

**Colorado Department of Public Health & Environment
Water Quality Control Division**

Emergency Response Forms

modified from
**EPA's Response Protocol Toolbox:
Response Guideline**

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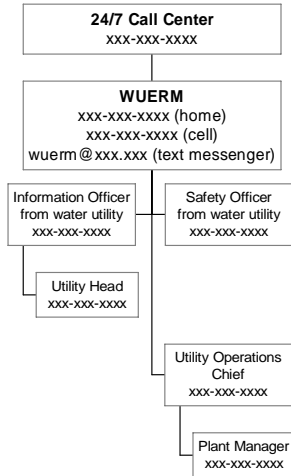
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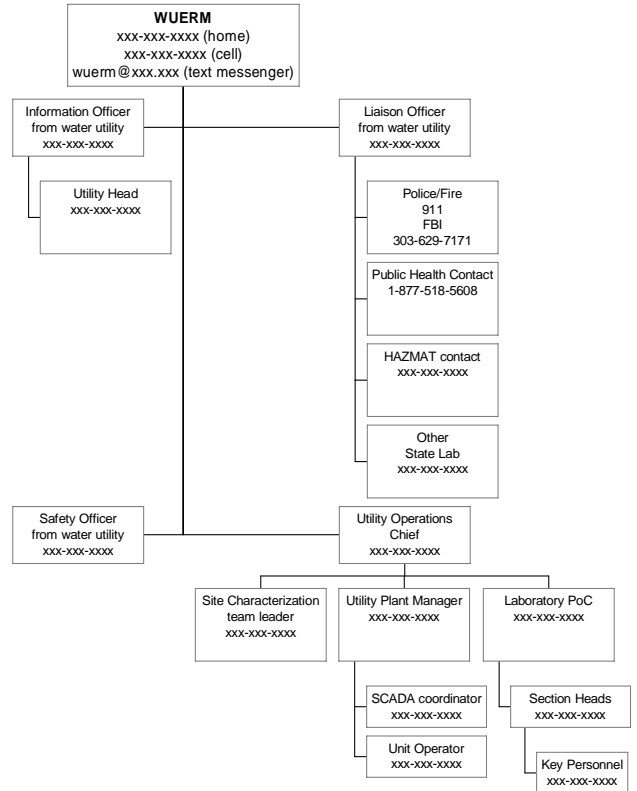
Communications and Notifications

Initial Notifications

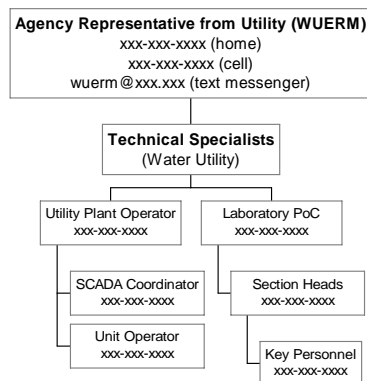
'Possible' stage evaluation by utility



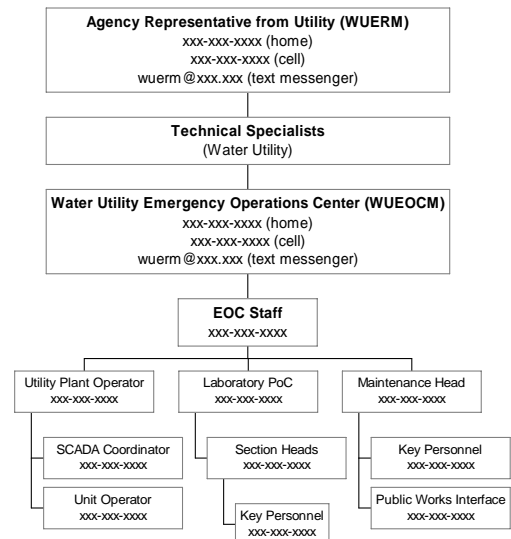
'Credible' stage evaluation by utility



'Credible' stage evaluation by unified command



'Confirmed' stage evaluation by unified command



Threat Evaluation Worksheet

INSTRUCTIONS

The purpose of this worksheet is to help organize information about a contamination threat warning that would be used during the Threat Evaluation Process. The individual responsible for conducting the Threat Evaluation (e.g., the WUERM) should complete this worksheet. The worksheet is generic to accommodate information from different types of threat warnings; thus, there will likely be information that is unavailable or not immediately available. Other forms in the Appendices are provided to augment the information in this worksheet.

THREAT WARNING INFORMATION

Date/Time threat warning discovered: _____

Utility Name and Address: _____

Name/Number of person who discovered threat warning: _____

Type of threat warning:

- | | | |
|---|--|--|
| <input type="checkbox"/> Security breach | <input type="checkbox"/> Witness account | <input type="checkbox"/> Phone threat |
| <input type="checkbox"/> Written threat | <input type="checkbox"/> Unusual water quality | <input type="checkbox"/> Consumer complaints |
| <input type="checkbox"/> Public health notification | <input type="checkbox"/> Other _____ | |

Identity of the contaminant: Known Suspected Unknown

If known or suspected, provide additional detail below

- Chemical Biological Radiological

Describe _____

Time of contamination: Known Estimated Unknown

If known or estimated, provide additional detail below

Date and time of contamination: _____

Additional Information: _____

Mode of contamination: Known Suspected Unknown

If known or suspected, provide additional detail below

Method of addition: Single dose Over time Other _____

Amount of material: _____

Additional Information: _____

Site of contamination: Known Suspected Unknown

If known or suspected, provide additional detail below

Number of sites: _____

Provide the following information for each site.

Site #1

Site Name: _____

Type of facility

- | | | |
|--|--|---|
| <input type="checkbox"/> Source water | <input type="checkbox"/> Treatment plant | <input type="checkbox"/> Pump station |
| <input type="checkbox"/> Ground storage tank | <input type="checkbox"/> Elevated storage tank | <input type="checkbox"/> Finished water reservoir |
| <input type="checkbox"/> Distribution main | <input type="checkbox"/> Hydrant | <input type="checkbox"/> Service connection |
| <input type="checkbox"/> Other _____ | | |

Address: _____

Additional Site Information: _____

Site #2

Site Name: _____

Type of facility

- | | | |
|--|--|---|
| <input type="checkbox"/> Source water | <input type="checkbox"/> Treatment plant | <input type="checkbox"/> Pump station |
| <input type="checkbox"/> Ground storage tank | <input type="checkbox"/> Elevated storage tank | <input type="checkbox"/> Finished water reservoir |
| <input type="checkbox"/> Distribution main | <input type="checkbox"/> Hydrant | <input type="checkbox"/> Service connection |
| <input type="checkbox"/> Other _____ | | |

Address: _____

Additional Site Information: _____

Site #3

Site Name: _____

Type of facility

- | | | |
|--|--|---|
| <input type="checkbox"/> Source water | <input type="checkbox"/> Treatment plant | <input type="checkbox"/> Pump station |
| <input type="checkbox"/> Ground storage tank | <input type="checkbox"/> Elevated storage tank | <input type="checkbox"/> Finished water reservoir |
| <input type="checkbox"/> Distribution main | <input type="checkbox"/> Hydrant | <input type="checkbox"/> Service connection |
| <input type="checkbox"/> Other _____ | | |

Address: _____

Additional Site Information: _____

ADDITIONAL INFORMATION

Has there been a breach of security at the suspected site? Yes No
If "Yes", review the completed 'Security Incident Report' (Section 2.4)

Are there any witness accounts of the suspected incident? Yes No
If "Yes", review the completed 'Witness Account Report' (Section 2.5)

Was the threat made verbally over the phone? Yes No
If "Yes", review the completed 'Phone Threat Report' (Section 2.6)

Was a written threat received? Yes No
If "Yes", review the completed 'Written Threat Report' (Section 2.7)

Are there unusual water quality data or consumer complaints? Yes No
If "Yes", review the completed 'Water Quality/Consumer Complaint Report' (Section 2.8)

Are there unusual symptoms or disease in the population? Yes No
If "Yes", review the completed 'Public Health Report' (Section 2.9)

Is a 'Site Characterization Report' available? Yes No
If "Yes", review the completed 'Site Characterization Report' (Section 3.4)

Are results of sample analysis available? Yes No
If "Yes", review the analytical results report, including appropriate QA/QC data

Is a 'Contaminant Identification Report' available? Yes No
If "Yes", review the completed 'Sample Analysis Report' (Section 4.3)

Is there relevant information available from external sources? Yes No
Check all that apply

- | | | |
|--|---|--|
| <input type="checkbox"/> Local law enforcement | <input type="checkbox"/> FBI | <input type="checkbox"/> DW primacy agency |
| <input type="checkbox"/> Public health agency | <input type="checkbox"/> Hospitals / 911 call centers | <input type="checkbox"/> US EPA / Water ISAC |
| <input type="checkbox"/> Media reports | <input type="checkbox"/> Homeland security alerts | <input type="checkbox"/> Neighboring utilities |
| <input type="checkbox"/> Other | _____ | |

Point of Contact: _____

Summary of key information from external sources (provide detail in attachments as necessary):

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THREAT EVALUATION

Has normal activity been investigated as the cause of the threat warning? Yes No

Normal activities to consider

- | | |
|--|---|
| <input type="checkbox"/> Utility staff inspections | <input type="checkbox"/> Routine water quality sampling |
| <input type="checkbox"/> Construction or maintenance | <input type="checkbox"/> Contractor activity |
| <input type="checkbox"/> Operational changes | <input type="checkbox"/> Water quality changes with a known cause |
| <input type="checkbox"/> Other _____ | |

Is the threat 'possible'? Yes No

Summarize the basis for this determination: _____

Response to a 'possible' threat:

- | | | |
|--|--|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Site characterization | <input type="checkbox"/> Isolation/containment |
| <input type="checkbox"/> Increased monitoring/security | <input type="checkbox"/> Other _____ | |

Is the threat 'credible'? Yes No

Summarize the basis for this determination: _____

Response to a 'credible' threat:

- | | | |
|---|--|---|
| <input type="checkbox"/> Sample analysis | <input type="checkbox"/> Site characterization | <input type="checkbox"/> Isolation/containment |
| <input type="checkbox"/> Partial EOC activation | <input type="checkbox"/> Public notification | <input type="checkbox"/> Provide alternate water supply |
| <input type="checkbox"/> Other _____ | | |

Has a contamination incident been confirmed? Yes No

Summarize the basis for this determination: _____

Response to a confirmed incident:

- | | | |
|--|--|---|
| <input type="checkbox"/> Sample analysis | <input type="checkbox"/> Site characterization | <input type="checkbox"/> Isolation/containment |
| <input type="checkbox"/> Full EOC activation | <input type="checkbox"/> Public notification | <input type="checkbox"/> Provide alternate water supply |
| <input type="checkbox"/> Initiate remediation and recovery | | |
| <input type="checkbox"/> Other _____ | | |

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How do other organizations characterize the threat?

