

982 Main Street, Zenith City, USA (555) 555-1234

**Saint Michael's
Hospital**

Fax

To: Zenith City Department of Public Health From: Saint Michael's Hospital

Fax: (555) 555-9876

Pages: 2 (Including this page)

Phone: (555) 555-9875

Date: July 18

Re: Gastrointestinal illness outbreak

CC: Janis Murphy

Urgent For Review Please Comment Please Reply Please Recycle

- Comments: Our hospital logs show many ill people with similar gastrointestinal symptoms from the Village. Attached is our hospital log for July 18.

St. Michael's Hospital - Emergency Room Log											
Patient #	Date	Time In	Sex	Age	Home Address	Zone*	Work Address	Zone*	Insurer	Brought in by EMS	Symptoms Reported
*FH = Forest Hills LD = Lake District TG = The Glens TV = The Village SZ = South Zenith											
1	7/18	8:00 AM	M	28	36 Lee Rd.	TG	375 Main St.	SZ	Aetna	No	bloody diarrhea, fever, dehydration
2	7/18	8:10 AM	M	68	12 Garden St.	TG	145 Forest Rd.	TV	PPO Blue	No	bloody diarrhea, severe cramping, and fever
3	7/18	8:30 AM	F	49	6 Capen Hill Rd.	FH	12 Edison St.	LD	N/A	No	vomiting, stomach ache
4	7/18	9:38 AM	M	26	22 Boulder Rd.	TG	39 Rosewood St.	TV	HMO Blue	No	stomach pain, fever, bloody diarrhea
5	7/18	10:12 AM	M	48	19 Elliot St.	TV	343 Main St.	TV	HMO Blue	No	stomach pain, fever, bloody diarrhea
6	7/18	10:16 AM	F	40	20 Gravel Rd.	TG	339 Main St.	TV	PPO Blue	No	blood in stool
7	7/18	10:29 AM	M	59	3 Marbet Rd.	TV	35 Beach St.	TV	Kaiser P.	No	bloody diarrhea, severe cramping, and fever
8	7/18	11:18 AM	F	13	22 Boulder Rd.	TG	N/A	N/A	HMO Blue	Yes	stomach pain, fever, bloody diarrhea
9	7/18	12:03 PM	M	20	92 Edison St.	LD	601 Highway 1	TG	PPO Blue	No	fractured femur
10	7/18	12:40 PM	M	27	12 Magnolia Rd.	FH	67 Beach St.	TV	Aetna	Yes	soreness in chest, fatigue, difficulty breathing
11	7/18	1:13 PM	M	47	7 Mark Rd.	TG	200 Highway 1	TV	Kaiser P.	No	diarrhea and vomiting
12	7/18	1:37 PM	M	15	7 Linda Rd.	TG	N/A	N/A	Kaiser P.	No	stomach pain, fever, bloody diarrhea
13	7/18	2:00 PM	M	12	52 Lee Rd.	TG	N/A	N/A	PPO Blue	No	dehydration and persistent diarrhea
14	7/18	2:02 PM	F	54	18 Boulder Rd.	TG	N/A	N/A	HMO Blue	No	bloody diarrhea, severe cramping, and fever
15	7/18	2:49 PM	M	43	19 Slate Rd.	TG	375 Main St.	TV	Aetna	No	bloody diarrhea, severe cramping, and fever
16	7/18	3:45 PM	F	37	2 Boulder Rd.	TG	N/A	N/A	N/A	No	blood in stool

A MESSAGE FOR: Water Superintendent

FROM Dr. John Connell, Public Health Director DATE July 18
OF Zenith City Health Department TIME 4:00 P.M. A.M.
PHONE (555) 555-3476 URGENT
AREA CODE NUMBER EXT.

TELEPHONED CAME TO SEE YOU RETURNED YOUR CALL

MESSAGE: PLEASE CALL WANTS TO SEE YOU WILL CALL AGAIN

He called to inform you of numerous similar gastroin-
testinal (GI) symptoms being reported from the ER at
St. Michael's. All the GI cases are from one particular
area in the Village borough. He is investigating where
these people have been or eaten at, but wanted to
give you a heads-up because they cannot rule out a
waterborne outbreak yet.

SIGNED Kat D

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: July 18, 1600 hrs.

Name of person who received the notification: Joseph Beal, Water Plant Superintendent

Contact information for individual providing the notification

Full Name: Dr. John Connell

Title: Director of Public Health Services

Organization: Zenith City Department of Public Health

Address: 480 Main Street

Day-time phone: 456.555.2165

Evening phone: 456.555.3097

Fax Number: 456.555.8056

E-mail address: jconnell@zcdph.gov

Why is this person contacting the drinking water utility? Increased incidence of illness that may be related to the utilities distribution system

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: Abdominal cramps and some patients with blood in stools

Causative Agent: Known Suspected Unknown

If known or suspected, provide additional detail below

- Chemical

 Biological

 Radiological

Describe: Preliminary clinical results indicate that illness is caused by *Shigella* species

Estimate of time between exposure and onset of symptoms: approximately 24 hours

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: All patients exhibiting similar symptoms live in the Village

