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# FIRST NATIONS WASTEWATER Emergency Response Plan Guide

A handbook for First Nations Operators  
and Band Administrators in British Columbia



Canada



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## ACKNOWLEDGEMENTS

*Since the publishing of First Nations Drinking Water Emergency Response Plan Guide, we have been receiving inquiries about an emergency response plan guide for wastewater systems. It has been our intent to produce a user-friendly and informative document that First Nations in British Columbia can use in the development of a Wastewater Emergency Response Plan. I believe we have now achieved this goal.*

*Thanks to Jian (Jane) Guo, P.ENG., Professional and Technical Services, Indian and Northern Affairs Canada for dedicating time and special effort in preparing this guide. I would also like to thank Paula Santos, P.ENG., and Danny Higashitani, P.ENG., Professional and Technical Services, Indian and Northern Affairs Canada, for their valuable input.*

*Quality information and a well-designed Wastewater Emergency Response Plan are critical for a timely response to emergency situations. I hope this booklet will aid First Nations in this regard.*

### **GARY GEE, P.ENG.**

Director, Professional and Technical Services  
Indian and Northern Affairs Canada BC Region



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# 1. Introduction

Raw or improperly treated sewage carries a dangerous cocktail of infectious bacteria, viruses, parasites and toxic chemicals. When it ends up in our drinking water, recreational water or in basements of our homes, it poses a significant threat to human health and the environment. Human contact with raw or improperly treated sewage can lead to serious health problems, including cholera, dysentery, infectious hepatitis, giardiasis, gastroenteritis, etc.. If released to fish-bearing waters, toxic substances in the raw sewage can also cause illness in fish and kill aquatic life.

Community sewage collection, treatment and disposal systems are designed to protect public health and the environment by conveying wastewater to treatment and disposal facilities prior to discharge. When these systems work as designed, there is little or no risk to public health or the environment. However, during emergencies, there can be increased risks. Preparing an emergency response plan (ERP) and practicing it can save lives, prevent illness, enhance system security, minimize property damage and environmental impact and lessen liability. An effective ERP includes planning for any and all possible emergency scenarios, communicating with system users and health and environmental authorities, and acting to stop, contain and minimize the effects of the spill.

The purpose of this guide/template is to assist BC First Nations administrators and wastewater systems operators to develop their own ERP to help them minimize the potentially damaging effects of sewage spills on public health and the environment. The guide/template provides examples of the most common types of emergencies with various levels and specific responses to those emergencies. It prompts operators to develop a list of people and agencies they may need to contact in case of emergency. The guide focuses on preventing or minimizing short-term and acute effects on public health and the environment associated with sewage spills. It is intended to supplement, rather than duplicate any existing ERPs.

## **2. What is a sewage spill?**

A sewage spill means the release or discharge into the environment of raw sewage or improperly treated sewage effluent in an amount that can cause pollution. According to the BC *Spill Reporting Regulation*, the amount of sewage spill that can cause pollution is equal to or greater than 200 kg (or 200 L).

## **3. Why do you need a Wastewater Systems Emergency Response Plan?**

As an operator of a community wastewater system, you need an ERP to ensure the safety and health of the people in your community and protection of the environment. The federal *Fisheries Act* prohibits the release of deleterious substances into fish bearing waters. The BC *Municipal Sewage Regulation* (MSR) enacted in 1999 prohibits the release of wastewater to the environment without meeting the effluent quality standards. The MSR also requires an operating plan including an emergency component be developed prior to effluent discharge.

A properly prepared, well thought out ERP will tell you exactly what to do and whom to call so that you can respond rapidly and effectively to any disruption to the downstream receptors. Your ability to respond rapidly and correctly in the event of a sewage spill will help prevent unnecessary problems and protect the health and safety of the community you are serving and the receiving environment within and around your community. It may also save you money by preventing further complications.





### Action — not reaction

When a wastewater emergency situation does occur, you should immediately start taking the necessary actions to resolve it – not stand around wondering what you should do first or next. First, you have to be familiar with your community wastewater systems and be able to detect various types of potential problems and causes which could lead to spills. Then you have to determine solutions to each of those problems which could prevent spills before they occur or minimize the spills if they do occur. The act of preparing to respond to a wastewater emergency may actually help you prevent one from happening. By making a thorough evaluation of all the potential “trouble spots” or vulnerable points in your own system, you may identify steps you can take now that will prevent an emergency from happening later. Conditions which require public notification, requests for assistance and other possible concerns should all be identified in advance.