Organization	Evaluation	Comment
<input type="checkbox"/> Local Law Enforcement	<input type="checkbox"/> Possible <input type="checkbox"/> Credible <input type="checkbox"/> Confirmed	
<input type="checkbox"/> FBI	<input type="checkbox"/> Possible <input type="checkbox"/> Credible <input type="checkbox"/> Confirmed	
<input type="checkbox"/> Public Health Agency	<input type="checkbox"/> Possible <input type="checkbox"/> Credible <input type="checkbox"/> Confirmed	
<input type="checkbox"/> Drinking Water Primacy Agency	<input type="checkbox"/> Possible <input type="checkbox"/> Credible <input type="checkbox"/> Confirmed	
<input type="checkbox"/> Other	<input type="checkbox"/> Possible <input type="checkbox"/> Credible <input type="checkbox"/> Confirmed	
<input type="checkbox"/> Other	<input type="checkbox"/> Possible <input type="checkbox"/> Credible <input type="checkbox"/> Confirmed	

SIGNOFF

Name of person completing this form:

Print name _____ Phone Number _____

Signature _____ Date/Time: _____

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Security Incident Report Form

INSTRUCTIONS

The purpose of this form is to help organize information about a security incident, typically a security breach, which may be related to a water contamination threat. The individual who discovered the security incident, such as a security supervisor, the WUERM, or another designated individual may complete this form. This form is intended to summarize information about a security breach that may be relevant to the threat evaluation process. This form should be completed for each location where a security incident was discovered.

DISCOVERY OF SECURITY INCIDENT

Date/Time security incident discovered: _____

Name of person who discovered security incident: _____

Mode of discovery:

- | | | |
|---|--|---|
| <input type="checkbox"/> Alarm (building) | <input type="checkbox"/> Alarm (gate/fence) | <input type="checkbox"/> Alarm (access hatch) |
| <input type="checkbox"/> Video surveillance | <input type="checkbox"/> Utility staff discovery | <input type="checkbox"/> Citizen discovery |
| <input type="checkbox"/> Suspect confession | <input type="checkbox"/> Law enforcement discovery | |
| <input type="checkbox"/> Other _____ | | |

Did anyone observe the security incident as it occurred? Yes No

If "Yes", complete the 'Witness Account Report' (Appendix 8.4)

SITE DESCRIPTION

Site Name: _____

Type of facility

- | | | |
|--|--|---|
| <input type="checkbox"/> Source water | <input type="checkbox"/> Treatment plant | <input type="checkbox"/> Pump station |
| <input type="checkbox"/> Ground storage tank | <input type="checkbox"/> Elevated storage tank | <input type="checkbox"/> Finished water reservoir |
| <input type="checkbox"/> Distribution main | <input type="checkbox"/> Hydrant | <input type="checkbox"/> Service connection |
| <input type="checkbox"/> Other _____ | | |

Address: _____

Additional Site Information: _____

BACKGROUND INFORMATION

Have the following "normal activities" been investigated as potential causes of the security incident?

- | | |
|--|--|
| <input type="checkbox"/> Alarms with known and harmless causes | <input type="checkbox"/> Utility staff inspections |
| <input type="checkbox"/> Routine water quality sampling | <input type="checkbox"/> Construction or maintenance |
| <input type="checkbox"/> Contractor activity | <input type="checkbox"/> Other _____ |

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Was this site recently visited *prior* to the security incident? Yes No

If "Yes," provide additional detail below

Date and time of previous visit: _____

Name of individual who visited the site: _____

Additional Information: _____

Has *this location* been the site of previous security incidents? Yes No

If "Yes," provide additional detail below

Date and time of most recent security incident: _____

Description of incident: _____

What were the results of the threat evaluation for this incident?

'Possible'

'Credible'

'Confirmed'

Have security incidents occurred at *other locations* recently? Yes No

If "Yes," complete additional 'Security Incident Reports' (Appendix 8.3) for each site

Name of 1st additional site: _____

Name of 2nd additional site: _____

Name of 3rd additional site: _____

SECURITY INCIDENT DETAILS

Was there an alarm(s) associated with the security incident? Yes No

If "Yes," provide additional detail below

Are there sequential alarms (e.g., alarm on a gate and a hatch)? Yes No

Date and time of alarm(s): _____

Describe alarm(s): _____

Is video surveillance available from the site of the security incident? Yes No

If "Yes," provide additional detail below

Date and time of video surveillance: _____

Describe surveillance: _____

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Unusual equipment found at the site and time of discovery of the security incident:

- | | |
|--|--|
| <input type="checkbox"/> Discarded PPE (e.g., gloves, masks) | <input type="checkbox"/> Empty containers (e.g., bottles, drums) |
| <input type="checkbox"/> Tools (e.g., wrenches, bolt cutters) | <input type="checkbox"/> Hardware (e.g., valves, pipe) |
| <input type="checkbox"/> Lab equipment (e.g., beakers, tubing) | <input type="checkbox"/> Pumps or hoses |
| <input type="checkbox"/> None | <input type="checkbox"/> Other _____ |

Describe equipment: _____

Unusual vehicles found at the site and time of discovery of the security incident:

- | | | |
|--|---|---------------------------------------|
| <input type="checkbox"/> Car/sedan | <input type="checkbox"/> SUV | <input type="checkbox"/> Pickup truck |
| <input type="checkbox"/> Flatbed truck | <input type="checkbox"/> Construction vehicle | <input type="checkbox"/> None |
| <input type="checkbox"/> Other _____ | | |

Describe vehicles (including make/model/year/color, license plate #, and logos or markings): _____

Signs of tampering at the site and time of discovery of the security incident:

- | | |
|--|--|
| <input type="checkbox"/> Cut locks/fences | <input type="checkbox"/> Open/damaged gates, doors, or windows |
| <input type="checkbox"/> Open/damaged access hatches | <input type="checkbox"/> Missing/damaged equipment |
| <input type="checkbox"/> Facility in disarray | <input type="checkbox"/> None |
| <input type="checkbox"/> Other _____ | |

Are there signs of sequential intrusion (e.g., locks removed from a gate and hatch)? Yes
 No

Describe signs of tampering: _____

Signs of hazard at the site and time of discovery of the security incident:

- | | |
|--|---|
| <input type="checkbox"/> Unexplained or unusual odors | <input type="checkbox"/> Unexplained dead animals |
| <input type="checkbox"/> Unexplained dead or stressed vegetation | <input type="checkbox"/> Unexplained liquids |
| <input type="checkbox"/> Unexplained clouds or vapors | <input type="checkbox"/> None |
| <input type="checkbox"/> Other _____ | |

Describe signs of hazard: _____

SIGNOFF

Name of person responsible for documenting the security incident:

Print name _____

Signature _____

Date/Time: _____

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Witness Account Report Form

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INSTRUCTIONS

The purpose of this form is to document the observations of a witness to activities that might be considered an incident warning. The individual interviewing the witness, or potentially the witness, should complete this form. This may be the WUERM or an individual designated by incident command to perform the interview. If law enforcement is conducting the interview (which may often be the case), then this form may serve as a prompt for "utility relevant information" that should be pursued during the interview. This form is intended to consolidate the details of the witness account that may be relevant to the threat evaluation process. This form should be completed for each witness that is interviewed.