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

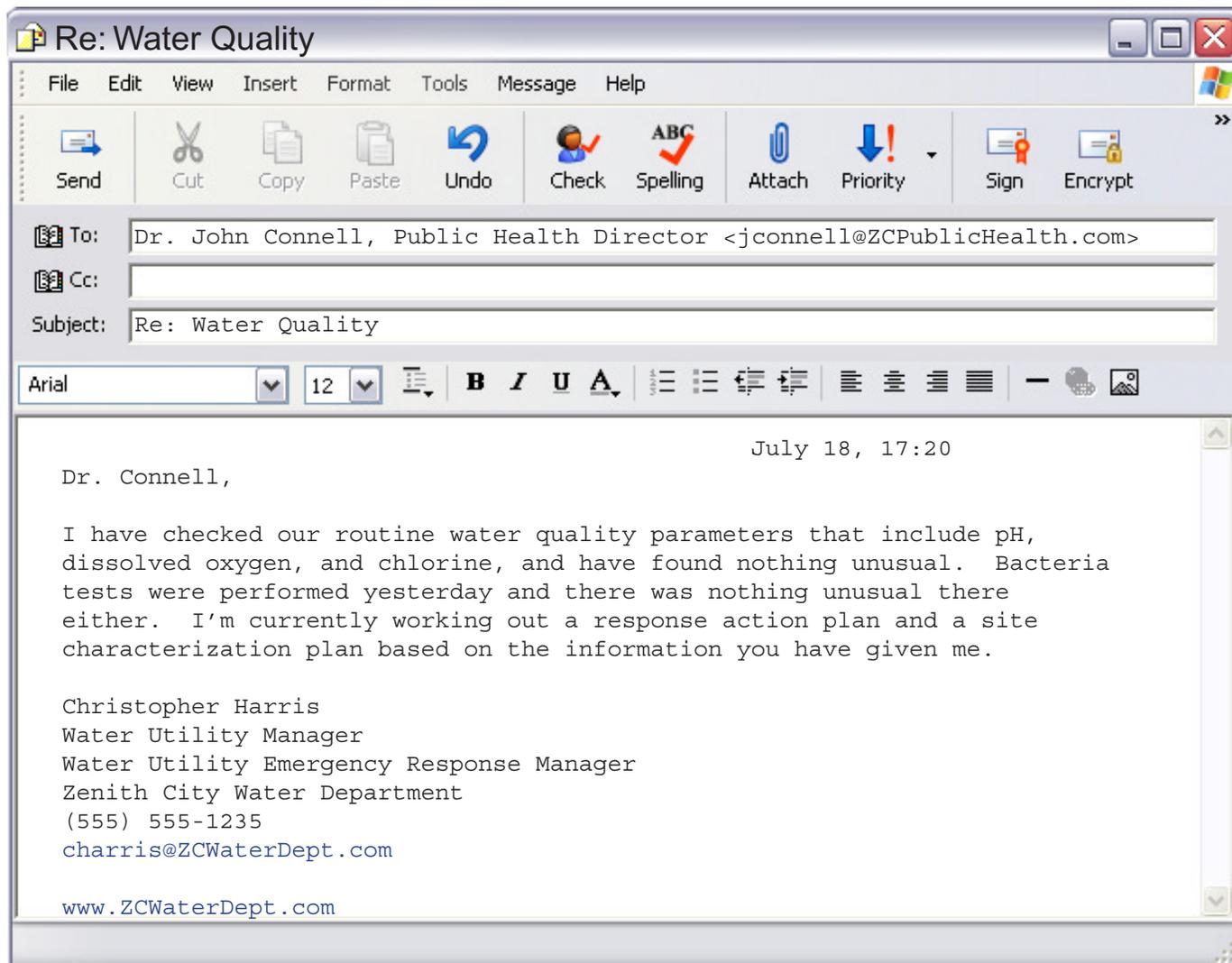
SIGNOFF

Name of person completing form:

Print name: Susie Delgado

Signature _____

Date/Time: July 18, 2004 1500 hrs.



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 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 Propagation Worksheet" in Appendix 9.1 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

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

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, is there a risk of dermal or inhalation exposure?

- Yes
- No
- Unknown

If no, issue a "Do Not Drink" notice.

If yes/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 _____

Notification to customers with special needs

- 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

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)

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

Notification/restriction timeline

Notification/restriction to begin:

Notification/restriction to end:

ALTERNATE WATER SUPPLY NEEDS

Is an alternate water supply needed?

- Drinking water Firefighting
- Other -Although a boil water advisory is in effect, it may be necessary for customers with special needs to have an alternate water supply

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 _____

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

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

SIGNOFF

Name of person completing form

Print name: _____

Signature: _____

Date/Time:

Site Characterization Plan Template

INSTRUCTIONS

This form is intended to support in 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.

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
connection | <input type="checkbox"/> Hydrant | <input type="checkbox"/> Service |
| <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.

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

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

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: _____



July 18, 18:30 hr.

