

North Carolina Suspicious Substance Response Guidelines (SSRG)

For Public Health, Emergency Responders, and Law Enforcement

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RECORD OF REVISION

Change Number	Date	Name of Person(s) Making Change	Position of Person Making the Change	Comments
VERSION 1	2003	Julie Casani, Brian Combs		Creation of Guidelines
VERSION 2	2007	Julie Casani, Brian Combs		Update
VERSION 3	2012	Julie Casani, Brian Combs		Update
VERSION 4	2017	Julie Casani, Brian Combs, Diana Blackburn		Amending text and adding appendices
VERSION 5	1.31.18	Valerie Lott, Diana Blackburn		Replaced Lab Form 4118 with updated version
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VERSION 7	December 2024	SSRG Workgroup	SSRG Workgroup	Substantial revision to text & appendices making document more usable for operations

DEFINITIONS

Biological Agent – bacteria, viruses, fungi, or other microorganisms and their associated toxins having the ability to adversely affect human health in a variety of ways, ranging from relatively mild, allergic reactions to serious medical conditions – even death.

Chain of Custody – the process of chronologically documenting the control, transfer, and disposition of an item(s), such as a sample that has been collected or a piece of evidence.

Chemical Agent – a chemical compound that, through its intended use and chemical properties produces lethal or other damaging effects on human beings.

Cold Zone – the uncontaminated area beyond the warm zone in which resources are assembled to support the response. No protective gear should be needed within this zone. The incident command center is usually in the cold zone. In addition, there is greater ability to provide patient care here.

Credible Threat – an imminent event/incident that may potentially result in either a public health threat, a criminal threat, or both.

Criminal Threat – an event/incident where law enforcement officials suspect that a criminal act has occurred or is imminent.

Decontamination – the physical and/or chemical process of reducing and preventing the spread and effects of contaminants to people, animals, equipment, objects, or the environment to preclude the occurrence of foreseeable adverse health effects.

Evidence – (Public Health definition): scientific data used to establish truth or falsehood.

(Law Enforcement definition): data presented to a court or jury to support a claim or belief.

Field Screening – a set of procedures typically performed on-scene by the HAZMAT entry team which are nondestructive and generally do not require physically touching or disturbing the suspicious substance. Field screening is conducted to inform the Initial On-Scene Evaluation and serves as a protective safety measure for first responders prior to performing more extensive on-scene work. Examples include the use of a photo-ionization detector (PID) to measure volatile organic compounds (VOCs), handheld multi-gas detection instruments, and portable ionizing radiation detectors.

Hot Zone – the area immediately surrounding the incident site in which primary contamination may occur. The zone extends far enough to prevent the primary contamination of persons and equipment/materials outside the zone. In general, evacuation – but not decontamination or patient care – is carried out in this zone (with certain exceptions). The primary activities performed in the hot zone are sampling, field testing, or other evidence collection activities (e.g., photography). Access Control Points should be established at the periphery of the hot zone to regulate the flow of personnel and equipment between the Hot and Warm Zones. The Hot Zone is also referred to as the Exclusion Zone.

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Initial On-Scene Evaluation – the initial investigation process conducted by a hazardous materials (HAZMAT) response team and/or other first responders who have arrived on-scene to confirm a potential threat. The evaluation typically includes securing the scene, conducting initial interviews and information gathering, reconnaissance, and field screening. The result of the evaluation will determine whether PHP&R and the FBI WMD Coordinator are notified.

Laboratory Response Network (LRN) – Established in 1999 by the Centers for Disease Control and Prevention (CDC) to run a network of laboratories that can respond to biological and chemical threats and other public health emergencies.

Package – any container that may hold a suspect material (e.g., letter, box, jar, bag, suitcase, etc.).

PHP&R – North Carolina Division of Public Health, Preparedness and Response Branch

PHP&R Shift Duty Officer (SDO) – the on-call state public health official responsible for receiving emergent public health threat notifications after normal weekday business hours and on weekends or holidays.

Presumptive Field Testing – a nonconfirmatory test that uses expedient analytical methods to screen a substance for the presence of a chemical or biological agent, typically by using a chemical reaction or mobile instrument, and is conducted outside a laboratory environment.

Public Health Threat – an imminent event/incident that can reasonably be expected to cause bodily harm; place individuals of the public at significant risk of exposure to a suspected chemical or biological agent or toxin; or cause individuals of the public to fear for their safety.

Sample – representative portion(s) of a substance or material(s) to be analyzed at an appropriate laboratory for the intent of positively identifying the substance/material, or to rule out the presence of selected biological agents, toxins, or chemical agents.

Sampling – the process of collecting a representative portion(s) of a substance or material(s) for analysis at a laboratory.

Suspicious Substance – a material (e.g., powder or liquid), that is suspected of being a biological agent, chemical agent, toxin, or an illicit substance and requires laboratory testing for identification.

Threat Credibility Evaluation (TCE) – a process for determining how credible a criminal threat and a public health threat are, the severity of the potential impact for each threat, and what further actions should be taken. The credibility assessment of a criminal threat is led by the FBI (in coordination with other LE officials) and the credibility of a public health threat is assessed by Public Health officials. The results of the TCE are shared during an inter-agency stakeholder coordination call.

Toxicant – a poisonous substance not derived from the metabolism of an organism, e.g., hydrogen fluoride. Most hazardous materials are toxicants, not toxins.

Toxin – substances created by plants or animals that are poisonous to humans; may also include some medicines that are helpful in small doses, but poisonous in large amounts. Most toxins that cause problems in humans come from bacteria.

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VOCs – Volatile Organic Compounds whose composition makes it possible for the compound to evaporate under normal indoor atmospheric conditions of temperature and pressure. The main concern of VOCs indoors is the potential to adversely impact the health of people that are exposed.

Warm Zone – the area surrounding the Hot Zone which also contains the area where decontamination activities are conducted. Patient or survivor treatment may be initiated here. The Warm Zone is designed to reduce the probability that the Cold Zone will become contaminated by putting distance between the Hot and Cold Zones. The Warm Zone is also referred to as the Contamination Reduction Zone.

I. PURPOSE AND SCOPE

The North Carolina Suspicious Substance Response Guidelines (SSRG or the “Guidelines”) provide public health, law enforcement, and emergency response personnel guidance for conducting a coordinated response to incidents where the presence or release of [suspicious substances](#), including powders and liquids, present a threat of human exposure to harmful chemical and/or biological agents or toxins. This document specifically addresses threats delivered through a point source, such as those that may arrive in the mail. For non-point source threats, the North Carolina Public Health Contaminating Incidents Plan should be followed.

These Guidelines describe the response actions that should be taken from the initial discovery of a suspicious substance through delivery of samples to the appropriate laboratory. While personnel safety is the number one priority in a suspicious substance response, this document is not intended to address all safety concerns associated with the response effort. All agencies will follow their respective policies and procedures for responder safety. Adherence to the processes and procedures within the SSRG will help ensure that proper communication and coordination are addressed by key agencies involved in the response, thus contributing to the overall safety of responders and the public.

The SSRG was developed and reviewed by a committee of state and federal partners including the North Carolina Public Health Preparedness and Response Branch (NC PHPR), North Carolina Occupational and Environmental Epidemiology Branch (NC OEEB), North Carolina State Laboratory of Public Health – Laboratory Response Network (NC SLPH-LRN), North Carolina Emergency Management (NCEM), North Carolina Hazardous Materials Regional Response Team (RRT) program, and the Federal Bureau of Investigation’s (FBI) Weapons of Mass Destruction (WMD) Coordinator for North Carolina.