BASIC INFORMATION

Date/Time of interview: _____

Name of person interviewing the witness: _____

Witness contact information

Full Name: _____

Address: _____

Day-time phone: _____

Evening phone: _____

E-mail address: _____

Reason the witness was in the vicinity of the suspicious activity: _____

WITNESS ACCOUNT

Date/Time of activity: _____

Location of activity:

Site Name: _____

Type of facility

- | | | |
|--|--|---|
| <input type="checkbox"/> Source water | <input type="checkbox"/> Treatment plant | <input type="checkbox"/> Pump station |
| <input type="checkbox"/> Ground storage tank | <input type="checkbox"/> Elevated storage tank | <input type="checkbox"/> Finished water reservoir |
| <input type="checkbox"/> Distribution main | <input type="checkbox"/> Hydrant | <input type="checkbox"/> Service connection |
| <input type="checkbox"/> Other _____ | | |

Address: _____

Additional Site Information: _____

Type of activity

- | | | |
|--------------------------------------|------------------------------------|--|
| <input type="checkbox"/> Trespassing | <input type="checkbox"/> Vandalism | <input type="checkbox"/> Breaking and entering |
| <input type="checkbox"/> Theft | <input type="checkbox"/> Tampering | <input type="checkbox"/> Surveillance |
| <input type="checkbox"/> Other _____ | | |

Additional description of the activity _____

Description of suspects

Were suspects present at the site? Yes No

How many suspects were present? _____

Describe each suspect's appearance:

Suspect #	Sex	Race	Hair color	Clothing	Voice
1					
2					
3					
4					
5					
6					

Where any of the suspects wearing uniforms? Yes No

If "Yes," describe the uniform(s): _____

Describe any other unusual characteristics of the suspects: _____

Did any of the suspects notice the witness? Yes No

If "Yes," how did they respond: _____

Vehicles at the site

Were vehicles present at the site? Yes No

Did the vehicles appear to belong to the suspects? Yes No

How many vehicles were present? _____

Describe each vehicle:

Vehicle #	Type	Color	Make	Model	License plate
1					
2					
3					
4					
5					
6					

Where there any logos or distinguishing markings on the vehicles? Yes No

If "Yes," describe: _____

Provide any additional detail about the vehicles and how they were used (if at all): _____

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Equipment at the site

Was any unusual equipment present at the site? Yes No

- Explosive or incendiary devices
- PPE (e.g., gloves, masks)
- Tools (e.g., wrenches, bolt cutters)
- Lab equipment (e.g., beakers, tubing)
- Other _____
- Firearms
- Containers (e.g., bottles, drums)
- Hardware (e.g., valves, pipe, hoses)
- Pumps and related equipment

Describe the equipment and how it was being used by the suspects (if at all): _____

Unusual conditions at the site

Were there any unusual conditions at the site? Yes No

- Explosions or fires
- Dead/stressed vegetation
- Other _____
- Fogs or vapors
- Dead animals
- Unusual odors
- Unusual noises

Describe the site conditions: _____

Additional observations

Describe any additional details from the witness account: _____

SIGNOFF

Name of interviewer:

Print name _____

Signature _____

Date/Time: _____

Name of witness:

Print name _____

Signature _____

Date/Time: _____

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Phone Threat Report Form

INSTRUCTIONS

This form is intended to be used by utility staff that regularly answer phone calls from the public (e.g., call center operators). The purpose of this form is to help these staff capture as much information from a threatening phone call while the caller is on the line. It is important that the operator keep the caller on the line as long as possible in order to collect additional information. Since this form will be used during the call, it is important that operators become familiar with the content of the form. The sections of the form are organized with the information that should be collected during the call at the front of the form (i.e., Basic Call Information and Details of Threat) and information that can be completed immediately following the call at the end of the form (i.e., the description of the caller). The information collected on this form will be critical to the threat evaluation process.

Remember, tampering with a drinking water system is a crime under the SDWA Amendments!

THREAT NOTIFICATION

Name of person receiving the call: _____

Date phone call received: _____

Time phone call received: _____

Time phone call ended: _____

Duration of phone call: _____

Originating number: _____

Originating name: _____

*If the number/name is not displayed on the caller ID, press *57 (or call trace) at the end of the call and inform law enforcement that the phone company may have trace information.*

Is the connection clear? Yes No

Could call be from a wireless phone? Yes No

DETAILS OF THREAT

Has the water already been contaminated? Yes No

Date and time of contaminant introduction known? Yes No

Date and time if known: _____

Location of contaminant introduction known? Yes No

Site Name: _____

Type of facility

- | | | |
|--|--|---|
| <input type="checkbox"/> Source water | <input type="checkbox"/> Treatment plant | <input type="checkbox"/> Pump station |
| <input type="checkbox"/> Ground storage tank | <input type="checkbox"/> Elevated storage tank | <input type="checkbox"/> Finished water reservoir |
| <input type="checkbox"/> Distribution main | <input type="checkbox"/> Hydrant | <input type="checkbox"/> Service connection |
| <input type="checkbox"/> Other _____ | | |

Address: _____

Additional Site Information: _____

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Name or type of contaminant known? Yes No

Type of contaminant

Chemical Biological Radiological

Specific contaminant name/description: _____

Mode of contaminant introduction known? Yes No

Method of addition: Single dose Over time Other _____

Amount of material: _____

Additional Information: _____

Motive for contamination known? Yes No

Retaliation/revenge Political cause Religious doctrine

Other _____

Describe motivation: _____

CALLER INFORMATION

Basic Information:

Stated name: _____

Affiliation: _____

Phone number: _____

Location/address: _____

Caller's Voice:

Did the voice sound disguised or altered? Yes No

Did the call sound like a recording? Yes No

Did the voice sound? Male / Female Young / Old

Did the voice sound familiar? Yes No

If 'Yes,' who did it sound like? _____

Did the caller have an accent? Yes No

If 'Yes,' what nationality? _____

How did the caller sound or speak?

Educated Well spoken Illiterate

Irrational Obscene Incoherent

Reading a script Other _____

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What was the caller's tone of voice?

- | | | | |
|--------------------------------------|----------------------------------|----------------------------------|--|
| <input type="checkbox"/> Calm | <input type="checkbox"/> Angry | <input type="checkbox"/> Lipping | <input type="checkbox"/> Stuttering/broken |
| <input type="checkbox"/> Excited | <input type="checkbox"/> Nervous | <input type="checkbox"/> Sincere | <input type="checkbox"/> Insincere |
| <input type="checkbox"/> Slow | <input type="checkbox"/> Rapid | <input type="checkbox"/> Normal | <input type="checkbox"/> Slurred |
| <input type="checkbox"/> Soft | <input type="checkbox"/> Loud | <input type="checkbox"/> Nasal | <input type="checkbox"/> Clearing throat |
| <input type="checkbox"/> Laughing | <input type="checkbox"/> Crying | <input type="checkbox"/> Clear | <input type="checkbox"/> Deep breathing |
| <input type="checkbox"/> Deep | <input type="checkbox"/> High | <input type="checkbox"/> Raspy | <input type="checkbox"/> Cracking |
| <input type="checkbox"/> Other _____ | | | |

Were there background noises coming from the caller's end?

- | | | |
|--|----------|-------|
| <input type="checkbox"/> Silence | | |
| <input type="checkbox"/> Voices | describe | _____ |
| <input type="checkbox"/> Children | describe | _____ |
| <input type="checkbox"/> Animals | describe | _____ |
| <input type="checkbox"/> Factory sounds | describe | _____ |
| <input type="checkbox"/> Office sounds | describe | _____ |
| <input type="checkbox"/> Music | describe | _____ |
| <input type="checkbox"/> Traffic/street sounds | describe | _____ |
| <input type="checkbox"/> Airplanes | describe | _____ |
| <input type="checkbox"/> Trains | describe | _____ |
| <input type="checkbox"/> Ships or large boats | describe | _____ |
| <input type="checkbox"/> Other: _____ | | |

SIGNOFF

Name of call recipient:

Print name _____

Signature _____

Date/Time: _____

Name of person completing form (if different from call recipient):

Print name _____

Signature _____

Date/Time: _____

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Written Threat Report Form

INSTRUCTIONS

The purpose of this form is to summarize significant information from a written threat received by a drinking water utility. This form should be completed by the WUERM or an individual designated by incident command to evaluate the written threat. The summary information provided in this form is intended to support the threat evaluation process; however, the completed form is not a substitute for the complete written threat, which may contain additional, significant details.

The written threat itself (e.g., the note, letter, e-mail message, etc.) may be considered evidence and thus should be minimally handled (or not handled at all) and placed into a clean plastic bag to preserve any forensic evidence.

Remember, tampering with a drinking water system is a crime under the SDWA Amendments!

SAFETY

A suspicious letter or package could pose a threat in and of itself, so caution should be exercised if such packages are received. The US Postal Service has issued guidance when dealing with suspicious packages (http://www.usps.com/news/2001/press/pr01_1022gsa.htm).

THREAT NOTIFICATION

Name of person receiving the written threat: _____

Person(s) to whom threat was addressed: _____

Date threat received: _____ **Time threat received:** _____

How was the written threat received?

- | | | |
|--|---|---|
| <input type="checkbox"/> US Postal service | <input type="checkbox"/> Delivery service | <input type="checkbox"/> Courier |
| <input type="checkbox"/> Fax | <input type="checkbox"/> E-mail | <input type="checkbox"/> Hand delivered |
| <input type="checkbox"/> Other _____ | | |

If mailed, is the return address listed? Yes No

If mailed, what is the date and location of the postmark? _____

If delivered, what was the service used (list any tracking numbers)? _____

If Faxed, what is the number of the sending fax? _____

If E-mailed, what is the e-mail address of sender? _____

If hand-delivered, who delivered the message? _____

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DETAILS OF THREAT

Has the water already been contaminated? Yes No

Date and time of contaminant introduction known? Yes No
Date and time if known: _____

Location of contaminant introduction known? Yes No
Site Name: _____

Type of facility
 Source water Treatment plant Pump station
 Ground storage tank Elevated storage tank Finished water reservoir
 Distribution main Hydrant Service connection
 Other _____

Address: _____

Additional Site Information: _____

Name or type of contaminant known? Yes No
Type of contaminant
 Chemical Biological Radiological

Specific contaminant name/description: _____

Mode of contaminant introduction known? Yes No
Method of addition: Single dose Over time Other _____

Amount of material: _____

Additional Information: _____

Motive for contamination known? Yes No
 Retaliation/revenge Political cause Religious doctrine
 Other _____

Describe motivation: _____

NOTE CHARACTERISTICS

Perpetrator Information:

Stated name: _____
Affiliation: _____
Phone number: _____
Location/address: _____

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Condition of paper/envelop:

- | | | |
|--|--|---|
| <input type="checkbox"/> Marked personal | <input type="checkbox"/> Marked confidential | <input type="checkbox"/> Properly addressed |
| <input type="checkbox"/> Neatly typed or written | <input type="checkbox"/> Clean | <input type="checkbox"/> Corrected or marked-up |
| <input type="checkbox"/> Crumpled or wadded up | <input type="checkbox"/> Soiled/stained | <input type="checkbox"/> Torn/tattered |
| <input type="checkbox"/> Other: _____ | | |

How was the note prepared?