Following is some guidance on how to prepare an emergency response plan for your community wastewater system(s).

## 4. What should your ERP include?

### Contact List

As a minimum, your ERP should include a list of contact people and phone numbers for trouble shooting, servicing and emergency assistance. This includes operators, repair people, government agencies, media representatives and community members. You should complete a Wastewater ERP Contact List as shown in Appendix A of this Guide and post it on the wall of your Band and operator's office. Your ERP should be organized into several logical sections so that information is easy to find. The following are some key elements that should be included in your ERP.

### Part 1, Introduction

Describe the purpose, goals, roles and responsibilities of your Band and operator(s) of your wastewater systems, access control protocol and overall organization of the ERP.

### Part 2, System Information

- Describe the sewage collection, treatment and disposal system as well as built-in redundancy features of the system;
- Outline measures in place to prevent emergency conditions from occurring;
- Describe equipment standard operating procedures,
- Describe procedures for connecting to portable pumps, switching to alternate power supplies and/or maintaining generators, including schematics of electrical systems in lift stations and wastewater treatment plants. They should be located beside the equipment they refer to.





- Provide a map of your community which shows the location of the items such as the ones below to help in the fastest possible response:
  - Wastewater collection lines
  - Critical control points (e.g., lift stations, shut-off valves, manholes, cleanouts, overflow storage or bypassing facilities)
  - Access routes, roads or trails to these critical control points
  - Wastewater treatment plant
  - Effluent disposal systems (i.e., ground disposal fields, outfalls, etc)
  - All built-in redundancy features of the facility
  - High volume sewage discharge businesses if any
  - Water distribution lines
  - Drinking water sources (wells, surface water intakes) and pump houses
  - Other high risk downstream receptors such as residents, schools, hospitals, daycare centres, long term care facilities, wells in unconfined aquifer or influenced by surface water, shellfish beds, recreational beaches, fish bearing waters
  - Storage location of tools and maintenance equipment
  - Storage location of your O & M Manual and O & M Plan
  - Location of your emergency contact list.

### Part 3, Emergency Causes, Impact Levels and Responses

When preparing your ERP, you should try to identify all situations which could have a negative impact on human health/safety or the environment. Some of the causes of spills and other malfunctions you should identify include:

- Power failure
- Pump/siphon failure
- Electrical Control malfunctioning
- Broken sewer main.
- Blocked sewer main
- Malfunctioning of wastewater treatment plant
- Malfunctioning of wastewater disposal facilities (i.e. ground disposal fields, outfalls)
- Flooding of wastewater treatment or disposal facilities
- Snow/wind storm
- Fire
- Earthquakes damaging the system
- Act of vandalism causing system disruption



Impact caused by the above emergency situations is ranked into three levels, minor, significant and major emergencies. Examples of responding actions based on either causes or impact levels are illustrated in Section 6.

#### **Part 4, ERP update and training**

Describe the ERP review and update process, evaluate the effectiveness of the ERP and provide information on the wastewater system's ERP training program. You need to update relevant components of the ERP when new wastewater facilities are added or the existing system is altered. You must update your emergency contact list once per year or whenever your contact information changes whichever comes first. As an operator, you need to make yourself familiar with the emergency response plan when starting the job and when the ERP is updated. A one-hour wastewater emergency response drill is recommended once per year.

#### **Appendices**

Appendices should be utilized for supplementary material essential for the emergency response activities. It's imperative that you put together a telephone contact list, site and system drawings, record keeping forms/worksheets, checklists, pre-written press releases, incident specific action plans and other necessary documents.

## 5. Communications

Communications play a key role in how well you are able to respond during an emergency. Your particular communications plan depends more than anything else on the level of emergency situation. You must be able to alert all the receptors of the spill from your system as soon as possible, especially if there is a possible risk to their health from contacting the spilled sewage. Here are a few methods to illustrate how to get the message out to the community:

### Public notices

A simple flyer/note to the affected people is an effective way to ensure that every person affected is aware of the current situation regarding the sewage spill. The key is to make sure that everyone gets the message that an emergency has occurred and that the area is no longer safe for normal use. Some possible suggestions for the flyer/note include:

- Use bright paper to ensure that it is visible, especially for older community members (and always use the same colour paper for a wastewater issue)
- Use readable, larger fonts so that the message can be read by everybody
- Post or tape the flyer to each house and don't simply place it in a mailbox or through the mail slot, where it has the chance to be missed
- Use the radio/telecommunication system if one is available in the community.

