

INVESTIGATIVE SUMMARY
OF
THE *ESCHERICHIA COLI*
OUTBREAK ASSOCIATED WITH A
RESTAURANT IN NORTH BAY,
ONTARIO

OCTOBER TO NOVEMBER 2008

JUNE 2009



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EXECUTIVE SUMMARY

This report summarizes the investigation led by the North Bay Parry Sound District Health Unit (NBPSDHU) into an outbreak of *Escherichia coli* (*E. coli*) O157:H7 in North Bay, Ontario in October and November 2008.

An investigation was initiated on October 11, 2008, by the NBPSDHU after being notified by the North Bay General Hospital (NBGH) of several people in Emergency presenting with bloody diarrhea and cramps. NBPSDHU interviewed the symptomatic individuals and collected stool specimens.

On the afternoon of October 12, 2008, the Health Unit was notified that a stool sample from one of the initial cases had tested positive for *E. coli* O157:H7. With a cluster of symptomatic cases plus one laboratory confirmed positive case for *E. coli* the NBPSDHU Medical Officer of Health (MOH) declared an outbreak. Preliminary analysis of food histories and outbreak questionnaire data identified food purchased from Harvey's restaurant in North Bay as a common exposure. At 20:45 on October 12th, 2008 the NBPSDHU closed the Harvey's/Swiss Chalet restaurant; given that Harvey's and Swiss Chalet are located on the same premise and share a common kitchen, closure orders were issued for both restaurants.

Epidemiological, environmental and laboratory investigations were initiated in order to ascertain the potential scope and source. The epidemiological investigation included developing case definitions and case finding, administering a standardized risk factor/exposure hypothesis-generating questionnaire, a case-control hypothesis-testing study and a restaurant employee investigation. Field Epidemiologists from the Public Health Agency of Canada's (PHAC) Field Epidemiology Program arrived within the first week to assist the Health Unit's Epidemiologist with the investigation. The environmental investigation comprised of a facility compliance inspection and food process audit by the NBPSDHU, and a traceback investigation conducted by the Canadian Food Inspection Agency (CFIA). Diagnostic testing of stool specimens and environmental samples submitted by NBPSDHU were analyzed by the Ontario Central Public Health Laboratory (CPHL). Information obtained through the epidemiological and laboratory investigations was used to inform the environmental investigation activities.

Between October 11 and November 10, 2008 over 350 individuals were reported to public health for investigation; 145 (41%) reported within the first seven days of the outbreak. The NBPSDHU was notified of cases and symptomatic individuals from multiple sources including: hospital emergency departments, hospital infection control, primary care and specialist physicians, public health laboratories, other health units, and the public.

In total 235 individuals met the outbreak case definitions. There were 47 confirmed cases, 59 probable cases, 118 suspect cases and 11 secondary cases, 3 of which were confirmed. Ninety-three (40%) cases reported bloody diarrhea, 26 (11.1%) persons were hospitalized, and one case of haemolytic uremic syndrome (HUS) in a child was reported. No deaths were associated with the outbreak. A majority of cases (195; 83%) resided in the NBPSDHU area, however (39; 16.7%) resided within other health units across Ontario, and one resided outside the province of Ontario.

The epidemiological investigation indicated that this outbreak was caused by a point source at the Harvey's restaurant in North Bay, most likely contaminated onions. Although the initial source of the contamination was not identified, the risk of exposure lingered on-site for about a

week. Inconsistent cleaning of the onion dicer may have perpetuated the contamination for several days.

The small number of secondary cases (individuals infected by other *E. coli* cases) can be attributed to the public health actions implemented at the outset and reinforced throughout the outbreak by the Health Unit. Cases who were currently employed as food handlers, child care providers, or health care workers were required by the Health Unit to stay off work until 48 hours after symptoms resolved and two consecutive negative stool cultures were obtained at least 48 hours apart. Symptomatic and confirmed cases received written or verbal information by the Health Unit on how to prevent the spread of infection and were referred to the website for more resources relating to *E. coli*. The Health Unit also leveraged the media coverage within the first week of the outbreak to promote handwashing.

The Harvey's restaurant in North Bay cooperated in full with the Health Unit throughout the outbreak and remained closed while under investigation. On November 12, 2008 the Harvey's and Swiss Chalet restaurants in North Bay re-opened after all control measures required by the NBPSDHU were met.

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ABBREVIATIONS

CDC	Communicable Disease Control
CFIA	Canadian Food Inspection Agency
CIOSC	Canadian Integrated Outbreak Surveillance Centre
CPHL	Ontario Central Public Health Laboratory
COMOH	Council of Medical Officers of Health (Canada)
<i>E.coli</i>	<i>Escherichia coli</i>
EH	Environmental Health
HACCP	Hazard Analysis and Critical Control Points
HPPA	Health Protection and Promotion Act
HUS	Hemolytic Uremic Syndrome
IBS	Irritable Bowel Syndrome
ID	Infectious Disease
MLVA	Multi-Locus Variable Number of Tandem Repeat Analysis
MOH	Medical Officer of Health
MOHLTC	Ministry of Health and Long-Term Care
NBGH	North Bay General Hospital
NBPSDHU	North Bay Parry Sound District Health Unit
NML	National Microbiology Laboratory
PFGE	Pulsed Field Gel Electrophoresis
PHB	Public Health Bulletin
PHN	Public Health Nurse
PHAC	Public Health Agency of Canada
PHI	Public Health Inspector

1.0

Introduction and Background

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1.1 Introduction

1.2 Background

1.2.1 Overview of Escherichia coli

1.2.2 Harvey's in North Bay

1.1 Introduction

On October 11, 2008, an investigation into an outbreak of bloody diarrhea in the City of North Bay, Ontario was initiated by the North Bay Parry Sound District Health Unit (NBPSDHU). The following day, October 12, 2008, the diarrheal illness was confirmed as *E. coli* O157:H7 and food purchased from Harvey's was identified as a common exposure for symptomatic individuals. That same evening the NBPSDHU closed the Harvey's/Swiss Chalet restaurant. Given that Harvey's and Swiss Chalet are located on the same premise and share a common kitchen, closure orders were issued for both franchises. An environmental investigation and case-control study were subsequently conducted in addition to case-finding activities in order to ascertain the cause and scope of the outbreak. This report summarizes the investigation into the cause of the outbreak.

1.2 Background

1.2.1 Overview of *Escherichia coli*

E. coli are a large and diverse group of bacteria. Although most strains are harmless, certain strains can cause gastroenteritis, the most common of these being *E. coli* O157:H7. *E. coli* are found naturally in the intestines of cattle and other animals. Transmission occurs primarily through the ingestion of contaminated food, but direct person-to-person transmission may also occur. The median incubation period is 3 to 4 days, but may range from 1 to 10 days.^[1]

The primary manifestation of *E. coli* infection is diarrhea, which may range from mild and non-bloody to stools that are virtually all blood. The lack of fever in most of those infected aids in the differential diagnosis; if fever is present it is generally not very high. The infection may range in severity from very mild to life-threatening; the majority of cases however recover within 5 to 7 days.^[1] The most severe complication of infection is hemolytic uremic syndrome (HUS), which occurs in approximately 5 – 10% of infections.^[1] Although the infection occurs in all ages, the elderly and children less than 5 years of age appear to be at greatest risk of complications.

The NBPSDHU has had one confirmed case of *E. coli* O157:H7 per year in each of the last 3 years (2005-2007). The index case for the outbreak was the first reported case in 2008.

1.2.2 Harvey's in North Bay

The City of North Bay is located approximately 345km north of Toronto in Ontario and has a population of 53,966.^[2] The Harvey's establishment in North Bay is located near the major intersection of Highway 11/17 (east/west), and Highway 11 North (see map in Appendix A) and shares a premise with Swiss Chalet. Food preparation utensils, protective wear, cleaning facilities, staff washrooms and some storage areas are shared by the establishments. Preparation, cooking and serving of most food items however is conducted by each establishment independently. At the time of the outbreak 76 employees worked at Harvey's and Swiss Chalet. Twenty-three (30.3%) employees were dedicated exclusively to Harvey's and 33 (43.4%) exclusively to Swiss Chalet. All other employees were considered staff of both establishments, including 11 (14.5%) managers, eight (10.5%) dishwashers and one (1.3%) preparation person.

2.0 Outbreak Chronology

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2.1 First Response

2.1.1 First Notification

2.1.2 Outbreak Declared & Closure of Harvey's

2.1.3 Case Management & Investigation

2.2 Outbreak Underway

2.3 Reopening of the Premise & Outbreak Over

1.3.1 Rescind Order

1.3.2 Outbreak Declared Over

Appendix B provides a detailed chronology of important investigative and communication events over the entire course of the outbreak. A brief summary of the health unit's case management and investigative activities throughout the outbreak are provided below.

2.1 First Response

2.1.1 First notification

On October 11, 2008 at 11:20am the NBPSDHU was notified by the NBGH of five individuals in Emergency all presenting with bloody diarrhea and cramps. The on-call PHI and the NBGH's Coordinator of Infection Prevention and Control interviewed the symptomatic individuals one at a time and completed individual food histories. Stool specimens were collected and were submitted to be screened for *E. coli* by the NBGH. To prevent the spread of infection symptomatic individuals were isolated to one room in Emergency.

After the NBPSDHU MOH was notified, information gathered from the interviews and food histories was reviewed to identify common exposures by the PHIs, Director of Environmental Health (EH), the Manager of Communicable Disease Control (CDC) program, the Director of Infectious Disease (ID) and the MOH. Additional questions regarding potential exposures were prepared.

The on-call Ministry of Health and Long-Term Care (MOHLTC) physician and PHAC were contacted and NBPSDHU was advised that no other cases had recently been reported.

Mattawa and West Nipissing Hospitals, as well as local walk-in clinics were contacted and no increase in presentation of clients with diarrheal illness was reported.

At 15:30 the Health Unit was notified by the NBGH of two additional symptomatic individuals presenting in the Emergency with bloody diarrhea. These cases were also interviewed before the end of the day.

2.1.2 Outbreak Declared and Closure of Harvey's

On the morning of day two (October 12, 2008) walk-in clinics and hospitals were contacted again and no increase in presentation of clients with diarrheal illness was reported. Restaurants identified in the case food histories were also contacted to determine if any complaints of illness had been reported; no complaints had been received.

That afternoon the NBPSDHU received notification that a stool sample from one of the first five cases had tested positive for *E. coli* O157:H7. The MOH declared an outbreak (cluster of cases plus one laboratory confirmed positive case for *E. coli*.) and an outbreak questionnaire was prepared by the Manager of CDC to facilitate hypothesis generation. Information including water source, groceries, restaurant/fast food exposures, and attendance at community markers and special events was collected from the symptomatic cases. A fact sheet on *E. coli* O157:H7 and an *Enteric Precautions Information Sheet* were provided to symptomatic individuals being discharged from the NBGH.

Preliminary analysis of the food histories revealed that of the 11 symptomatic individuals with known information, nine (81.8%) ate food purchased from Harvey's restaurant in North Bay. Burgers were identified as being a common exposure.

Based on results from the food history analysis a site visit was made to Harvey's by the MOH, Manager of EH and a PHI. A verbal Section 13 order under the Ontario Health Protection and Promotion Act (HPPA) was issued to the manager of Harvey's by the Manager of EH, and the establishment was closed at 20:45. An environmental investigation commenced with a facility compliance inspection and a HACCP audit relating to hamburgers being conducted by the Manager of EH and a PHI. Sixteen food samples were collected from Harvey's by the NBPSDHU.

Sudbury District Hospital Emergency was contacted by the NBPSDHU Acting MOH and the Health Unit was advised of one laboratory-confirmed case for *E. coli* and three additional symptomatic cases. To

determine the scope of the outbreak, the Sudbury and District Health Unit (SDHU) MOH was contacted as well as the MOH for Simcoe Muskoka. Attempts were also made to reach the MOHs for neighbouring Porcupine, Timiskaming and Algoma health units.

A Public Health Bulletin (PHB) was sent out to local physicians, nurse practitioners, walk-in clinics, emergency departments, infection control practitioners and Telehealth. The first media release was issued advising of a possible foodborne outbreak of *E. coli* O157:H7 in North Bay.

By midnight, 16 symptomatic individuals (including 1 laboratory confirmed *E. coli* O157:H7) had been reported. Of these 16 individuals, 14 presented with bloody diarrhea and two with non-bloody diarrhea. Food frequency exposure analysis revealed that 13 (81.3%) of the 16 individuals had been exposed to food from Harvey's restaurant in North Bay.

2.1.3 Case Management and Investigation

On day three (October 13, 2008) the second laboratory-confirmed case positive for *E. coli* O157:H7 was reported. In addition, nine more symptomatic individuals (seven with bloody diarrhea) were reported for investigation. All had eaten at Harvey's restaurant in North Bay.

Surveillance was enhanced through a revised case history form and outbreak questionnaire which was used to interview all reported symptomatic cases. Clinical symptoms and specific information on Harvey's purchases such as burger type, condiments, toppings, and other food items was collected in addition to information on travel, water sources, and groceries, other restaurant/fast food exposures, and special events.

An alert notice was posted on Canadian Integrated Outbreak Surveillance Centre (CIOSC). To notify the public, a media release was issued, media interviews were held, and NBPSDHU website was updated to include Health Alert, *E. coli* fact sheets and media releases.

Case management was coordinated by the Manager of CDC and all symptomatic individuals reported were interviewed and managed by PHIs. Laboratory results were tracked and case line listings were generated in consultation with the NBGH.

The environmental investigation continued and an audit of Harvey's processes for storage, preparation, and serving of food items identified through preliminary food frequency exposures was initiated by Manager of EH and PHIs. Additionally, the City of North Bay was requested to collect and process representative bacteriologic samples from the North Bay water distribution system.

A written copy of the closure order was provided to the owner/operator of Harvey's in North Bay and the MOH met with the President of Harvey's to provide an update on the investigation.

2.2 Outbreak Investigation Underway

The epidemiologic and environmental investigation was continued by the staff and management of EH and the epidemiologist under the direction of the EOC. On October 14, 2008 the City of North Bay confirmed all 14 municipal water sample results were negative for *E. coli* O157:H7; ruling out water as a possible source for contamination. Preliminary epidemiological analysis identified dates of onset ranged from October 4 to 13, 2008 and exposure dates for those with single exposures (multiple exposures excluded) were October 6 to 8, 2008. The most reported burger condiments were lettuce, onions, cheese and tomato.

On day 5 and 6, the NBPSDHU received investigative assistance from the CFIA and PHAC's Canadian Field Epidemiology Program. CFIA initiated a traceback investigation on October 15, 2008 into Harvey's burgers and on October 16, 2008, the first Field Epidemiologist from PHAC arrived to assist the NBPSDHU Epidemiologist.

The employee investigation was initiated on day 6 (October 16, 2008) with the distribution of stool kits to Harvey's staff and management. Interviewing of employees commenced on October 18, 2008 by PHIs.

On day 10 (October 20, 2008), the NBPSDHU received confirmation of the Pulsed Field Gel Electrophoresis (PFGE) pattern for six cases (ECXAI.0017/ECBMI.0012); a pattern identical to the outbreak which occurred in Chatham Windsor, Ontario earlier in the year. As a result of this information CFIA commenced a second traceback investigation into Harvey's shredded iceberg lettuce.

By day 11 (October 21, 2008), over 200 symptomatic individuals had been reported to public health for investigation and eight other health units were involved in the outbreak. Given the volume of cases that were being interviewed and managed, a triage case management system was implemented; PHIs were assigned to manage high risk cases (i.e., cases who were currently employed as food handlers, child care providers, or health care workers) and PHNs to low risk cases.

To assist in identifying the source within the restaurant a case control analytic study, was conducted, starting October 21, 2008. Cases and controls were interviewed by PHNs using a Harvey's specific menu. Controls were initially identified through dining companions (cases), but on October 22 a request was made via a media announcement for individuals who ate at Harvey's but did not get ill (controls) to call into the NBPSDHU. On October 22 the NBPSDHU also received assistance from a second PHAC Field Epidemiologist.