- | | | |
|---|--|---|
| <input type="checkbox"/> Handwritten in print | <input type="checkbox"/> Handwritten in script | <input type="checkbox"/> Computer typed |
| <input type="checkbox"/> Machine typed | <input type="checkbox"/> Spliced (e.g., from other typed material) | |
| <input type="checkbox"/> Other: _____ | | |

If handwritten, does writing look familiar? Yes No

Language:

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> Clear English | <input type="checkbox"/> Poor English |
| <input type="checkbox"/> Another language: _____ | |
| <input type="checkbox"/> Mixed languages: _____ | |

Writing Style

- | | | |
|---------------------------------------|--|-------------------------------------|
| <input type="checkbox"/> Educated | <input type="checkbox"/> Proper grammar | <input type="checkbox"/> Logical |
| <input type="checkbox"/> Uneducated | <input type="checkbox"/> Poor grammar/spelling | <input type="checkbox"/> Incoherent |
| <input type="checkbox"/> Use of slang | <input type="checkbox"/> Obscene | |
| <input type="checkbox"/> Other: _____ | | |

Writing Tone

- | | | |
|--|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> Clear | <input type="checkbox"/> Direct | <input type="checkbox"/> Sincere |
| <input type="checkbox"/> Condescending | <input type="checkbox"/> Accusatory | <input type="checkbox"/> Angry |
| <input type="checkbox"/> Agitated | <input type="checkbox"/> Nervous | <input type="checkbox"/> Irrational |
| <input type="checkbox"/> Other: _____ | | |

SIGNOFF

Name of individual who received the threat:

Print name _____

Signature _____ Date/Time: _____

Name of person completing form (if different from written threat recipient):

Print name _____

Signature _____ Date/Time: _____

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Water Quality/Consumer Complaint Report Form

INSTRUCTIONS

This form is provided to guide the individual responsible for evaluating unusual water quality data or consumer complaints. It is designed to prompt the analyst to consider various factors or information when evaluating the unusual data. The actual data used in this analysis should be compiled separately and appended to this form. The form can be used to support the threat evaluation due to a threat warning from unusual water quality or consumer complaints, or another type of threat warning in which water quality data or consumer complaints are used to support the evaluation.

Note that in this form, water quality refers to both specific water quality parameters and the general aesthetic characteristics of the water that might result in consumer complaints.

Threat warning is based on: Water quality Consumer complaints Other

What is the water quality parameter or complaint under consideration?

Are unusual consumer complaints corroborated by unusual water quality data?

Is the unusual water quality indicative of a particular contaminant of concern? For example, is the color, odor, or taste associated with a particular contaminant?

Are consumers in the affected area experiencing any unusual health symptoms?

What is 'typical' for consumer complaints for the current season and water quality?

Number of complaints.
Nature of complaints.
Clustering of complaints

What is considered to be 'normal' water quality (i.e., what is the baseline water quality data or level of consumer complaints)?

What is reliability of the method or instrumentation used for the water quality analysis?

Are standards and reagents OK?
Is the method/instrument functioning properly?

Based on recent data, does the unusual water quality appear to be part of a gradual trend (i.e., occurring over several days or longer)?

Are the unusual water quality observations sporadic over a wide area, or are they clustered in a particular area?

What is the extent of the area? A pressure zone. A neighborhood. A city block. A street. A building.

If the unusual condition isolated to a specific area:

Is this area being supplied by a particular plant or source water?
Have there been any operational changes at the plant or in the affected area of the system?
Has there been any flushing or distribution system maintenance in the affected area?
Has there been any repair or construction in the area that could impact water quality?

SIGNOFF

Name of person completing form:

Print name _____

Signature _____

Date/Time: _____

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Public Health Information Report Form

INSTRUCTIONS

The purpose of this form is to summarize significant information about a public health episode that could be linked to contaminated water. This form should be completed by the WUERM or an individual designated by incident command. The information compiled in this form is intended to support the threat evaluation process.

In the case of a threat warning due to a report from public health, it is likely that the public health agency will assume incident command during the investigation. The drinking water utility will likely play a support role during the investigation, specifically to help determine whether or not water might be the cause.

PUBLIC HEALTH NOTIFICATION

Date and Time of notification: _____

Name of person who received the notification: _____

Contact information for individual providing the notification

Full Name: _____

Title: _____

Organization: _____

Address: _____

Day-time phone: _____

Evening phone: _____

Fax Number: _____

E-mail address: _____

Why is this person contacting the drinking water utility? _____

Has the state or local public health agency been notified? Yes No

If "No," the appropriate public health official should be immediately notified.

DESCRIPTION OF PUBLIC HEALTH EPISODE

Nature of public health episode:

Unusual disease (mild) Unusual disease (severe) Death

Other: _____

Symptoms:

Diarrhea Vomiting/nausea Flu-like symptoms

Fever Headache Breathing difficulty

Other: _____

Describe symptoms: _____

Causative Agent: Known Suspected Unknown

If known or suspected, provide additional detail below

Chemical Biological Radiological

Describe _____

Estimate of time between exposure and onset of symptoms: _____

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Exposed Individuals:

Location where exposure is thought to have occurred

- Residence Work School
- Restaurant Shopping mall Social gathering
- Other: _____

Additional notes on location of exposure: _____

Collect addresses for specific locations where exposure is thought to have occurred.

Is the pattern of exposure clustered in a specific area? Yes No

Extent of area

- Single building Complex (several buildings) City block
- Neighborhood Cluster of neighborhoods Large section of city
- Other: _____

Additional notes on extent of area: _____

Do the exposed individuals represent a disproportionate number of:

- Immune compromised Elderly Children
- Infants Pregnant women Women
- Other: _____
- None, no specific groups dominate the makeup of exposed individuals

EVALUATION OF LINK TO WATER

Are the symptoms consistent with typical waterborne diseases, such as gastrointestinal disease, vomiting, or diarrhea? Yes No

Does the area of exposure coincide with a specific area of the system, such as a pressure zone or area feed by a specific plant? Yes No

Were there any consumer complaints within the affected area? Yes No

Were there any unusual water quality data within the affected area? Yes No

Were there any process upsets or operational changes? Yes No

Was there any construction/maintenance within the affected area? Yes No

Were there any security incidents within the affected area? Yes No

SIGNOFF

Name of person completing form:

Print name _____

Signature _____

Date/Time: _____

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Site Characterization & Sampling

Emergency Water Sample Collection Kit

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Item	Quantity	Notes
Field Resources and Documentation		
Field guide	2	Resource for field personnel
Health and safety plan	2	If required for the site
Sample labels	48	Waterproof (filled out in advance, if possible)
Sample documentation forms	24	For recording sample information
Custody tape (or seals)	2 rolls	Used on sample or shipping containers
Chain of custody forms	24	For documenting sample custody
Lab marker	2	Waterproof, 1 red, 1 black
General Sampling Supplies		
Sample containers	Table 3-2	For collecting samples
Device for grab sampling	1	For sampling large water bodies
10 liter HDPE container	4	For collection of large volume water samples
Lab grade tape	3 rolls	For temporary labeling in the field
Miscellaneous glassware	N/A	Beakers, graduated cylinders, spatula, etc.
Collapsible cooler	1	For sample storage
Rigid shipping container	1	For shipping by overnight service if needed.
1 qt. zippered freezer bags	1 pack100	For double bagging ice and sample containers
Thermometer	2	For checking water temperature
Paper towels	2 rolls	Wiping wet containers and containing spills
Pathogen Sampling Supplies		
Tubing and clamp	1	For sample tap flushing, etc.
Stopwatch & graduated cylinder	1	For measuring flow rate
Ultrafiltration apparatus	1	For concentrating pathogen samples
Reagents (may need to be kept separate from the rest of the kit)		
Laboratory grade water	5 liters	For sample dilution in the field
Sodium thiosulfate crystals	100 grams	For water sample dechlorination
Ascorbic acid	100 grams	For water sample dechlorination
Sodium sulfite crystals	100 grams	For water sample dechlorination
Potassium dihydrogen citrate	100 grams	For carbamate preservation
6 Molar ACS grade hydrochloric acid (HCl)	25 mL	In dropper bottle for preservation of samples for organic analyses
6 Molar trace metal-grade nitric acid (HNO ₃)	25 mL	In dropper bottle for preservation of samples for trace metals analysis
10 Normal Sodium hydroxide (NaOH)	25 mL	In dropper bottle for preservation of samples for cyanide analyses
pH paper in ranges from 0 - 4 and 10 - 14	50 strips	For checking the pH of samples preserved with acid or base (sensitive to 0.5 pH units)
Safety Supplies		
Splash resistant goggles	2	One per individual (minimum)
Disposable gloves	6 pairs	Nitrile or polyethylene, powder-free
Disposable shoe covers	2 pairs	One pair per individual (minimum)
Disposable laboratory coats	2	One per individual (minimum)
Clear, heavy duty plastic trash bags	4	For disposal of lab coat, gloves, etc.
Rinse water	20 liters	For general use and first aid
Antiseptic wipes	1 container	For cleaning hands, sample containers, etc.
Bleach solution (at least 5%)	1 gallon	For decontamination if necessary
Squirt bottle	2	For use with rinse water or lab grade water
First aid kit	1	For general first aid
Flashlight/headlamp	3	For working at night or in dark locations