These Guidelines support and should be utilized as an accompaniment to the following documents:

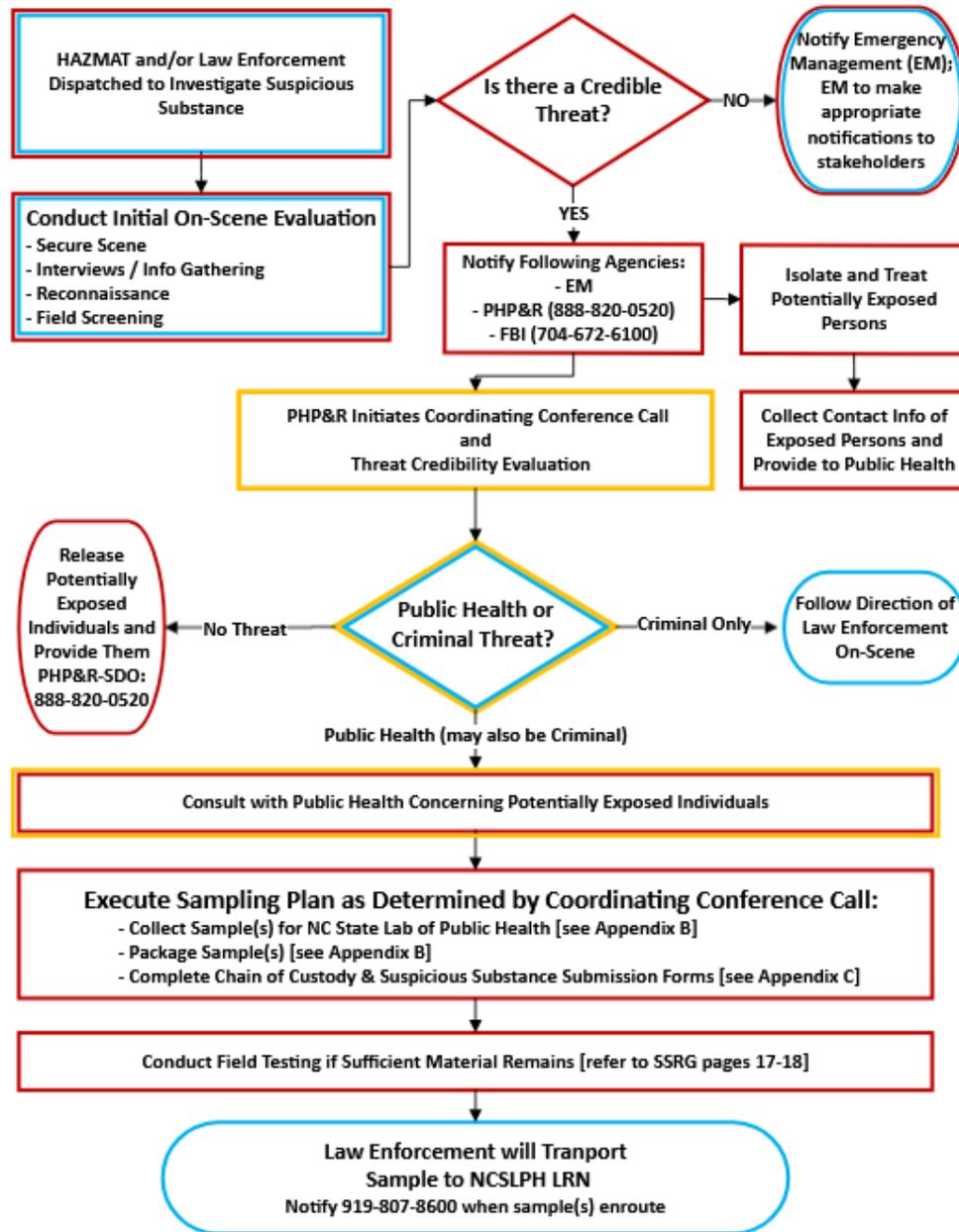
- ASTM International E2270-17 and E2458-17
- [Guidance on Initial Responses to a Suspicious Letter/Container with a Potential Biological Threat](#) (Joint Coordinated Document between FBI, CDC, and DHS published November 2, 2004)
- [Algorithm and Guidelines for Responding to an Incident Involving a Suspicious Non-Clinical Sample](#) (Association of Public Health Laboratories Model Practice published July 2022)
- [Chemical Hazards Emergency Medical Management \(CHEMM\)](#), U.S. Department of Health and Human Services, Administration for Strategic Preparedness and Response (updated 6/7/24)

Published documents consulted in the preparation of these guidelines are listed in the References section herein. NC PHPR is responsible for the maintenance of this document. The SSRG will be reviewed, exercised, revised, and updated as necessary. All recipients are requested to advise NC PHPR by emailing PHPR.NC@dhhs.nc.gov regarding recommendations for improvement.

III. RESPONSE PROCESS

The key elements of a suspicious substance response are presented in the process flow diagram below. This process is intended to guide interagency coordination and communication to enable a safe and efficient response. Individual agencies should utilize their organization’s Standard Operating Procedures (SOPs) for specific guidance on safety and communication protocols. In the case where SOPs conflict with these Guidelines, responders should immediately notify their supervisors and seek resolution from the Incident Commander.

Figure 1. SSRG Response Process Flow Diagram



Responsible Agency



A. DISCOVERY AND INITIAL DISPATCH

An individual who discovers a package with a suspicious substance should immediately take the following steps, as appropriate for the situation.

1. Call 911 and describe the situation.
2. Leave the package where it was discovered to prevent spread of contamination.
3. Do not move, carry, shake, open, or empty the contents of the package.
4. Do not examine (e.g., sniff, touch, taste) the suspicious substance.
5. Wash hands with soap and water.
6. Alert individuals within the immediate vicinity. Isolate and restrict access to the incident location, if possible (e.g., close doors, windows, and ventilation system).
7. Isolate potentially exposed individuals until cleared to leave the scene by law enforcement, public health, or emergency response authorities.

The Telecommunicator (911) will dispatch the appropriate law enforcement and fire department agencies to the scene.

B. INITIAL ON-SCENE EVALUATION

An [initial on-scene evaluation](#) should be conducted by responders. The goal of the initial evaluation is to gather sufficient information in a timely manner to determine if additional coordinated response activities are required. Responders shall follow their organizational SOPs for safety and the use of personal protective equipment (PPE).

- Secure the scene.
 - Establish initial boundaries to prevent unauthorized individuals from entering the area and to prevent potentially exposed individuals from leaving the scene.
- Conduct initial interviews of key individuals and gather relevant information.
 - While maintaining the safety of personnel, attempt to determine the presence or absence of an implied or explicit threat.
 - Attempt to determine if there is a reasonable or obvious explanation for the presence of a suspicious substance that leads to the conclusion that the substance is (or is not) harmless.
 - If there is a return address on a package, attempt to contact and interview the sender.
 - Determine whether anyone was exposed to the substance by inhalation or physical touch.
 - Collect names and contact information of individuals who: are experiencing symptoms of an exposure to the suspicious substance, have potentially been exposed, or have information that may help resolve the matter.
- Conduct reconnaissance.
 - Perform [Field Screening](#) methods to inform responder safety, only if possible to do so without touching or disturbing the suspicious substance. Examples of field screening include the use of air monitoring devices and radiation detection devices.
 - Note the physical state of the substance (solid, liquid, gas), and whether the substance is present on surfaces and the type of surface (porous vs. non-porous)
 - If possible, take photographs that are representative of the scene and the suspicious substance.
- Determine if a credible threat exists.

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- Notify the FBI WMD Coordinator (704-672-6100) and the PPHR Shift Duty Officer (888-820-0520) if there is an imminent event or situation that may potentially result in either a public health threat, a criminal threat, or both.
- If there is no credible threat, communicate this information to local Emergency Management and await their authorization to depart the scene. If in doubt, always contact the FBI WMD Coordinator and the PPHR Shift Duty Officer.

The handling of potentially exposed or injured individuals identified during the initial on-scene evaluation shall be given priority during the response. See [Part 4\(E\)](#) of this section on page 11 for treating exposed individuals that require medical attention.

C. COORDINATION CALL & THREAT CREDIBILITY EVALUATION (TCE)

If it is determined during the Initial On-Scene Evaluation that a credible threat exists, a Coordination Call will be conducted. This call is the opportunity for vested partners to assess the available information and conduct a [Threat Credibility Evaluation \(TCE\)](#). The TCE consists of two separate, but simultaneously occurring assessments:

- Public Health Threat Assessment
- Criminal Threat Assessment

Threat Credibility Evaluation (TCE) Process. The TCE is a three-part process that evaluates the credibility of the threat, determines the potential impact of the threat, provides planning support and involves key stakeholders in determining a coordinated course of action for response.