On October 27 (day 17), preliminary results of the case control study indicated that individuals who consumed Spanish onions were significantly more likely to become ill. The CPHL reported that 36 of the 46 food samples submitted by NBPSDHU had been tested and all were negative for *E. coli* O157:H7. The following day results from the Centers of Communicable Disease Control in Atlanta, Georgia on the Multi-Locus Variable Number of Tandem Repeat Analysis (MLVA) of 11 of 13 isolates showed that all nine North Bay outbreak isolates were unrelated to an outbreak strain in Michigan, USA and to the cluster in Chatham Windsor, Ontario. Based on these results, CFIA ceased their trace-back investigation into lettuce and later commenced an investigation into Spanish onions.

On November 6, 2008 the employees directly involved in onion preparation were interviewed by PHIs on delivery, storage and preparation of onions over the exposure period of interest.

2.2 Reopening of the Premise & Outbreak Over

2.2.1 Rescind Order

On November 10, 2008 the premise was deemed to be in compliance with all the reopening conditions (outlined in writing on November 6, 2008). The Director of EH provided written confirmation to the operator that the facility closure order issued on October 12, 2008 was rescinded.

Harvey's and Swiss Chalet opened for business on November 12, 2008.

2.2.2 Outbreak Declared Over

The outbreak was declared over by the MOH on November 21, 2008. During the outbreak 360 symptomatic individuals were reported to public health for investigation of these 235 met the outbreak case definitions. A total of 50 cases were laboratory confirmed for *E. coli* O157:H7, three of which were secondary cases.

3.0

Investigative Methodology

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3.1 Case Management

3.1.1 During the Outbreak

3.1.2 Long-Term Follow-up

3.2 Epidemiologic Investigation

3.2.1 Case Finding and Descriptive Epi

3.2.2 Case Control Analytic Study

3.2.3 Restaurant Employees

3.2.4 Data Analysis

3.3 Laboratory Investigation

3.4 Environmental Investigation

3.4.1 Facility Compliance Inspection

3.4.2 Food Product Sampling

3.4.3 Food Process Audit

3.4.4 Trace-back Investigation

3.1 Case Management

3.1.1 During the Outbreak

All cases of gastrointestinal illness reported to the NBPSDHU and other involved health units were investigated by PHIs or PHNs using a standardized risk factor/exposure questionnaire. At the NBPSDHU an intake and triage system was organized whereby high-risk cases (i.e., cases who were currently employed as food handlers, child care providers, or health care workers) were interviewed and managed by PHIs, and the majority of low-risk cases were managed by PHNs. Cases residing outside the NBPSDHU boundaries were followed up by their respective health unit using the NBPSDHU standardized risk factor/exposure questionnaire. The completed questionnaires were subsequently faxed to the NBPSDHU for data entry. Case definitions (See Table 1) were developed by the epidemiologists to facilitate classification and management of cases. Case definitions were consistently applied to all cases regardless of the responsible health unit.

In an effort to prevent secondary transmissions the following case management strategies were implemented:

1. *Exclusion from work guidelines:* High risk cases were excluded from work until two successive negative fecal samples or rectal swabs were obtained 24 hours apart and no sooner than 48 hours after the last dose of antimicrobials if patients have been on them for other reasons. Low risk cases were excluded from work until they were diarrhea-free for a period of 48 hours.
2. *Preventative measures:* All symptomatic individuals interviewed by the NBPSDHU received verbal and/or written information on how to prevent the spread of infection and were referred to the Health Unit website for more information.
3. *Prevention communication campaign:* An expanded newspaper and radio campaign to reinforce “Preventing the spread of *E. coli*” was implemented October 21, 2008 (see section 5.0 for more details).

3.1.2 Long-Term Follow-up

Research has shown that individuals with severe *E. coli* infection (with or without HUS) are at higher risk for long-term health conditions including irritable bowel syndrome (IBS), hypertension (high blood pressure), arthritis, and pregnancy-related hypertension.^[3] A retrospective population-based cohort study by Clark et al^[3] on residents of Walkerton found that compared to those who were not ill at the time of the outbreak, those with severe gastroenteritis had a more than three fold increase in risk of developing IBS within two years of the outbreak. Within four years a 33% increase in risk of developing hypertension and 38% increase in risk of developing arthritis was also observed.

To address these potential long-term health effects the NBPSDHU distributed a public health bulletin to health care providers in the area outlining the recommended guidelines for current treatment and follow-up of patients who experience bacterial (*E.coli* O157:H7) gastroenteritis. A letter was also sent to all cases classified as confirmed, probable, suspect or secondary from the Acting NBPSDHU MOH advising them to have yearly follow-up with a family physician for the next three years. Cases were provided with information on the increased risk for future health problems and a copy of the public health bulletin that was distributed to physicians. Assistance was offered by the NBPSDHU in finding follow-up care for those who did not have a family physician.

Table 1. Outbreak Case Definitions for the *E. coli* O157:H7 Outbreak in North Bay, Ontario, 2008

<p><u>Confirmed Case</u></p> <p>Patrons and employees of Harvey's/Swiss Chalet in North Bay, Ontario with a confirmed <i>E. coli</i> O157:H7 infection with the outbreak strain PFGE pattern of, or within one band of ECXAI.0017/ECBNI.0012</p>
<p><u>Secondary Case</u></p> <p>a. A laboratory-confirmed <i>E. coli</i> O157:H7 infection with onset after close contact with a symptomatic individual with a relevant Harvey's/Swiss Chalet exposure, with the outbreak strain PFGE pattern of, or within one band of ECXAI.0017/ECBNI.0012.</p> <p>b. An individual with symptoms compatible with <i>E. coli</i> O157:H7 infection, with onset 1-10 days after close contact with a symptomatic individual with a relevant Harvey's/Swiss Chalet exposure.</p>
<p><u>Probable Case</u></p> <p>a. Patrons and employees of Harvey's/Swiss Chalet in North Bay, Ontario with bloody diarrhea and/or blood in diarrhetic or formed stool and/or HUS on or after September 22, 2008.</p> <p>b. A symptomatic individual with a relevant Harvey's/Swiss Chalet exposure without laboratory confirmation of <i>E. coli</i> O157:H7, with an onset of symptoms before an epi-linked laboratory confirmed <i>E. coli</i> O157:H7 secondary case with the outbreak strain PFGE pattern of, or within one band of ECXAI.0017/ ECBNI.0012.</p>
<p><u>Suspect Case</u></p> <p>Patrons and employees of Harvey's/Swiss Chalet in North Bay, Ontario with diarrhea (≥ 3 or more loose stools in 24hrs) with onset of symptoms on or after September 22, 2008.</p>

3.2 Epidemiological Investigation

3.2.1 Case Finding and Descriptive Epidemiology

Case Finding

Case finding is an important component of an outbreak investigation as the information gained from additional cases is used to validate original hypotheses and guide investigative activities. Case finding and surveillance was enhanced by the NBPSDHU during the outbreak through the utilization of the following activities:

1. Development and administration of a standardized risk factor/exposure questionnaire to all cases reporting gastrointestinal illness (Appendix C);
2. A posting on the Canadian Integrated Outbreak Surveillance Centre (CIOSC) requesting other health regions to report any cases of *E. coli* that may have traveled to the North Bay area or have a similar onset date to those presenting to the NBPSDHU;
3. Release of public health bulletins to health care providers, emergency departments, infection control and Telehealth requesting that the health unit be notified if a patient met the clinical criteria for *E. coli*.
4. Media releases informing the general public about the outbreak and advising that persons with *E. coli*-like symptoms to seek medical attention.

Descriptive Epidemiology

Descriptive epidemiology was compiled and reported daily to the investigative team by the NBPSDHU epidemiologist in the form of an *Epidemiological Summary*. The reports summarized case numbers, demographics, onset and exposure date frequencies, as well as clinical and laboratory data. Food item frequencies and results from other epidemiologic investigation activities were also included when available. Information from this report was used to inform decision-making and determine the scope of the outbreak.

3.2.2 Case Control Analytic Study

As the descriptive epidemiology pointed to an exposure in the Harvey's restaurant, a case control study was conducted from October 21 to 31, 2008 to identify the source within the restaurant. All confirmed and probable cases (as per the case definitions) who reported one episode of eating at Harvey's during the exposure period were eligible for inclusion in the study. Controls were selected through self-identification (via a call-in line after a media announcement on October 22, 2008) or were previously identified as dining companions of cases. All controls were screened for illness, and anyone reporting gastrointestinal symptoms since September 22, 2008 was excluded from the study. Cases and controls were interviewed by PHNs via telephone using a standardized questionnaire asking about consumption of restaurant menu items from October 1 to 12, 2008 (Appendix D & E).

3.2.3 Restaurant Employees

The restaurant operator provided a list of employees, and all were contacted by telephone from October 18 to November 3, 2008 by PHIs. A modified questionnaire was administered, which included questions about history of clinical illness, food and travel history, and workplace details such as area of the restaurant where they worked, their roles and activities and whether they worked at other establishments (Appendix F). When staff reported diarrheic illness, their clinical history was evaluated against the outbreak case definitions and the employee classified accordingly.

Descriptions of each job position were obtained, as well as detailed shift rosters for the period of September 22 to October 12, 2008. Employee absence information was verified with the employee.

All employees were required to submit stool specimens for laboratory testing. Stool collection kits were prepared by NBPSDHU and distributed to the restaurant on October 19, 2008. NBPSDHU staff collected all specimens daily and shipped them to the Ontario Central Public Health Lab (CPHL).

3.2.4 Data Management and Analysis

Information collected from cases during the investigation was entered and analyzed by EpiInfo 3.4.3TM (Centers for Disease Control and Prevention, Atlanta, Georgia) and Microsoft Office Excel 2003. Clinical information for classified cases was also entered into iPHIS (integrated Public Health Information System) by each responsible health unit. The case control analysis, including univariate and multivariate analysis, was conducted in SPSS version 14. A final multivariate model was developed with the stepwise variable selection approach. Employee schedule information and absentee records were plotted in a Gantt chart using Microsoft Office Excel 2003.

3.3 Laboratory Investigation

The majority of initial stool screening for *E. coli* O157:H7 occurred at the NBGH, whereas all reference laboratory testing of clinical and environmental samples was performed at the CPHL.

CPHL conducted routine enteric diagnostic testing, reference biochemical confirmation and serotyping of *E. coli* O157:H7 isolates and PFGE subtyping. Unpreserved stool samples and isolates were also tested for the presence of verotoxin using the NOVITEC (Verotoxin 1 & 2) ELISA kit. Subtyping by pulsed field gel electrophoresis (PFGE) was performed in the Molecular Surveillance Laboratory at CPHL; a two-enzyme analysis (EXCAI and ECBNI) was conducted. PFGE patterns were submitted electronically to the National Microbiology Laboratory (NML) in Winnipeg, Manitoba for national pattern designation. MLVA was conducted at the Centers for Disease Control and Prevention in Atlanta, Georgia.

Environmental testing was also performed at CPHL; samples were tested for *E. coli* O157:H7 by immunomagnetic separation and selective culture methods. Ancillary direct verotoxin testing by commercial ELISA was also performed on food samples placed into selective broth.

Food samples collected by the CFIA were tested at the Greater Toronto Area Laboratory, Scarborough, Ontario, the Ottawa Laboratory (Carling) for Food Chemistry and Microbiology, Ottawa, Ontario and the St. Hyacinthe Laboratory, Quebec. Samples were tested using the MFLP-30, (Dupont Qualicon BAX System for the Detection of *E. coli* O157:H7) from Health Canada's Compendium of Analytical Methods (personal communication^[4]).

3.4 Environmental Investigation

NBPSDHU Public Health Inspectors initiated investigation activities when the restaurant was closed on October 12, 2008.

3.4.1 Facility Compliance Inspection

A compliance inspection of the Harvey's establishment was completed by the health unit's Manager of EH and a PHI on October 12, 2008. Items critical to food safety and sanitation/maintenance conditions of the facility (see Table 2) were evaluated. A HACCP audit relating to beef burgers (i.e., original and angus) prepared at the establishment was also conducted.

3.4.2 Food Product Sampling

Food samples were collected at the Harvey's and Swiss Chalet restaurant by NBPSDHU staff from October 12 to 31, 2008 and were submitted for testing to CPHL. Information from the epidemiologic investigation (i.e., food frequencies and case-control study results) was used to focus the sampling of food items.

Table 2. Food Safety and Sanitation/Maintenance Compliance Items

Food Safety	Temperature control <ul style="list-style-type: none"> ▪ Refrigeration ▪ Temperature control hot holding ▪ Temperature control final cooking
	Food handler hygiene
	General food protection <ul style="list-style-type: none"> ▪ Food storage ▪ Water supply ▪ Sewage disposal ▪ Product inventory ▪ Product suppliers and delivery
Sanitation/Maintenance Conditions	General maintenance and sanitation <ul style="list-style-type: none"> ▪ Ware washing ▪ Surface sanitizing ▪ Storage of knives ▪ Food processing equipment ▪ General facility sanitation ▪ General facility maintenance ▪ Public washrooms ▪ Staff washrooms ▪ Pest control

3.4.3 Food Process Audit

A detailed investigation into the acquisition, storage, preparation and serving of selected food items was undertaken to identify opportunities for cross-contamination and time-temperature abuse. Food items were selected to be audited based on information gleaned from the epidemiologic investigation (i.e., food frequencies and case-control study results).

Interviews on food preparation were also conducted with both management and staff. Detailed interviews were conducted by telephone beginning November 6, 2008 with staff members directly involved in onion preparation (Appendix G) and included questions about delivery, storage and preparation. Answers provided during the interview were assessed against standard operating procedures. If the employee indicated that they did not specifically prepare onions on October 5 to 7, 2008, their routine onion preparation practices were explored.

3.4.4 Traceback Investigation

The CFIA conducted a parallel food safety investigation, which included testing and traceback investigations of selected food items in order to identify a source of the outbreak and determine if there was ongoing risk.

4.0

Investigation Results

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4.1 Epidemiologic Investigation

4.1.1 Descriptive Epidemiology

4.1.2 Case Control Analytic Study

4.1.3 Restaurant Employees

4.2 Laboratory Investigation

4.3 Environmental Investigation

4.3.1 Facility Compliance Inspection

4.3.2 Food Process Audit

4.3.3 Trace-Back Investigation

4.1 Epidemiological Investigation

4.1.1 Descriptive Epidemiology

Between October 11 and November 10, 2008 over 350 individuals were reported to public health for investigation, 145 (41%) reported within the first seven days of the outbreak (see Figure 1). Due to the outbreak commencing on the Thanksgiving long weekend a majority of cases over the first 3 days of the outbreak were reported to the NBPSDHU by the NBGH emergency department. Throughout the outbreak however, the NBPSDHU was notified of cases and symptomatic individuals from multiple sources including: hospital emergency departments, hospital infection control, primary care and specialist physicians, public health laboratories, other health units, and the public.

In total 235 individuals met the outbreak case definitions. There were 47 confirmed cases, 59 probable cases, 118 suspect cases, and 11 secondary cases, 3 of which were confirmed. Ninety-three (40%) cases reported bloody diarrhea, 26 (11.1%) persons were hospitalized, and one case of HUS in a child was reported. No deaths were associated with the outbreak. Demographic information is presented in Tables 3 and 4.

The epidemic curve is presented in Figure 2; illness onset dates ranged from September 24 to October 30, 2008 and peaked on October 11. Of the 47 primary confirmed cases that provided exposure histories, 46 (97.9%) ate at Harvey's/Swiss Chalet in the days leading up to their illness. Figure 3 represents the exposure curve for individuals with one exposure to Harvey's/Swiss Chalet during their incubation period. Peak exposure for confirmed and probable cases was October 6 and 7, 2008; exposures had declined by October 11, prior to the restaurant closing. A subset of confirmed cases was asked about the time of day when they ate at Harvey's/Swiss Chalet. The greatest risk of exposure for these cases (n=31) started the afternoon of October 5, 2008 and peaked October 7, 2008 as illustrated in Figure 4.