### Phone trees

In the case of small or medium-sized communities, your communications plan may include organizing a “phone tree.” This is a pre-arranged plan which allows every household in the community

to be contacted with an important message by their neighbours, by telephone. People who have been phoned have their own list of other people to phone, who in turn have the names of others to phone, and so on down the line until everyone on the system has been alerted.

Many small communities already have some kind of “phone tree” system in place so they can respond quickly to other emergencies, such as alerting local volunteer fire fighters. Talk to your local fire chief, you may be able to use the same system for an emergency involving your wastewater system. If you use a phone tree, it is very important to keep it up to date.

For very small wastewater system where there is only one/two or a dozen connections, all located near each other, a “phone tree” probably isn’t necessary. In these cases, assuming that you as the wastewater operator are already at the scene, you can pass the word around just by knocking on a few doors, and getting others to pass the word around as well, so that all the users are made aware of the problem right away.

If you are using a “phone tree” to send out a message to your community members telling them not to use the sewer system (eg flushing toilets, doing laundry) during the spill, make sure that people who either don’t have phone lines or who aren’t in when the call is made also get the message.

## Media

Local media – radio, television and newspapers – can also carry warnings to the community members if the situation is serious enough. Make sure you contact local media as part of your emergency planning to establish your credibility with them and to ensure that if you ever do have to call they will know who you are and how important it is to cooperate with you in alerting their readers or listeners.

## 6. Examples of potential emergency situations and possible responses

The following subsections describe some examples of potential emergency situations and possible responses. These are categorized as “responses based on causes”, which outline responses to common causes of emergencies in wastewater systems, and “responses based on levels of impact”, which outline responses to be taken depending on the consequences.

Please note, these examples may or may not apply to your particular wastewater system. The type of response, the contact list and the order of response will also vary with the size of your system, quantity, quality and location of spills, sensitivity of the receiving environment, and other factors.

If as a community wastewater systems operator, you believe the spill is not the responsibility of the Band, inform the resident of what to do and who to call for help. Provide a small works roster to the resident to use for contacting contractors.





## 6.1. Responses Based on Causes

### Power outage

- ACTIONS**
- Notify the Chief and Council.
  - Call BC Hydro.
  - Start back-up generator.
  - Notify all users of interruption of service if back-up not capable of carrying away the flow.
  - Estimate the quantity of sewage spilled if any.
  - Determine the level of emergency.
  - Take further actions and make contact as per table on page 15 based on the level of emergency.

### Pump/siphon failure

- ACTIONS**
- Notify the Chief and Council.
  - Call for repair service and/or equipment supplier.
  - Call circuit rider for advice if needed.
  - Replace with spare pump or hook up to a portable pump if available.
  - Notify all users of interruption service for minimizing washing and flushing activities.
  - Estimate the quantity of sewage spilled if any.
  - Determine the level of emergency
  - Take further actions and make contact as per table on page 15 based on the level of emergency.

## Electrical Control malfunctioning

- ACTIONS**
- Notify the Chief and Council.
  - Call for repair service.
  - Call circuit rider for advice if needed.
  - Estimate the quantity of sewage spilled if any.
  - Determine the level of emergency
  - Take further actions and make contact as per table on page 15 based on the level of emergency.

## Broken sewer main

- ACTIONS**
- Notify the Chief and Council.
  - Call for repair service.
  - Call circuit rider for advice if needed.
  - Contain the spill as much as possible.
  - Notify upstream sewer users for minimizing their washing and flushing activities until further notice.
  - Notify downstream spill receptors.
  - Arrange alternate sewage disposal if necessary, i.e. divert the spill into downstream manhole if possible, pump and haul, emergency storage, etc.
  - Estimate the quantity of sewage spilled if any.
  - Determine the level of emergency
  - Take further actions and make contact as per table on page 15 based on the level of emergency.

## Malfunctioning wastewater treatment plant

- ACTIONS**
- Notify the Chief and Council.
  - Locate the parts that are malfunctioning if can.
  - Call for repair service or order replacement parts.
  - Call circuit rider for advice if needed.
  - Notify sewer users for minimizing washing and flushing activities until further notice.
  - Monitor the performance of the wastewater treatment plant.
  - Take effluent quality samples once per week while parts are malfunctioning.
  - Determine the impact of the malfunctioning and level of emergency.
  - Take further actions and make contact as per table on page 15 based on the level of emergency

## Malfunctioning wastewater disposal facilities (ground disposal fields, outfalls)

- ACTIONS**
- Notify the Chief and Council.
  - Locate the areas that are malfunctioning if can.
  - Call for repair service or order replacement parts.
  - Call circuit rider for advice if needed.
  - Determine the impact of the malfunctioning and level of emergency.
  - Take further actions and make contact as per table on page 15 based on the level of emergency.