1. The first step in the TCE process is to determine the credibility of the threat by evaluating the source of the information and an assessment of the technical feasibility, operational practicality, and adversarial intent.
2. If a credible threat is determined to exist, the potential impact is discussed in the second step of the TCE process as either being a low or high impact (see TCE Matrix on Page 14).
3. The final step of the TCE process provides planning support on a course of action, if necessary, to mitigate the threat by providing technical advice, safety measures, evidence collection procedures, intelligence, and scientific analysis.

To effectively inform the development of appropriate response measures, including the entry and site sampling plan, it is important that all available information collected during the Initial On-Scene Evaluation be made available during the TCE (i.e., field screening data, photographs, and medical data if available).

The Coordination Call will be set up and led by PPHR. At a minimum, the following agencies are required to attend the call: FBI WMD Coordinator, local law enforcement, NCEM, local EM, HAZMAT and/or the RRT, OEEB, SLPH-LRN, and the local health department. The on-scene personnel participating in the call should move to a safe, quiet space and be prepared to answer questions, make recommendations, and take notes related to decisions made during the call.

Coordinating Call Agenda

1. Introductions
2. Situation briefing from Incident Commander, on-scene leader, or EM

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3. HAZMAT Team briefing
4. Local public health official briefing
5. Status and disposition of exposed personnel
6. Status and disposition of incident location/building
7. TCE: Criminal Threat Assessment by FBI/LE
8. TCE: Public Health Threat Assessment by Public Health officials
9. Overall assessment and course-of-action consensus
10. Assignments and communication of responsibilities

D. TCE OUTCOMES AND RESULTING COURSES OF ACTION

There are four possible outcomes resulting from the TCE process and coordination conference call. It should be noted that hoaxes (for example, letters that contain a threat about a dangerous substance with or without visible substance present) will be considered credible threats because these cases may be prosecuted under the Hoax statutes (18 USC 1038); even if later the substance is determined to have posed no hazard.

Figure 2. Threat Credibility Evaluation Matrix

		PUBLIC HEALTH THREAT LEVEL	
		HIGH	LOW
CRIMINAL THREAT LEVEL	HIGH	<p><u>Critical Actions</u></p> <ul style="list-style-type: none"> • Treat Incident as Crime Scene and Substance as Evidence • Collect Sample(s) for Analysis by NCSLPH LRN and for Law Enforcement as Evidence • Conduct Presumptive Field Testing • Collect Contact Information of Potentially Exposed Individuals and Provide List to Public Health Officials • Treat Exposed Individuals That Require Immediate Medical Attention • *Offer Prophylaxis/Treatment (if needed) Based on Lab Results 	<p><u>Critical Actions</u></p> <ul style="list-style-type: none"> • Treat Incident as Crime Scene and Substance as Evidence • Collect Sample(s) at Discretion of Law Enforcement as Evidence • Conduct Presumptive Field Testing • No Prophylaxis/Treatment Recommended • Provide Public Health Contact Information to Potentially Exposed Individuals
	LOW	<p><u>Critical Actions</u></p> <ul style="list-style-type: none"> • Collect Sample(s) for Analysis by NCSLPH LRN at Discretion of Public Health • Conduct Presumptive Field Testing • Collect Contact Information of Potentially Exposed Individuals and Provide List to Public Health Officials • Treat Exposed Individuals That Require Immediate Medical Attention • *Offer Prophylaxis/Treatment (if needed) Based on Lab Results • *Further Public Health & Law Enforcement Investigation as Needed 	<p><u>Critical Actions</u></p> <ul style="list-style-type: none"> • Presumptive Field Testing Not Required • No Sample Collection for NCSLPH LRN • No Prophylaxis/Treatment Recommended • Provide Public Health Contact Information to Potentially Exposed Individuals

*Follow-up actions not typically conducted on-scene. Details for the critical actions listed in the TCE Matrix are provided below.

1. TREATING INCIDENT AS CRIME SCENE AND SUBSTANCE AS EVIDENCE

The Incident Commander on-scene should place emphasis on protection of the scene, and responders should work closely with law enforcement authorities to secure the scene. Movement into the secure area should be restricted to only allow access by HAZMAT responders and law enforcement. When the TCE process has determined the criminal threat level is “High”, responders should process the incident as a crime scene to help ensure evidence integrity and preservation. The 12-steps recommended by the FBI for processing a crime scene where evidence will be collected are provided in Appendix A.

At a minimum the following actions must be performed:

- Senior public safety officials for the jurisdiction must be notified & briefed by the Incident Commander.
- Senior public safety officials with statutory public safety authority may isolate property and conduct other short-term tactical operations pending confirmatory analysis by the laboratory as deemed necessary if sufficient hazards or threat credibility indicators are present.
- Typically, short-term action taken under local public safety authority is to restrict access to the affected area based on a risk assessment.

Public health authorities may make decisions for public health protective actions based on the incident threat assessment. These decisions may be informed by presumptive field testing and confirmation results from laboratory analysis.

2. SAMPLE COLLECTION AND TRANSPORTATION

Samples analyzed at an appropriately certified laboratory (e.g., NCSLPH LRN or NC State Crime Lab) provide the only definitive results. When the TCE process dictates that [samples](#) should be collected, responders should follow the procedures provided in Appendix B for sample collection. When possible, priority should be given to collecting samples from the primary source of the substance. It is imperative that all sample collection be conducted by a minimum of a two-person entry team utilizing aseptic evidentiary methods, as described in Appendix B.

- Prior to sample collection:
 - Establish a written Sampling Plan and Safety & Decontamination Plan, including the selection of appropriate PPE based on a risk assessment.
 - Establish boundaries for the [Hot Zone](#), [Warm Zone](#) with decontamination area, and [Cold Zone](#).
- During sample collection:
 - All samples should be collected in accordance with the Sampling Plan. Written procedures for the collection of powders and liquids, from both porous and non-porous surfaces, shall be followed (Appendix B). The use of sampling kits provided by the NC Division of Public Health is preferred.

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- Document the collection of each sample on a sample collection form. Samples being submitted to the NCSLPH LRN must be documented on a Suspicious Substance/Package Submission Form (Appendix C).
- Samples must be screened for explosives, radiation, and [volatile organic compounds \(VOCs\)](#).
- Ensure that photographs are taken in a manner that provides detailed and contextual information. Photographs should include entry/exit shots; long, medium, and closeup shots; and a ruler or object of known scale in close-up shots.
- Photographs should be taken before and after a sample is collected. Photographs should also be taken of any additional evidence present at the scene (i.e., handwritten notes, chemical formulas, container labels, scientific or other reference material).
- After samples have been collected:
 - [Decontaminate](#) the outermost container with 10% bleach solution (commercially purchased or made fresh on day of use) or another approved disinfectant known to kill anthrax spores, such as Dahlgren Decon™ or CaviCide surface disinfectant, in accordance with the collecting agency’s safety and decontamination plan. Adhere to decontamination contact times and allow surfaces to air dry.
 - Ensure required documentation is completed for each sample. Samples must be accompanied by a [Chain of Custody](#) form from the time they leave the Warm Zone until they are received by the laboratory that will assume custody. When submitting samples to the NCSLPH LRN, ensure the “[Suspicious Substance/Package Submission Form](#)” and a “[Chain of Custody Form](#)” have been completed (Appendix C). For sample submission to other labs, consult with lab contact for appropriate lab submittal procedures.
 - If the incident has been deemed a “High” Public Health Threat, samples will be sent to the NCSLPH LRN for analysis. Once samples are packaged, the NCSLPH LRN must be notified at 919-807-8600 with the quantity of samples being transported, a contact number for the law enforcement person transporting the samples, and the approximate time of arrival of the samples at the NCSLPH LRN.
 - If the incident has been deemed a “High” Criminal Threat and a “Low” or “No” Public Health Threat, samples will be sent to a laboratory determined by law enforcement officials for analysis (e.g., SBI State Crime Laboratory). Once samples are packaged, the selected laboratory must be notified with the quantity of samples being transported, a contact number for the law enforcement person transporting the samples, and the approximate time of arrival of the samples at the appropriate facility lab. Note that the NCSLPH LRN may still be utilized to assist in “clearing” a sample for safety purposes prior to its transport to the selected facility lab.
 - Photos and/or video of the samples taken prior to packaging should be sent to the receiving laboratory to help the lab prepare for accepting and analyzing the sample(s). If samples are being sent to the NCSLPH LRN, photos should be sent to slph.bt.dutyphone@dhhs.nc.gov.