Figure 1. Frequency of Symptomatic Cases Reported to Public Health for Investigation, North Bay, Ontario, October 11 to November 10, 2008 (n=354)

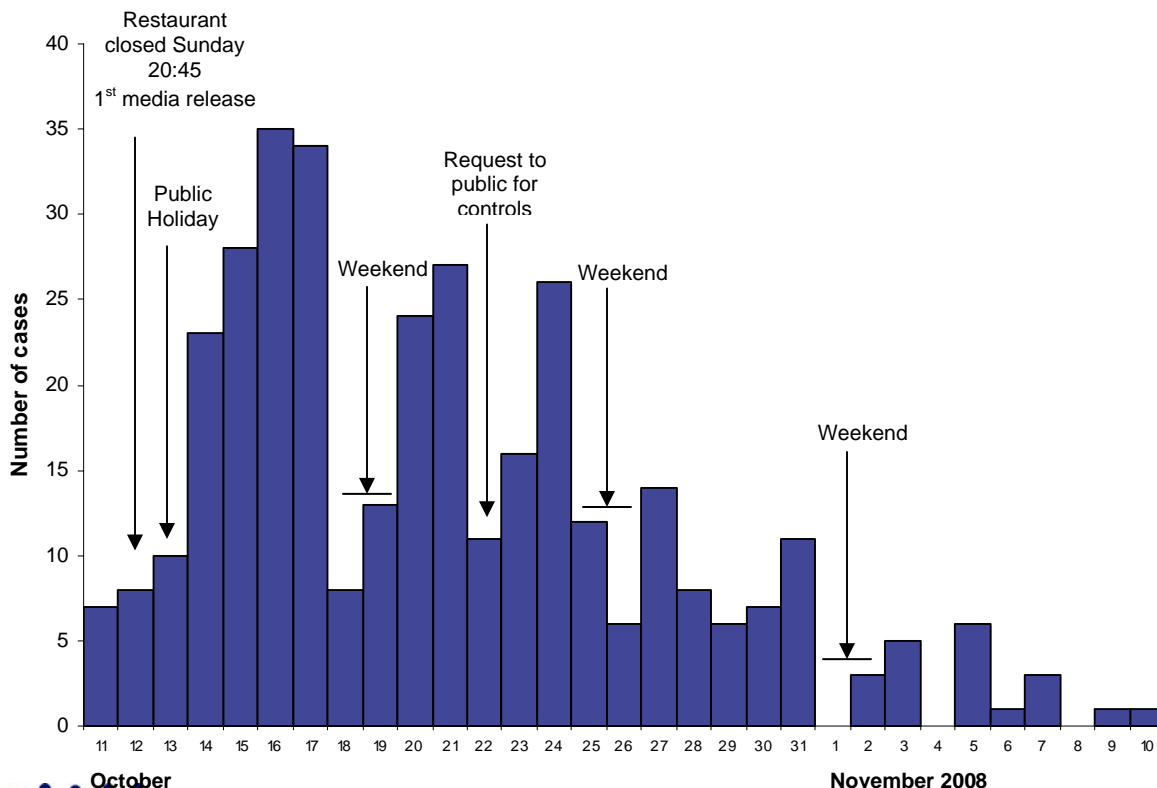


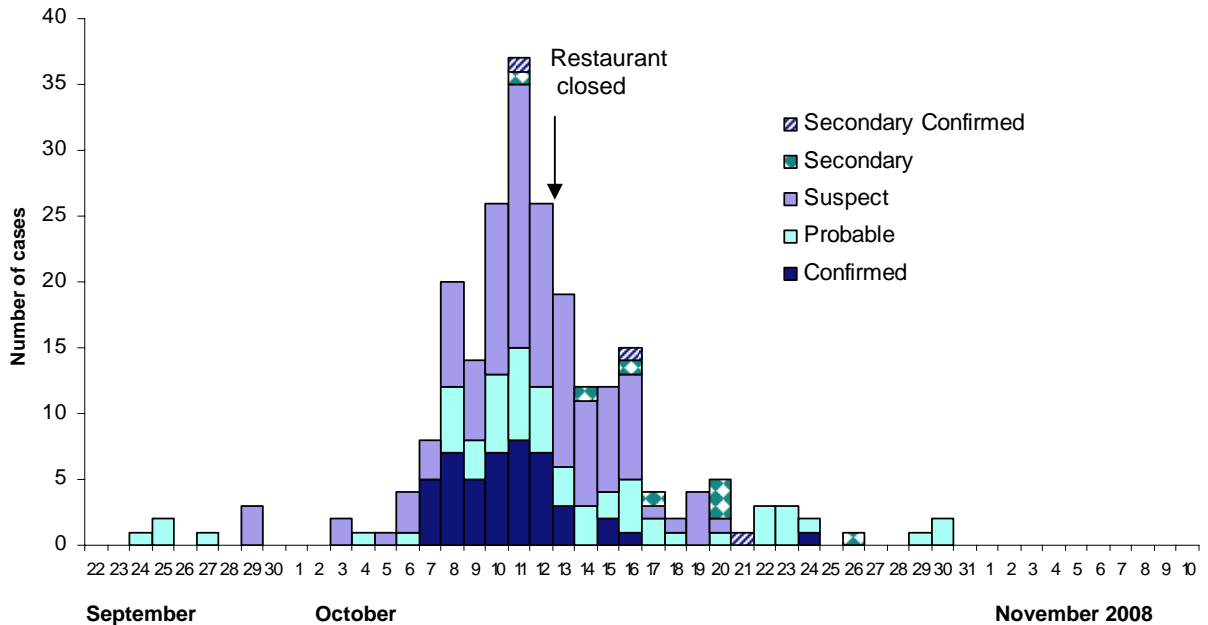
Table 3. Demographic Information for Outbreak Cases (n=235), North Bay, Ontario, October – November, 2008

Statistic	Outbreak Case Classification			
	Confirmed (n=47)	Probable (n=59)	Suspect (n=118)	Secondary (n=11)
Gender:				
Male(%)	26 (55.3%)	27(45.8%)	49(41.5%)	4 (63.6%)
Female (%)	21 (44.7%)	32(54.2%)	69(58.5%)	7 (36.4%)
Age (years):				
Mean	33.4 (±17.4)	40.8 (±18.0)	41.6 (±17.5)	21.3 (±14.3)
Median	27.0	44.0	43.5	19.0
Range	9 to 84	8 to 78	<1 to 87	1 to 47

Table 4. Health Unit of Residence for Outbreak Cases (n=235), North Bay, Ontario, October – November 2008

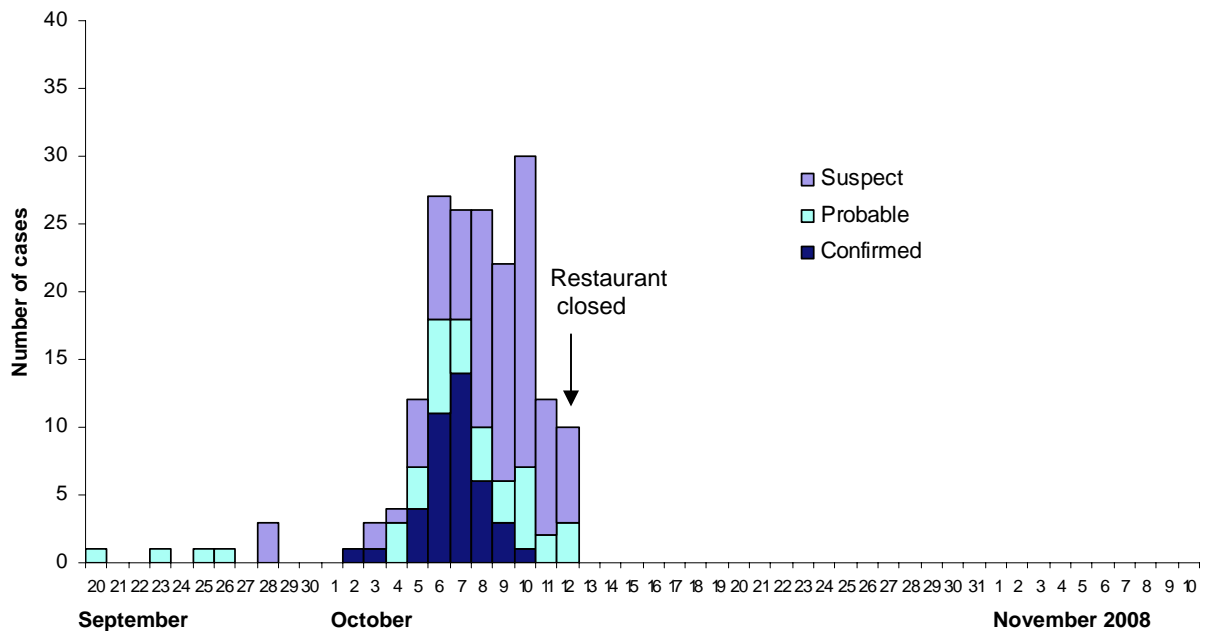
Health Unit	Confirmed	Probable	Suspect	Secondary	Total
Durham	0	1	0	0	1
Haliburton	0	0	0	1	1
Hastings Prince Edward	1	0	0	0	1
NBPSDHU	38	52	95	10	195
Niagara	1	0	1	0	2
Peel	0	0	1	0	1
Porcupine	1	3	4	0	8
Sudbury	3	0	10	0	13
Simcoe Muskoka	0	1	0	0	1
Timiskaming	3	2	5	0	10
Toronto	0	0	1	0	1
Out of province	0	0	1	0	1
Total:	47	59	118	11	235

Figure 2. Illness onset of cases of *E. coli* O157 infection, September 20 to November 10, 2008 (n=232*)



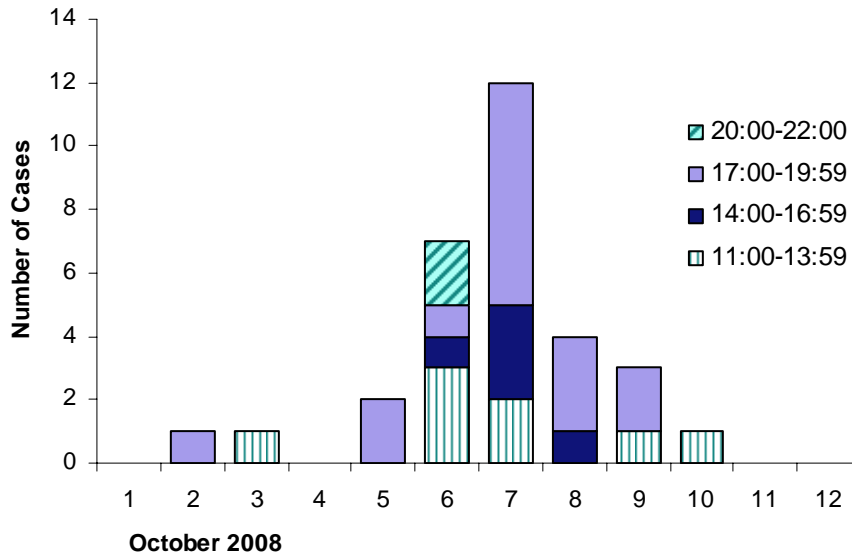
* Excludes three cases: two with unknown onset dates and one who was asymptomatic

Figure 3. Date of single Harvey's / Swiss Chalet exposure for cases of *E. coli* O157 infection, September 20 to November 10, 2008, North Bay, Ontario (n=180*)



* Excludes 11 secondary cases, 14 cases with no exposure, 7 cases with unknown exposure dates (1 confirmed, 3 probable, and 3 suspect), and 23 cases with multiple exposures (4 confirmed, 4 probable, and 15 suspect).

Figure 4. Time of day when confirmed cases (n=31) were exposed at Harvey's/Swiss Chalet, North Bay, October 1 to 12, 2008



4.1.2 Case Control Analytic Study

Sixty-four cases (34 confirmed and 30 probable) and 145 controls were included in the analysis. The median time from exposure (the date of eating at the restaurant) to follow up among cases and controls was 17 days (range 12-33 days) and 14 days (range 10-32 days), respectively. There was no significant difference between the gender distribution of cases and controls; however the mean age of cases (36.1 SD 17.4) was younger than controls (44.3 SD 19.2) ($p=.004$).

The majority of cases reported exposure dates between October 6 and 12, 2008. Of the cases included in the study, 34 (100%) confirmed cases and 24 (80 %) probable cases ate Harvey's food items during the exposure period.

A univariate analysis was conducted for all food items consumed at Harvey's. On initial analysis, statistically significant food items among cases were beef burgers, lettuce, onion, cheese, pickles, and hot peppers (see Table 5). These food items were entered into a multivariate logistic regression model along with age. After adjusting for each food item and age, the final effects model included only onions and age; all other food items were no longer significant (see Table 6). Individuals who consumed onions were significantly more likely to become ill (OR 10.73 95%CI 4.32-26.61). Age appeared to be both a confounder (odds ratio for onions increased by approximately 10% after adjusting for age) and an independent risk factor for illness. People aged 16 to 23 years were more likely of becoming a confirmed or probable case, although these findings were not statistically significant ($p=.070$).

Table 5. Case control food exposures for Harvey's menu items consumed by cases and controls from September 23rd to October 12th (n=189)

Food item	Ill (Cases)				Well (Controls)				Difference in percent	Odds ratio	P value
	Ate	Did not eat	Total	% Exposed	Ate	Did not eat	Total	% Exposed			
Beef Burger	49	9	58	84.48	89	42	131	67.94	16.54	2.57	0.018**
Original	43	15	58	74.14	82	49	131	62.60	11.54	1.71	0.122
Angus	6	52	58	10.34	8	123	131	6.11	4.24	1.77	0.305
Lettuce	44	14	58	75.86	70	61	131	53.44	22.43	2.74	0.004**
Onion	50	8	58	86.21	51	80	131	38.93	47.28	9.80	<0.0005**
Cheese	36	22	58	62.07	54	77	131	41.22	20.85	2.33	0.008**
Pickle	45	13	58	77.59	71	60	131	54.20	23.39	2.93	0.002**
Tomato	33	25	58	56.90	63	68	131	48.09	8.80	1.42	0.264
Bacon	16	42	58	27.59	21	110	131	16.03	11.56	2.00	0.065
Hot pepper	18	40	58	31.03	18	113	131	13.74	17.29	2.83	0.005**
Mustard	43	15	58	74.14	79	52	131	60.31	13.83	1.89	0.067
Ketchup	32	26	58	55.17	56	75	131	42.75	12.42	1.65	0.114
Relish	30	28	58	51.72	54	77	131	41.22	10.50	1.53	0.18
Mayo	23	35	58	39.66	51	80	131	38.93	0.72	1.03	0.925
BBQ sauce	6	52	58	10.34	5	126	131	3.82	6.53	2.91	0.078
Spicy buffalo	2	56	58	3.45	0	131	131	0.00	3.45	-	0.093*
Veggie burger	5	53	58	8.62	13	118	131	9.92	-1.30	0.86	0.778
Chicken burger	2	56	58	3.45	13	118	131	9.92	-6.48	0.32	0.155*
Fries	28	30	58	48.28	72	59	131	54.96	-6.69	0.76	0.396
Onion rings	20	38	58	34.48	38	93	131	29.01	5.48	1.29	0.452
Poutine	2	56	58	3.45	13	118	131	9.92	-6.48	0.32	0.155*

* Fischer's Exact test

** significant at $\alpha=0.05$

- Undetermined

Table 6. Final Logistic Regression Model for Significant Food Items Consumed from September 23 to October 12, 2008 at the Harvey's Restaurant in North Bay, Ontario

Food Item	Odds Ratio	95% Confidence Interval	P Value
Onions	10.73	4.32-26.61	<0.0005
Age			
<16 years (ref)			
16-23 years	4.19	0.89-19.78	0.070
24-41 years	0.51	0.13-2.06	0.347
42-51 years	0.87	0.22-3.43	0.844
>52 years	0.31	0.07-1.32	0.114

4.1.3 Restaurant Employee Investigation

A total of 76 employees worked at Harvey's and Swiss Chalet. Twenty-three (30.3%) employees were dedicated exclusively to Harvey's and 33 (43.4%) exclusively to Swiss Chalet. All other employees were considered staff of both establishments, including 11 (14.5%) managers, eight (10.5%) dishwashers and one (1.3%) preparation person.

Seventy-five of 76 staff (99%) responded to the standard questionnaire. Repeated efforts (including visits to the house) were made to reach the remaining staff member without success.

