United States
Environmental Protection
Agency

Wastewater Response Protocol Toolbox:

Planning For and Responding To Wastewater Contamination Threats and Incidents

December 2011

Appendices

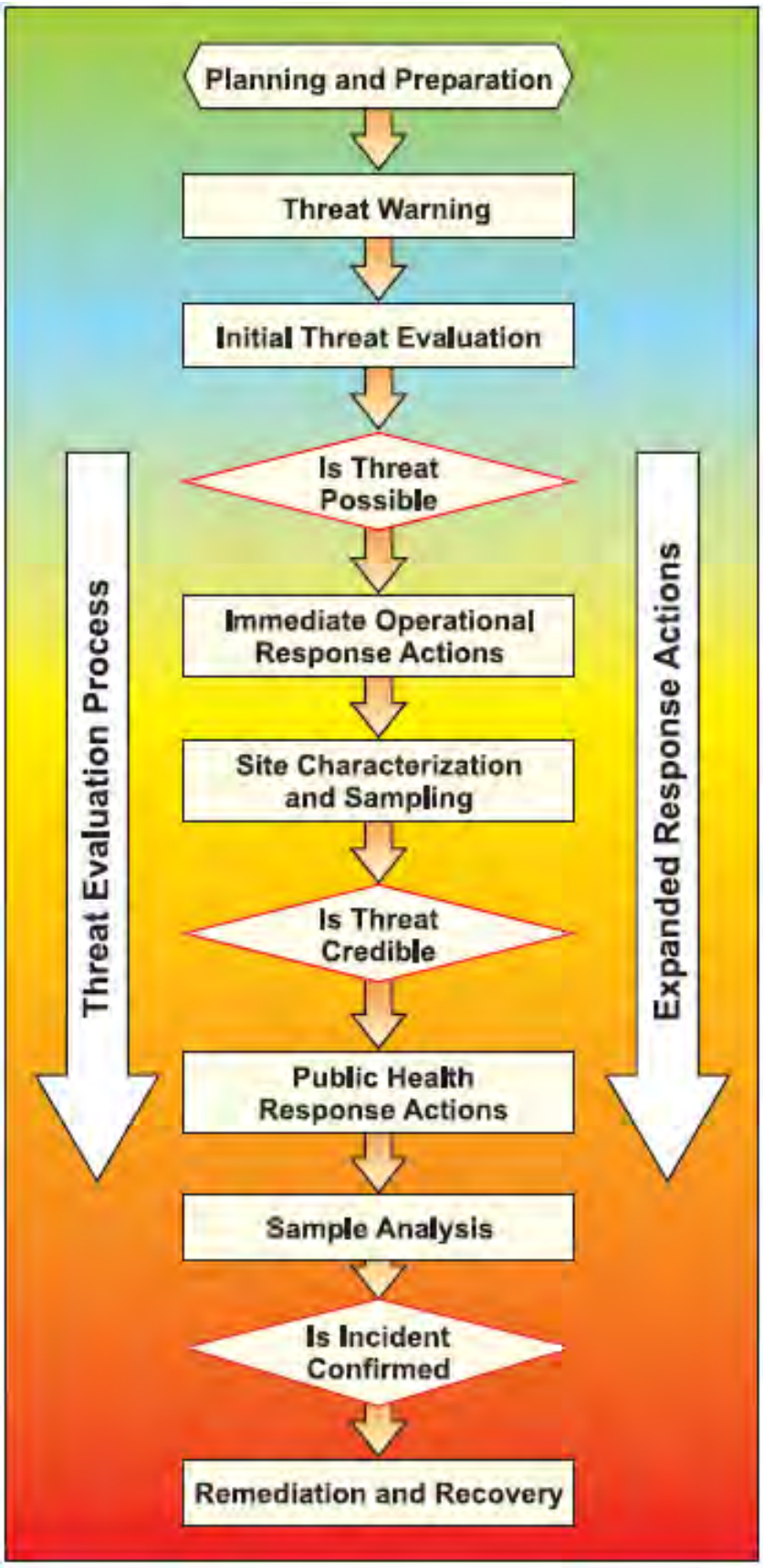
Planning and Preparation
Threat Warning
Initial Threat Evaluation
Is Threat Possible
Immediate Operational Response Actions
Site Characterization and Sampling
Is Threat Credible
Public Health Response Actions
Sample Analysis
Is Incident Confirmed
Remediation and Recovery
Threat Evaluation Process
Expanded Response Actions