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- Package all samples as “Category A - Biological Agents” in accordance with the Department of Transportation (DOT) and International Air Transport Association (IATA) hazardous materials regulations (see [Appendix B1: Sampling and Packaging Guidance](#)).
- Sample Transportation and Delivery:
 - Samples shall be transported to the receiving laboratory by law enforcement only. If responding law enforcement agencies/departments for the incident are unable to facilitate transportation of the samples, contact NC State Highway Patrol Hazardous Materials Section (919-319-1523) or the FBI WMD Coordinator (704-672-6100) to assist with sample transportation.
 - Chain of custody must be maintained from sample collection until the sample reaches the lab. Either the public health [Chain of Custody form](#) (Appendix C) or a law enforcement Chain of Custody form may be used.
 - Samples will only be received by the NCSLPH LRN if they have been properly:
 - screened for explosives, radiation, and VOCs prior to sample packaging and delivery; completion of screening should be documented on the [Suspicious Substance/Package Submission Form](#) (Appendix C).
 - packaged in accordance with the instructions found in Appendix B.
 - NCSLPH LRN All-Hazards Protocol requires testing of biological threats prior to chemical threats. NCSLPH LRN will follow standard LRN-B and LRN-C protocols when analyzing samples.
 - Laboratory results will only be reported to the agency submitting the sample(s). For positive sample results, a coordinating conference call led by NCSLPH LRN will be conducted to determine the next steps of action.

3. CONDUCTING PRESUMPTIVE FIELD TESTING

[Presumptive field testing](#) is a nonconfirmatory test that uses expedient analytical methods to screen a substance for the presence of a chemical or biological agent, typically by using a chemical reaction or mobile instrument, and is conducted outside a laboratory environment. Examples of presumptive field testing include, but are not limited to, Raman spectroscopy, Fourier Transform Infrared Spectroscopy (FTIR) [such as the *RedWave Technology Threat ID FTIR* or the *HazMatID Elite* handheld device], Potassium Iodide (KI) starch paper, M8 or M9 chemical agent detection paper, and pH test strips.

Presumptive field testing may involve disturbing, heating, or even destroying the material being tested and should therefore only be done *after* sufficient samples have been collected for laboratory testing and *only* when agreed upon during the Coordinating Conference Call. Presumptive field testing should not be performed on the same sample material that has been packaged for laboratory analysis but should come from the same source, when possible.

If a package or container is unopened, the package should remain unopened, unless determined necessary to open it during the Coordinating Conference Call. In the situation where a suspicious package or container

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is left sealed, presumptive field testing will not be conducted on the contents of the package but may be conducted to screen residues on the outside of the package.

Importantly, it must be remembered that presumptive field testing results are not definitive. Only samples analyzed at an appropriately certified laboratory (e.g., NCSLPH LRN or NC State Crime Lab) provide definitive results.

All results of presumptive field testing, including the absence of results, should be communicated to the receiving lab prior to sample arrival (via phone if necessary) and be documented on paperwork accompanying the samples when possible.

4. COLLECTING CONTACT INFORMATION OF POTENTIALLY EXPOSED INDIVIDUALS

Contact information of both known and potentially exposed persons shall be collected for law enforcement and public health officials. Contact information for responders that entered the Hot Zone or may have had exposures should be included in the list provided to law enforcement and public health. Law enforcement officials may require this information for their investigation, and public health officials require this information to help in the diagnosis and treatment of exposures, or to follow up with individuals once confirmatory sample results are received from the laboratory.

Responders should also provide public health contact information (PHPR Shift Duty Officer: 888-820-0520 and/or local health department) to anyone who may have been exposed and is released from the incident scene, as individuals may experience delayed symptoms.

5. TREATING EXPOSED INDIVIDUALS THAT REQUIRE IMMEDIATE MEDICAL ATTENTION

Decisions regarding immediate transport of potentially exposed individuals to emergency medical care will be made based on the symptoms or the identification of potential immediately life-threatening substances. Consultation with public health officials or Poison Control can assist in these decisions. See Appendix D for additional guidance for managing occupational exposures to Fentanyl and analogues.

Those with direct hand and face exposure should wash the exposed areas with soap and water as soon as possible. This action should be done in a manner that does not contaminate other areas or other people. Those with heavier contamination or those who do not have soap and water readily available will require appropriate decontamination with the assistance of the HAZMAT Team. Exposed individuals should be isolated in a safe location. If it is not clear who or how to decontaminate, decontamination decisions should be made by public health officials with cooperation and participation of the HAZMAT Team and others, as needed. For decisions about treatment or prophylaxis of exposed persons, a physician should be consulted. Public health officials in the Occupational and Environmental Epidemiology (OEE) Branch can assist with these decisions (919-695-2662).

IV. POST-INCIDENT RECOVERY PROCESS

As the on-scene field activities conclude, agencies involved in the response shall initiate the following activities, as appropriate, to facilitate the post-incident recovery process.

A. SAMPLING RESULTS

NCSLPH LRN

Bioterrorism and Emerging Pathogens Unit (BTEP): Preliminary results from biological screening should be available within approximately 8 hours from receipt of a sample. Actual turnaround times will depend on several factors including the number of samples received. A final laboratory report will be issued by the NCSLPH LRN within 7 days. Results will be provided to the submitter of the samples, PHP&R, and the FBI WMD Coordinator.

Chemical Terrorism and Threat Unit (CTAT): Preliminary results from chemical screening should be available within approximately 1-2 hours from receipt of a sample after BTEP screening. Actual turnaround times will depend on several factors including the number of samples received. A final laboratory report will be issued by the NCSLPH LRN within approximately 2 days after CTAT Unit receives the samples. Results will be provided to the submitter of the samples, PHP&R, and the FBI WMD Coordinator.

For positive sample results, a coordinating conference call led by NCSLPH LRN will be convened to determine the next courses of action. The lab will consult directly with the WMD Coordinator to determine the disposition of all original sample material, sample container(s), AND all processed aliquots. If not needed, the lab's policy for destruction will be followed.

For negative sample results, PHP&R will convey the outcome through a final sitrep sent via email. The lab will contact the submitter to determine if the original material and containers are needed and arrange a time for pickup. If not needed, the lab's policy for destruction will be followed.

Other Labs

Results submitted to labs other than the NCSLPH LRN (e.g., criminal forensics lab) will be coordinated through the lead law enforcement agency. Results may not be able to be shared due to classification level (e.g., LE Sensitive).

B. LONG-TERM SURVEILLANCE AND CARE OF INJURED OR EXPOSED INDIVIDUALS

Based on the sampling results, NC OEEB will coordinate with the Local Health Department to determine how best to care for exposed individuals. Primary responsibility for the surveillance of exposed individuals will be the responsibility of the LHD. NC OEEB will provide consultation and resources to the LHD as needed.

C. DISPOSAL OF MATERIAL AND SITE CLEANUP

The disposal of hazardous materials and the cleanup of the incident site will be determined by the nature of the incident and the substances involved. In some scenarios, the North Carolina Department of Environmental

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Quality (NC DEQ) Hazardous Waste Section may be able to provide the local jurisdiction with assistance with the disposal and cleanup efforts. Additionally, the United States Environmental Protection Agency (US EPA) may be able to offer support.

In cases where an imminent health hazard exists, the local health director has the authority, under North Carolina General Statute 130A-20, to order the "owner, lessee, operator, or other person in control of the specific identified property" to abate the hazard. If the responsible party fails to take the necessary actions, the county may proceed with abating the imminent hazard and place a lien on the property for the cost of the abatement, as outlined in Chapter 44A of the North Carolina General Statutes.

The appropriate course of action for the disposal of materials and site cleanup will be determined through the coordination of the relevant agencies, including law enforcement, public health officials, and environmental regulatory agencies. Proper handling and disposal of hazardous materials will be of utmost importance to ensure the safety of responders, the public, and the environment.