Sample Containers[Go to Table of Contents](#)

Sample Type	Container Size	Container Type	No.	Dechlorinating Agent	Preservative	Analytical Technique	Reference Methods
CHEMISTRY - BASIC SCREEN (Established Techniques)							
Organic Analytes							
Volatiles	40 mL	Glass w / Teflon faced septa	5	Ascorbic acid	1:1 HCl to pH < 2 See method.	P&T – GC/MS	EPA 524.2, 8260B
						P&T – GC/PID/ELCD	EPA 502.2, 8021B
Semi-volatiles	1 L	Amber w / Teflon-lined screw caps	4	Sodium sulfite	6M HCl. See method.	SPE GC/MS	525.2, 8270D/3535
Quarternary nitrogen compounds	1 L	Amber PVC or silanized glass	4	Sodium thiosulfate	Sulfuric acid to pH 2	SPE HPLC - UV	549.2
Carbamate Pesticides	40 mL	Glass w / Teflon faced septa	4	Sodium thiosulfate	Potassium dihydrogen citrate sample pH to ~3.8	HPLC-fluorescence	531.2
Inorganic Analytes							
Metals/Elements	125 mL	Plastic (i.e. HPDE)	2	None	Trace metal grade nitric acid. See method.	ICP-MS	200.8
						ICP-AES	200.7
						AA	200.9
Organometallic compounds	125 mL	Plastic (i.e. HPDE)	2	None	Nitric acid to pH ≤2. See method.	AA – cold vapor manual	245.1
						AA – cold vapor automater	245.2
Cyanide	1 L	Plastic	2	Ascorbic acid	Sodium hydroxide to pH 12. See method.	Titrimetric Spectrophotometric	335.2
						Colorimetric UV	335.3
Radiological	2 L	Plastic	2	None	None - mark samples not preserved	Gross alpha, gross beta, gamma isotopes, specific radionuclides	900 Series

Sample Type	Container Size	Container Type	No.	Dechlorinating Agent	Preservative	Analytical Technique	Reference Methods
CHEMISTRY - EXPANDED SCREEN (Exploratory Techniques)							
Unknown organics (volatile)	40 mL	Glass w / Teflon faced septa	5	None	None - mark samples not preserved	P&T-GC/MS	See Module 4
Unknown organics (general)	1 L	Amber Glass	4	None	None - mark samples not preserved	Prep: SPE, SPME, micro LLE, direct aqueous injection, headspace	See Module 4
						Analysis: GC/MS, GC, HPLC, LC-MS	
Unknown inorganics	1 L	Plastic	2	None	None - mark samples not preserved	ICP-MS	See Module 4
Immunoassays	1 L	Amber Glass	2	Consult manufacturers instructions	Consult manufacturers instructions	Consult manufacturers instructions	None
PATHOGENS - EXPANDED SCREEN (Established and Exploratory Techniques)							
Pathogens - culture	100 mL	HDPE (plastic)	2	Thiosulfate	TBD	Per target pathogens	See Module 4
Pathogens - PCR	100 mL	HDPE (plastic)	2	Thiosulfate	TBD	Per target pathogens	See Module 4
BASELINE WATER QUALITY PARAMETERS (See Section 3.4)							
Water quality: bacteria	250 mL	Plastic	1	Thiosulfate	None	Fecal coliforms, E-coli,	Standard methods
Water quality: chemistry	1 L	Plastic	1	None	None - mark samples not preserved	Conductivity, pH, alkalinity, hardness, turbidity	Standard methods
Surrogates	1 L	Amber glass	2	None	None - mark samples not preserved	Total organic carbon, ultraviolet absorbance, color, chlorine demand	Standard methods
Toxicity	125 mL	Glass	2	Consult manufacturers instructions	Consult manufacturers instructions.	Rapid toxicity assay (several vendors)	None

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Sample Collection Guidelines

Safety Guidelines

1. **Do not** enter the site to perform sampling until cleared. Hazardous materials response units may perform safety screening before allowing other responders to enter the site. *Note that field safety screening does **not** generally include testing for pathogens.*
2. **Do not** eat, drink, or smoke at the site.
3. **Do not** taste or smell the water samples.
4. **Do** use general personal protective equipment (PPE) such as splash-proof goggles, disposable gloves, proper footwear (i.e., no open toe or open heel shoes), a chemical resistant, disposable lab coat, and long pants. *(Note that this level of PPE is only intended to minimize incidental contact with the water or chemical reagents used during sample collection or field testing.)*
5. **Avoid** all skin contact with the water, and if incidental contact does occur, immediately flush the affected area with clean water brought to the site for that purpose.
6. Fill sampling containers **slowly** to avoid volatilization or aerosolization of contaminants.
7. **Minimize** the time that personnel are on the site and collecting samples.

Sampling Procedures

1. Pre-label sample containers with a waterproof marker. Information should include: analyte class (pathogen, chemical, or radionuclide), specific analyte (if sample is being collected for a specific target), sample identification number, utility name, location of sample collection, sample collection date and time, and sampler's initials.
2. Check for the presence of any in-line filters (e.g., home treatment devices) that might interfere with sampling. Remove such devices if present.
3. If the sample tap is the suspected point of contaminant introduction, collect swab samples from the tap **before** flushing the tap and collecting water samples.
4. Flush sample taps for a time sufficient to displace the water in connecting lines in order to obtain a sample that is representative of the water of interest. Keep the flow rate from the sample tap sufficiently low in order to avoid splashing and aerosolizing water droplets. Divert water to a drain if possible.
5. Carefully collect samples in the specified containers (see Section 3.3). If a reagent needs to be added to the sample, allow enough headspace in the container to add the proper amount of preservative. Cap then gently mix the contents to ensure that the reagent is properly mixed with the sample. Test the sample with a strip of pH paper to ensure preservation to the proper pH. Do not insert the pH paper into the sample container. Pour a small portion of the mixed sample into the container cap then pour from the cap onto the pH paper to verify
6. For chlorinated samples, VOCs should be collected into a secondary 8-oz. glass container (prepared with ascorbic acid - see footnote 1, Table 3.3). Gently mix the sample and transfer to 3, 40-ml VOA containers (triplicate). Fill the 40-ml container above the top to form a meniscus. Close the container with the Teflon side of the septa facing the water

sample, gently invert the sample container several times, and verify that there are no air bubbles in the container. Once each container is tagged, the three 40-ml containers should be inserted into a plastic whirlpack bag (provided) and sealed prior to sample storage.

7. Wipe the outside of the sealed containers with paper towel.
8. Attach custody seal to the sample container.
9. Place the sealed container into a rigid cooler and pack with frozen ice packs (preferred) or sealable freezer bags filled with ice.
10. Tag each sample and record all necessary information on “Sample Documentation” and “Chain of Custody” forms.
11. After all samples have been collected, preservative blanks and temperature blanks should be prepared and tagged. A preservative blank should be prepared for each preservative used during the sampling event. The preservative blank can be prepared by adding the appropriate amount of preservative to the preservative blank containers, and tagging the sample for the appropriate analysis (i.e., HNO₃ preservative blank should be analyzed for metals). Additionally, a temperature blank container should be placed in each cooler containing samples.

Sample Holding

1. When samples are not in the possession of designated personnel, they should be secured (e.g., locked in a *secure area*) and only accessible by designated personnel. In the field, samples may need to be locked in a vehicle.
2. Samples should be chilled, but protected from freezing.
3. Samples should be held at the drinking water utility lab until shipped to a lab for analysis or until it is determined that they are not needed.
4. Samples that are held longer than the approved holding times for contaminant analysis may no longer be useful.

Sample Transport

1. Sample integrity and chain of custody must be maintained. All factors that might compromise sample integrity (e.g., storage containers, excessive transit time, temperature, pressure, physical disturbance, etc.) should be considered and appropriate measures taken to avoid compromising samples.
2. Sample packaging must be in compliance with shipping regulations.
3. Samples may be screened by law enforcement and/or ICs prior to sample transport to the laboratory.
4. Samples will be transported to the appropriate laboratory in coordination with law enforcement using appropriate air and ground assets.

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Site Characterization Plan Template

INSTRUCTIONS

This form is intended to support the development of a customized site characterization plan developed in response to a specific water contamination threat. The incident commander and site characterization team leader should develop this plan jointly if possible. The completed form will be used to guide site characterization activities in the field; however, it may be necessary to revise the initial plan based on initial observations at the site. A form should be completed for each investigation site that will be characterized.

THREAT WARNING INFORMATION

Consult Module 2, Appendix 8.2 “Threat Evaluation Worksheet” for details about the threat.

INVESTIGATION SITE

Site Name: _____

Type of facility:

- | | | |
|--|--|---|
| <input type="checkbox"/> Source water | <input type="checkbox"/> Treatment plant | <input type="checkbox"/> Pump station |
| <input type="checkbox"/> Ground storage tank reservoir | <input type="checkbox"/> Elevated storage tank | <input type="checkbox"/> Finished water |
| <input type="checkbox"/> Distribution main | <input type="checkbox"/> Hydrant | <input type="checkbox"/> Service connection |
| <input type="checkbox"/> Other | _____ | |

Address: _____

Additional Site Information: _____

INITIAL HAZARD ASSESSMENT

Are there any indicators of an explosive hazard? Yes No

If “Yes,” notify law enforcement and do not send a team to the site.

Initial hazard categorization

- | | |
|--|--|
| <input type="checkbox"/> Low hazard | <input type="checkbox"/> Chemical hazard |
| <input type="checkbox"/> Radiological hazard | <input type="checkbox"/> Biological hazard |

If the initial hazard assessment indicates a chemical, radiological, or biological hazard (as described in Module 3, Section 4.1.3), then only teams trained to deal with such hazards should be sent to the site.