Table of Contents - Appendices

1 Response Planning Matrix

Incident				**Response**	
Credibility	*Consequences*		*Other Considerations*	*Possible Actions*	*Anticipated Impacts on the public, infrastructure, property, and environment*
	# people affected	*Health Impact*			
Possible	10's	Minor			
		Moderate			
		Severe			
	100's	Minor			
		Moderate			
		Severe			
	1,000's	Minor			
		Moderate			
		Severe			
Credible	10's	Minor			
		Moderate			
		Severe			
	100's	Minor			
		Moderate			
		Severe			
	1,000's	Minor			
		Moderate			
		Severe			
Confirmed	10's	Minor			
		Moderate			
		Severe			
	100's	Minor			
		Moderate			
		Severe			
	1,000's	Minor			
		Moderate			
		Severe			

2 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 Utility Incident Commander) 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: _____

Name of person who discovered threat warning: _____

Type of threat warning:

☐ Security breach ☐ Witness account ☐ Phone threat
☐ Written threat ☐ Law enforcement ☐ Public health notification
☐ News media ☐ Public complaints
☐ Degradation of treatment organisms
☐ Unusual wastewater chemical characteristics
☐ 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 suspected, 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:

☐ Manhole ☐ Treatment plant ☐ Pump station
☐ Catch basin ☐ Collection main ☐ Building drain
☐ Other: _____

Address: _____

_____

Additional site information: _____

_____

Site #2

Site Name: _____

Type of facility:

☐ Manhole ☐ Treatment plant ☐ Pump station
☐ Catch basin ☐ Collection main ☐ Building drain
☐ Other: _____

Address: _____

_____

Additional site information: _____

_____

Site #3

Site Name: _____

Type of facility:

☐ Manhole ☐ Treatment plant ☐ Pump station
☐ Catch basin ☐ Collection main ☐ Building drain
☐ 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'

Are there any witness accounts of the suspected incident? ☐ Yes ☐ No

If "Yes," review the completed 'Witness Account Report'

Was the threat made verbally over the phone? ☐ Yes ☐ No

If "Yes," review the completed 'Phone Threat Report'

Was a written threat received? ☐ Yes ☐ No

If "Yes," review the completed 'Security Incident Report'

Are there unusual wastewater chemical data or public complaints? ☐ Yes ☐ No

Are there unusual symptoms or disease in the population? ☐ Yes ☐ No

If "Yes," review the completed 'Public Health Report'

Is a 'Site Characterization Report' available? ☐ Yes ☐ No

If "Yes," review the completed 'Site Characterization Report' (Module 3)

Are results of sample analysis available? ☐ Yes ☐ No

If "Yes," review the analytical results report, including appropriate QA/QC data

Is a 'Contamination Identification Report' available? ☐ Yes ☐ No

If "Yes," review the completed 'Contaminant Characterization and Transport Worksheet' (Module 5)

Is there relevant information available from external resources? ☐ Yes ☐ No

Check all that apply

☐ Local law enforcement	☐ FBI	☐ Primacy agency
☐ Public health agency	☐ Hospitals/911 call centers	☐ US EPA/Water ISAC
☐ Media reports	☐ Homeland Security alerts	☐ Neighboring utilities
☐ WARNs	☐ Other: _____	

Point of contact: _____

_____

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

_____

_____

_____

_____

_____

Threat Evaluation

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

Normal activities to consider

☐ Utility staff inspections ☐ Routine wastewater sampling
☐ Construction or maintenance ☐ Contractor activity
☐ Operational changes ☐ Wastewater chemical changes with a known cause
☐ Other: _____

Is the threat 'possible'? ☐ Yes ☐ No

Summarize the basis for this determination: _____

_____

_____

Response to a 'possible' threat:

☐ None ☐ Site characterization ☐ Isolation/containment
☐ Increased monitoring/security ☐ Other: _____

Is the threat 'credible'? ☐ Yes ☐ No

Summarize the basis for this determination: _____

_____

_____

Response to a 'credible' threat:

☐ Sample analysis ☐ Site characterization ☐ Isolation/containment
☐ Partial EOC activation ☐ Public notification ☐ Law Enforcement Notification
☐ Other: _____

Has a contamination incident been confirmed? ☐ Yes ☐ No

Summarize the basis for this determination: _____

_____

_____

Response to a confirmed incident:

☐ Sample analysis ☐ Site characterization ☐ Isolation/containment
☐ Full EOC activation ☐ Public notification ☐ Provide alternate sanitary services
☐ Initiate remediation and recovery ☐ Law Enforcement Notification
☐ Other: _____

How do other organizations characterize the threat?