## **Flooding, Earthquake, Snow/windstorm, Fire, Act of vandalism**

### **ACTIONS**

- Notify the Chief and Council.
- Call fire fighters for fire, RCMP for vandalism.
- Advise all sewer users for minimizing their washing and flushing activities if sewer spill has occurred or is imminent.
- Take necessary actions outlined on page 15 when appropriate.
- Work together with Band Chief and Council and village maintenance personnel and water system operator for collaborated response.
- Contact media and phone trees for public notification.

## 6.2. Responses based on impact levels of emergency

Impact Levels	What it Means	Actions	Personnel/ Agency to Notify
Level 1 – Minor Emergency	<ul style="list-style-type: none"> <li>• lower risk situation that requires minimal outside assistance,</li> <li>• there has been no spill or the spill size is less than 200L and there is no threat to drinking water or to a water body</li> <li>• the situation is not likely to cause public health or environmental problems,</li> <li>• the risks of personnel injury are relatively small,</li> <li>• this type of problem can normally be solved within 24 hours.</li> </ul>	<ul style="list-style-type: none"> <li>• Call BC Hydro for power failure.</li> <li>• Call circuit rider for advice if needed.</li> <li>• Start back-up generator if power is out.</li> <li>• Arrange alternate sewage disposal if necessary, ie divert into downstream manhole if you can, pump and haul, emergency storage, etc.</li> <li>• Repair minor problems if you can.</li> <li>• Call for repair service and/or equipment supplier.</li> <li>• Notify downstream receptors.</li> <li>• Estimate the quantity of sewage spilled.</li> <li>• Advise upstream users to postpone and minimize their washing and flushing activities until further notice.</li> <li>• Record your emergency response activities (See Appendix B).</li> <li>• Record the time and duration of the spill.</li> <li>• Report to your circuit rider and INAC FSO.</li> <li>• Recover the damage after resuming to normal operation</li> <li>• Notify users.</li> </ul>	<ul style="list-style-type: none"> <li>• Chief and Council</li> <li>• circuit rider</li> <li>• equipment supplier if necessary</li> <li>• INAC</li> </ul>

Impact Levels	What it Means	Actions	Personnel/ Agency to Notify
<p>Level 2 – Significant Emergency</p>	<ul style="list-style-type: none"> <li>the system experiences a significant spill or discharge (larger than 200 L) or major disruption that requires external coordination and/or issuance of a health advisory,</li> <li>the spill will be impacting drinking water or a water body,</li> <li>the risk of personnel injury and impact on public health or environment is elevated,</li> <li>will likely take more than 24 hours to resolve.</li> </ul>	<ul style="list-style-type: none"> <li>All of Level 1 actions.</li> <li>Notify Provincial Emergency Program (PEP) if a spill larger than 200L has occurred to a water body.</li> <li>Take necessary steps to stop the spill and protect life, property and the environment.</li> <li>Isolate the sewer line, if possible, to stop, contain, or minimize the spill, or divert the spill to low risk areas.</li> <li>Identify spill receptors (ie downstream drinking water source, business or farming water users).</li> <li>Notify water system operators, business and farming water users immediately if they could be affected.</li> <li>Record the time and duration of the sewage spill.</li> <li>Record and report to INAC and PEP the incident including the following information (See Appendix B)</li> <li>Follow up with the affected receptors after emergency has been lifted.</li> <li>Secure the spill site to prevent contact by the public until the site has been thoroughly cleaned.</li> <li>Clean up the spill thoroughly after it is stopped.</li> <li>Where necessary, disinfect and /or deodorize the site using lime or other type of chemicals deemed appropriate.</li> <li>If spill is into a body of water that bears fish or other aquatic life, do not apply bleach or other disinfectant.</li> <li>Contact PEP for specific instructions.</li> </ul>	<ul style="list-style-type: none"> <li>All of Level 1 contacts</li> <li>PEP if spill to the environment has occurred.</li> <li>All upstream sewer users for stopping or minimizing the discharge to sewers.</li> <li>All downstream property owners</li> <li>Downstream users of the effected areas</li> <li>Water system operators if source water is effected</li> </ul>