D. DECEDENTS

The PHP&R Fatality Management Unit shall be notified by calling 888-820-0520 for any incident involving a decedent(s). The PHP&R Fatality Management Unit will be the lead for coordinating with the county or State Office of the Chief Medical Examiner.

E. SITUATION REPORT

PHP&R will develop a written situation report utilizing the following format.

Public Health Situation Report Format

All reports should be considered open source as all state e-mails are open source and subject to Public Information requests (NC General Statute Chapter 132).

1. A Situation Report (Sit Rep) will be generated in a timely period, optimally within four to eight hours, by the designated incident lead commander to report any acute incident or incident.
 - a. The format to be used is the Epi Section Sit Rep and is as follows:
 - i. Date and time of initial notification
 - ii. Reported by: (your name here)
 - iii. Incident
 - iv. Location
 - v. Primary Contact: Local: (name, contact number, e-mail if possible)
 - vi. State Contact: (same information)
 - vii. Narrative: (bullets)
 - viii. Action items (who, what, where, how)
 - b. The Sit Rep will be sent to:
 - i. PHPR IH Supervisor and SDO
 - a) PHPR IH Supervisor sends to Branch Director
 - b) Branch director sends to Epi Section Chief

North Carolina Suspicious Substance Response Guidelines

- c) Epi Section Chief sends to sit.rep@dhhs.nc.gov (if deemed necessary)
 - ii. LHD contact person (if applicable). **IH or SDO sends.**
 - iii. Agencies/organizations on coordinating call. **IH or SDO sends.**
 - iv. Any appropriate state (State Emergency Operations Center, NC Information Sharing and Analysis Center, Office of Emergency Medical Services, Department of Environment and Natural Resources, Radiation Protection Section, Department of Agriculture and Consumer Services), federal (FBI, Department of Homeland Security, EPA) agencies, and any other state or federal partners deemed necessary at the time of the incident. **IH or SDO sends.**
2. Patient names and proprietary names **shall not** be included in the report unless there is an immediate life safety need to know.
3. All reports should be considered open source as all state e-mails are open source and subject to Public Information requests (NC General Statute Chapter 132).
 - a. Any updates and/or corrections will be sent to the designated incident lead who will issue the updated Sit Rep.
 - b. A follow-up Sit Rep is required at least every 24 hours, and is the responsibility of the OEE, CD or the PHP&R Branch lead until the incident is concluded. Follow-up may simply be “nothing new to report”. After the incident, a Sit Rep will be issued by the designated lead that terminates the PHP&R response.

F. HOTWASH

A meeting should be conducted with appropriate stakeholders as soon as possible but within 30 days following an incident to help improve the response process and develop lessons learned. The SSRG will be updated, if needed, within 30 days after the conclusion of the hotwash meeting. The guidance listed in Reference 12 of Section V below, or a similar method, should be used to conduct the hotwash process.

V. REFERENCES

1. 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response; [eCFR :: 29 CFR 1910.120 -- Hazardous waste operations and emergency response.](#)
2. Association of Public Health Laboratories Model Practice: *Algorithm and Guidelines for Responding to an Incident Involving a Suspicious Non-Clinical Sample*; Version 4.0., July 2022. <https://www.aphl.org/aboutAPHL/publications/Documents/PHPR-2022-Algorithm-Sample-Guide-4th.pdf>
3. ASTM International Standard Practices for Bulk Sample Collection and Swab Sample Collection of Visible Powders Suspected of Being Biological Agents from Nonporous Surfaces; Designation: ASTM E2458-17. <https://www.astm.org/Standards/E2458.htm>.
4. ASTM International Standard Guide for Operational Guidelines for Initial Response to a Suspected Bio Threat Agent; Designation: ASTM E2270-17. <https://www.astm.org/Standards/E2770.htm>.
5. *Chemical Hazards Emergency Medical Management (CHEMM)*, U.S. Department of Health and Human Services, Administration for Strategic Preparedness and Response (updated 6/7/24, accessed 6/11/24). [Triage Guidelines - CHEMM \(hhs.gov\)](#)
6. DHHS Form 4118: Suspicious Package or Bioterrorism Sample Submittal Form. <https://slph.dph.ncdhhs.gov/forms.asp>
7. *Guidance on Initial Responses to a Suspicious Letter/Container with a Potential Biological Threat*. FBI-DHS-HHS/CDC Coordinated Document; <https://emergency.cdc.gov/planning/pdf/suspicious-package-biothreat.pdf>
8. *Hotwash Guide*, Ohio School Safety Center <https://dam.assets.ohio.gov/image/upload/ohioschoolsafetycenter.ohio.gov/osscc-Hotwash-Guide-2023.pdf>
9. International Association of Fire Chiefs (IAFC), *Guidance Model Procedures for Responding to a Package with Suspicion of a Biological Threat*, October 2008.
10. *Joint Criminal-Epidemiologic Investigations Handbook*. FBI and CDC. Domestic Edition, 2018. <https://www.fbi.gov/file-repository/criminal-and-epidemiological-investigation-handbook.pdf>
11. NC DHHS Contaminating Incidents Plan
12. NFPA 470-2022, *Hazardous Materials/Weapons of Mass Destruction (WMD) Standards for Responders*. <https://link.nfpa.org/free-access/publications/470/2022>

13. Laboratory Response Network (LRN), Procedure # LRN-1118. Processing of Environmental Samples. Version 7.

APPENDICES

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APPENDIX A: FBI 12-STEP PROCESS FOR CRIME SCENE PROCESSING

Step 1: Preparation

- Pre-incident activities necessary to prepare for the sampling mission

Step 2: Approach of Scene

- During response to the scene, obtain as much additional awareness as possible
- Once on scene, review any existing site safety plans or incident action plans that has already been developed
- Begin developing your size-up as to potential resource needs and safety issues that may be present

Step 3: Secure and Protect of Scene

- Isolate the immediate scene and evacuate any endangered individuals
- Removal of non-essential personnel
- Securing scene (barrier control)
- Search warrant considerations

Step 4: Reconnaissance Survey

- Safety considerations
- cursory search identifying obvious items of evidence
- Create a “game plan”
- Complete a rough sketch

Step 5: Evaluation Possibilities

- Is going to be scene dependent
- Do not attempt to sample everything
- Develop a written sampling plan

Step 6: Prepare Narrative

- Record pertinent data immediately
- Arrival
- Actions taken
- Personnel present
- Presence of evidence that was visible without searching
- Scene entry

Step 7: Depict Scene Photographically

- Videotape
- Photography
- Depictions

Step 8: Scene Diagram

- Rough Sketch
- Final Sketch
- Methods

Step 9: Conduct Search

- Assemble necessary supplies
- Establish and communicate objectives to sampling team during pre-entry briefing
- Utilize aseptic techniques and maintain safety awareness
- Sampling of primary containers
- A “blank” or “control” container for each primary sample container

Step 10: Record and Collect

- All samples shall have and maintain individual chain of custody.
- All individual samples are then transferred to and maintained by an evidence custodian.

Step 11: Final Survey

- Final entry is made into the area to ensure that all necessary samples have been collected and that all safety issues have been addressed.
- This review may include a detailed additional search to ensure no items of evidence have been overlooked.

Step 12: Release of Scene

- Proper disposal of hazardous waste will be a primary concern.
- Hazardous waste is generally segregated and disposed of based upon hazard class.
- Scene is released to property owner/contractor or other agency.
- Hazards present must be clearly communicated to the receiving authority.

Any re-entry by law enforcement or fire personnel may require a new search warrant.

APPENDIX B1: SAMPLING AND PACKAGING GUIDANCE

Sampling Guidance

On-scene leaders must prepare by having a sufficient number of trained personnel to staff and support the sample collection process. A cold zone, decontamination area, warm zone, and hot zone should be established, documented, and the locations briefed to all team members. The sample collection team entering the hot zone should comprise a minimum of two people: a Sample Collector and a Sample Facilitator. Additional personnel may be necessary to help document and manage sample collection. All responders shall follow their organizational SOPs for safety and the use of PPE.