Organization	Evaluation	Comment
☐ Local law enforcement	☐ Possible ☐ Credible ☐ Confirmed	
☐ FBI	☐ Possible ☐ Credible ☐ Confirmed	
☐ Public health agency	☐ Possible ☐ Credible ☐ Confirmed	
☐ Wastewater permitting agency	☐ Possible ☐ Credible ☐ Confirmed	
☐ Other	☐ Possible ☐ Credible ☐ Confirmed	
☐ Other	☐ Possible ☐ Credible ☐ Confirmed	

Signoff

Name of person responsible for threat evaluation:

Print name: _____

Signature: _____ Date/Time: _____

3 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 wastewater contamination threat. The individual who discovered the security incident, such as a security supervisor, the Utility Incident Commander, 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:

☐ Alarm (building) ☐ Alarm (gate/fence) ☐ Alarm (access hatch)

☐ Video surveillance ☐ Utility staff discovery ☐ Citizen discovery

☐ Suspect confession ☐ Law enforcement discovery

☐ Other: _____

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

If "Yes", complete the 'Witness Account Report'

Site Description

Site Name: _____

Type of facility

☐ Manhole ☐ Treatment plant ☐ Pump station

☐ Catch basin ☐ Collection main ☐ Building drain

☐ Other: _____

Address: _____

_____

Additional Site Information: _____

_____

Background Information

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

☐ Alarms with known and harmless causes ☐ Utility staff inspections

☐ Routine wastewater sampling ☐ Construction or maintenance

☐ Contractor activity ☐ Other: _____

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' 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 information 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 for the site of the security incident? Yes No

If 'Yes,' provide additional detail below

Date and time of video surveillance: _____

Describe surveillance: _____

_____

_____

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

- ☐ Discarded PPE (e.g., gloves and masks)
- ☐ Tools (e.g., wrenches, bolt cutters)
- ☐ Lab equipment (e.g., beakers, tubing)
- ☐ None
- ☐ Empty containers (e.g., bottles, drums)
- ☐ Hardware (e.g., valves, pipe)
- ☐ Pumps or hoses
- ☐ Other: _____

Describe equipment: _____

_____

_____

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

- ☐ Car/sedan
- ☐ SUV
- ☐ Pickup truck
- ☐ Flatbed truck
- ☐ Construction vehicle
- ☐ None
- ☐ Other: _____

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

_____

_____

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

- ☐ Cut locks/fences
- ☐ Open/damaged access hatches
- ☐ Facility in disarray
- ☐ Other: _____
- ☐ Open/damaged gates, doors, or windows
- ☐ Missing/damaged equipment
- ☐ None

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:

- ☐ Unexplained or unusual odors
- ☐ Unexplained dead or stressed vegetation
- ☐ Unexplained clouds or vapors
- ☐ Other: _____
- ☐ Unexplained dead animals
- ☐ Unexplained liquids
- ☐ None

Describe signs of hazard: _____

_____

_____

Signoff

Name of person responsible for documenting the security incident:

Print name: _____

Signature: _____ Date/Time: _____

4 Witness Account Report Form

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 Utility Incident Commander 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 witness: _____

Witness contact information: _____

Full Name: _____

Address: _____

Daytime 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

☐ Manhole ☐ Treatment plant ☐ Pump station

☐ Catch basin ☐ Collection main ☐ Building drain

☐ Other: _____

Address: _____

_____

Additional site information: _____

Type of activity

☐ Trespassing ☐ Vandalism ☐ Breaking and entering
☐ Theft ☐ Tampering ☐ Surveillance
☐ 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					

Were 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					

Were there any logos or distinguishing marks on the vehicles? ☐ Yes ☐ No

If 'Yes,' describe: _____

_____

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

_____

_____

_____

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)
- ☐ Firearms
- ☐ Containers (e.g., bottles, drums)
- ☐ Hardware (e.g., valves, pipe, hoses)
- ☐ Pumps and related equipment
- ☐ Other: _____

Describe 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 ☐ Fogs or vapors ☐ Unusual odors

☐ Dead/stressed vegetation ☐ Dead animals ☐ Unusual noises

☐ Other: _____

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: _____

5 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 as possible 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 the 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 beginning 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.