Impact Levels	What it Means	Actions	Personnel/ Agency to Notify
Level 3 – Major Emergency	<ul style="list-style-type: none"> <li>• Earthquake, massive flooding, storm or act of vandalism/terrorism causing massive disruption to the wastewater systems throughout the community.</li> <li>• immediate notification of local and other emergency management services is required to aid in efficient response actions, and of law enforcement if act of vandalism is suspected,</li> <li>• effective communication with communities is necessary to prevent injury or loss of life,</li> <li>• may take several days or weeks to resolve.</li> </ul>	<ul style="list-style-type: none"> <li>• All of Levels 1 and 2 actions as appropriate.</li> <li>• Work together with the Band Chief and Council, Village maintenance personnel and water operator for collaborated response.</li> <li>• Contact media and phone trees for public notification.</li> </ul>	<ul style="list-style-type: none"> <li>• All of Levels 1 and 2 contacts.</li> <li>• Local fire fighters</li> <li>• RCMP if emergency caused by vandalism, terrorism or sabotage.</li> </ul>

## 7. Emergency Response Plan – Action Lists

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**TYPE OF EMERGENCY:**

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- ACTIONS**
- \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
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  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_

- CONTACTS**
- 1 \_\_\_\_\_
  - 2 \_\_\_\_\_
  - 3 \_\_\_\_\_
  - 4 \_\_\_\_\_
  - 5 \_\_\_\_\_

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**TYPE OF EMERGENCY:**

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- ACTIONS**
- \_\_\_\_\_
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  - \_\_\_\_\_
  - \_\_\_\_\_
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  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_

- CONTACTS**
- 1 \_\_\_\_\_
  - 2 \_\_\_\_\_
  - 3 \_\_\_\_\_
  - 4 \_\_\_\_\_
  - 5 \_\_\_\_\_

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**TYPE OF EMERGENCY:**

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**ACTIONS**

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**CONTACTS**

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_

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**TYPE OF EMERGENCY:**

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**ACTIONS**

- \_\_\_\_\_
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- \_\_\_\_\_
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- \_\_\_\_\_
- \_\_\_\_\_

**CONTACTS**

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_

## APPENDIX

### A. Wastewater Emergency Response Plan Contact List

	Organization	Name	Phone / Fax / Email
Band	Operator		
	Staff or 2nd operator		
	Chief		
	Band Administrator		
	Councillor		
	Circuit Rider		
Emergency Personnel	Police/Fire/Ambulance		
	Provincial Emergency Program (PEP)		1-800-663-3456
	RCMP		
Regulatory Authorities	INAC Funding Services Officer		
	Health Canada		
	Provincial Ministry of Environment Regional Office		
	Dept. of Fisheries & Ocean		
Utilities	Hydro		
	Gas		
	Telephone		
Media	TV		
	Radio		
	Newspaper		
Suppliers and Contractors	Nearest environmental lab 1		
	Nearest environmental lab 2		
	Pump rentals		
	Sewage pump/haul service		
	Pump system servicing		
	Pump supplier		
	Electrician		
	Excavation		
	Plumbing		
	General rental		
	Excavation services		
	Other		

Date this list completed

Name of person who completed list

Date for next updating (every 12 months recommended)

## APPENDIX

### B. Emergency Response Activity Record and Reporting Template

1. Date Checklist entered (yyyy/mm/dd): \_\_\_\_\_
2. Name of the person recorded: \_\_\_\_\_
3. Title of the person recorded:  
 WW System operator,  Band Manager,  Other (specify) \_\_\_\_\_
4. Description of cause(s) of the incident
  - Power Outage, area affected \_\_\_\_\_
  - Pump/siphon failure, Location \_\_\_\_\_
  - Electrical Control malfunctioning, Location \_\_\_\_\_
  - Broken sewer main, Location \_\_\_\_\_
  - Blocked sewer main, Location \_\_\_\_\_
  - Malfunctioning of wastewater treatment plant  
Describe \_\_\_\_\_
  - Malfunctioning of wastewater disposal facilities (i.e. ground disposal fields, outfalls)
  - Flooding
  - Earthquake
  - Snow/wind storm
  - Fire
  - Act of vandalism, terrorism or sabotage (eg. explosions) causing massive system disruption.
  - Others, Specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Effect of the incident observed:  
\_\_\_\_\_  
\_\_\_\_\_
6. Has any spill occurred?  Yes  No. If No, skip Sections 7 to 12.
7. Amount of spill estimated \_\_\_\_\_ Litre.
8. Location of the spill (Attach a copy of the site plan marked with the spill location).

