### E. INVESTIGATION OF A WATERBORNE OUTBREAK

1. Where did the outbreak occur?

   State: ____________________
   City or Town: ____________________
   County: ____________________

2. Date of outbreak: (Date of onset of 1st case)

   (3-8)

3. Indicate actual or estimated numbers:

   Persons exposed: ________ (9-11)
   Persons ill: ________ (12-14)
   Hospitalized: ________ (15-16)
   Fatal cases: ________ (17)

4. History of exposed persons:

   No. histories obtained: ________ (18-20)
   No. persons with symptoms: ________ (21-23)
   Nausea: ________ (24-26) Diarrhea: ________ (33-35)
   Vomiting: ________ (27-29) Fever: ________ (36-38)
   Cramps: ________ (30-32)
   Other, specify: ________ (39)

5. Incubation period (hours):

   Shortest: ________ (40-42) Longest: ________ (43-45)
   Median: ________ (46-48)

6. Duration of illness (hours):

   Shortest: ________ (49-51) Longest: ________ (52-54)
   Median: ________ (55-57)

7. Epidemiologic data (e.g., attack rate [number ill/number exposed] for persons who did or did not eat or drink specific food items or water, attack rate by quantity of water consumed, anecdotal information) ** (58)

<table>
<thead>
<tr>
<th>ITEMS SERVED</th>
<th>NUMBER OF PERSONS WHO ATE OR DRANK SPECIFIED FOOD OR WATER</th>
<th>NUMBER WHO DID NOT EAT OR DRINK SPECIFIED FOOD OR WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ILL</td>
<td>NOT ILL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Vehicle responsible (item not included by epidemiologic evidence): (59-60)

9. Water supply characteristics

   (A) Type of water supply** (61)
   - Municipal or community supply (Name: ____________)
   - Individual household supply
   - Semi-public water supply
     - Institution, school, church
     - Camp, recreational area
   - Other, ____________
   - Bottled water

   (B) Water source (check all applicable): (62-65)
   - Well
   - Spring
   - Lake, pond
   - River, stream

   (C) Treatment provided (circle treatment of each source checked in B):
   - a. no treatment
   - b. disinfection only
   - c. purification plant – coagulation, settling, filtration, disinfection (circle those applicable)
   - d. other

10. Point where contamination occurred: (66)

    - Raw water source
    - Treatment plant
    - Distribution system

---

*See HSM 4.245 (NCDC) Investigation of a Foodborne Outbreak, Item 7.
** Municipal or community water supplies are public or investor owned utilities. Individual water supplies are wells or springs used by single residences. Semi-public water systems are individual-type water supplies serving a group of residences or locations where the general public is likely to have access to drinking water. These locations include schools, camps, parks, resorts, hotels, industries, institutions, subdivisions, trailer parks, etc., that do not obtain water from a municipal water system but have developed and maintain their own water supply.

CDC 4.461
2-75
1. Water specimens examined: (67)
(Specify by "X" whether water examined was original (drunk at time of outbreak) or check-up (collected before or after outbreak occurred)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>ORIGINAL</th>
<th>CHECK UP</th>
<th>DATE</th>
<th>FINDINGS</th>
<th>BACTERIOLOGIC TECHNIQUE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(e.g., fermentation tube, membrane filter)</td>
</tr>
<tr>
<td>Tap water</td>
<td>X</td>
<td></td>
<td>6/12/74</td>
<td>10 fecal coliforms per 100 ml.</td>
<td></td>
</tr>
<tr>
<td>Raw water</td>
<td></td>
<td>X</td>
<td>6/2/74</td>
<td>23 total coliforms per 100 ml.</td>
<td></td>
</tr>
</tbody>
</table>

2. Treatment records: (Indicate method used to determine chlorine residual):
Example: Chlorine residual – One sample from treatment plant effluent on 6/11/74 – trace of free chlorine
Three samples from distribution system on 6/12/74 – no residual found

3. Specimens from patients examined (stool, vomitus, etc.) (68)

<table>
<thead>
<tr>
<th>SPECIMEN</th>
<th>NO. PERSONS</th>
<th>FINDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Stool</td>
<td>11</td>
<td>8 Salmonella typhi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 negative</td>
</tr>
</tbody>
</table>

14. Unusual occurrence of events:
Example: Repair of water main 6/11/74; pit contaminated with sewage, no main disinfection. Turbid water reported by consumers 8/12/74.

5. Factors contributing to outbreak (check all applicable):
- [ ] Overflow of sewage
- [ ] Interruption of disinfection
- [ ] Improper construction, location of well/spring
- [ ] Seepage of sewage
- [ ] Inadequate disinfection
- [ ] Use of water not intended for drinking
- [ ] Contamination of storage facility
- [ ] Flooding, heavy rains
- [ ] Deficiencies in other treatment processes
- [ ] Contamination through creviced limestone or fissured rock
- [ ] Use of untreated water
- [ ] Cross-connection
- [ ] Other (specify)
- [ ] Use of supplementary source
- [ ] Back-siphonage
- [ ] Water inadequately treated
- [ ] Contamination of mains during construction or repair

3. Etiology: (69-70)
Pathogen
Confirmed
Suspected
Unknown

1. Remarks: Briefly describe aspects of the investigation not covered above, such as unusual age or sex distribution; unusual circumstances leading to contamination of water; epidemic curve; control measures implemented; etc. (Attach additional page if necessary)

5. Reporting agency: (72)

Investigating Official: ____________________________ Date of investigation: ____________

Note: Epidemic and Laboratory assistance for the investigation of a waterborne outbreak is available upon request by the State Health Department to the Center for Disease Control, Atlanta, Georgia 30333.

To improve national surveillance, please send a copy of this report to: Center for Disease Control
Attn: Enteric Diseases Branch, Bacterial Diseases Division
Bureau of Epidemiology
Atlanta, Georgia 30333

Submitted copies should include as much information as possible, but the completion of every item is not required.