Basic Information

Name of person receiving the call: _____

Date phone call received: _____ Time phone call received: _____

Time phone call ended: _____ Duration of 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 the call be from a wireless phone? ☐ Yes ☐ No

Details of Threat

Has the wastewater system 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

☐ Manhole ☐ Treatment plant ☐ Pump station

☐ Catch basin ☐ Collection main ☐ Building drain

☐ 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: _____

_____

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 did it sound like? _____

How did the caller sound or speak?

☐ Educated	☐ Well spoken	☐ Illiterate
☐ Irrational	☐ Obscene	☐ Incoherent
☐ Reading a script	☐ Other: _____	

What was the caller's tone of voice?

☐ Calm	☐ Angry	☐ Lisping	☐ Stuttering/broken
☐ Excited	☐ Nervous	☐ Sincere	☐ Insincere
☐ Slow	☐ Rapid	☐ Normal	☐ Slurred
☐ Soft	☐ Loud	☐ Nasal	☐ Clearing throat
☐ Laughing	☐ Crying	☐ Clear	☐ Deep breathing
☐ Deep	☐ High	☐ Raspy	☐ Cracking

☐ Other: _____

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

☐ Silence	Describe: _____
☐ Voices	Describe: _____
☐ Children	Describe: _____
☐ Animals	Describe: _____
☐ Factory sounds	Describe: _____
☐ Office sounds	Describe: _____
☐ Music	Describe: _____
☐ Traffic/street sounds	Describe: _____
☐ Airplanes	Describe: _____
☐ Trains	Describe: _____
☐ Ships or large boats	Describe: _____

☐ 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: _____

6 Written Threat Report Form

INSTRUCTIONS

The purpose of this form is to summarize significant information from a written threat received by a wastewater utility. This form should be completed by the Utility Incident Commander 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.

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 which can be found here: http://about.usps.com/posters/pos84.pdf

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?

☐ US Postal Service ☐ Delivery service ☐ Courier

☐ Fax ☐ E-mail ☐ Hand-delivered

☐ 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 the sender? _____

_____

If hand-delivered, who delivered the message? _____

Details of Threat

Has the wastewater system 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

☐ Manhole ☐ Treatment plant ☐ Pump station

☐ Catch basin ☐ Collection main ☐ Building drain

☐ 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: _____

Condition of paper/envelope:

- ☐ Marked personal
- ☐ Marked confidential
- ☐ Properly addressed
- ☐ Neatly typed or written
- ☐ Clean
- ☐ Corrected or marked-up
- ☐ Crumpled or wadded up
- ☐ Soiled/stained
- ☐ Torn/tattered
- ☐ Other: _____

How was the note prepared?

- ☐ Handwritten in print
- ☐ Handwritten in script
- ☐ Computer typed
- ☐ Machine typed
- ☐ Spliced (e.g., from other typed material)
- ☐ Other: _____

Language:

- ☐ Clear English
- ☐ Poor English
- ☐ Another language: _____
- ☐ Mixed languages: _____

Writing style:

- ☐ Educated
- ☐ Proper grammar
- ☐ Logical
- ☐ Uneducated
- ☐ Poor grammar/spelling
- ☐ Incoherent
- ☐ Use of slang
- ☐ Obscene
- ☐ Other: _____

Writing tone:

- ☐ Clear
- ☐ Direct
- ☐ Sincere
- ☐ Condescending
- ☐ Accusatory
- ☐ Angry
- ☐ Agitated
- ☐ Nervous
- ☐ Irrational
- ☐ 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: _____

7 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 wastewater. This form should be completed by the Utility Incident Commander 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 wastewater utility will likely play a support role during the investigation, specifically to help determine whether or not wastewater 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 wastewater 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: _____

Exposed Individuals:

Location where exposure is thought to have occurred

☐ Residence ☐ Work ☐ School

☐ 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 WASTEWATER

Were there any public complaints within the affected area? ☐ Yes ☐ No

Were there any unusual wastewater chemical 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: _____

8 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 wastewater 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 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, "Threat Evaluation Worksheet" for details about the threat.