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SITE CHARACTERIZATION TEAM

Name & Affiliation of Site Characterization Team Leader:

Drinking water utility staff:

- Water quality specialist Name: _____
- Security specialist Name: _____
- Operations specialist Name: _____
- Other _____ Name: _____

Representatives from other agencies:

- Local law enforcement Fire department HazMat
- US EPA FBI Other

COMMUNICATION PROCEDURES

Mode of communication:

- Phone 2-way radio Digital
- Facsimile Other _____

Reporting events:

- Upon arrival at site During approach Site entry
- After site evaluation After field testing Site exit
- Other _____

FIELD SCREENING CHECKLIST

Y	Parameter ¹	Screen ²	Meter/Kit ID ³	Check Date ⁴	Reference Value ⁵
	Radiation	Both			
	Chlorine residual	Water			
	pH / conductivity	Water			
	Cyanide	Water			
	Volatile chemicals	Safety			
	Chemical weapons	Both			
	Biotoxins	Water			
	Pathogens	Water			

1. List the parameters that will be evaluated as part of field screening (examples are listed).
2. Screening may be conducted for safety, rapid water testing, or both.
3. Report the unique identifier for the meter or kit used during screening.
4. Report date of last calibration, last equipment check, or expiration date as appropriate.
5. List any reference value that would trigger a particular action, such as exiting the site.

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SAMPLING CHECKLIST

Y	Analyte ¹	No. Samples	Sample Preservation ²
	Standard VOCs		
	Semi-volatiles		
	Quaternary nitrogen compounds		
	Cyanide		
	Carbamate pesticides		
	Metals/elements		
	Organometallic compounds		
	Cyanide		
	Radionuclides		
	Non-target VOCs		
	Non-target organic compounds		
	Non-target inorganic compounds		
	Immunoassays		
	Pathogens – culture		
	Pathogens – PCR		
	Water quality – bacteria		
	Water quality – chemistry		

1. List the parameters that will be sampled during site characterization (examples are listed).
2. List preservatives and dechlorinating agents and indicate if they are to be added in the field.

EQUIPMENT CHECKLIST

- | | |
|---|--|
| <input type="checkbox"/> Completed Site Characterization Plan | <input type="checkbox"/> Additional documentation |
| <input type="checkbox"/> Emergency Water Sampling Kit (Table 3-1) | <input type="checkbox"/> Field Testing Kit (Table 3-3) |
| <input type="checkbox"/> Reagents (if stored separately) | <input type="checkbox"/> Bags of ice or freezer packs |
| <input type="checkbox"/> Laboratory grade water (5 gal) | <input type="checkbox"/> Rinse water (20 liters) |
| <input type="checkbox"/> Special equipment for the specific site | <input type="checkbox"/> Disposable camera |
| <input type="checkbox"/> Other _____ | |

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SAMPLE HANDLING INSTRUCTIONS

Sample delivery:

- Return samples to water utility
- Ship samples to specified location
- Deliver samples to specified recipient (e.g., laboratory, law enforcement, shipping co., etc.)

Name of recipient: _____

Phone No.: _____

Fax No.: _____

Delivery address: _____

Sample storage and security:

Describe any special precautions or instructions related to sample storage and security:

SIGNOFF

Incident Commander (or designee responsible for developing Site Characterization Plan):

Print name _____

Signature _____

Date/Time: _____

Site Characterization Team Leader:

Print name _____

Signature _____

Date/Time: _____

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Site Characterization Report Form

INSTRUCTIONS

Members of the site characterization team can use this form to record their observations at the investigation site. It also serves as a checklist for notifying incident command at key points during the characterization. Additional checklists are included in this form for sample collection and exiting the site. The completed form can also be used as a component of the site characterization report. A form should be completed for each investigation site that is characterized

GENERAL INFORMATION

Date: _____ **Time arrived investigation at site:** _____

Name of Site Characterization Team Leader: _____

Phone No.: _____ **Fax No.:** _____

LOCATION OF INVESTIGATION SITE

Site Name: _____

Type of facility:

- | | | |
|---|--|--|
| <input type="checkbox"/> Source water | <input type="checkbox"/> Treatment plant | <input type="checkbox"/> Pump station |
| <input type="checkbox"/> Finished water reservoir | <input type="checkbox"/> Elevated storage tank | <input type="checkbox"/> Ground storage tank |
| <input type="checkbox"/> Distribution main | <input type="checkbox"/> Hydrant | <input type="checkbox"/> Service connection |
| <input type="checkbox"/> Other _____ | | |

Address: _____

Weather Conditions at Site: _____

Additional Site Information: _____

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APPROACH TO SITE

Time of Approach to Site: _____

Initial Field Safety Screening (as listed in the “Site Characterization Plan”):

- | | | |
|---------------------------------|---|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Radiation | <input type="checkbox"/> Volatile chemicals |
| <input type="checkbox"/> HAZCAT | <input type="checkbox"/> Chemical weapons | <input type="checkbox"/> Biological agents |
| <input type="checkbox"/> Other | _____ | |

Report results of field safety screening in Section 3.7 “Field Testing Results Form.”
If any field safety screening result is above the corresponding reference value, immediately notify incident command and do not proceed further into the site.

Initial Observation and Assessment of Immediate Hazards

- Unauthorized individuals present at the site
- Fire or other obvious hazard
- Signs of a potential explosive hazard (e.g., devices with exposed wires)
- Signs of a potential chemical hazard (e.g., dead animals, unusual fogs, unusual odors)
- Unusual and unexplained equipment at the site
- Other signs of immediate hazard _____

If there are any indicators of immediate hazard, immediately notify incident command and do not proceed further into the site.

Report initial observations and results to incident commander.

Approval granted to proceed further into the site? Yes No

SITE INVESTIGATION

Time of Entry to Site: _____

Repeat Field Safety Screening

- | | | |
|---------------------------------|---|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Radiation | <input type="checkbox"/> Volatile chemicals |
| <input type="checkbox"/> HAZCAT | <input type="checkbox"/> Chemical weapons | <input type="checkbox"/> Biological agents |
| <input type="checkbox"/> Other | _____ | |

Report results of field safety screening in Section 3.7 “Field Testing Results Form.”
If any field safety screening result is above the corresponding reference value, immediately notify incident command and do not proceed further into the site.

Signs of Hazard:

- | | |
|--|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Unexplained dead animals |
| <input type="checkbox"/> Unexplained dead or stressed vegetation | <input type="checkbox"/> Unexplained clouds or vapors |
| <input type="checkbox"/> Unexplained liquids | <input type="checkbox"/> Other _____ |

Describe signs of hazard: _____

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Unexplained or Unusual Odors:

- | | | |
|---------------------------------------|---------------------------------------|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Pungent | <input type="checkbox"/> Irritating |
| <input type="checkbox"/> Sulfur | <input type="checkbox"/> Skunky | <input type="checkbox"/> Bitter almond |
| <input type="checkbox"/> Sweet/Fruity | <input type="checkbox"/> New mown hay | <input type="checkbox"/> Other _____ |

Describe unusual odor: _____

Unusual Vehicles Found at the Site:

- | | | |
|--|---|---------------------------------------|
| <input type="checkbox"/> Car/sedan | <input type="checkbox"/> SUV | <input type="checkbox"/> Pickup truck |
| <input type="checkbox"/> Flatbed truck | <input type="checkbox"/> Construction vehicle | <input type="checkbox"/> None |
| <input type="checkbox"/> Other _____ | | |

Describe vehicles (including make/model/year/color, license plate #, and logos or markings): _____

Signs of Tampering:

- | | |
|--|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Cut locks/fences |
| <input type="checkbox"/> Open/damaged gates, doors, or windows | <input type="checkbox"/> Open/damaged access hatches |
| <input type="checkbox"/> Missing/damaged equipment | <input type="checkbox"/> Facility in disarray |
| <input type="checkbox"/> Other _____ | |

Signs of sequential intrusion (e.g., locks removed from a gate and hatch)?
 Yes No

Describe signs of tampering: _____

Unusual Equipment:

- | | |
|--|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Discarded PPE (e.g., gloves, masks) |
| <input type="checkbox"/> Tools (e.g., wrenches, bolt cutters) | <input type="checkbox"/> Hardware (e.g., valves, pipe) |
| <input type="checkbox"/> Lab equipment (e.g., beakers, tubing) | <input type="checkbox"/> Pumping equipment |
| <input type="checkbox"/> Other _____ | |

Describe equipment: _____

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Unusual Containers:

Type of container:

- | | | |
|--------------------------------------|---|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Drum/Barrel | <input type="checkbox"/> Bottle/Jar |
| <input type="checkbox"/> Plastic bag | <input type="checkbox"/> Box/Bin | <input type="checkbox"/> Pressurized cylinder |
| <input type="checkbox"/> Test Tube | <input type="checkbox"/> Bulk container | <input type="checkbox"/> Other _____ |

Condition of container:

- | | | |
|-----------------------------------|------------------------------|--|
| <input type="checkbox"/> Opened | <input type="checkbox"/> New | <input type="checkbox"/> Damaged/leaking |
| <input type="checkbox"/> Unopened | <input type="checkbox"/> Old | <input type="checkbox"/> Intact/dry |

Size of container: _____

Describe labeling on container: _____

Describe visible contents of container: _____

Rapid Field Testing of the Water

- | | | |
|-------------------------------------|--|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Residual disinfectant | <input type="checkbox"/> pH / conductivity |
| <input type="checkbox"/> Cyanide | <input type="checkbox"/> Radiation | <input type="checkbox"/> VOCs and SVOCs |
| <input type="checkbox"/> Pesticides | <input type="checkbox"/> Biotoxins | <input type="checkbox"/> General toxicity |
| <input type="checkbox"/> Other | _____ | |

Report results of rapid field testing of the water in Section 3.7 “Field Testing Results Form.”