Investigation by NBPSDHU staff initially identified 9 employees of interest: 7 (9%) who reported non-bloody diarrheic illness since September 1, 2008; a food handler who tested positive for *E. coli* O157:H7, PFGE pattern EXCAI.0017 / ECBNI.0012, but did not report symptoms; and one uncooperative employee who refused to answer most questions and refused to submit a stool sample until legally ordered to comply.

Of the seven symptomatic employees, 4 (57.1%) met the suspect outbreak case definition. Onset of illness dates for these four employees were: September 29, October 3, October 11, and October 14, 2008. The employees with onset of illness dates of September 29 and October 3 reported not eating food from the restaurant. Both of these employees also indicated having an underlying condition which can cause diarrheal symptoms. The other two employees reported eating food from the restaurant between October 5 and 10, 2008. None of the four employees worked for Harvey's exclusively; two worked in the Swiss Chalet kitchen, one was a preparation person for both restaurants, and one was management.

All symptomatic employees reported not working while symptomatic, and management records did not indicate employee absence due to illness for the period September 29 to October 9, 2008. All symptomatic employees had two negative stool specimens. The average length of time from onset to first and second specimen collection was 12 days and 14 days, respectively. Specimens collected from one employee under Ontario's HPPA were also negative.

The asymptomatic confirmed case worked exclusively for Swiss Chalet, but did not commence working at the restaurant until after the onset of symptoms for the first confirmed case. The food history of this individual indicated over 5 exposures to food items from Harvey's restaurant between September 28 and October 12, 2008.

All staff who reported eating at Harvey's/Swiss Chalet had multiple exposures. The confirmed asymptomatic case and 2 suspect symptomatic employees had a combined 14 exposures to food items from Harvey's restaurant between September 28 and October 12, 2008.

4.2 Laboratory Investigation

A total of 47 cases were confirmed with the identical PFGE subtype pattern EXCAI.0017/ECBNI.0012; three additional isolates were identified as closely related based on a two to three band difference when compared to the outbreak pattern. A subgroup of 10 isolates was forwarded for MLVA typing and results were compared to isolates from a lettuce associated outbreak of *E. coli* O157:H7 in the United States and Ontario with the same PFGE pattern; there was no matching MLVA pattern found.

The 88 food samples submitted by NBPSDHU to the CPHL for analysis were negative for *E. coli* O157:H7 and verotoxin (Appendix H). All 12 food samples tested by CFIA Food Microbiology Labs were reported as "not detected" for *E. coli* O157:H7 (Appendix I).

4.3 Environmental Investigation

4.3.1 Facility Compliance Inspection

No infractions were identified for items associated with food safety however three deficiencies associated with sanitation/maintenance conditions were revealed: a damaged area of the ceiling requiring repair, a storage cart for soiled dishes in need of cleaning, and absence of paper towels in both male and female staff washrooms.

4.3.2 Food Process Audit

Food preparation and storage procedures were examined for opportunities for cross-contamination and time-temperature abuse. A detailed investigation was conducted on the acquisition, storage, preparation and serving of burgers, onions, lettuce, cheese, tomatoes and hot peppers. Spanish onions were delivered in mesh bags and stored in the refrigerated cooler with other raw produce. Onions were peeled and chopped with a knife on a cutting board; a cutting glove was used to protect the hand holding the onion. Peeled onions were finely chopped using a dicer (Appendix J) which was placed directly into a storage container. Once the container was full the dicer was removed and the container was stored covered in the refrigerated cooler until required for burger garnishing. Bowls of onions at garnish stations had dedicated spoons and were stored at room temperature throughout the day. Garnish stations were topped up as needed in the drive-through area from partial bowls or a central container stored in the cooler: all unused onions were discarded at the end of each day.

As of November 10, 2008, four of the eight (50%) food handlers involved with onion preparation had completed the onion-specific questionnaire. One food handler indicated that he had prepared onions between October 5 and 7, 2008. Two others indicated that although onion preparation is part of their job, they did not prepare onions between October 5 and 7, 2008.

Employees' responses to the questionnaire indicated overall concordance for most aspects of onion processes within the restaurant. However, cleaning practices for the onion dicer and the cutting glove differed among employees. It appeared that the dicer was not uniformly cleaned prior to use, and some cleaning practices may have been inadequate (e.g., no dicer disassembly in the dishwasher). The cutting glove was tested on October 25, 2008 and found to be negative; the dicer was not swabbed.

4.3.3 Traceback Investigation

CFIA independently tested 10 food products as part of their investigation; no *E. coli* O157:H7 was detected. Traceback investigations were conducted for burgers, lettuce and onions. Eighty samples of beef from different dates and codes were tested and found to be negative.

Further traceback of the lettuce was discontinued after MLVA results ruled out an association between the North Bay outbreak and other concurrent *E. coli* outbreaks in Ontario and United States in which lettuce was considered the primary source.

The onion traceback identified that a 50kg bags of onions were delivered to the restaurant on September 30, October 3 and October 9, 2008. Samples could not be obtained from the October 3 delivery because the entire bag was used prior to the restaurant closure and initiation of investigation. Onions from the October 3 delivery originated from a Quebec grower that was not the usual supplier for the restaurant; it was unclear why this grower supplied the onions on this occasion. Two samples of 30 onions each from different growing times (September and October 2008) were tested and found to be negative. Onions from the grower that supplied the onions on October 3 were also delivered to a Sudbury restaurant and an unrelated restaurant in North Bay; no outbreaks resulted at these other locations (personal communication^[5]).

Eight onions from the October 9, 2008 delivery and the mesh bag in which they were contained were tested and found to be negative.

5.0

Communication

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5.1 Background

5.2 Communication Activities

5.1.1 General Public

5.1.2 Local Health Care Providers

5.1.3 Public Health Officials

5.1.4 Prevention Campaign

5.1 Background

Good communication is crucial in any outbreak response. The public as well as health care providers must be made aware of the illness in the community, who is affected, what they need to do and that the health unit is managing the situation appropriately.

Target populations this outbreak included:

- the public, including people who ate food from Harvey's (those who got ill and those who did not) and anyone in contact with someone ill with *E. coli*
- the media
- health care providers (local hospitals, Emergency departments, physicians, walk-in clinics)
- public health officials (other health units, MOHLTC, PHAC and the CFIA)

5.2 Communication Activities

The detailed chronology (see Appendix B) outlines the dates of key media communications during the outbreak and a summary of communications activities is presented in Figure 5.

5.2.1 General Public

The NBPSDHU issued 29 media releases over the course of the outbreak. The first media release was issued October 12, 2008 and media releases were issued daily for the next three weeks (see Appendix B). All media releases were translated into French and posted on the NBPSDHU website. The MOH held local media conferences and provincial media teleconferences daily from October 14 to 28, 2008 (see Appendix B).

All media releases, fact sheets, question and answers (Q&A's) and prevention messages were posted on the Health Unit website. The prominent red "Health Alert" box was activated on the main page of the website to draw attention to the related media releases and information.

A prevention campaign, consisting of print and radio advertisements, and a display at Northgate Shopping Centre (located in the City of North Bay) was implemented to supplement the news media coverage across the catchment area from October 21, 2008 until January 29, 2009. Cogeco Community Cable TV to aired a hand-washing video, produced by Grey Bruce Health Unit, beginning October 21 for two weeks. It promoted "proper hand-washing" as a method of reducing the secondary spread of *E. coli*.

There were 98 requests for interviews from the media regarding *E. coli* from October 13 to November 13, 2008. These requests were not only from local media outlets, but also from national media including Globe and Mail, Toronto Star, CBC Radio Toronto, CBC Newsworld, Canadian Press Canwest Global and Canada AM.

5.2.2 Local Health Care Providers

The CDC program sent Public Health Bulletins to all physicians, hospital emergency rooms, infection control departments in hospitals, walk-in clinics, nursing stations/practitioners, and Telehealth on October 13, 14, 16, 22, 30 and November 14, 2008. As well, the Public Health Physician contacted area hospitals as well as hospitals in neighbouring health units by phone to find out if they had any possible cases.

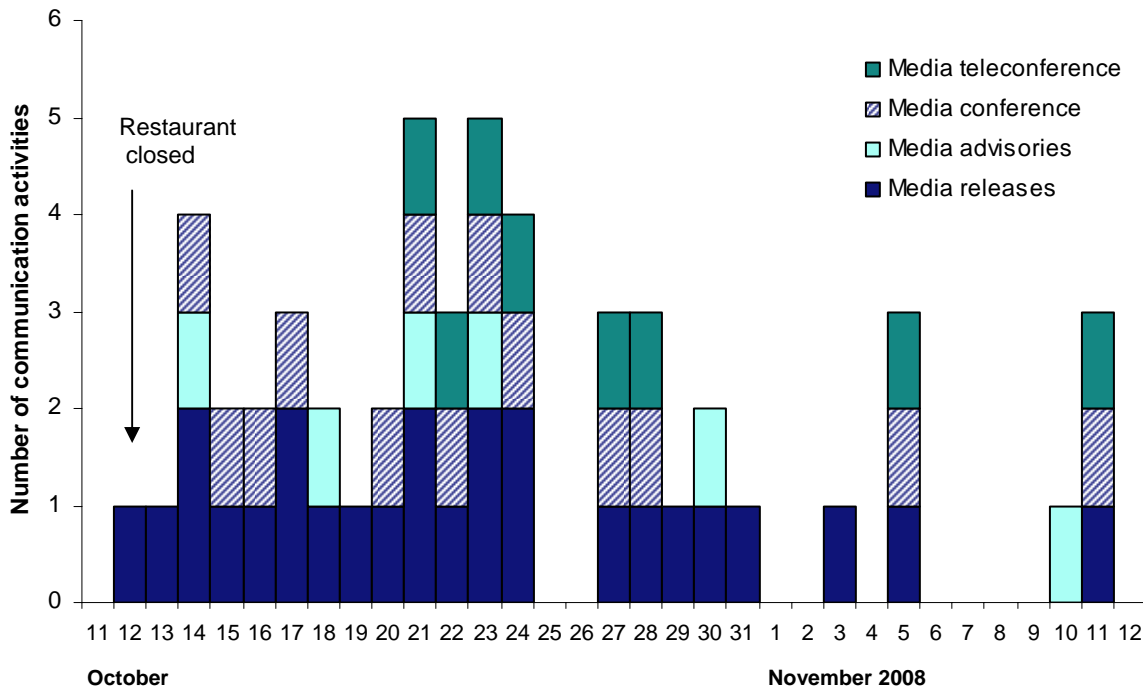
5.2.3 Public Health Officials

MOHLTC and PHAC were contacted regularly. Daily teleconferences started October 14 with MOHLTC, PHAC and CFIA. As other health units became involved, they joined the teleconferences. All NBPSDHU staff were provided with situation updates regularly through email. All media releases were sent to every health unit through the Council of Medical Officers of Health (COMOH) list. Due to the possibility of travel through the district, adjoining health units were also notified by telephone on October 12 and 13, 2008. An alert notice was posted on CIOSC on October 14, 2008.

5.2.4 Prevention Campaign:

A campaign to further promote “Prevent the spread of *E. coli*” was implemented October 21, 2008 and continued until January 29, 2009. The campaign included print advertisements in newspapers in Parry Sound, Almaguin, Mattawa, West Nipissing and North Bay along with radio advertisements on Moose FM in Parry Sound, Moose FM in North Bay, JOCO Communications in West Nipissing and Rogers Radio (102 FM Fox, CKAT, EZ Rock) in North Bay.

Figure 5. Summary of NBPSDHU outbreak-related communication activities, October 11 to November 12, 2008



6.0

Discussion, Limitations and Conclusions

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6.1 Discussion

6.2 Limitations

6.3 Conclusions

6.1 Discussion

This outbreak was caused by a point source contamination at the Harvey's restaurant in North Bay. Although exposures of confirmed cases began as early as October 2, the majority concentrated between October 5 and 10, 2008. Based on the illness and exposure curves, the source of the contamination appears to have been waning by the time the restaurant was ordered closed. This decreased the likelihood of successfully isolating *E. coli* from contaminated food or surfaces.

PFGE and MLVA laboratory analyses proved to be very useful in establishing this outbreak as an isolated event, given that there were two additional *E. coli* O157:H7 outbreaks occurring in Ontario at the same time. One of the outbreaks had an identical PFGE pattern and was distinguished through MLVA, while the other had a different PFGE pattern.

Based on the case control analysis, the most likely source was contaminated onions. Although the origin of the initial contamination was not elucidated, inadequate cleaning of the onion dicer may have perpetuated the contamination for several days. Similar to the Maple Leaf Listeriosis outbreak during summer 2008, residual contamination of the slicer/dicers despite standard cleaning protocols may have been the mechanism for its persistence.

Spanish onions have not been previously implicated in outbreaks; however studies have demonstrated that it is possible to isolate *E. coli* O157: H7 following experimental contamination with manure compost or contaminated water.^[6] In this restaurant, onions used for garnishing were left out during the workday at room temperature, so it is conceivable that if they were contaminated, time/temperature would allow for survival and replication of the bacteria.

There was some evidence to support the hypothesis that the outbreak originated from contaminated onions being brought into the restaurant. The onion shipment supplied to Harvey's on October 3, 2008 was from a non-typical source; this farm also supplied other restaurants with no evidence of other *E. coli* cases, but it is possible that contamination was concentrated in certain areas of the field or certain bags, resulting in non-uniform contamination of the onions. The on-farm investigation conducted by CFIA, which included soil and onion testing, did not find evidence of contamination but this hypothesis cannot be ruled out because onions from the October 3 shipment were not available for sampling, as they had all been consumed.

The alternative hypothesis was that the contamination occurred in the restaurant to increase the risk of infection between the afternoon of October 5, 2008 and peaking October 7, 2008, either via cross contamination from another contaminated food product or through an infected food handler.

Cross-contamination in this restaurant was possible, as burgers were garnished with multiple food items, some with shared utensils. Because of their strong taste, however, onions have dedicated utensils, reducing the likelihood of cross contamination from other produce. There was also no evidence of improper food handling or storage of the beef products and all test results were negative.

The exposure curve revealed approximately one week of high-risk exposures at the restaurant, which correlates well with the typical duration of *E. coli* excretion in adults.^[1] One asymptomatic *E. coli* positive food handler and four employees who met the suspect outbreak case definition were discovered, however, there is more evidence that staff were exposed simultaneously with customers and not the source.

Public health actions were taken to prevent further transmission. High risk cases were required to stay off work or out of daycares until 48 hours after symptoms resolved and two consecutive negative stool cultures were obtained at least 48 hours apart. The health unit also leveraged the media coverage to promote handwashing. The restaurant remained closed while under investigation and re-opened after all criteria set out by NBPSDHU were met.

6.2 Limitations

The investigation had a bias towards Harvey's exposures; case finding and media messages focused on Harvey's food consumption based on information obtained from the initial cases. Although it is difficult to assess the extent of self-selection by individuals, it undoubtedly occurred.

Selection bias likely occurred during selection of controls, as it was voluntary and not a random sample. Although the age difference between cases and controls were accounted for in the analysis, it is possible that there were other differences between these two populations that affected the analysis. There was also a bias in the control population towards the end of the exposure period, which may have affected the results; more cases had earlier exposure dates, while there were more controls than cases toward the end of the outbreak.

Diarrheic illness was self-reported by employees of the restaurant. By the time this portion of the investigation was conducted, there had been extensive media coverage. This could have led to additional under-reporting of illness for fear of being implicated as the source of the outbreak.

All symptomatic employees had negative stool results, however, many were collected several days after the onset of illness; five of seven symptomatic food handlers had their first stool specimen collected at least seven days after onset of symptoms. Given that the average adult sheds the bacteria for approximately 7 to 10 days it is possible that there were missed cases among staff.^[1]

Schedule information obtained from management required verification with employees. This information proved to be less accurate than what could have been obtained from payroll records, which may have led to inaccuracies in examination of employee roles and scheduling. The investigation revealed that the two restaurants' operations were not as separate as originally thought, and it is likely that symptomatic staff worked both sides of the restaurant. One person who reported diarrheic illness did not provide schedule information during the course of the investigation.

Despite repeated attempts by NBPSDHU staff, there were difficulties with three employees. One employee did not complete the questionnaire, and a second employee did not submit stool specimens. A third employee completed the questionnaire, but refused to answer most questions.