The Sample Collector collects the sample and handles everything that contacts the product (or sample). The Sample Collector must change gloves after each sampling operation to avoid cross-contamination. This individual is responsible for signing the Chain-of-Custody form in the cold zone.

The Sample Facilitator is responsible for communication with the cold zone, taking photographs, handling the clean supplies and providing those to the Sample Collector. This individual does not need to change gloves after each sample unless there is a possibility they were contaminated. To prevent contamination, the Facilitator keeps all sample equipment sealed until just before use.

The sampling team should use aseptic techniques whenever handling the sample product, its containers, and collection tools (never touch the end of the tool that contacts the sample).

All disposable materials used in the hot zone during the sampling process (e.g., gloves, plastic tools) should be double bagged using the red/orange poly biohazard waste bags provided to the RRTs. Waste items are considered potentially contaminated until definitive sampling results are received from the laboratory. If needed, the NC SLPH LRN will accept and dispose of sampling waste items brought to their facility.

Identify Sampling Strategy

If the outcome of the Threat Credibility Evaluation has determined that a sample(s) will be collected, an appropriate sampling strategy must be chosen. Depending on the situation, different types of sampling methods may be utilized. The following table lists the four different sampling methods for unknown solids and liquids:

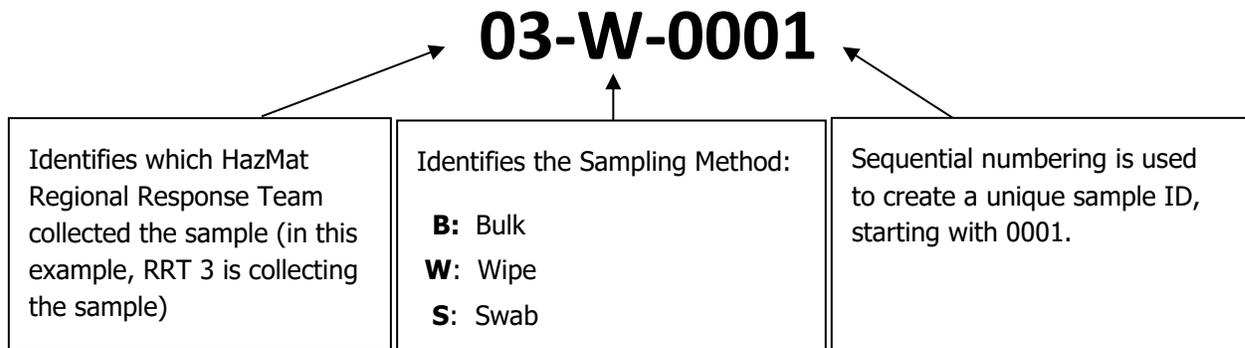
Method of Sampling	Sample Type	Example
Bulk	Solid	Loose powder; container holding powder or liquid (e.g., entire envelope or jar); piece of clothing/carpet
Wipe	Solid or Liquid	Residual powder or liquid on a non-porous surface (e.g., tabletop, dashboard, wall, or window).
Swab	Solid or Liquid	Residual powder or liquid in a hard-to-reach location (e.g., computer keyboard, inside corner of a desk drawer, in vents & ductwork)
Liquid	Liquid	Collection of liquid directly from larger or bulk-sized containers (e.g., 55-gallon drum)

The selected sampling strategy and sampling methods should be documented in the site Sampling Plan.

Select Appropriate Sampling Kit

PHP&R provides each Regional Response Team (RRT) with Sampling Kits for Bulk, Wipe, and Swab sampling methods. The kits are pre-packaged to contain all materials needed for the selected method. HazMat teams may prepare their own sampling kits by assembling the materials listed in the sampling protocols (Appendix B2 – B5). Every sampling kit is identified by a pre-designated, specific and unique Sample ID.

An example Sample ID:



Using a Sampling Kit

Each sample kit contains the appropriate paperwork and sampling materials to take ONE sample. You must use ONLY ONE sampling kit for each sample that is collected. Each kit contains a [Chain of Custody Form](#) and a [Suspicious Substance/Package Submission Form](#) along with the other essential sampling supplies. Required forms and the instructions for completing them are described in Appendix C, and a copy of the forms can also be found on the [NC SLPH LRN website](#). Appendix B2 through B5 describe the protocol for each method of sampling.

Packaging Guidance

Samples must be packaged to meet the standards of [49CFR 173.196](#) using a triple packaging system consisting of (1) a leakproof primary receptacle, (2) leakproof secondary packaging, and (3) rigid outer packaging with infectious substance labeling. The secondary and outer rigid packaging must remain in the [Cold Zone](#). Commercially available *Category A Infectious Substance* shipping kits (examples shown below) are provided to the RRTs by the NC SLPH LRN. These kits meet the DOT standards found in [49CFR 178.609](#) and are pre-labeled to conform with [49CFR 178.503](#).

1. **Double Containment.** ([Hot Zone](#)) Ensure each sample is secured within a double containment system, at a minimum. For example, if a wipe sample is collected, the plastic specimen cup provided in the sample kit is the primary leakproof container for the wipe sample. The cup is then double contained by placing it inside a slide-top bag.

2. **Decontaminate.** ([Warm Zone](#)) Decontaminate the slide-top bag with a 10% bleach solution or another approved disinfectant known to kill anthrax spores, such as Dahlgren Decon™ or CaviCide® surface disinfectant. Allow proper contact time per disinfectant instructions and allow sufficient time for the surface to air dry.

3. **Outer Packaging.** ([Cold Zone](#)) Place the deconned, double-contained sample into the leakproof secondary container, then into the rigid outer packaging. The rigid outer packaging must be of adequate strength for its capacity, mass and intended use. If using rigid outer packaging not provided by the NC SLPH LRN, ensure the rigid outer package is labeled with the diamond hazard label "[CLASS 6.2 Infectious Substance](#)".

*DO NOT USE PAINT CANS FOR PACKAGING. If consultation is needed for packaging, please call the 24hr duty phone for the NC SLPH LRN at 919-807-8600.

4. **Transportation.** Only a law enforcement officer shall transport the properly packaged sample(s) with Chains of Custody and the Sample Submission Form to the NCSLPH LRN located at 4312 District Dr, Raleigh, NC 27607. The lab must be notified in advance of arrival so they will be prepared to receive the sample(s) by contacting the 24hr duty phone for the NC SLPH LRN at 919-807-8600.

Examples of Category A Shipping Containers



BioPack-2 Packaging

(manufactured by AirSea Containers)



Saf-T-Pak® STP-100
Category A Ambient Shipping



Saf-T-Pak® STP-110
Category A Ambient Shipping

Saf-T-Pak® STP-100 & STP-110®

(manufactured by Saf-T-Pak®)

*Shipping of oversized samples which will not fit in the Category A box will be handled on an individual basis. Please contact the NCSLPH LRN 24hr on-call line at 919-807-8600.

**Do NOT use paint cans for inner or outer packaging.

Bulk Sample Collection Protocol

Purpose & Use

Bulk Samples are collected to detect and characterize the presence of biological and/or chemical contamination on materials such as sections of carpet, office supplies, mail (letter or small package), clothing, heating/ventilation/and air conditioning (HVAC) filters, etc., or to test small bulk quantities of a powder or liquid (e.g., powder in an envelope or liquid in a small container).

Sample Kit Contents

Bulk Sample kits are pre-packaged and include everything necessary to take bulk samples. Slide-top bags are used as the primary and secondary containers to secure the sample. The slide-top bags in the kit can vary in size to accommodate the variety of sizes of a sample, but the maximum size bag provided in any bulk sample kit is 24in. x 24in. due to limitations of sample handling at the laboratory. Every Bulk Sample kit contains the following items:

- 2 transparent slide-top bags (primary and secondary sample containers)
- Sample ID labels (may come loose or pre-attached to slide-top bags)
- 1 Chain of Custody Form (typically contained in envelope)
- 1 Sample Submission Form (typically contained in envelope)



Sample Collection Procedure

Before entry:

1. Remove Chain of Custody Form and Sample Submission Form from kit. These forms must remain in the cold zone.
2. Apply Sample ID labels to slide-top bags (primary and secondary sampling containers) if not already labeled.
3. Review Downrange procedures (below).