If any field test result is above the corresponding reference value, immediately notify incident command and wait for instruction regarding how to proceed.

Report findings of site investigation to incident commander.

Approval granted to proceed with sample collection? Yes No

SAMPLING

Time Sampling was Initiated / Completed: _____ / _____

Implement Sampling Procedures Appropriate for the Hazard Conditions at the Site:

- | | |
|--|--|
| <input type="checkbox"/> Low hazard | <input type="checkbox"/> Chemical hazard |
| <input type="checkbox"/> Radiological hazard | <input type="checkbox"/> Biological hazard |

If the site is characterized as a chemical, radiological, or biological hazard, then special sampling and safety procedures should be followed.

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Safety Checklist:

- Do not** eat, drink, or smoke at the site.
- Do not** taste or smell the water samples.
- Do** use the general PPE included in the emergency water sampling kit.
- Avoid** all contact with the water, and flush immediately with clean water in the case of contact.
- Slowly fill** sample bottles to avoid volatilization and aerosolization.
- Minimize** the time that personnel are on site and collecting samples.

General Sampling Guidelines:

- Properly label each sample bottle.
- Carefully flush sample taps prior to sample collection, if applicable.
- Collect samples according to method requirements (e.g., w/o headspace for VOCs).
- Add preservatives or dechlorinating agents as specified.
- Carefully close sample containers and verify that they don't leak.
- Wipe the outside of sample containers with a mild bleach solution if needed.
- Place sample containers into a sealable plastic bag.
- Place samples into an appropriate, rigid shipping container.
- Pack container with frozen ice packs.
- Complete "Sample Documentation Form" (Section 3.8).
- Complete "Chain of Custody Form" (Section 3.9).
- Secure shipping container with custody tape.
- Comply with any other sample security provisions required by participating agencies.

EXITING THE SITE

Time of Site Exit: _____

Site Exit Checklist

- Verify that hatches, locks, etc. are properly secured.
- Remove all samples, equipment, and materials from the site.
- Verify that all samples are in the cooler and properly seal the cooler.
- Remove all PPE at site perimeter.
- Place disposable PPE and other trash into a heavy-duty plastic trash bag.
- Verify that the perimeter has been properly secured before leaving the site.
- Ensure that all documentation has been completed before leaving the site perimeter.
- Comply with any site control measures required by participating agencies.
- Contact incident commander and inform them that the team is leaving the site.

SIGNOFF

Site Characterization Team Leader:

Print name _____

Signature _____

Date/Time: _____

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Sample Analysis

Laboratory Contact List

Analysis	Laboratory	Physical Address	Contact Person	Phone
Pathogens				
Chemical				
Chemical				
Radiological				
CW Agents				

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Contaminant Characterization and Transport Worksheet

INSTRUCTIONS

The purpose of this worksheet is to help organize information that will lead to the identification of the contaminant to facilitate decisions on appropriate operational responses and provide more accurate information for public communication/notification. Contaminant identification will most likely first be a presumptive identification followed by more lengthy procedures to verify the identity of the contaminant. While validated analytical results are typically the most reliable means of contaminant identification, other information collected during the **threat evaluation** and **site characterization** may provide valuable insight regarding the identity of the contaminant.

SITE CHARACTERIZATION/THREAT EVALUATION SUMMARY

Describe the contaminant's odor, if applicable. _____

Describe the *reported* taste of the contaminant, if applicable. _____

Caution: Do NOT taste the water.

What was the physical form of the contaminant?

- | | | |
|--------------------------------------|---------------------------------|-----------------------------------|
| <input type="checkbox"/> Solid | <input type="checkbox"/> Liquid | <input type="checkbox"/> Gas |
| <input type="checkbox"/> Slurry | <input type="checkbox"/> Powder | <input type="checkbox"/> Granules |
| <input type="checkbox"/> Other _____ | | |

What color was the contaminant? _____

Summarize additional information obtained during site characterization/threat warning that is relevant to contaminant identification. _____

Summarize the on-line monitoring data, consumer complaints, or witness accounts that are relevant to contaminant identification. _____

Field Analysis Summary

Summarize the results of the field analysis for the following parameters:

Radiation _____

Chlorine residual _____

pH, conductivity _____

Cyanide _____

Volatile chemicals _____

Chemical weapons _____

Biotoxins _____

Pathogens _____

Other _____

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Public Health Information

Have death or disease in the population been reported? Yes No Unknown

Type/symptoms _____

Is there information on unusual sales of pharmaceutical supplies (e.g., diarrhea medication)? _____

Number of people affected _____

Number of fatalities _____

Location/area affected _____

Was an epidemiological investigation conducted? Yes No Unknown
Results _____

Was a clinical investigation conducted? Yes No Unknown
Results _____

Is the contaminant acutely toxic and what are the acute effects? Yes No Unknown
Describe _____

LABORATORY ANALYSIS SUMMARY

Results of analysis _____

Reporting units _____

Analytical method _____

Minimum reporting level _____

Precision (relative standard deviation) _____

QA/QC (e.g., recovery of matrix spikes, standard checks, etc.) _____

Summarize additional information obtained during laboratory analysis that is relevant to contaminant identification.

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CONTAMINANT CHARACTERISTICS

What is the class of the contaminant?

- Biological Chemical Radiological
 Unknown _____

Can any conclusions regarding the contaminant properties be made? (Place an 'X' in the appropriate column)

	Yes	No	Unk	Comment/Additional Information
Is the contaminant susceptible to disinfection or chemical oxidation?				
Does the contaminant hydrolyze into less toxic products?				
Does the contaminant hydrolyze into more toxic products?				
What are pKa values for chemicals?				
Is the contaminant water soluble?				
Does the contaminant have a discernable taste, odor, or color?				
Is the contaminant volatile or semi-volatile?				
Does the contaminant impact the pH?				
Does the contaminant impact conductivity?				
Does the contaminant impact other water quality parameters?				
Does the contaminant react with certain disinfectants (i.e., chlorine, chloramines, etc.)?				
What is the contaminant's half life?				

Contaminant Public Health Effect Information

What are the primary routes of exposure?

- Ingestion Inhalation Dermal Contact
 Unknown _____

What are the acute health effects for the exposure routes identified? _____

What is the contaminant's LD₅₀/ID₅₀? _____

What is the length of time to first onset of symptoms after exposure? _____

What are the chronic health effects associated with exposure to the contaminant? _____

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Does the contaminant have a method of secondary transmission?

Yes No Unknown

Describe _____

Is an approach available to prevent undesirable health effects from the contaminant?

Yes No Unknown

Describe _____

Are there treatments available for individuals exposed to the contaminant?

Yes No Unknown

Describe _____

Are health standards for the contaminant available?

Yes No Unknown

Describe _____

By which exposure route(s)?

Ingestion Inhalation
 Dermal Ocular

List the levels for each exposure route.

Contaminant Treatment Information

Treatment Types	Could be used to treat the contaminant?	Degradation products formed as a consequence of treatment	Rating of effectiveness (poor, fair, good) of percent effectiveness
Lime softening	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Reverse osmosis	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Standard chlorination	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Enhanced chlorination	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Standard filtration	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Enhanced filtration	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Membrane filtration	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Nanofiltration	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Electrodialysis	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Cation exchange resin	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Anion exchange resin	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Activated alumina	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Chloramine	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Chlorine dioxide	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Standard UV	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Enhanced UV	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Standard ozone	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Enhanced ozone	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Standard GAC	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Enhanced GAC	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Standard air stripping	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Enhanced air stripping	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Other Methods	<input type="checkbox"/> Yes <input type="checkbox"/> No		

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Access to contaminant information (effects and properties)

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In-house information

Contact/phone no. _____
Internal database _____

Public Health officials

Contact/phone no. _____
Web site/database _____

US EPA Water Contaminant Information Tool

Web site/access code _____

- US EPA water contaminant information tool (WCIT).
- US EPA's List of Drinking Water Contaminants & MCLs: <http://www.epa.gov/safewater/mcl.html#mcls>.
- Agency for Toxic Substances and Disease Registry (ATSDR): www.atsdr.cdc.gov.
- CDC Emergency Preparedness and Response: www.bt.cdc.gov.
- Recognizing Waterborne Disease and the Health Effects of Water Pollution: A Physician On-line Reference Guide: www.WaterHealthConnection.org.
- Physician Preparedness for Acts of Water Terrorism: www.waterhealthconnection.org/bt/index.asp.
- Registry of Toxic Effects of Chemical Substances (RTECS): www.cdc.gov/niosh/rtecs.html.
- Risk Assessment Information System (RAIS), which contains information taken from US EPA's Integrated Risk Information System (IRIS), the *Health Effects Assessment Summary Tables* (HEAST-rad HEAST-nonrad), US EPA Peer Reviewed Toxicity Values (PRTVs) Database, and other information sources: <http://risk.lsd.ornl.gov/index.shtml>.
- United States Army Medical Research Institute of Infectious Diseases (USAMRIID) Medical Management of Biological Casualties Handbook: <http://www.usamriid.army.mil/education/bluebook.html>.
- WHO: www.who.int/search/en/.
- WHO's "Public health response to biological and chemical weapons:" www.who.int/csr/delibepidemics/biochemguide/en/index.html.

CONTAMINANT TRANSPORT

Summarize what is known regarding the location of contaminant introduction.