Only half of the employees identified as having contact with onions were successfully contacted and interviewed. Employees were asked to recall specific situations that took place a month previously, thus the accuracy of recall may have been compromised and was not verifiable.

Exposures among staff and customer cases were not directly comparable. Given the difficulty in determining which exposure is the most likely exposure to have caused illness, customer cases with more than one exposure to the restaurant were excluded from the analysis. Analysis of exposure information for symptomatic employees was limited because of the small number of employees who met the outbreak case definitions. Additionally, the employee cases either reported multiple exposures or could not recall if they had eaten at Harvey's/Swiss Chalet over the exposure period of interest.

6.3 Conclusions

Contaminated onions at the Harvey's restaurant in North Bay, Ontario, most likely caused the *E. coli* O157:H7 infections in this outbreak. Although the initial source of the contamination was not identified, the risk of exposure lingered on-site for about a week; inconsistent cleaning of the onion dicer may have been a contributing factor. Spanish onions have not been previously implicated in outbreaks of *E. coli* infections, but the analytical study suggests that onions should receive more attention when developing food safety plans in food establishments.

7.0

Control Measures & Recommendations

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*7.1 Control Measures: Criteria for
Premise Reopening*

7.2 General Recommendations

7.1 Control Measures: Criteria for Premise Reopening

Facility Maintenance

- *Discarding of Food On-Site:* The NBPSDHU required that all foods and food packaging materials in the food premise inventory as of closing on October 12, 2008 be removed from the premise and discarded. On November 3, 2008 a waste disposal bin was provided to the premise. A maintenance service was contracted by the operator to remove food from the premise. All discarded food was transported to the waste disposal bin. A PHI accompanied the bin to the North Bay landfill site.
- *Facility Cleaning and Sanitizing:* The NBPSDHU required that all surfaces, equipment, utensils and multi-service articles in the premise receive a thorough cleaning and sanitizing. On November 5, 2008 a PHI observed cleaning and sanitizing methods at the facility. The operator consulted with an Ecolab representative. The disinfectant used was Ecolab oasis 146 multiquat (QUAT) at 200ppm. All surfaces were washed with soap and water, disinfected with the QUAT spray, left wet for a two minute contact time and finally wiped with a clean cloth.

Facility Staff

- *Letter of Inclusion:* The NBPSDHU required that staff previously employed at the Harvey's or Swiss Chalet establishment on or after October 1, 2008 were in receipt of a letter of inclusion as issued by the Medical Officer of Health of the NBPSDHU. The inclusion letter indicated that staff could return to work and was issued to staff following confirmation of two negative stool specimens (*E. coli* O157:H7).
- *Food Safety Certification Training of Staff:* The NBPSDHU required that the employer commit to the food safety certification training of all staff prior to reopening.

Initially two 6-hour Food Safety Certification Courses were provided at the Harvey's/ Swiss Chalet premise on November 8 and 9, 2008. Scheduling of staff for these courses was arranged by the employer. An additional two courses were provided on November 11 and 18, 2008. A total of 64 received food handler certification training and successfully completed the program with a passing grade of 70% or greater.

The training manual for NBPSDHU's Food Safety Certification Course was *Basics.fst® Food Safety Training in Canada (2nd edition)*. All students were provided a copy of this manual. NBPSDHU PHIs served as instructors for the courses. Course materials included a training manual, ServSafe® Steps to Food Safety videos and a PowerPoint presentation. The course outline covered food safety principles including safe handling, preparation and storing of food, food handler hygiene and food premises sanitation. Special emphasis was placed on proper hand washing technique and frequency with the use of a Glow Germ™ demonstration. This course meets the minimum requirements as outlined in the *Food Handler Training Protocol* in accordance with the Ministry of Health's Mandatory Health Programs and Services Guidelines.

- *Exclusion of Ill Staff:* The NBPSDHU required that the employer create a policy to ensure that staff with gastroenteric illness excludes themselves from work during illness and for 48 hours after symptoms resolve. The employer must monitor and document staff illness and have staff sign off on the policy.

Facility Methods/Practice

- *Compliance Inspection:* The NBPSDHU required that the premise be deemed in full compliance with Ontario Regulation 562 prior to reopening. On November 10, 2008 a compliance inspection at the facility revealed full compliance with the regulation. All violation conditions noted at the premise on October 12, 2008 were confirmed in full compliance.
- *Food Preparation Practices:* The NBPSDHU required that the operator modify operating procedures at the premise as follows:



1. Provide a separate serving utensil for each garnish bowl at the garnish stations on-site.
 2. Discontinue the top-up of garnish bowls.
 3. Discard leftover contents of garnish bowls at the end of each day.
 4. Discontinue use of the existing “cutting glove”. The glove may be replaced by another product which is demonstrated to have physical qualities that provide for ease of cleaning and sanitizing. Alternatively, cover the existing cutting glove with a non-absorbent glove (i.e. plastic disposable).
 5. Standardize a procedure for the disassembly, cleaning and sanitizing of onion and tomato slicers.
- *Personal Hygiene:* The NBPSDHU required that a signed two hour log be kept which identified the ongoing maintenance of hand wash facilities including washrooms (employee/public). Signage on proper hand washing procedure was posted at all hand washing locations on-site.
 - *Post Re-opening Audit of Food Preparation Practices:* The NBPSDHU advised the operator that audits of food preparation practices and sampling would occur following reopening.
 - *Food Inventory:* The NBPSDHU required that the operator maintain records for all received foods including: recorded lot numbers and expiry dates. The operator is required to record temperatures of delivered refrigerated and frozen foods. The operator is encouraged to inspect the delivery vehicle to assess the potential for product contamination.

7.2 General Recommendations

- In future restaurant-based outbreaks, simultaneous investigations of community case-finding and employees should be conducted. Collecting stool samples from all employees should be initiated as soon as the restaurant is closed; administering the questionnaires can follow later. This would increase the likelihood of identifying infected staff.
- Risk assessment tools should be created to assist health units in systematically developing evidence-based criteria for re-opening restaurants following outbreaks. Ideally this should be done at the provincial or federal level to maximize benefit to local public health jurisdictions.
- Equipment used in food preparation should be thoroughly cleaned regularly to prevent buildup of organic material (biofilms) and bacteria. Kevlar safety gloves should be avoided or covered with disposable, single-use food-safe latex gloves. Steel mesh gloves can also harbor bacteria, so if used must be cleared of all debris, cleaned and sanitized regularly with an effective, food-safe product. Any equipment used to prepare food that has multiple components must be completely disassembled prior to cleaning and kept in good working order at all times. Initialing a cleaning schedule for the dicer may help focus employees’ attention on its proper cleaning.

8.0 Acknowledgements

The North Bay Parry Sound District Health Unit gratefully acknowledges the contributions of our health sector and community partners in responding to this unprecedented community outbreak. The successful execution of this process requires a coordinated application of expertise from a variety of health related specialties, working collaboratively to minimize the impact of illness on the community.

NBPSDHU Medical Officer of Health

Dr. Catherine Whiting, Medical Officer of Health, deserves special recognition for her contribution to the management of the outbreak. Dr. Whiting called upon her over 20 years of experience as the Medical Officer of Health to respond to the demands of the outbreak. Under her leadership, the staff at the Health Unit moved quickly to investigate the outbreak, to communicate with the public and to implement public health control measures. Dr. Whiting was the image of the Health Unit in the media, the community and with our partners. Her experience, passion and dedication to public health lead the community through this outbreak.

The North Bay General Hospital

With recognition to all attending Emergency Room Staff, especially Dr. Michael Arthurs, for his astuteness in the early identification of a cluster of illness, and to Kim Carter and Infection Control colleagues for executing early containment and infection control measures. The laboratory staff including, Dr. Alex Steele, provided timely consultation and technical advice throughout the course of this event.

Health Units

Staff in all programs and at every level of the North Bay Parry Sound District Health Unit contributed to the local public health response. As some affected individuals resided outside of the North Bay Parry Sound jurisdiction, we would like to acknowledge the significant contribution made to investigation and follow up by the following Health Units:

- Timiskaming
- Sudbury and District
- Porcupine
- Niagara Region
- Simcoe Muskoka District
- Peel Region
- Durham Region
- Hastings and Prince Edward Counties
- Toronto
- Haliburton, Kawartha, Pine Ridge District
- Centre Locale de Service Communautaire (Temiscaming, Quebec)

The City of North Bay

Grant Love, Fire Chief and Community Emergency Management Coordinator, was readily available to provide support where required.

The Canadian Field Epidemiology Program, Public Health Agency of Canada

The outbreak investigation and this report could not have been completed without the expert assistance of Dr. Joanne Tataryn and Jennifer Cutler from the Canadian Field Epidemiology Program, supported by Dr. Linda Panaro, Dr. Andrea Ellis and Dr. James Flint at the Public Health Agency of Canada. Together they provided essential leadership and support in the development and refinement of outbreak case definitions, the case control analytic study, as well as the employee and environmental investigations.

The Canadian Food Inspection Agency

Davendra Sharma and colleagues conducted food safety and trace-back investigation in their efforts to identify the source of the outbreak.

The Central Public Health Laboratory

Anne Maki and colleagues played key scientific roles in the complex processing and sub-typing of clinical and environmental samples related to this incident.

The National Microbiology Laboratory in Winnipeg and the Centers for Disease Control and Prevention in Atlanta

The National Microbiology Laboratory was responsible for national pattern designation of PFGE patterns. The Centers for Disease Control and Prevention in Atlanta, Georgia conducted MLVA diagnostic testing and interpretation.

In order to advance public health's major role in protecting the health of the people of the District, "working together" is recognized as a prerequisite to achieve this end. This level of collaboration is essential and was readily revealed in the follow-up and containment of this outbreak.

Ministry of Health and Long-Term Care

The role of the Ministry of Health and Long Term care requires special acknowledgement. The far reaching contributions ranged from technical communicable disease surveillance expertise such as the enhanced surveillance directive posted and disseminated through iPHIS (integrated public health information system) to laboratory and communications support. Yvonne Whitfield and Dean Middleton from the Infectious Diseases Branch, Enteric and Zoonotic Disease Unit, coordinated and conducted teleconferences to create necessary linkages across jurisdictions in facilitating the monitoring and surveillance of events as they unfolded. Special thanks to Director, Marie Muir and Acting Manager, Jim Stone. Karen Hay, Tina Badiani, Karen Johnson, Brenda Lee and Ellen Chan from the Infectious Disease Surveillance Section contributed their expertise. Technical contributions included data entry, updating and detailing the input of iPHIS cases including Pulse Field Gel Electrophoresis results, collaborative input on case definitions, detailed advice on entering cases into iPHIS, as well as case management consultation. The Environmental Health Branch was represented by Brenda Mitchell – Director, Tony Amalfa - Manager, Akbar Ali and Alison Samuel. Assistance was provided in the development of criteria to re-open the restaurant. Kevin Finnerty, Executive Director of the Communications Branch and Andrew Morrison, Communications Coordinator, played key roles in creating efficiency for expediting and facilitating media inquires. The Honourable David Caplan, also visited onsite to provide support and encouragement.

The Ontario Agency for Health Protection and Promotion provided investigative support through teleconference participation.

9.0

Appendices

A: City of North Bay, Ontario and location of Harvey's in the City of North Bay.

B: Detailed Chronology of Events

C: Standardized Questionnaire

D: Questionnaire for Cases in Case Control study

E. Questionnaire for Controls in Case Control study

F. Employee Interview Questionnaire

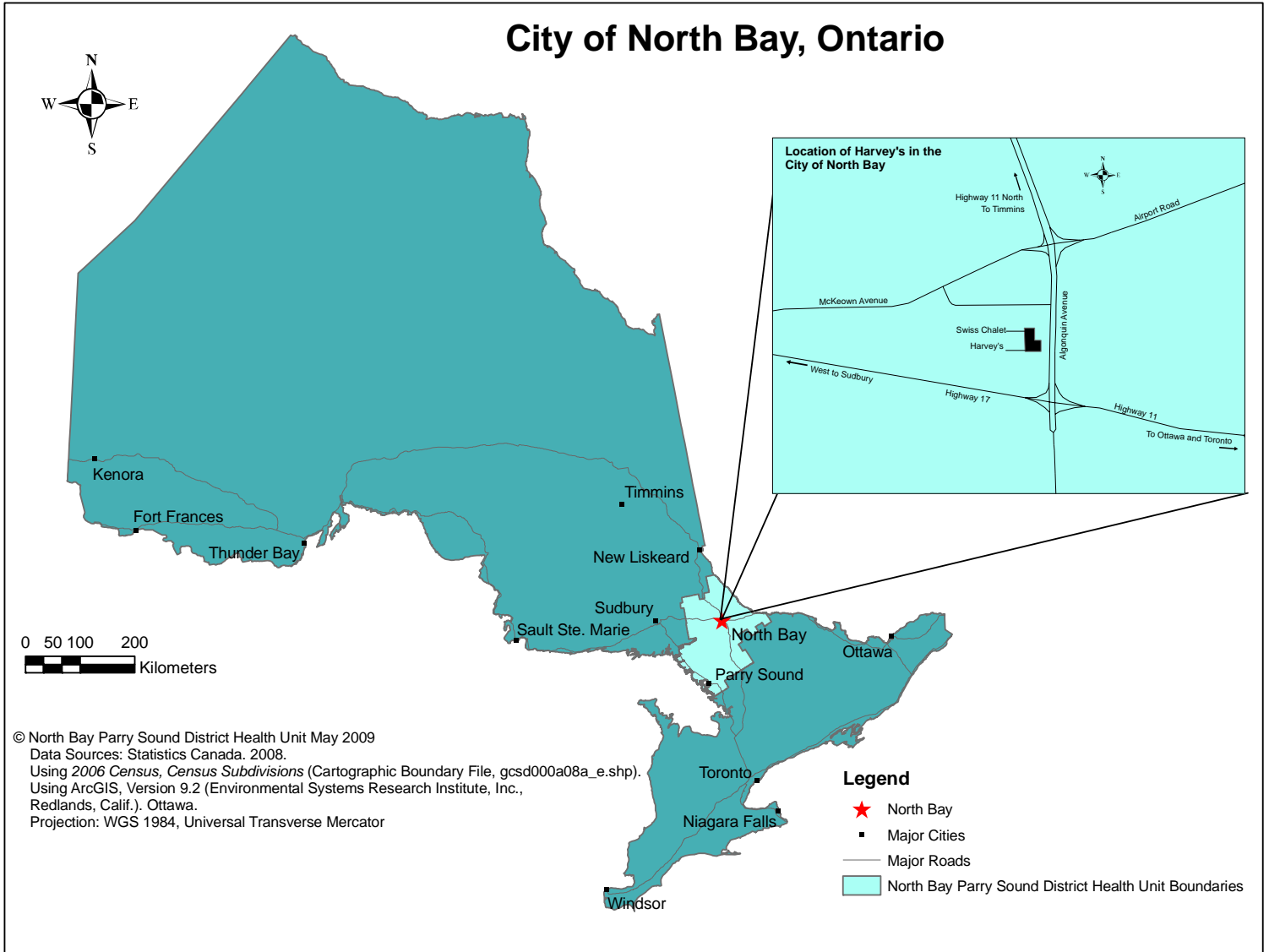
G. Onion preparation Interview Questionnaire

H. Summary of Environmental Samples from CPHL

I. Summary of Environmental Samples from CFIA

J. Harvey's Onion Dicer

Appendix A:
MAP: City of North Bay, Ontario and location of Harvey's in the City of North Bay



Appendix B

Detailed chronology of events

Saturday October 11th 2008

- NBPSDHU received notification from the North Bay General Hospital (NBGH) at 11:20am of 5 individuals in Emergency all presenting with bloody diarrhea and cramps.
- The on-call Public Health Inspector (PHI) and the NBGH's Coordinator of Infection Prevention and Control interviewed the symptomatic individuals and completed individual food histories. Stool specimens were collected and were submitted to be screened for *E.coli* by the North Bay General Hospital.
- Symptomatic individuals were isolated to one room in Emergency from other patients.
- An additional PHI was called in to assist with the investigation.
- The NBPSDHU Medical Officer of Health (MOH) was notified of the situation.
- Information gathered from the interviews and food histories were reviewed by the PHIs, Manager and Director of Environmental Health (EH), the Manager of Communicable Disease Control (CDC) program, the Director of Infectious Disease (ID) and the MOH. Additional questions regarding potential exposures were prepared.
- NBPSDHU was notified by the NBGH of two more symptomatic individuals. New cases were interviewed.
- The on-call Ministry of Health and Long-Term Care (MOHLTC) physician was contacted and NBPSDHU was advised that no other *E.coli* cases had been reported.
- The Public Health Agency of Canada (PHAC) was contacted and NBPSDHU was advised that no increased diarrheal illness or *E.coli* cases in Ontario had been reported.
- Mattawa and West Nipissing Hospitals were contacted and they reported no increased presentation of diarrheal illness.
- Walk-in clinics were contacted by the NBGH's Coordinator of Infection Prevention and Control and no increased presentation of diarrheal illness.