Investigation Site

Site Name: _____

Type of facility:

☐ Manhole ☐ Treatment plant ☐ Pump station

☐ Catch basin ☐ Collection main ☐ Building drain

☐ 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

☐ Low hazard ☐ Chemical hazard

☐ Radiological hazard ☐ Biological hazard

If the initial hazard assessment indicates a chemical, radiological, or biological hazard, then only teams trained to deal with such hazards should be sent to the site.

Site Characterization Team

Name & Affiliation of Site Characterization Team Leader: _____

_____

Wastewater utility staff:

☐ Wastewater security specialist Name: _____

☐ General 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 for Worker Safety and Rapid Wastewater Testing

✓	Parameter[1]	Screen[2]	Meter/Kit ID[3]	Check Date[4]	Reference Value[5]
	Radiation	Both Safety and Wastewater			
	pH / conductivity	Wastewater			
	Cyanide	Wastewater			
	Combustible gases	Both Safety and Wastewater			
	Volatile chemicals	Both Safety and Wastewater			
	Metals	Wastewater			

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

Sampling Checklist

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

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

Equipment Checklist

- ☐ Completed Site Characterization Plan
- ☐ Emergency Wastewater Sampling Kit (Table 3-1)
- ☐ Reagents (if stored separately)
- ☐ Laboratory grade water (5 gal)
- ☐ Special equipment for the specific site
- ☐ Additional Documentation
- ☐ Field Testing Kit
- ☐ Bags of ice or freezer packs
- ☐ Rinse water (20 liters)
- ☐ Disposable camera
- ☐ Other: _____

Sample Handling Instructions

Sample delivery:

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

Name of recipient: _____

Phone: _____ Fax: _____

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: _____

9 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 sited that is characterized.

General Information

Date: _____ Time arrived at investigation site: _____

Name of Site Characterization Team Leader: _____

Phone: _____ Fax: _____

Location of Investigation Site

Site Name: _____

Type of facility:

☐ Manhole ☐ Treatment plant ☐ Pump station

☐ Catch basin ☐ Collection main ☐ Building drain

☐ Other: _____

Address: _____

_____

_____

Weather conditions at site: _____

_____

Additional Site Information: _____

_____

Approach to Site

Time of approach to site: _____

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

☐ None ☐ Radiation ☐ Volatile chemicals

☐ HazCat ☐ Chemical Weapons ☐ Biological agents

☐ Other: _____

Report results of field safety screening in Appendix 10 "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

- ☐ None ☐ Radiation ☐ Volatile chemicals
- ☐ HazCat ☐ Chemical weapons ☐ Biological agents
- ☐ Other: _____

Report results of field safety screening in Appendix 10 "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:

- ☐ None ☐ Unexplained dead animals
- ☐ Unexplained dead or stressed vegetation ☐ Unexplained clouds or vapors
- ☐ Unexplained liquids ☐ Other: _____

Describe signs of hazard: _____

_____

_____

_____

Unexplained or Unusual Odors:

☐ None ☐ Pungent ☐ Irritating

☐ Sulfur ☐ Skunky ☐ Bitter almond

☐ Petroleum ☐ Other: _____

Describe unusual odor: _____

_____

_____

Unusual Vehicles Found at the Site:

☐ Car/sedan ☐ SUV ☐ Pickup truck

☐ Flatbed truck ☐ Construction vehicle ☐ None

☐ Other: _____

Describe vehicle(s) (include make/model/year/color, license plate #, and logos or markings):

_____

_____

Signs of Tampering:

☐ None ☐ Cut locks/fences

☐ Open/damaged gates, doors, or windows ☐ Open manholes

☐ Missing/damaged equipment ☐ Facility in disarray

☐ Other: _____

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

Describe signs of tampering: _____

_____

_____

Unusual Equipment:

☐ None ☐ Discarded PPE (e.g., gloves, masks)

☐ Tools (e.g., wrenches, bolt cutters) ☐ Hardware (e.g., valves, pipes)

☐ Lab equipment (e.g., beakers, tubing) ☐ Pumping equipment

☐ Other: _____

Describe equipment: _____

_____

_____

Unusual Containers:

Type of container:

☐ None ☐ Drum/barrel ☐ Bottle/jar
☐ Plastic bag ☐ Box/bin ☐ Pressurized cylinder
☐ Test tube ☐ Bulk container
☐ Other: _____

Condition of container:

☐ Opened ☐ New ☐ Damaged/leaking
☐ Unopened ☐ Old ☐ Intact/dry

Size of container: _____

_____

Describe labeling on container: _____

_____

Describe visible contents of container: _____

_____

Rapid Field Testing of Wastewater

☐ None ☐ Residual disinfectant ☐ pH/conductivity
☐ Cyanide ☐ Radiation ☐ VOCs and SVOCs
☐ Pesticides ☐ Biotoxins ☐ General toxicity
☐ Other: _____

Report results of rapid field testing in Appendix 10 "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:

☐ Low hazard ☐ Chemical hazard

☐ Radiological hazard ☐ Biological hazard

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

Safety Checklist:

☐ **Do not** eat, drink, or smoke at the site.

☐ **Do not** taste or smell the wastewater samples.

☐ **Follow** all steps/procedures in HASP.

☐ **Do** use the general PPE included in the emergency wastewater sampling kit.

☐ **Avoid** all contact with the wastewater, 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., without headspace for VOCs).

☐ Add preservatives as specified.

☐ Carefully close sample containers and verify that they do not leak.

☐ Wipe the outside of sample containers with a mild bleach solution if there was any spillage.

☐ Place sample containers into a sealable plastic bag.

☐ Place samples into an appropriate, rigid shipping container.

☐ Pack container with frozen ice packs, as appropriate.

☐ Complete "Sample Documentation Form" (Appendix 11)

☐ Complete "Chain of Custody Form" (Appendix 12)

☐ 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 (IC) and inform the IC that the team is leaving the site

---

Signoff

Site Characterization Team Leader:

Print Name: _____

Signature: _____ Date/Time: _____

10 Field Testing Results Form

Date of Field Testing:		Site Name:		Field Tester:		Phone:	
Parameter	Units	Screen[1]	Meter/Kit ID[2]	Testing Location[3]	Testing Time[4]	Results[5]	Ref. Value[6]

[1]Screening may be conducted for safety, rapid wastewater testing, or both.
[2]Report the unique identifier for the meter or kit used during screening.
[3]Report the specific location where the field testing was conducted.
[4]Report the specific time at which the test was performed.
[5]Results of field testing should include replicate analysis where appropriate.
[6]Results should be compared with a reference value, if available, to determine whether or not the levels detected pose a hazard.

11 Sample Documentation Form

Collection Date:		Site Name:		Sampler:		Phone:
Sample ID	**No. Bottles**	**Sampling Time**	**Sampling Location**	**Sample Description**	**Analysis**	**Sample Additives[1]**

[1]Report preservatives, dechlorinating agents, acid/base for pH adjustment, and any other sample additives.

12 Chain of Custody Form

Site Name:		Sampler:	
Sampler Phone No.:		Signature:	
Sample ID	**Collection Date**	**No. Bottles**	**Analysis**

Relinquished by:	**Received by:**	**Date/time:**
Relinquished by:	**Received by:**	**Date/time:**
Relinquished by:	**Received by:**	**Date/time:**
Relinquished by:	**Received by:**	**Date/time:**
Relinquished by:	**Received by:**	**Date/time:**

Dispatched by:	**Date/time:**	**Received for Laboratory by:**	**Date/time:**

Method of Sample Transport:		
Shipper:	**Phone No.:**	**Tracking No.:**

13 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 for verification. 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. (Note: For safety reasons, it is recommended that you not intentionally smell samples.)

What was the physical form of the contaminant?

☐ Solid ☐ Liquid ☐ Gas

☐ Slurry ☐ Powder ☐ Granules

☐ 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, public complaints, or witness accounts that are relevant to contaminant identification. _____

_____

_____

Describe any other characteristics of the contaminant not mentioned above. _____

_____

_____

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: _____

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

Type/symptoms: _____

Is there information on unusual sales of pharmaceutical supplies? _____

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

Unusual analytical results: _____

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. _____

_____

_____

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	Unknown	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?				
Does the contaminant react at certain pH's?				
Is the contaminant water soluble?				
Does the contaminant have a discernable odor or color? (Note: For safety reasons you should not intentionally smell samples.)				
Is the contaminant volatile or semi-volatile?				
Does the contaminant impact the pH?				
Does the contaminant impact conductivity?				
Does the contaminant impact other wastewater chemical 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?