How much material was used _____ (lbs., tons, gal, etc.)

How was it added? Single dose Over time Unknown

Time period of suspected contaminant introduction. _____

Elapsed time. _____

Method of estimating the spread.

- Manual calculations Hydraulic model Water flow analysis
 GIS Field analysis Areas of customer complaints
 Areas of people with health-related symptoms
 Other _____

Estimate the contaminated area. _____

Estimate the population affected. _____

Identify any customers with special needs that are within the affected area.

Critical Care Facilities

- Hospitals
- Nursing Homes
- Other _____

- Clinics
 - Dialysis Centers
-

Schools

Day Care Facilities

Businesses

- Food and Beverage Manufacturers
- Restaurants
- Power Generation Facilities
- Other _____

- Commercial Ice Manufacturers
 - Agricultural Operations
-

SIGNOFF

Name of person completing form

Print name _____

Signature _____

Date/Time: _____

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Public Health Response Action Worksheet

INSTRUCTIONS

The purpose of this form is to help organize information to aid in the evaluation of containment options and public notification options. The objectives of public health response actions (operational and public notification) are to prevent or limit public exposure to potentially contaminated water by either restricting further propagation of the contaminant through the distribution system or restricting use of the water through public notification. This worksheet assumes that the "Contaminant Characterization and Transport Worksheet" in Section 5.3 has been completed to the extent possible.

ASSESSMENT OF PUBLIC HEALTH IMPACT

Identity of the contaminant Suspected Known Unknown

Describe _____

Contaminant properties (if known):

Toxic or infectious dose (LD₅₀/ID₅₀): _____

Route of exposure:

Ingestion Inhalation Dermal Contact

Other _____

Symptoms of exposure to high dose: _____

Symptoms of exposure to low dose: _____

Other: _____

EVALUATION OF CONTAINMENT OPTIONS

Describe the location and extent of the contaminated area. _____

Containment options

Valve closures Reverse flow conditions By-pass

Isolate zone(s)

Other _____

Critical equipment within contaminated area

System equipment Zones Pump stations

Hydrants Other _____

Customers with special needs within contaminated area

Critical Care Facilities

Hospitals

Clinics

Nursing Homes

Dialysis Centers

Other _____

Schools

Businesses

Food and Beverage Manufacturers

Commercial Ice Manufacturers

Restaurants

Agricultural Operations

Power Generation Facilities

Other _____

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Effectiveness of containment options

- Complete contaminant isolation
- Unknown
- Reduction in spread of contaminant
- Other _____

Is containment expected to provide adequate public health protection?

- Yes
- No
- Unknown

Timeline for implementation of containment options

Containment procedures to begin: _____

Containment procedures to end: _____

EVALUATION OF PUBLIC NOTIFICATION OPTIONS

Is public notification necessary? Yes No

Collaboration Agencies (identified in Public Health Response Plan and Utility’s ERP)

- Public health agencies
- Hospitals/clinics
- Regional Poison Control Center
- Other _____
- Police departments
- Laboratories
- Fire departments
- Drinking water primacy agency

Type of notification (Follow steps shown)

- Is the contaminant known? Yes No
- If no, issue a “Do Not Use” notice.*
- If yes, is boiling effective and advisable? Yes No Unknown
- If yes, issue a “Boil Water” notice.*
- - If no or unknown, is there a risk of dermal or inhalation exposure? Yes No Unknown
- If no, issue a “Do Not Drink” notice.*
- If yes or unknown, issue a “Do Not Use” notice.*

Content of public notification

- Has the contamination incident been confirmed? Yes No
- Is the contaminant known? Yes No
- If yes, identity of the contaminant _____
- Characteristics of the contaminant _____
- Restrictions on use _____
- Ingestion exposure Inhalation exposure Dermal exposure
- Exposure symptoms _____
- Medical treatments _____
- Transmission mode (if biological) _____
- Duration of restriction _____
- Alternate water supply _____
- Additional instructions to consumers _____
- Other information about the incident _____
- Other _____

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Notification to customers with special needs

- Critical Care Facilities
 - Hospitals
 - Nursing Homes
 - Other _____
- Schools
- Businesses
 - Food and Beverage Manufacturers
 - Restaurants
 - Power Generation Facilities
 - Other _____
- Clinics
- Dialysis Centers
- Commercial Ice Manufacturers
- Agricultural Operations

Are there subpopulations that will be affected at a greater rate than general population?

- Yes
- No
- Unknown

Describe _____

Notification to consecutive system.

- Yes
- No
- Not Applicable

Method of dissemination

- Broadcast media (radio and television)
- Web site
- Newspaper
- Newsletters (water utility or partner organizations)
- Broadcast phone messages
- Posting in conspicuous locations
- Hand delivery
- Town hall meetings
- Other _____
- Government access channels
- Listserv email
- Letters by mail
- Phone banks
- Broadcast faxes
- Mass distribution through partners
- Door-to-door canvassing
- Conference calls

Notification/restriction timeline

Notification/restriction to begin: _____

Notification/restriction to end: _____

ALTERNATE WATER SUPPLY NEEDS

Is an alternate water supply needed?

- Drinking water
- Fire fighting
- Other _____

Where can customers obtain the alternate water supply?

- Bottled water provided by local government agencies
- Bottled water provided by local retailers
- Bulk water provided by certified water haulers
- Bulk water transported or provided by military assets
- Bulk water providing by neighboring water utilities
- Water treated at plant and hauled to distribution centers (i.e., in the case of distribution system contamination)
- Other _____

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What customers with special needs should be notified of the alternate water supply availability?

Critical Care Facilities

- Hospitals
- Nursing Homes
- Other _____

- Clinics
 - Dialysis Centers
-

Schools

Businesses

- Food and Beverage Manufacturers
- Restaurants
- Power Generation Facilities
- Other _____

- Commercial Ice Manufacturers
 - Agricultural Operations
-

SIGNOFF

Name of person completing form

Print name _____

Signature _____

Date/Time: _____

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Appendices

Critical System Information Checklist

- ❑ Population Served and Service Connections
- ❑ Distribution Network Map (including pressure zones)
- ❑ Pressure Zone Map
- ❑ Treatment Process Flow Diagram
- ❑ Chlorination Stations (location and quantity of chlorine on site)
- ❑ Chemical Handling and/or Storage Facilities and Release Impact Analysis
- ❑ Booster Pump Stations (location, capacity, and power requirements)
- ❑ Supervisory Control and Data Acquisition systems
- ❑ Site Staffing Rosters and Employee's Duties and Responsibilities
- ❑ Vulnerability Assessments
- ❑ Backup Equipment and Power Generation

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Information Resources

- Agency for Toxic Substances and Disease Registry (ATSDR): www.atsdr.cdc.gov.
- AOAC. 2003b. "Rapid Test Kits Test Kit Database"
<http://www.aoac.org/testkits/TKDATA2.HTM>.
- CDC Emergency Preparedness and Response: www.bt.cdc.gov.
- CDC. 2003f. "List of Select Biological Agents" <http://www.cdc.gov/od/sap/docs/salist.pdf>.
- CWC. 2003b. "The Chemical Weapons Convention – A Quick Guide, CWC-002"
http://www.cwc.gov/Industry_Outreach/Publications/002/cwc-b0001.html.
- FEMA, Hazardous Materials Guide for First Responders. <http://www.usfa.fema.gov/fire-service/hmgfr3.cfm>
- Physician Preparedness for Acts of Water Terrorism:
www.waterhealthconnection.org/bt/index.asp.
- Recognizing Waterborne Disease and the Health Effects of Water Pollution: A Physician On-line Reference Guide: www.waterhealthconnection.org.
- Registry of Toxic Effects of Chemical Substances (RTECS): www.cdc.gov/niosh/rtecs.html.
- Risk Assessment Information System (RAIS), which contains information taken from the US EPA Integrated Risk Information System (IRIS), the *Health Effects Assessment Summary Tables* (HEAST-rad HEAST-nonrad), US EPA Peer Reviewed Toxicity Values (PRTVs) Database, and other information sources: <http://risk.lsd.ornl.gov/index.shtml>.
- US Army Medical Research Institute of Infectious Diseases (USAMRIID) Medical Management of Biological Casualties Handbook: <http://www.usamriid.army.mil/education/bluebook.html>.
- US Army. 2002. "Toxic Chemical Agent Safety Standards"
http://www.usapa.army.mil/pdffiles/p385_61.pdf.
- US Coast Guard. 2001. "Chemical Hazards Response Information System"
<http://www.chrismanual.com>.
- US EPA's List of Drinking Water Contaminants & Maximum Contaminant Levels (MCLs):
<http://www.epa.gov/safewater/mcl.html#mcls>.
- US EPA. 2000. "EPA Radiological Emergency Response Plan"
<http://www.epa.gov/radiation/rert/docs/rerp-1-00.pdf>.
- US EPA. 2003c. "EPA Environmental Technology Verification Home" <http://www.epa.gov/etv/>.
- US EPA. Undated c. Compendium of Environmental Testing Laboratories.
<http://www.epa.gov/compendium>
- US National Library of Medicine. 2001. Toxicology Tutor I - Basic Principles. May 14.
<http://www.sis.nlm.nih.gov/ToxTutor/Tox1/a12.htm>
- WaterISAC, which contains information on contaminants including various contaminant fact sheets as well as the United Kingdom Water Industry Research (UKWIR) database:
www.waterisac.org.
- WHO's "Public health response to biological and chemical weapons"
www.who.int/csr/delibepidemics/biochemguide/en/index.html.
- WHO. 2001. "Health Aspects of Biological and Chemical Weapons"
http://www.who.int/emc/pdfs/BIOWEAPONS_FULL_TEXT2.pdf

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