Sunday October 12th 2008

- The Emergency Operations Centre (EOC) was activated.
- Walk-in clinics were contacted again. No increase in activity was reported.
- Restaurants identified through food histories were contacted. No complaints had been received.
- In the afternoon, NBPSDHU received notification that a stool sample had tested positive for *E. coli* O157:H7.
- The outbreak was declared.
- An outbreak questionnaire was prepared to facilitate hypothesis generation. Information including water source, groceries, restaurant/fast food exposures, and attendance at community markers and special events was collected.
- A fact sheet on *E. coli* O157:H7 and an Enteric Precautions Information Sheet were reviewed and provided to symptomatic individuals being discharged from the NBGH.
- Of the 11 symptomatic individuals with preliminary food history information, 9 ate food purchased from Harvey's in North Bay. Burgers were identified as being a common exposure.
- A site visit was made to Harvey's by the MOH, Manager of EH and a PHI. A verbal Section 13 order was issued to the manager of Harvey's by the Manager of EH, and the establishment was closed at 20:45.
- A facility compliance inspection and a HACCP audit relating to hamburgers was conducted by the Manager of EH and a PHI.
- 16 food samples were collected from Harvey's by the NBPSDHU.
- Case definitions were developed.
- Sudbury District Hospital Emergency Department was contacted and NBPSDHU was advised of one laboratory-confirmed case for *E. coli* and three additional symptomatic cases.
- To determine the scope of the outbreak, the Sudbury and District Health Unit (SDHU) MOH was contacted as well as the MOH for Simcoe Muskoka. Attempts were also made to reach the MOH's for Porcupine, Timiskaming and Algoma health units.
- A Public Health Bulletin (PHB) was sent out to physicians, nurse practitioners, walk-in clinics, emergency departments, infection control practitioners and Telehealth.
- A media release was issued advising of a possible foodborne outbreak of *E. coli* O157:H7 in North Bay.
- By midnight, 16 symptomatic individuals (including 1 laboratory confirmed *E. coli* O157:H7) had been reported

since October 11, 2008. Of these 16 individuals, 14 (87.5%) presented with bloody diarrhea and 2 (12.5%) with non-bloody diarrhea. 13 (81.3%) of the 16 individuals reported eating at Harvey's restaurant in North Bay.

Monday October 13th 2008 (Public Holiday)

- 2nd laboratory-confirmed case *E. coli* O157:H7 reported. 9 more symptomatic individuals (7 with bloody diarrhea) were reported for investigation. All had been exposed to Harvey's food.
- Food samples collected from Harvey's on October 12th driven to Central Public Health Laboratory (CPHL) in Toronto to ensure processing could commence on October 14th.
- The City of North Bay was requested to collect and process bacteriologic samples from the North Bay water distribution system to rule out the possibility of water being a possible source.
- The case history form and outbreak questionnaire was revised to collect specific information on Harvey's purchases such as burger type, condiments, toppings, and other food items. Information on water sources, and groceries, other restaurant/fast food exposures, and special events continued to be asked so as not rule out other possible sources of *E. coli*.
- Audit of Harvey's processes for storage, preparation, and serving of food items identified through preliminary food frequency exposures initiated by Manager of EH and PHIs.
- iPHIS reporting was initiated.
- An alert notice was posted on Canadian Integrated Outbreak Surveillance Centre (CIOSC).
- MOH responded to 2 media calls and conducted an on-camera interview with CTV.
- Media release #2 issued providing an update on the outbreak.
- Updates provided to MOHLTC.
- Case definition broadened to include non-bloody diarrhea.
- Media releases, PHB, and data sheets emailed to alPha list serve.
- Written copy of the closure order provided to the owner/operator of Harvey's North Bay. MOH met with the President of Harvey's to provide an update on the investigation.
- PHIs assigned to respond to calls from the public.

Tuesday October 14th 2008

- 7 additional cases were laboratory-confirmed for *E. coli* O157:H7, bringing the total to 9 confirmed cases. One of the 9 laboratory-confirmed cases was from the Sudbury and District Health Unit area.
- 27 new symptomatic individuals (17 with bloody diarrhea) reported. 52 symptomatic individuals reported for investigation since October 11th, 2008.
- The City of North Bay reported 14 municipal water sample results as negative for *E. coli*.
- 1st MOHLTC lead teleconference held (other attendees: Canadian Food Inspection Agency (CFIA) and Provincial Infectious Diseases Advisory Committee (PIDAC)).
- NBPSDHU exclusion guidelines for food handlers, child care workers and health care providers were put in place.
- Media advisory # 1 issued announcing the 1st media conference.
- Media release #3 issued. Harvey's restaurant was named in the release.
- The 2nd PHB was distributed.
- First media conference was held with the MOH.
- Reception hours were extended to 19:00 hrs.
- Public Service Announcement issued announcing expanded Health Unit phone line hours.
- The need for a Field Epidemiologist was identified.
- Confirmed, probable and suspect case definitions revised under consultation from MOHLTC.

Wednesday October 15th 2008

- 5 additional cases laboratory-confirmed for *E. coli* O157:H7, bringing the total to 14.
- 34 new symptomatic individuals reported. 86 symptomatic individuals reported for investigation since October 11th, 2008.
- Epidemiological analysis identified dates of onset range from October 4th to 13th. Exposure dates for those with single exposures (multiple exposures excluded) were October 6th to 8th. Top 4 burger condiments were lettuce, onions, cheese, and tomato.
- An Enhanced Surveillance Directive was posted on iPHIS.

- 2nd MOHLTC teleconference held (other attendees: CFIA, CPHL, PHAC, SDHU).
- CFIA commences food safety and trace-back investigation.
- Media release #4 issued. Confirmation that drinking water is not the source and prevention of secondary transmission information provided.
- Media conference #2 was held with the MOH.

Thursday October 16th 2008

- 1 additional case laboratory-confirmed for *E. coli* O157:H7, bringing the total to 15.
- 4 other health units investigating cases linked to the outbreak (SDHU, Hastings Prince Edward, Timiskaming, and Porcupine).
- 28 new symptomatic individuals reported for investigation. 114 symptomatic individuals reported for investigation since October 11th, 2008.
- 1st NBPSDHU Epidemiologic Summary released to investigative team, PHAC, MOHLTC, CPHL and CFIA.
- 3rd MOHLTC lead teleconference held.
- Field Epidemiologist from the PHAC's Canadian Field Epidemiology Program arrived.
- Results received from CPHL on 8 of the 16 food samples collected on October 12th, 2008. All (4 burgers, 1 mayonnaise, 1 pickles, 1 peppers, and 1 tomatoes) were negative for *E.coli*.
- A second batch of 15 food samples submitted to CPHL for testing by NBPSDHU.
- 1st epidemiologist teleconference was held with investigating health units, PHAC, and MOHLTC.
- Stool sample kits distributed to all staff and management employed at Harvey's and Swiss Chalet.
- MOH conducted radio interview with CBC.
- Media release #5 issued. Update and prevention of secondary transmission information provided for public and "high risk individuals" (i.e. those currently employed to handle food or provide child or patient care).
- Media conference #3 held with the MOH.

Friday October 17th 2008

- 7 additional cases laboratory-confirmed for *E. coli* O157:H7, bringing the total to 22.
- 36 new symptomatic individuals reported. 150 symptomatic individuals reported for investigation since October 11th, 2008.
- 4th MOHLTC lead teleconference held.
- Food line listing received from CPHL via MOHLTC – 16 of 31 food samples tested and all negative for *E. coli* O157:H7.
- Stool kits made available at the NBGH Emergency.
- Stool kits provided at NBPSDHU for "high risk" individuals who require 2 negative stool samples (24 hrs apart) in order to return to work.
- 13 stool samples from Harvey's / Swiss Chalet employees sent to CPHL for testing.
- A Q&A on *E.coli* was posted to the NBPSDHU website.
- Staffing put in place for the weekend.
- Case history form revised in order to better capture secondary transmission cases.
- Questionnaire developed to interview Harvey's & Swiss Chalet employees and management.
- Media release #6 issued. Update provided.
- Media conference #4 held by MOH.

Saturday October 18th 2008

- 2 additional cases laboratory-confirmed for *E. coli* O157:H7, bringing the total to 24.
- 2 more health units (Toronto & Simcoe Muskoka) involved in the outbreak; 6 in total.
- 8 new symptomatic individuals reported. 158 symptomatic individuals reported for investigation since October 11th, 2008.
- Interviewing of Harvey's and Swiss Chalet employees commenced (76 to be interviewed).
- 9 more stool samples from Harvey's / Swiss Chalet employees sent to CPHL for testing; bringing total to 22.
- Media release #7 issued. Screening of restaurant staff announced.
- MOH completed interview with Toronto Star.
- Preliminary PFGE results were received for the first 3 laboratory-confirmed cases. 6 of the 7 had a common

pattern.

- Media advisory #2 sent announcing media conference on Monday, Oct 20 at 14:00

Sunday October 19th 2008

- 3 additional cases laboratory-confirmed for *E. coli* O157:H7 and 1 laboratory-confirmed secondary; bringing the total to 28 laboratory-confirmed cases (including 1 secondary case). 3 of the 28 laboratory-confirmed cases reside outside of NBPSDHU area.
- 10 new symptomatic individuals reported. 168 symptomatic individuals reported for investigation since October 11th, 2008; 115 (68.5%) meet outbreak case definitions.
- 2nd NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants.
- Media release #8 issued.

Monday October 20th 2008

- 1 additional case laboratory-confirmed for *E. coli* O157:H7, bringing the total to 27 laboratory-confirmed and 1 secondary laboratory-confirmed.
- 23 new symptomatic individuals reported. 191 symptomatic individuals reported for investigation since October 11th, 2008; 119 (62.3%) meet outbreak case definitions.
- Confirmation of PFGE pattern – ECXAI.0017 / ECBMI.002. Pattern identical to the outbreak in Chatham Windsor, Ontario. Represents 1.66% of patterns in Centers of Disease Control database in the United States.
- Audit of processes for storage, preparation, and serving of food items identified through the epidemiological investigation continues by Manager of EH.
- Food samples submitted by CFIA tested negative for *E.coli*. Trace back for lettuce and beef underway.
- 5th MOHLTC lead teleconference held.
- 3rd NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants.
- 18 more stool samples from Harvey's / Swiss Chalet employees sent to CPHL for testing; bringing total to 40.
- 3rd PHB sent.
- Teleconference held with Illinois, Michigan, USDA, CFIA, PHAC to compare investigative findings to date.
- Media release #9 issued.
- Media conference # 5 was held by MOH.

Tuesday October 21st 2008

- 7 additional cases laboratory-confirmed for *E. coli* O157:H7, bringing the total to 34 laboratory-confirmed and 1 secondary laboratory-confirmed. A total of 8 health units involved in the investigation.
- 23 new symptomatic individuals reported. 214 symptomatic individuals reported for investigation since October 11th, 2008. 124 (57.9%) meet outbreak case definitions.
- 6th MOHLTC lead teleconference held.
- 4th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants.
- Samples sent from CPHL to in Centre of Disease Control database in the United States for MLVA analysis.
- Case control study initiated.
- Media release # 10 issued. Investigation update and tips on prevention of secondary transmission provided.
- Local media conference #6 was held with the MOH.
- MOH held first province-wide media teleconference.
- Media Release # 11 issued. Notification of extended hours to provide information on *E. coli*.

Wednesday October 22nd 2008

- 1 additional case laboratory-confirmed for *E. coli* O157:H7, bringing the total to 35 laboratory-confirmed and 1 secondary laboratory-confirmed.
- 19 new symptomatic individuals reported. 233 symptomatic individuals reported for investigation since October 11th, 2008. 129 (55.4%) meet outbreak case definitions.
- 2nd PHAC Field Epidemiologist arrived.
- 7th MOHLTC lead teleconference held.
- 5th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants.
- 36 of the 76 employees interviewed.
- Call centre activated to receive calls from controls.

- Media release # 12 issued. Investigation update and tips on prevention of secondary transmission provided.
- 7th local media conference held by MOH.
- MOH held 2nd province-wide media teleconference.

Thursday October 23rd 2008

- 1 additional case laboratory-confirmed for *E. coli* O157:H7, bringing the total to 36 laboratory-confirmed and 1 secondary laboratory-confirmed.
- 12 new symptomatic individuals reported. 245 symptomatic individuals reported for investigation since October 11th, 2008; 161 (65.7%) meet outbreak case definitions.
- 40 controls identified for case-control study.
- 2nd stool sample result received for 10 employees; all negative for *E. coli* O157:H7.
- 8th MOHLTC lead teleconference held.
- 6th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants
- 4th PHB sent.
- Media release # 13 issued. Investigation update and announcement of HUS case. Tips on prevention of secondary transmission and *E.coli* provided.
- Local media conference #8 held by MOH.
- 3rd Provincial media teleconference held by MOH.
- 3rd Media advisory sent with new phone number for media teleconference.

Friday October 24th 2008

- 1 additional case laboratory-confirmed for *E. coli* O157:H7, bringing the total to 36 laboratory-confirmed and 1 secondary laboratory-confirmed.
- 2 new symptomatic individuals reported. 247 symptomatic individuals reported for investigation since October 11th, 2008.
- 2nd stool sample result received for 12 employees; bringing total to 20 employees with 2 results negative for *E. coli* O157:H7.
- 9th MOHLTC lead teleconference held.
- 7th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants.
- Food line listing received from CPHL via MOHLTC – 36 of 46 food samples tested and all negative for *E. coli* O157:H7.
- 2nd stool sample result received for 12 employees; bringing total to 20 employees with 2 results negative for *E. coli* O157:H7.
- Media release # 14 issued. Investigation update and tips on prevention of secondary transmission provided. Requirements for return to work after being ill, information on *E.coli* and HUS also provided. The public notified that the Call Centre is closed. Thanked the public for calling in to assist in the investigation.
- Local media conference # 9 held by MOH.
- MOH held provincial media teleconference #4 .
- Media release # 15 issued. Health Unit phone lines open over weekend for *E. coli* related questions.
- 4th Media advisory sent announcing media conference and teleconferences set for Monday.

Saturday October 25th 2008

- 11 new symptomatic individuals reported. 258 symptomatic individuals reported for investigation since October 11th, 2008.
- Radio advertisements focusing on spread of infection & not to go to work if symptomatic are initiated.
- Health unit open to accept stool samples.

Sunday October 26th 2008

- 5 new symptomatic individuals reported. 263 symptomatic individuals reported for investigation since October 11th, 2008.
- Health unit open to accept stool samples.

Monday October 27th 2008

- 6 additional case laboratory-confirmed for *E. coli* O157:H7, bringing the total to 42 laboratory-confirmed and 1 secondary laboratory-confirmed. One of the additional cases confirmed to be an asymptomatic restaurant employee.
- 9 new symptomatic individuals reported. 272 symptomatic individuals reported for investigation since October 11th, 2008.
- 8th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants.
- 10th MOHLTC lead teleconference held.
- Minister of Health and Long-Term Care, visited the NBPSDHU.
- 74 of the 76 employees interviewed.
- 190 individuals interviewed by PHNs for case-control study (58 confirmed and probable cases and 132 controls).
- Preliminary analysis of case-control study indicates Spanish onions as the most significant food item.
- Received laboratory results from Harvey's independent testing – all negative for *E. coli* O157:H7.
- Media release # 16 issued. Investigation update and tips on prevention of secondary transmission provided. Requirements for return to work after being ill, information on *E.coli* and HUS also provided.
- Local media conference # 10 held by MOH.
- Provincial media teleconference # 5 held by MOH.
- 5th Media advisory announcing daily media conferences the rest of the week.