Downrange:

1. After entry, the Sample Facilitator removes sample collection supplies from kit.
2. Sample Collector places bulk source material gently into primary slide-top bag. Sample Facilitator carefully dispels excess air and seals the primary bag.
3. Sample Facilitator places sealed primary bag containing the source material into secondary slide-top bag. Then carefully dispel excess air and seal the secondary bag. Place into sample transport container (if used to carry from hot zone to warm zone) for decontamination.
4. Communicate the following information to the cold zone:
 - Sample ID
 - Time and date of sample
 - Name of person collecting sample
 - Description of bulk item being collected
 - Map and/or description of source material location
5. Refer to Packaging Guidance in Appendix B1 for decontamination, packaging, and transportation.

APPENDIX B3 WIPE SAMPLE PROTOCOL

Wipe Sample Protocol

Purpose & Use

The wipe sample method is used to collect powder or residual liquid from non-porous surfaces (such as tabletops, counters, desks, file cabinets, windowsills, floors, mailboxes, and tile floors) over a limited area. Optimally, the area should be less than 8in. x 8in.

The wipe sample is taken using the S-Wipe method. The recommended wipe area is approximately 64 in² or less. Make enough vertical S-strokes to cover the entire sample area. Flip wipe material over and with the unexposed side of the pad, make horizontal S-strokes over the same area. Avoid letting pad dry completely, however do not add additional PBS solution to remoisten pad.

Sample Kit Contents

Wipe sampling packs are prepackaged and contain everything required to take a wipe sample. Every pack is pre-labeled with a Sample ID and should include:

- 1 transparent slide-top bag
- Sterile 2in. x 2in. synthetic gauze wipe
- Phosphate-buffered saline (PBS) solution
- Specimen Cup, pre-labeled
- Chain of Custody and Sample Submission Forms



4. Fold the gauze wipe, exposed side in, and place it into the specimen cup.
5. Place cup in slide-top bag (secondary containment).
6. Communicate the following information out to the cold zone:
 - Sample ID
 - Time and date of sample
 - Name of person collecting sample
 - Approximate size of area sampled
 - Map and/or description of source material location
7. Refer to Packaging Guidance in Appendix B1 for decontamination, packaging, and transportation.

Swab Sample Protocol

Purpose & Use

The swab method is used for sample collection of small volumes of powders or liquids on smaller, non-porous surfaces that do not have a large accumulation of dust and dirt such as keyboards, hard to reach areas within machinery, mail sorters, and ventilation grilles.

Sample Kit Contents

Swab sampling packs are prepackaged and contain everything required to take a swab sample. Every pack is pre-labeled with a Sample ID and should include:

- 1 transparent slide-top bag
- Sterile Dacron Swab, Pre-Labeled
- Sterile Phosphate-buffered saline (PBS) solution
- Chain of Custody and Sample Submission Forms (Pre-Labeled)



Procedure

Before entry:

1. Remove Chain of Custody Form and Sample Submission Form from kit. These forms must remain in the cold zone.
2. Apply label to slide-top bag and swab container (primary and secondary sampling containers) if not already labeled.
3. Review Downrange procedures (below).

Downrange:

1. After entry, the Sample Facilitator removes sample collection supplies from kit.
2. The Sample Collector removes the swab from container and moistens it with PBS solution.
3. Sample Collector then collects the source material from the target surface using the following technique:
 - a. Collect source material by rotating the swab while gently moving it across the target surface area to ensure the entire surface of the swab was used. Avoid letting the swab dry completely. Do not add additional PBS solution to remoisten.
 - b. Recommended wipe area is less than 2in. x 2in.
4. Place swab back into container and secure the cap (primary containment).
5. Place swab container into slide-top bag (secondary containment).
6. Communicate the following information out to the cool zone:
 - Sample ID
 - Time and date of sample
 - Name of person collecting sample
 - Approximate size of area sampled
 - Map and/or description of source material location
7. Refer to Packaging Guidance in Appendix B1 for decontamination, packaging, and transportation.

Liquid Sample Protocol

Purpose

This protocol is intended only for the collection of a small or trace amount of an unknown liquid, which is defined in this protocol as less than 2 tablespoons. Collection techniques and procedures for large or bulk liquid samples (i.e., liquid amounts greater than 2 tablespoons), should be collected only after consultation with NCSLPH LRN.

Sampling Equipment

The tools and equipment used for liquid sample collection may vary; however, samples **MUST** be collected using certified sterile collection devices (e.g., sterile plastic pipettes, wipes, or Dacron swabs). Samples must be placed or transferred into plastic, preferably polypropylene, containers. Glass equipment or containers should not be used, as glass interferes greatly with the laboratory analytical processes for analyses.

Sample kits specific to liquid sample collection are not provided to RRTs. However, extra supplies from the list below are provided to each RRT and can be used in the collection of small liquid samples. In most cases, the collection of small liquid samples will include the following:

- Sterile Pipettes
- Sterile Specimen Cup
- Sterile 2in. x 2in. Gauze Wipe
- Sterile Dacron Swab

Procedures

A. Wipe or Swab Method.

The Wipe Sample Protocol (Appendix B3) and the Swab Sample Protocol (Appendix B4) can be used to collect small liquid samples. Note: the application of PBS solution to wet the collection device should not be performed.

B. Pipette Liquid Draw Sampling.

When a sterile pipette is used for liquid draw sampling, the following should be performed.

Before entry:

1. Ensure Chain of Custody Form and Sample Submission Form are used, and they remain in the cold zone.

2. Review Downrange procedures (below).

Downrange:

1. The Sample Facilitator carries the sampling supplies, to include a packaged sterile pipette, sterile specimen cup labeled with sample ID (primary containment), and slide-top bag labeled with sample ID (secondary containment).
2. Assisted by the Sample Facilitator, the Sample Collector removes the pipette from its package and draws the unknown liquid into the pipette.
3. Assisted by the Sample Facilitator, the Sample Collector dispenses the liquid from pipette into the specimen cup held by the Sample Facilitator. Steps 2 and 3 may be repeated to collect sufficient liquid for analysis by the NCSLPH LRN.
4. The Sample Facilitator secures the lid on the specimen cup and places the cup into the slide-top bag.
5. Communicate the following information out to the coldzone:
 - Sample ID
 - Time and date of sample
 - Name of person collecting sample
 - Approximate amount of liquid collected and any descriptive qualitative information (color, viscosity, etc.) about the liquid.
 - Map and/or description of source material location
6. Refer to Packaging Guidance in Appendix B1 for decontamination, packaging, and transportation.

APPENDIX C: NC SLPH SUSPICIOUS SUBSTANCE/PACKAGE SUBMISSION FORM AND CHAIN OF CUSTODY FORM

(An electronic fillable copy of this form can be found on the NCSLPH LRN website:

<https://slph.dph.ncdhhs.gov/Forms/BTandCT-EnvironmentalSubmissionForm.pdf>)



DEPARTMENT OF HEALTH AND HUMAN SERVICES
 DIVISION OF PUBLIC HEALTH
 NORTH CAROLINA STATE LABORATORY OF PUBLIC HEALTH
 4312 DISTRICT DRIVE
 RALEIGH, NC 27607
 24/7 Emergency Phone: (919)-807-8600

SUSPICIOUS SUBSTANCE/PACKAGE SUBMISSION FORM

SUBMITTER DATA

Please fill in all data in appropriate boxes

Submitter Facility/ Name:		Date Submitted:	
Address:			
City/County:		State:	Zip Code:
Phone No.:	Fax No.:	E-mail:	
24-hour contact name (for emergency) Name:		24-hour phone number (for emergency) Phone:	

ENVIRONMENTAL SAMPLE SCREEN INFORMATION

Sample screened for explosives (required) <input type="checkbox"/> yes <input type="checkbox"/> no	Sample screened for radioactivity (required) <input type="checkbox"/> yes <input type="checkbox"/> no	Sample screened for VOCs (required) <input type="checkbox"/> yes <input type="checkbox"/> no	Sample screened for drugs (optional) <input type="checkbox"/> yes <input type="checkbox"/> no	Sample X-rayed (if applicable) <input type="checkbox"/> yes <input type="checkbox"/> no
---	--	---	--	--

SAMPLE DISPOSITION

Laboratory Sample Number(s):
Submitter requests sample disposal by NCSLPH: <input type="checkbox"/> yes <input type="checkbox"/> no

SAMPLE DESCRIPTION

Incident report:
Contents of Package:

Total Number of Containers/Samples: _____

SAMPLE COLLECTION INFORMATION

Collected by(initials):	Date and Time Collected:	Location (full address):
Contents Suspected:		
Samples relinquished by:		Sign:
Print:		

A chain of custody should be maintained on all samples submitted and a copy of the chain of custody should accompany the specimens. Specimens should be evidence taped for evidentiary preservation according to CDC collection, packaging and shipping protocols.