KWSD interrupts its regularly scheduled programming to bring you further developments in the recent illness outbreak in “The Village” borough of Zenith City. For those of you not aware of this event, the emergency room of St. Michael’s Hospital has been overwhelmed with residents of “The Village” stricken with a mysterious, flu-like illness. Symptoms include diarrhea, fever, and stomach cramps. Some residents of “The Village” have been hospitalized; that’s how severe this outbreak is. KWSD has been able to talk to an emergency room staff member who has informed us that food poisoning is being considered as a potential source of this outbreak. We have no other information at this time, but we will keep you posted of any new developments in this breaking news story.



To the Opressors:

Your countrys unwanted interference in world affairs will not be tolerated. Your government says it wants world peace but then takes countries by force in the name of peace. We know what you are trying to do. You want to own and control everyone.

You cannot control the oppressed. We will rise and we will be heard. You and your government will take notice. We can control your lives. Do you not believe? You should. Go and see apartment 3G in the deluxe building at 22 boulder road. Theirs a reason everyone is getting sick.



Zenith City Police Department

PAGE NO.	TYPE OF REPORT	BOOKING NO.	DR NO.
1	Terrorist Crime		00-05 29657

On July 19 at approximately 13:00 hours, my partner Officer Dougan #32465 and I, Officer Martinez #35691 received a potential terrorist crime investigation. Sgt. Hobart #30076, along with the forensics team and HazMat unit met us at the location of the investigation.

Upon arrival at 22 Boulder Road, Deluxe Apartment Building, we found Apartment 3G was locked. Apartment 3G was forcefully entered and found vacant and unfurnished.

Table 1. Materials found in Apartment 3G

ITEM NO.	ITEM DESCRIPTION
1	4 empty 5-gallon buckets with about ½-inch of liquid in each of their bottoms
2	A pump on the bathroom floor labeled "LMI" and a hose on one end attached to the bathroom sink spigot
3	A second pump with a hose on one end connected to each 5-gallon bucket
4	Empty soda cans and take-out pizza boxes in the kitchen
5	Cigarette butts throughout the apartment
6	Discarded latex gloves strewn about the bathroom
7	3 discarded and crumpled Tyvek suits on the living room floor

In the bathroom, both pumps were plugged into wall outlets and were running when found. Unplugged all pumps and turned off bathtub faucets. Unable to immediately identify the liquid in 5-gallon buckets on site.

Headquarters was called for notification of findings and for further instruction.



ZENITH CITY FIRE DEPARTMENT HEADQUARTERS

Call received July 19, 14:22 hrs.

Call Transcript (logged by Sgt. David Taylor, emergency line 3): Resident at 39 Gravel Road reports her apartment is on fire and she is trapped. Fire engine and ambulance dispatched.

147 Main Street, Zenith City, USA 12345
Phone (800) 555-8642 Fax (800) 555-8643

MEDLAB

Fax

To: Saint Michael's Hospital

From: MEDLAB

Fax: (555) 555-1298

Pages: 2 (including this page)

Phone: (555) 555-1299

Date: 07/20

Re: Stool sample results

CC: Patrick Jones

Urgent For Review Please Comment Please Reply Please Recycle

-
- Comments: The stool samples tested positive for *Shigella spp.* Attached are the results.



MEDLAB



147 Main Street • Zenith City, USA 12345 • Phone (800) 555-8642 • FAX (800) 555-8643

"Providing accurate analytical results to hospitals nationwide"

Lab Director: Henry Geiger

Lead Technician on duty: CB

Start and end dates of analyses: 07/19-07/20 **Date/Time reported:** 07/20, 11:10 a.m.

Hospital Contact: Patrick Jones

Data code: 38740-32

Results:

Patient ID	Matrix	Parameter	Result
21354	stool	<i>Shigella spp.</i>	Present
21361	stool	<i>Shigella spp.</i>	Present
21363	stool	<i>Shigella spp.</i>	Present
21367	stool	<i>Shigella spp.</i>	Absent
21374	stool	<i>Shigella spp.</i>	Present
21379	stool	<i>Shigella spp.</i>	Present

Zenith City Water
Department

Fax

To: Water Utility Emergency Response Manager	From: Public Information Officer
Fax: (555) 222-3333	Pages: 2 (including this page)
Phone: (555) 222-3334	Date: 07/20
Re: "Boil Water" notice	CC: David Lewis
<input type="checkbox"/> Urgent <input type="checkbox"/> For Review <input type="checkbox"/> Please Comment <input checked="" type="checkbox"/> Please Reply <input type="checkbox"/> Please Recycle	

● Comments: I'm working on the "Boil Water" notice you asked me to issue. Can you help me fill out the blank portions of the form?

WARNING

BOIL YOUR WATER BEFORE USING

Zenith Water Distribution System water is contaminated with *Shigella*

Shigella bacteria were found in the water supply on July 20. These bacteria can make you sick and are of particular concern for people with weakened immune systems.

What is *Shigella*?

- *Shigella* are bacteria whose presence indicates that the water may be contaminated.

What should I do?

What are the symptoms of illness caused by these organisms?

- Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
- If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

What happened? What is being done?

Who do I contact for more information?

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