Tuesday October 28th 2008

- 1 additional secondary case laboratory-confirmed for *E. coli* O157:H7, bringing the total to 42 laboratory-confirmed and 2 secondary laboratory-confirmed.
- 3 new symptomatic individuals reported. 275 symptomatic individuals reported for investigation since October 11th, 2008; 201(73.1%) meet outbreak case definitions.
- 2nd stool sample result received for 9 employees; bringing total to 29 employees with 2 results negative and 1 positive for *E. coli* O157:H7.
- 9th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants
- Confirmation of results from the CDC on the MLVA typing of 11 of 13 isolates received. Results show all 9 North Bay outbreak isolates were unrelated by MLVA to the Michigan, U.S. outbreak strain. However, 2 isolates we sent from the Chatham Windsor, Ontario outbreak were related.
- Re-interviewing of cases who reported eating Swiss Chalet was initiated by PHNs using a Swiss Chalet specific menu.
- Media release # 17 issued. Investigation update and tips on prevention of secondary transmission provided. Requirements for return to work after being ill, information on *E. coli* and HUS also provided.
- MOH held local media conference # 11.
- 6th provincial media teleconference held.
- 6th Media advisory cancelled all media conferences until Fri. Oct. 31, 2008.

Wednesday October 29th 2008

- 1 additional case laboratory-confirmed for *E. coli* O157:H7, bringing the total to 43 laboratory-confirmed and 2 secondary laboratory-confirmed.
- 2 new symptomatic individuals reported. 277 symptomatic individuals reported for investigation since October 11th, 2008; 207 (74.7%) meet outbreak case definitions.
- 2nd stool sample result received for 20 employees; bringing total to 49 employees with 2 results negative and 1 positive for *E. coli* O157:H7.
- 10th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants
- 11th MOHLTC lead teleconference held.
- Asymptomatic laboratory confirmed restaurant employee re-interviewed.
- 73 of 76 employee interviews complete.
- Media release # 18 issued. Investigation update and tips on prevention of secondary transmission provided.
- 1st PHAC Field Epidemiologist leaves North Bay.

Thursday October 30th 2008

- 2 additional cases laboratory-confirmed for *E. coli* O157:H7. 1 laboratory-confirmed case removed from outbreak due to having a non-matching PFGE result and 1 re-categorized due to a false positive lab result); bringing the total to 43 laboratory-confirmed and 2 secondary laboratory-confirmed.
- 2 new symptomatic individuals reported. 279 symptomatic individuals reported for investigation since October 11th, 2008; 212 (76%) cases meet outbreak case definitions.
- 2nd stool sample result received for 5 employees; bringing total to 54 employees with 2 results negative and 1 positive for *E. coli* O157:H7.
- 11th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants.
- CPHL reported that of 69 food samples collected, 49 had been processed and were negative for *E.coli* O157:H7. Protective gloves came back negative for *E.coli* O157:H7.
- Further food samples including mesh onion bag sent by NBPSDHU for testing.
- Teleconference to discuss the restaurant re-opening criteria was held with PHAC.
- Media release # 19 issued. Investigation update and tips on prevention of secondary transmission provided.
- 7th Media advisory cancelled Friday's media conferences.

Friday October 31st 2008

- 1 additional case laboratory-confirmed for *E. coli* O157:H7, bringing the total to 44 laboratory-confirmed and 2 secondary laboratory-confirmed.
- 7 new symptomatic individuals reported. 286 symptomatic individuals reported for investigation since October 11th, 2008; 213 (74.5%) meet outbreak case definitions.
- 2nd stool sample result received for 2 employees; bringing total to 56 employees with 2 results negative and 1 positive for *E. coli* O157:H7.
- Section 22 orders issued on restaurant employees refusing to supply stool samples.
- 12th MOHLTC lead teleconference held.
- 12th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants.
- CFIA advised the NBPSDHU that their food sampling at the facility was completed.
- NBPSDHU provided approval to the operator to discard food items on site.
- Media release # 20 issued. Investigation update and tips on prevention of secondary transmission provided. Notification that the Health Unit will be returning to normal hours over the weekend.

Monday November 3rd 2008

- 3 additional cases laboratory-confirmed for *E. coli* O157:H7, bringing the total to 46 laboratory-confirmed and 3 secondary laboratory-confirmed.
- 7 new symptomatic individuals reported. 293 symptomatic individuals reported for investigation since October 11th, 2008; 215 (73.4%) meet outbreak case definitions.
- Discarding of food and other items at Harvey's initiated.
- 13th MOHLTC lead teleconference held.
- 13th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants
- CPHL reported that of 73 food samples collected between October 14th and October 31st, 69 had been processed and were negative for *E. coli* O157:H7.
- 75 of 76 employee interviews complete.
- Media release # 21 issued. Investigation update and tips on prevention of secondary transmission provided.
- Radio ads on *E. coli* and the prevention of transmission initiated.

Tuesday November 4th 2008

- 302 symptomatic individuals reported for investigation since October 11th, 2008; 219 (72.5%) meet outbreak case definitions.
- 2nd stool sample result received for 3 employees; bringing total to 59 employees with 2 results negative and 1 positive for *E. coli* O157:H7.

<ul style="list-style-type: none"> ▪ Revised case history form with additional questions related to other outbreaks occurring in Ontario put into circulation. ▪ Teleconference held with CFIA, PHAC, and Health Canada to finalize the criteria for re-opening of Harvey's. ▪ Discarding of food and other items at Harvey's completed. ▪ Cogeco interview held with the NBPSDHU Occupational Health Nurse on hand washing.
<p>Wednesday November 5th 2008</p>
<ul style="list-style-type: none"> ▪ 303 symptomatic individuals reported for investigation since October 11th, 2008; 224 (73.9%) cases meet outbreak case definitions. ▪ 14th NBPSDHU Epidemiologic Summary released to investigative team and MOHLTC teleconference participants. ▪ 14th MOHLTC lead teleconference held. ▪ Media release # 22 issued. Investigation update and tips on prevention of secondary transmission provided.
<p>Thursday November 6th 2008</p>
<ul style="list-style-type: none"> ▪ Interviews with employees involved with onion preparation commenced. ▪ Rescind order delivered to Harvey's owner / operator. ▪ Disinfecting and cleaning of Harvey's commenced. Process overseen by NBPSDHU PHI.
<p>Friday November 7th 2008</p>
<ul style="list-style-type: none"> ▪ 1 more case laboratory-confirmed for <i>E. coli</i> O157:H7, bringing the total to 47 laboratory-confirmed and 3 secondary laboratory-confirmed. ▪ 2nd stool sample result received for 5 employees; bringing total to 64 employees with 2 results negative and 1 positive for <i>E. coli</i> O157:H7. ▪ 2nd PHAC Field Epidemiologist leaves North Bay.
<p>Saturday November 8th 2008</p>
<ul style="list-style-type: none"> ▪ Food handler training for Harvey's employees conducted by NBPSDHU PHIs.
<p>Sunday November 9th 2008</p>
<ul style="list-style-type: none"> ▪ Food handler training for Harvey's employees conducted by NBPSDHU PHIs.
<p>Monday November 10th 2008</p>
<ul style="list-style-type: none"> ▪ MOH meeting with President of Harvey's. ▪ 2nd stool sample result received for 5 employees; bringing total to 69 employees with 2 results negative and 1 positive for <i>E. coli</i> O157:H7. ▪ 15th MOHLTC lead teleconference held. ▪ Epidemiology teleconference held to determine final case definitions. ▪ NBPSDHU Director of EH rescinds the October 12, 2008 closure order. ▪ EOC disbanded. ▪ 8th Media advisory sent advising of media conference and teleconference on Nov. 11.
<p>Tuesday November 11th 2008</p>
<ul style="list-style-type: none"> ▪ Media release # 23 issued. MOH announces that the closure order on Harvey's restaurant has been lifted. ▪ Lunch time reception hours discontinued. ▪ 12th Media conference held with MOH. ▪ 6th provincial media teleconference held by MOH.
<p>Wednesday November 12th 2008</p>
<ul style="list-style-type: none"> ▪ 310 symptomatic individuals reported for investigation since October 11th, 2008; 230 (74.2%) meet outbreak case definitions. ▪ Harvey's and Swiss Chalet re-open for business. ▪ Outbreak case definitions revised and circulated. ▪ 1st de-escalation session provided for staff.

Thursday November 13th 2008

- Teleconference held with MOHLTC, CFIA, PHAC and OHPPA to discuss hypotheses.
- 2nd stool sample result received for 3 employees; bringing total to 72 employees with 2 results negative and 1 positive for *E. coli* O157:H7. Remaining samples were received on November 17th and 24th.
- 2nd de-escalation session provided for staff.

Friday November 21st 2008

- MOH declared the outbreak over. MOHLTC notified.

Appendix C Standardized questionnaire

CALL ATTEMPTS

Date (yyyy/mm/dd)	Time (24-00)	Inspector (first & last name)	Interview complete	If yes: Interview with:	Left message	No answer	To call back	Date & time to call back	Meets Case Definition	Date (yyyy/mm/dd)	Inspector Initials (FL)
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/> Client <input type="checkbox"/> Proxy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Y <input type="checkbox"/> N <input type="checkbox"/>		
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/> Client <input type="checkbox"/> Proxy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Y <input type="checkbox"/> N <input type="checkbox"/>		
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/> Client <input type="checkbox"/> Proxy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Y <input type="checkbox"/> N <input type="checkbox"/>		

STATUS

Complaint # (format):	iPHIS Outbreak # (format):	Case Id # (format):
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CASE DEMOGRAPHICS

Last name:	First name:	<input type="checkbox"/> Male <input type="checkbox"/> Female	DOB (yyyy/mm/dd):	Parental Consent: N/A <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
Home Ph: ()	Work Ph: ()	Cell Ph: ()	Other Ph: ()	Prefer: <input type="checkbox"/> H <input type="checkbox"/> W <input type="checkbox"/> C <input type="checkbox"/> Other

Address at time of illness

Mail: Y <input type="checkbox"/> N <input type="checkbox"/>	Unit # - House # - Street name:	City:	Postal Code (L#L#L#):	If not residential - Name of place:
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Permanent address (if not "as above" complete address details below)

<input type="checkbox"/> As above <input type="checkbox"/> Different	Unit # - House # - Street name:	City:	Postal Code (L#L#L#):
Mail: Y <input type="checkbox"/> N <input type="checkbox"/>			

Mailing Address (if "No" in above sections, complete mailing address below)

If "No" in above sections then complete mailing address	Unit # - House # - Street name or PO BOX #:	City:	Postal Code (L#L#L#):
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PROXY DETAILS

Last name:	First name:	<input type="checkbox"/> Male <input type="checkbox"/> Female	Relationship to case: <input type="checkbox"/> Parent <input type="checkbox"/> Other family member <input type="checkbox"/> Spouse/partner <input type="checkbox"/> Other
Home Ph: ()	Work Ph: ()	Cell Ph: ()	Cottage/Other Ph: ()
Prefer: <input type="checkbox"/> H <input type="checkbox"/> W <input type="checkbox"/> C <input type="checkbox"/> Other			

PLACE OF EMPLOYMENT AND/OR STUDIES

Employed: Y <input type="checkbox"/> N <input type="checkbox"/>	Student: Y <input type="checkbox"/> N <input type="checkbox"/>	Daycare: N/A <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
Place of employment:	Institution name:	<input type="checkbox"/> Home-based <input type="checkbox"/> Centre-based
City:	City:	Daycare name (or provider):
High risk ¹ : Y <input type="checkbox"/> N <input type="checkbox"/>		City:

SIGNS & SYMPTOMS: Have you experienced any of the following symptoms (use case definition) in the past (use suspected/known incubation period) hours?									
Intoxication:		Enteric Infections:		Generalized Infections:		Localized Infections:		Neurological Infections:	
Nausea*:	Y <input type="checkbox"/> N <input type="checkbox"/>	Abdominal cramps*:	Y <input type="checkbox"/> N <input type="checkbox"/>	Headache:	Y <input type="checkbox"/>	Ear:	Y <input type="checkbox"/>	Blurred vision:	Y <input type="checkbox"/>
Vomiting*:	Y <input type="checkbox"/> N <input type="checkbox"/>	Diarhea*:	Y <input type="checkbox"/> N <input type="checkbox"/>	Malaise:	Y <input type="checkbox"/>	Eye:	Y <input type="checkbox"/>	Coma:	Y <input type="checkbox"/>
Anemia:	Y <input type="checkbox"/>	# times/day:		Cough:	Y <input type="checkbox"/>	Itching:	Y <input type="checkbox"/>	Delirium:	Y <input type="checkbox"/>
Bloating:	Y <input type="checkbox"/>	- Bloody:	Y <input type="checkbox"/> N <input type="checkbox"/>	Edema:	Y <input type="checkbox"/>	Mouth:	Y <input type="checkbox"/>	Dizziness:	Y <input type="checkbox"/>
Burning sensation:	Y <input type="checkbox"/>	- Greasy:	Y <input type="checkbox"/> N <input type="checkbox"/>	Jaundice:	Y <input type="checkbox"/>	Rash:	Y <input type="checkbox"/>	Double vision:	Y <input type="checkbox"/>
Cyanosis:	Y <input type="checkbox"/>	- Mucoid:	Y <input type="checkbox"/> N <input type="checkbox"/>	Lack of appetite:	Y <input type="checkbox"/>	Skin lesion:	Y <input type="checkbox"/>	Irritability:	Y <input type="checkbox"/>
Dehydration:	Y <input type="checkbox"/>	- Watery:	Y <input type="checkbox"/> N <input type="checkbox"/>	Muscular aching:	Y <input type="checkbox"/>	Pneumonia:	Y <input type="checkbox"/>	Numbness:	Y <input type="checkbox"/>
Excessive salivation:	Y <input type="checkbox"/>	Fever*:	Y <input type="checkbox"/> N <input type="checkbox"/>	Perspiration:	Y <input type="checkbox"/>			Paralysis:	Y <input type="checkbox"/>
Flushing:	Y <input type="checkbox"/>	Temp (°C):		Stiff neck joints:	Y <input type="checkbox"/>			Difficulty in:	
Foot/wrist drop:	Y <input type="checkbox"/>	Chills:	Y <input type="checkbox"/>	Swollen lymph nodes:	Y <input type="checkbox"/>			Swallowing:	Y <input type="checkbox"/>
Insomnia:	Y <input type="checkbox"/>	Constipation:	Y <input type="checkbox"/>	Weakness:	Y <input type="checkbox"/>			Speaking:	Y <input type="checkbox"/>
Metallic taste:	Y <input type="checkbox"/>	Tenesmus:	Y <input type="checkbox"/>	Decreased urine output:	Y <input type="checkbox"/>			Breathing:	Y <input type="checkbox"/>
Pallor:	Y <input type="checkbox"/>			Pain in back/kidney:	Y <input type="checkbox"/>			Tingling:	Y <input type="checkbox"/>
Pigmentation:	Y <input type="checkbox"/>								
Prostration:	Y <input type="checkbox"/>								
Scaling of skin:	Y <input type="checkbox"/>								
Soapy/salty taste:	Y <input type="checkbox"/>								
Thirst:	Y <input type="checkbox"/>								
Weight loss:	Y <input type="checkbox"/>								
White bands on fingernails:	Y <input type="checkbox"/>								
Known allergies or intolerances: Y <input type="checkbox"/> N <input type="checkbox"/>		If yes, specify:		Underlying illness which could cause similar symptoms: Y <input type="checkbox"/> N <input type="checkbox"/>		If yes, specify:			
First Symptom Onset (X)	Common Source Event (Y)	Incubation Period (Z)	Symptom Status		Medications				
Date (yyyy/mm/dd):	Suspected event: Y <input type="checkbox"/> N <input type="checkbox"/>	If Yes to suspected event:	<input type="checkbox"/> On-going <input type="checkbox"/> Recovered	Prescribed: Y <input type="checkbox"/> N <input type="checkbox"/>	Over the counter: Y <input type="checkbox"/> N <input type="checkbox"/>				
Time (24:00):	If Yes: Date (yyyy/mm/dd):	Z = _____ (hrs)	If Recovered: Date (yyyy/mm/dd):	Start date (yyyy/mm/dd):	Start date (yyyy/mm/dd):				
	Time (24:00):		Time (24:00):	End date (yyyy/mm/dd):	End date (yyyy/mm/dd):				
			Duration = _____ (hrs)	Name(s):	Name(s):				
		<u>Calculation:</u> $Z = Y(\text{date, time}) - X(\text{date, time})$	<u>Calculation:</u> $\text{Duration} = X(\text{date, time}) - \text{Recovery}(\text{date, time})$						