☐ Inhalation ☐ Dermal contact ☐ Ingestion ☐ Unknown

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

_____

_____

What is the contaminant's LD50/ID50 for these routes of exposure? _____

_____

_____

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?

Does the contaminant have the potential for 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 routes?

☐ Dermal ☐ Inhalation ☐ Ocular ☐ Ingestion

List the levels for each exposure route.

Access to Contaminant Information (Effects and Properties)

In-house Information

Contact/ phone no.:

Internal database:

Public Health Officials

Contact/phone no.:

Website/database:

Resources

- ☐ US EPA Water contaminant information tool (WCIT), at http://www.epa.gov/wcit.
- ☐ US EPA Water Health and Economic Analysis Tool (WHEAT), at http://water.epa.gov/infrastructure/watersecurity/techtools/wheat.cfm
- ☐ 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://www.epa.gov/risk_assessment/.
- ☐ 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 (2004)*: 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, gals, 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 public 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
- ☐ Clinics
- ☐ Nursing Homes
- ☐ Dialysis Centers
- ☐ Other: _____

☐ Schools

☐ Day Care Facilities

☐ Businesses

- ☐ Food and Beverage Manufacturers
- ☐ Commercial Ice Manufacturers
- ☐ Restaurants
- ☐ Agricultural Operations
- ☐ Power Generation Facilities
- ☐ Other : _____

Signoff

Name of person completing form: _____

Print name: _____

Signature: _____ Date/Time: _____

14 Public Health Response Action Worksheet

INSTRUCTIONS

The purpose of this form is to help organize information to aid in the evaluation of containment 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 wastewater by either restricting further transport of the contaminant through the wastewater system or restricting use of the system through public notification. This worksheet assumes that the "Contaminant Characterization and Transport Worksheet" in Appendix 13 has been completed to the extent possible.

Assessment of Public Health Impact

Identity of the contaminant: ☐ Suspected ☐ Known ☐ Unknown

Describe: _____

Contaminant properties (if known):

Route of exposure:

☐ Dermal ☐ Inhalation ☐ Ingestion ☐ Other: _____

Toxic or infectious dose (LD_{50}/ID_{50}) by these routes of exposure: _____

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

☐ Other: _____

Customers with special needs within contaminated area:

☐ Critical Care Facilities

- ☐ Hospitals
- ☐ Clinics
- ☐ Nursing Homes
- ☐ Dialysis Centers
- ☐ Other: _____

☐ Schools

☐ Day Care Facilities

☐ Businesses

- ☐ Food and Beverage Manufacturers
- ☐ Commercial Ice Manufacturers
- ☐ Restaurants
- ☐ Agricultural Operations
- ☐ Power Generation Facilities
- ☐ Other: _____

Effectiveness of containment options:

☐ Complete contaminant isolation ☐ Reduction in spread of contaminant

☐ Unknown

☐ 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 and/or required by any applicable laws or regulations? ☐ Yes ☐ No

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

☐ Public health agencies ☐ Police departments ☐ Fire departments
☐ Hospitals/clinics ☐ Laboratories ☐ Wastewater permitting agency
☐ Regional Poison Control Center
☐ Other: _____

Type of notification (follow steps shown):

- Is the contaminant known? ☐ Yes ☐ No
- Is there a risk of explosion? ☐ Yes ☐ No

If "Yes," consider an evacuation notice.

- Is there a risk of dermal or inhalation exposure? ☐ Yes ☐ No ☐ Unknown

If "Yes" or "Unknown," consider an evacuation notice.

Content of Public Notification

☐ Has the contamination event been confirmed? ☐ Yes ☐ No

☐ Is the contaminant known? ☐ Yes ☐ No

☐ If "Yes," identity of the contaminant: _____

☐ Characteristics of the contaminant: _____

☐ Restrictions on use: _____

☐ Inhalation exposure ☐ Dermal exposure

☐ Exposure symptoms: _____

☐ Medical treatments: _____

☐ Transmission mode (if biological): _____

☐ Duration of restriction: _____

☐ Alternate sanitary services: _____

☐ Additional instructions to consumers: _____

☐ Other information about the incident: _____

☐ Other: _____

Notification to customers with special needs:

☐ Critical Care Facilities

- ☐ Hospitals
- ☐ Clinics
- ☐ Nursing Homes
- ☐ Dialysis Centers
- ☐ Other: _____