Fentanyl Safety for First Responders*

BACKGROUND :

Fentanyl is a powerful synthetic opioid 50 to 100 times more potent than morphine.¹ As little as two milligrams, about the size of 5 grains of salt, can cause negative health effects including trouble breathing, dizziness, and possible overdose.



There are 42 known illicitly manufactured fentanyl analogs on the market.² Fentanyl has been detected in counterfeit pills, powder, blotter paper, heroin, cocaine, crack cocaine, and crystal methamphetamine³. Fentanyl can be swallowed, snorted, injected or absorbed in the mouth with a blotter paper.¹ While some users may seek fentanyl products, some users and sellers may not be aware that their substances contain fentanyl.

Because of fentanyl's strength and increasing prevalence,^{4,5} there is growing concern about fentanyl exposure for first responders and others who might be potentially exposed. **To date, there have been no documented nor confirmed cases of overdoses among first responders in North Carolina through occupational exposure via routine duties.**

First responders can protect themselves from fentanyl exposure by:

1. Knowing the risks of fentanyl exposure
2. Taking appropriate precautions when fentanyl might be present
3. Knowing the signs of fentanyl intoxication, and having naloxone readily available

What are the risks of fentanyl exposure for first responders?

A first responder can be exposed to fentanyl in one of five ways: skin contact, inhalation, ingestion, contact with a mucous membrane (eyes, nose, etc), or with a needlestick. The most likely way for a first responder to be exposed to fentanyl is through brief skin exposure. For skin exposure, clinical toxicology experts⁶ state:

“The risk of clinically significant exposure to emergency responders is extremely low.”

Skin exposure is not expected to lead to toxicity due to its extremely poor penetration of the skin barrier, and symptoms of intoxication from skin exposure are unlikely. If your skin is exposed to fentanyl, you should wash the area with water as quickly as possible. **Do not use alcohol based hand sanitizers or bleach; they do not effectively wash opioids off skin and may increase skin absorption of fentanyl.**

First responders are unlikely to be exposed through the other four methods of exposure (inhalation, ingestion, contact with a mucous membrane, or a needlestick) if they are following good practice and using universal precautions. Situations involving large amounts of fentanyl, such as a laboratory raid that puts significant powder into the air, is a very rare occurrence. If you have been exposed to fentanyl and develop symptoms of fentanyl intoxication (see below), contact the **Carolina Poison Control 1-800-222-1222** and follow any additional protocols from your agency regarding reporting.

What should first responders do when fentanyl might be present?

Conduct a risk assessment for the presence of fentanyl

- Is a person unconscious and the cause unknown?
- Are suspected drugs or paraphernalia visible?
- What is the form and volume of suspected drugs?

During the assessment assume any white powder is fentanyl.

If the presence of fentanyl or any synthetic opioid is suspected, after addressing the immediate health needs of individuals at the scene, personnel should contact the appropriate officials within their agency who have been trained to handle hazardous materials, or contact the nearest SBI or DEA field office for assistance.

Fentanyl Safety for First Responders*

Centers for Disease Control and Prevention (CDC) Recommends²:

- Do not eat, drink, smoke, or use the bathroom while working in an area with known or suspected fentanyl.
- Do not touch your eyes, mouth, or nose after touching any surface potentially contaminated with fentanyl.
- Field testing fentanyl or its analogs is not recommended because it increases the risk of exposure to responders.
- Avoid performing tasks that may cause fentanyl to become airborne, including handling and field testing. Activities that cause fentanyl to become airborne require higher levels of Personal Protective Equipment (PPE) and should be conducted by appropriately trained personnel and in accordance with agency policies and procedures.
- Wash hands with soap and water immediately after a potential exposure and after leaving a scene where fentanyl is known or suspected to be present to avoid potential exposure and to avoid cross contamination.
- Do not use hand sanitizers or bleach solutions to clean contaminated skin.

What are the symptoms of fentanyl intoxication?

The symptoms of fentanyl intoxication include:

- Respiratory distress, respiratory depression or arrest
- Drowsiness
- Dizziness
- Disorientation
- Pinpoint pupils
- Loss of consciousness
- Nausea/Vomiting

First Responder QUICK TIPS

- Wear gloves when handling narcotics.
- Do not open packaged narcotics.
- Do not field test unknown substances.
- Use soap and water rather than hand sanitizer.



Naloxone is the antidote for opioid overdose. First, **call 911** or request medical assistance. Naloxone should be administered to a person with signs of opioid overdose, such as a person whose breathing has slowed down or stopped or a person losing consciousness. Naloxone can be administered via intramuscular/intravenous injection or through the nose with nasal naloxone.

Due to the potency of fentanyl, a person may need multiple doses of naloxone until breathing has returned to normal. Those who do not improve with naloxone should receive airway support.

If a healthcare worker or first responder has symptoms, please call Poison Center 1-800-222-1222 for additional instructions and reporting of incident.

References:

- 1 Fentanyl. National Institute on Drug Abuse. NIH. Accessed September 19, 2017. <https://www.drugabuse.gov/publications/drugfacts/fentanyl>
2. Fentanyl: Preventing Occupational Exposure to Emergency Responders. The National Institute for Occupational Safety and Health (NIOSH). CDC. Accessed September 19, 2017. <https://www.cdc.gov/niosh/topics/fentanyl/risk.html>
3. NC SBI Crime Lab. Personal Communications November 2017
4. Fentanyl: The Next Wave of the Opioid Epidemic. Debray Houry, M.D., Director National Center for Injury Prevention and Control, CDC, U.S. Department of Health and Human Services (HHS). Accessed September 19, 2017.
- 5 The First Count of Fentanyl Deaths in 2016: Up 540% in Three Years. Accessed September 19, 2017. <https://www.nytimes.com/interactive/2017/09/02/upshot/fentanyl-drug-overdose-deaths.html?mcubz=1>
- 6 American College of Medical Toxicology (ACMT) & American Academy of Clinical Toxicology (AACT). Position Statement: Preventing Occupational Fentanyl and Fentanyl Analog Exposure to Emergency Responders. Accessed September 19, 2017. http://www.acmt.net/_Library/Fentanyl_Position/Fentanyl_PPE_Emergency_Responders_.pdf
- 7 Opioid Overdose Toolkit. Substance Abuse and Mental Health Services Administration (SAMHSA). Accessed September 19, 2017. https://store.samhsa.gov/shin/content/SMA13-4742/Overdose_Toolkit_2014_Jan.pdf

***For the purpose of this document, the term "fentanyl" refers to illicit fentanyl (non-pharmaceutical), including compounds that contain fentanyl, which are known as fentanyl analogs.**



North Carolina Guidelines for Management of Occupational Exposures to Fentanyl

Specialized testing for fentanyl and derivatives is recommended for incidental occupational exposures for individuals believed to be or potentially poisoned by fentanyl and/or its derivatives. Facilitate as follows:

1. If a healthcare worker or first responder has symptoms, please call the North Carolina Poison Control at **1-800-222-1222** for instructions on treatment and clinical management of the patient.
2. Poison Control will immediately report the incident to the Public Health Preparedness and Response Branch (PHPR) 24-hour emergency operations on-call phone at **888-820-0520**.
3. PHPR will notify the State Laboratory of Public Health 24-hour emergency operations duty phone at **919-807-8600** AND the Occupational and Environmental Epidemiology Branch at **919-695-2662** to coordinate additional testing.