**9. Location of the affected downstream area:**

- Drinking water source, specify location \_\_\_\_\_
- Well, specify location \_\_\_\_\_
- House or other buildings, specify location \_\_\_\_\_
- Fish bearing stream, specify location \_\_\_\_\_
- Swimming/recreational water body, specify location \_\_\_\_\_
- High traffic area, specify location \_\_\_\_\_
- Other, specify \_\_\_\_\_  
\_\_\_\_\_

**10. Duration of spill:**

From \_\_\_\_\_ Days \_\_\_\_\_ Hours To \_\_\_\_\_ Days \_\_\_\_\_ Hours

**11. Type of spill:**

- Raw sewage,  Septic tank effluent,  WW treatment plant effluent

**12. Samples taken:**

**Location 1** (attach a site plan),

Date (yyyy/mm/dd): \_\_\_\_\_, Time: \_\_\_\_\_ Hour,  
CBOD<sub>5</sub> \_\_\_\_\_ mg/L, TSS \_\_\_\_\_ mg/L,  
Fecal Coliform \_\_\_\_\_ MPN/100 mL, LC50\* \_\_\_\_\_

**Location 2** (attach a site plan),

Date (yyyy/mm/dd): \_\_\_\_\_, Time: \_\_\_\_\_ Hour,  
CBOD<sub>5</sub> \_\_\_\_\_ mg/L, TSS \_\_\_\_\_ mg/L,  
Fecal Coliform \_\_\_\_\_ MPN/100 mL, LC50\* \_\_\_\_\_

**Location 3** (attach a site plan),

Date (yyyy/mm/dd): \_\_\_\_\_, Time: \_\_\_\_\_ Hour,  
CBOD<sub>5</sub> \_\_\_\_\_ mg/L, TSS \_\_\_\_\_ mg/L,  
Fecal Coliform \_\_\_\_\_ MPN/100 mL, LC50\* \_\_\_\_\_

**Location 4** (attach a site plan),

Date (yyyy/mm/dd): \_\_\_\_\_, Time: \_\_\_\_\_ Hour,  
CBOD<sub>5</sub> \_\_\_\_\_ mg/L, TSS \_\_\_\_\_ mg/L,  
Fecal Coliform \_\_\_\_\_ MPN/100 mL, LC50\* \_\_\_\_\_

(\*Sampling for fish bioassay LC50 is required only if spill leads to a fish bearing water body)

**13. Level of Impact (See Section 6.2 for ranking criteria):**

- Level 1 – Minor,  Level 2 – Significant,  Level 3 – Major



**14. Other actions taken:**

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**15. Persons Contacted:**

Date \_\_\_\_\_, Name \_\_\_\_\_, Telephone No. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Telephone No. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Telephone No. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Telephone No. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Telephone No. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Telephone No. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Telephone No. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Telephone No. \_\_\_\_\_

**16. Person/agencies on the scene**

Date \_\_\_\_\_, Name \_\_\_\_\_, Agency. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Agency. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Agency. \_\_\_\_\_  
Date \_\_\_\_\_, Name \_\_\_\_\_, Agency. \_\_\_\_\_

**17. Further actions to be taken and when:**

- Action 1 \_\_\_\_\_,  
By Date (yyyy/mm/dd) \_\_\_\_\_
- Action 2 \_\_\_\_\_,  
By Date (yyyy/mm/dd) \_\_\_\_\_
- Action 3 \_\_\_\_\_,  
By Date (yyyy/mm/dd) \_\_\_\_\_

## APPENDIX

### C. Wastewater/Receiving Water Sampling Instruction

#### Sampling for CBOD5 and TSS:

Use a 1 L clean plastic bottle, fill the sample completely to the top, squeeze out any air bubbles and cap tightly. Samples must be stored in a cooler with an ice pack and delivered to the lab as soon as possible. The maximum storage time before measurement is 48 hours.

#### Sampling for Fecal Coliform:

Use a 500 mL plastic sterilized bottle (preferably sent from the lab that you will be using). Samples must be stored in a cooler with an ice pack and delivered to the lab as soon as possible. The maximum storage time before measurement is 24 hours.

#### Sampling for Fish Bioassay LC50 96 hours:

Use 2 x 20 L plastic containers unpreserved. Plastic collapsible drinking water containers or clean fuel jerrycans can be used. Containers should be purchased new and rinsed out at least twice with the sample before filling (to rinse out manufacturing residues). There is no need to store the sample in a cooler. In fact, you should not allow the samples to freeze. The maximum holding time before measurement is 72 hours (3 days).



