline
- Dog team consumables – ball or tug-toy, poop bags, food and water
- Training benches for calibration and testing exercises
- Rain gear and high visibility safety vest handler
- Tracklog data collector (optional)
- Transportation vehicle for canine team

Source Control Team

- High visibility safety vests for humans
- Detection dog calibration samples
- Clean media samples - soil, sand, and/or drainage samples
- Quantified PCB media samples-- soil, sand, and/or drainage samples
- PCB field sample for field verification tests and periodic play reinforcement

- Sampling equipment and paperwork
- Investigation documentation forms
- Health and Safety Plan (HASP)
- Hardware – cell phones, video equipment
- Software – GIS, video camera software
- Transportation – vehicles as needed.
- Map of the search area with age of buildings (highlighted if built before prior to 1980)

Skills and/or certifications necessary to carry out the work:

- Hazardous Waste and Emergency Response Certification (HAZWOPER)
- Baseline PCB blood work for detection dog
- Dog handler skills
- Familiarity with the area to be searched

Training required before an individual can do this work and duration of training:

- At a minimum - HAZWOPER, 24 Hours
- Dog trained to detect PCB Aroclor at or below 1,000 ug/kg and verified with bench testing
- At least one team member able to recognize PCB by odor

Use of PCB trained Odor Detection Dog Team for Inspection and Source Tracing:

- **<u>Before Project Start:</u>**
  1. A contract in place
  2. Detection dog trained adequately for inspection purposes
  3. Detection dog baseline and routinely tested for PCB in blood
  4. Dog handler and SPU inspector current on 24 hour HAZWOPER

- **<u>Prior to Field Investigations</u>**
  1. Bench test warmup and calibration each day prior to field investigations
  2. Safety Meeting
     a. Introductions and roles
     b. Instructions for proper access
     c. Focus of the search
     d. Hazards likely to be encountered
     e. Safety equipment or PPE needed
     f. Site history
  3. Scope of area and plan of progress
     a. What are we looking for or expect of this search?
     b. Be aware of anything that could affect or distract canine
     c. What we are not interested in
     d. Will this search include drainage structures?

e. Will samples be collected and where?
f. What information will be recorded
g. Provide a map of the search area with age of buildings (post and prior to 1980 noted)

4. Weather concerns
    a. Working temperature should be less than 80F for dog comfort
    b. Working below 45F is discouraged or with snow on the ground
    c. Winds should be less than 10 mph
    d. Weather conditions must be documented on investigation form
        i. Radical changes in weather should be noted

- **<u>Roles and Responsibilities During Field Investigations</u>**
    - Lead Investigator (LI) is SPU inspector duties:
        - Document handler's interpretation of dog responses on investigation form
        - Document the search with video and photos
        - Will lead the search and direct what to investigate and what not to using the map of the search area with age of buildings
        - Will document the route taken in the search area
        - Will keep a watch out for safety issues as they arise
        - Will take samples as needed for lab analysis or for bench screening
        - Will complete sample COC and sampling sheets
    - Dog handler (DH)
        - Familiar with the detection dog response
        - Controls the direction of search by the dog as instructed by LI
        - Controls the dog safely to protect the dog and public
        - Responsible for the health of dog, determines break times
        - Communicates clearly with the LI during search
        - Requests periodic field tests to check and entertain the dog
        - Brings food and water for the dog as needed
    - Assistants
        - Help with video recording of search
        - Assists LI and DH as requested
        - Interaction with the public or property owners to answer questions

- **<u>After Field Investigations</u>**

1. Close of investigation meeting to review collected notes
    a. Document any additional observations or changes
    b. Interpret results and confidence levels
    c. Decide if additional samples are needed for confirmation
    d. Review any concerns or changes to the procedures for next investigation