☐ Schools

☐ Day Care Facilities

☐ Businesses

- ☐ Food and Beverage Manufacturers
- ☐ Commercial Ice Manufacturers
- ☐ Restaurants
- ☐ Agricultural Operations
- ☐ Power Generation Facilities
- ☐ Other: _____

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 (check all that apply):

- ☐ Broadcast media (radio and television)
- ☐ Web site
- ☐ Newspaper
- ☐ Newsletters (wastewater utility/partner)
- ☐ Broadcast phone messages
- ☐ Posting in conspicuous locations
- ☐ Hand delivery
- ☐ Town hall meetings
- ☐ Auto dialer system
- ☐ Government access channels
- ☐ Listserve email
- ☐ Letters by mail
- ☐ Phone banks
- ☐ Broadcast faxes
- ☐ Mass distribution through partners
- ☐ Door-to-door canvassing
- ☐ Conference calls
- ☐ Reverse 911
- ☐ Other _____

Notification/restriction timeline: _____

Notification/restriction to begin: _____

Notification/restriction to end: _____

Alternate Sanitation Services

Are alternate sanitation services needed? ☐ Yes ☐ No

Where can customers obtain the alternate sanitary services (e.g., locations for portable toilets)?

_____

_____

Which customers with special needs should be notified of the alternate sanitary services?

☐ Critical Care Facilities

- ☐ Hospitals
- ☐ Clinics
- ☐ Nursing Homes
- ☐ Dialysis Centers
- ☐ Other: _____

☐ Schools

☐ Day Care Facilities

☐ Businesses

- ☐ Food and Beverage Manufacturers
- ☐ Commercial Ice Manufacturers
- ☐ Restaurants
- ☐ Agricultural Operations
- ☐ Power Generation Facilities
- ☐ Other: _____

Signoff

Name of person completing form: _____

Print name: _____

Signature: _____ Date/Time: _____

15 Suggested Outline for System Characterization/Feasibility Study Work Plan

I. Executive Summary

II. Introduction

III. System Description and Environmental Setting

IV. Initial Evaluation and Results of Site Characterization

- A. Contaminants present, volume of wastewater and media affected
- B. Potential pathways of contaminant migration/preliminary assessment of public health and environmental impacts
- C. Preliminary identification of candidate response objectives and remedial response action alternatives

V. Work Plan Rationale

- A. Data quality objectives
- B. Work plan approach

VI. Tasks

- A. Project Planning
- B. Community Relations/Public Communication
- C. Field Investigations
- D. Sample Analysis/Validation
- E. Data Evaluation
- F. Risk Assessment
- G. Evaluation of Remedial Alternatives
- H. Treatability Studies
- I. Reports

VII. Costs and Key Assumptions

VIII. Schedule

IX. Project Management

- A. Staffing
- B. Coordination

X. References

XI. Appendices

16 Elements for a Quality Assurance Project Plan

I. Project Management

A. Title and Approval Sheet

B. Table of Contents

C. Distribution List

D. Project/Task Organization

E. Problem Definition and Background

F. Project/Task Description

G. Quality Objectives and Criteria

H. Special Training/Certifications

I. Documentation and Records

II. Data Generation and Acquisition

A. Sampling Process Design (Experimental Design)

B. Sampling Methods

C. Sample Handling and Custody

D. Analytical Methods

E. Quality Control

F. Instrument/Equipment Testing

G. Inspection and Maintenance

H. Instrument/Equipment Calibration and Frequency

I. Inspection/Acceptance of Supplies and Consumables

J. Non-direct Measurements

K. Data Management

III. Assessment and Oversight

A. Assessments and Response Actions

B. Reports to Management

IV. Data Validation and Usability

A. Data Review, Verification, and Validation

B. Verification and Validation Methods

C. Reconciliation with User Requirements

17 Elements of a Health and Safety Plan

I. The name of a site health and safety officer and the names of key personnel and alternates responsible for site safety and health

II. Health and safety risk analysis for existing site conditions, and for each site task and operation

III. Employee training assignments

IV. Description of personal protective equipment to be used by employees for each of the site tasks and operations being conducted

V. Medical surveillance requirements

VI. Description of the frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used

VII. Site control measures

VIII. Decontamination procedures

IX. Standard operating procedures for the site

X. Contingency plan that meets the requirements of 29 CFR 1910.120(l)(1) and (I)(2)

XI. Entry procedures for confined spaces

Printed on Recycled Paper