• Ask if these symptoms occurred, even if not mentioned in interview

MEDICAL TREATMENT AND SPECIMEN COLLECTION					
Hospital / ER		Family Doctor / Walk-In Clinic		Collection of previous specimens	
Visit: Y <input type="checkbox"/> N <input type="checkbox"/>		Visit: Y <input type="checkbox"/> N <input type="checkbox"/>		Blood: Y <input type="checkbox"/> N <input type="checkbox"/>	
Date (yyyy/mm/dd):		Date (yyyy/mm/dd):		Date (yyyy/mm/dd):	
Time (24:00):		Time (24:00):		Setting: Family Doctor <input type="checkbox"/> Hospital <input type="checkbox"/>	
Hospital: _____ City: _____		Doctor's name: _____		Stool: Y <input type="checkbox"/> N <input type="checkbox"/>	
Admitted to hospital: Y <input type="checkbox"/> N <input type="checkbox"/>		City: _____		Date (yyyy/mm/dd):	
Date (yyyy/mm/dd):				Setting: Family Doctor <input type="checkbox"/> Hospital <input type="checkbox"/>	
Discharge date (yyyy/mm/dd):				Vomitus: Y <input type="checkbox"/> N <input type="checkbox"/>	
				Date (yyyy/mm/dd):	
				Setting: Family Doctor <input type="checkbox"/> Hospital <input type="checkbox"/>	
NBPSDHU Specimen Collection					
Are you willing to provide a sample?		Specimen Type		Specimen #	
Yes <input type="checkbox"/> Refuse <input type="checkbox"/> N/A <input type="checkbox"/>		<input type="checkbox"/> Stool <input type="checkbox"/> Blood <input type="checkbox"/> Vomitus			
				Date Collected (yyyy/mm/dd):	
				Results	
				<input type="checkbox"/> Confirmed <input type="checkbox"/> Presumptive <input type="checkbox"/> Suspect <input type="checkbox"/> Negative	
				Details (e.g. Pathogen):	
ADDITIONAL EXPOSURE INFORMATION					
Previous Exposure		Last Name		First Name	
Have you been in contact with anyone (at work/school/home) with bloody diarrhea OR diarrhea 3-4 times/day in 10 days before you got sick?: Y <input type="checkbox"/> N <input type="checkbox"/>					
				Contact Setting	
				Date(s) (yyyy/mm/dd):	
Recently attended events / gatherings		Date(s) (yyyy/mm/dd)		# Persons in Attendance	
Travel: *In the 10 days before you got sick \ started experiencing symptoms					
Travel?* Y <input type="checkbox"/> N <input type="checkbox"/>		If yes, dates (yyyy/mm/dd):			(see travel form)
Water use: *In the 10 days before you got sick \ started experiencing symptoms					
Recreational water use?* Y <input type="checkbox"/> N <input type="checkbox"/>		If yes, dates (yyyy/mm/dd):		If yes, location:	
Ingestion of water from unprotected sources (e.g. stream, lake, etc)?* Y <input type="checkbox"/> N <input type="checkbox"/>		If yes, dates (yyyy/mm/dd):		If yes, location:	
Home water source: <input type="checkbox"/> Municipal <input type="checkbox"/> Private (i.e. drilled well, dug well, surface water)		If private, specify treatment type:		If private, indicate the most recent bacteriological water test results: Test date (yyyy/mm/dd): _____ Test result: _____	

FOOD & DRINK HISTORY

Do you have any special dietary requirements? Y N If yes, list:

Day of illness	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>
Day before illness	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>

2. If food was prepared outside the home, indicate the place where it was prepared

FOOD & DRINK HISTORY continued...						
Two days before illness	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>
Three days before illness	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>

2. If food was prepared outside the home, indicate the place where it was prepared

FOOD & DRINK HISTORY continued....						
Four days before illness	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Place ² :
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Food:
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>
Five days before illness	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Place ² :
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Food:
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>

2. If food was prepared outside the home, indicate the place where it was prepared

Six days before illness		Date (yyyy/mm/dd):				
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>
Seven days before illness		Date (yyyy/mm/dd):				
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>

2. If food was prepared outside the home, indicate the place where it was prepared

FOOD SAMPLES						
Food Submitted	Date of meal (yy/mm/dd)	Type of meal	Date Collected (yy/mm/dd)	Date Sent for Testing (yy/mm/dd)	Specimen #	Results
		<input type="checkbox"/> Breakfast <input type="checkbox"/> Pre-lunch snack <input type="checkbox"/> Lunch <input type="checkbox"/> Post-lunch snack <input type="checkbox"/> Dinner <input type="checkbox"/> Dessert <input type="checkbox"/> Post-dinner snack				
		<input type="checkbox"/> Breakfast <input type="checkbox"/> Pre-lunch snack <input type="checkbox"/> Lunch <input type="checkbox"/> Post-lunch snack <input type="checkbox"/> Dinner <input type="checkbox"/> Dessert <input type="checkbox"/> Post-dinner snack				
		<input type="checkbox"/> Breakfast <input type="checkbox"/> Pre-lunch snack <input type="checkbox"/> Lunch <input type="checkbox"/> Post-lunch snack <input type="checkbox"/> Dinner <input type="checkbox"/> Dessert <input type="checkbox"/> Post-dinner snack				
		<input type="checkbox"/> Breakfast <input type="checkbox"/> Pre-lunch snack <input type="checkbox"/> Lunch <input type="checkbox"/> Post-lunch snack <input type="checkbox"/> Dinner <input type="checkbox"/> Dessert <input type="checkbox"/> Post-dinner snack				

X¹ = Use the suspected/known incubation period

CASE QUESTIONNAIRE – REVISED FOOD HISTORY						
QUESTION	RESPONSE 1		RESPONSE 2		RESPONSE 3	
1. Did you eat at Harvey's/Swiss Chalet on Algonquin Ave in North Bay between September 22 nd and October 12 th ?	<input type="checkbox"/> Y; <input type="checkbox"/> N; <input type="checkbox"/> Can't Remember		<input type="checkbox"/> Y; <input type="checkbox"/> N; <input type="checkbox"/> Can't Remember		<input type="checkbox"/> Y; <input type="checkbox"/> N; <input type="checkbox"/> Can't Remember	
a. If yes: On what date(s)	Date (Y-M-D):	Time (24:00):	Date (Y-M-D):	Time (24:00):	Date (Y-M-D):	Time (24:00):
b. Location	<input type="checkbox"/> In-store; <input type="checkbox"/> Drive-thru		<input type="checkbox"/> In-store; <input type="checkbox"/> Drive-thru		<input type="checkbox"/> In-store; <input type="checkbox"/> Drive-thru	
c. What did you order:	<p>Single Burger:</p> <input type="checkbox"/> Original bacon cheeseburger <input type="checkbox"/> Original cheeseburger <input type="checkbox"/> Original hamburger <input type="checkbox"/> Angus burger with cheese & bacon <input type="checkbox"/> Angus burger with cheese <input type="checkbox"/> Angus burger <p>Double Burger:</p> <input type="checkbox"/> Double original bacon cheese burger <input type="checkbox"/> Double original cheeseburger <input type="checkbox"/> Double original hamburger <p>Other burger / sandwich:</p> <input type="checkbox"/> Grilled chicken sandwich <input type="checkbox"/> Grilled chicken BLT sandwich <input type="checkbox"/> Veggie burger	<p>Other:</p> <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips <p>Salad:</p> <input type="checkbox"/> Entrée garden salad <input type="checkbox"/> Entrée chicken salad <p>Sides:</p> <input type="checkbox"/> French fries <input type="checkbox"/> Onion rings <input type="checkbox"/> Poutine <input type="checkbox"/> Chicken Soup <p>Other, specify:</p>	<p>Single Burger:</p> <input type="checkbox"/> Original bacon cheeseburger <input type="checkbox"/> Original cheeseburger <input type="checkbox"/> Original hamburger <input type="checkbox"/> Angus burger with cheese & bacon <input type="checkbox"/> Angus burger with cheese <input type="checkbox"/> Angus burger <p>Double Burger:</p> <input type="checkbox"/> Double original bacon cheese burger <input type="checkbox"/> Double original cheeseburger <input type="checkbox"/> Double original hamburger <p>Other burger / sandwich:</p> <input type="checkbox"/> Grilled chicken sandwich <input type="checkbox"/> Grilled chicken BLT sandwich <input type="checkbox"/> Veggie burger	<p>Salad:</p> <input type="checkbox"/> Entrée garden salad <input type="checkbox"/> Entrée chicken salad <p>Other:</p> <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips <p>Sides:</p> <input type="checkbox"/> French fries <input type="checkbox"/> Onion rings <input type="checkbox"/> Poutine <input type="checkbox"/> Chicken Soup <p>Other, specify:</p>	<p>Single Burger:</p> <input type="checkbox"/> Original bacon cheeseburger <input type="checkbox"/> Original cheeseburger <input type="checkbox"/> Original hamburger <input type="checkbox"/> Angus burger with cheese & bacon <input type="checkbox"/> Angus burger with cheese <input type="checkbox"/> Angus burger <p>Double Burger:</p> <input type="checkbox"/> Double original bacon cheese burger <input type="checkbox"/> Double original cheeseburger <input type="checkbox"/> Double original hamburger <p>Other burger / sandwich:</p> <input type="checkbox"/> Grilled chicken sandwich <input type="checkbox"/> Grilled chicken BLT sandwich <input type="checkbox"/> Veggie burger	<p>Salad:</p> <input type="checkbox"/> Entrée garden salad <input type="checkbox"/> Entrée chicken salad <p>Other:</p> <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips <p>Sides:</p> <input type="checkbox"/> French fries <input type="checkbox"/> Onion rings <input type="checkbox"/> Poutine <input type="checkbox"/> Chicken Soup <p>Other, specify:</p>
1. What was on the burger?	<input type="checkbox"/> Lettuce; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Pickles; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> BBQ sauce; <input type="checkbox"/> Spicy buffalo sauce; <input type="checkbox"/> Ketchup; <input type="checkbox"/> Mayonnaise; <input type="checkbox"/> Mustard; <input type="checkbox"/> Relish; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Lettuce; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Pickles; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> BBQ sauce; <input type="checkbox"/> Spicy buffalo sauce; <input type="checkbox"/> Ketchup; <input type="checkbox"/> Mayonnaise; <input type="checkbox"/> Mustard; <input type="checkbox"/> Relish; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Lettuce; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Pickles; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> BBQ sauce; <input type="checkbox"/> Spicy buffalo sauce; <input type="checkbox"/> Ketchup; <input type="checkbox"/> Mayonnaise; <input type="checkbox"/> Mustard; <input type="checkbox"/> Relish; <input type="checkbox"/> Other, specify:	
2. What was in the salad:	<input type="checkbox"/> Chicken; <input type="checkbox"/> Bacon; <input type="checkbox"/> Lettuce; <input type="checkbox"/> Cucumbers; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Carrots; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Feta; <input type="checkbox"/> Pickles; <input type="checkbox"/> Green Olives; <input type="checkbox"/> Black Olives; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Chicken; <input type="checkbox"/> Bacon; <input type="checkbox"/> Lettuce; <input type="checkbox"/> Cucumbers; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Carrots; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Feta; <input type="checkbox"/> Pickles; <input type="checkbox"/> Green Olives; <input type="checkbox"/> Black Olives; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Chicken; <input type="checkbox"/> Bacon; <input type="checkbox"/> Lettuce; <input type="checkbox"/> Cucumbers; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Carrots; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Feta; <input type="checkbox"/> Pickles; <input type="checkbox"/> Green Olives; <input type="checkbox"/> Black Olives; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> Other, specify:	
3. What dressing / Dipping Sauces / Gravy:	<input type="checkbox"/> None <input type="checkbox"/> Gravy; Dipping Sauce:		<input type="checkbox"/> None <input type="checkbox"/> Gravy; Dipping Sauce:		<input type="checkbox"/> None <input type="checkbox"/> Gravy; Dipping Sauce:	

CASE QUESTIONNAIRE – REVISED FOOD HISTORY						
QUESTION	RESPONSE 1		RESPONSE 2		RESPONSE 3	
	<input type="checkbox"/> BBQ dipping sauce; <input type="checkbox"/> Honey mustard dipping sauce; <input type="checkbox"/> Sweet n' sour dipping sauce; <input type="checkbox"/> Plum sauce; Dressing: <input type="checkbox"/> Caesar; <input type="checkbox"/> Balsamic; <input type="checkbox"/> Asian Sesame; <input type="checkbox"/> Ranch; <input type="checkbox"/> Italian; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> BBQ dipping sauce; <input type="checkbox"/> Honey mustard dipping sauce; <input type="checkbox"/> Sweet n' sour dipping sauce; <input type="checkbox"/> Plum sauce; Dressing: <input type="checkbox"/> Caesar; <input type="checkbox"/> Balsamic; <input type="checkbox"/> Asian Sesame; <input type="checkbox"/> Ranch; <input type="checkbox"/> Italian; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> BBQ dipping sauce; <input type="checkbox"/> Honey mustard dipping sauce; <input type="checkbox"/> Sweet n' sour dipping sauce; <input type="checkbox"/> Plum sauce; Dressing: <input type="checkbox"/> Caesar; <input type="checkbox"/> Balsamic; <input type="checkbox"/> Asian Sesame; <input type="checkbox"/> Ranch; <input type="checkbox"/> Italian; <input type="checkbox"/> Other, specify:	
d. What drinks were consumed:	<input type="checkbox"/> No drink; <input type="checkbox"/> Milk; <input type="checkbox"/> Milkshake; <input type="checkbox"/> Pepsi; <input type="checkbox"/> Diet Pepsi; <input type="checkbox"/> Root beer; <input type="checkbox"/> Lipton lemon brisk ice-tea; <input type="checkbox"/> OJ; <input type="checkbox"/> Apple juice; <input type="checkbox"/> White milk; <input type="checkbox"/> Chocolate milk; <input type="checkbox"/> Coffee; <input type="checkbox"/> Tea; <input type="checkbox"/> Seven up; <input type="checkbox"/> Bottled water; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> No drink; <input type="checkbox"/> Milk; <input type="checkbox"/> Milkshake; <input type="checkbox"/> Pepsi; <input type="checkbox"/> Diet Pepsi; <input type="checkbox"/> Root beer; <input type="checkbox"/> Lipton lemon brisk ice-tea; <input type="checkbox"/> OJ; <input type="checkbox"/> Apple juice; <input type="checkbox"/> White milk; <input type="checkbox"/> Chocolate milk; <input type="checkbox"/> Coffee; <input type="checkbox"/> Tea; <input type="checkbox"/> Seven up; <input type="checkbox"/> Bottled water; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> No drink; <input type="checkbox"/> Milk; <input type="checkbox"/> Milkshake; <input type="checkbox"/> Pepsi; <input type="checkbox"/> Diet Pepsi; <input type="checkbox"/> Root beer; <input type="checkbox"/> Lipton lemon brisk ice-tea; <input type="checkbox"/> OJ; <input type="checkbox"/> Apple juice; <input type="checkbox"/> White milk; <input type="checkbox"/> Chocolate milk; <input type="checkbox"/> Coffee; <input type="checkbox"/> Tea; <input type="checkbox"/> Seven up; <input type="checkbox"/> Bottled water; <input type="checkbox"/> Other, specify:	
e. Did you eat part of someone else's meal?	<input type="checkbox"/> Y; <input type="checkbox"/> N If yes, provide details:		<input type="checkbox"/> Y; <input type="checkbox"/> N If yes, provide details:		<input type="checkbox"/> Y; <input type="checkbox"/> N If yes, provide details:	
OTHER WELL CONTROLS						
Did you eat at Harvey's \ Swiss Chalet with anyone else?	Name:	Contact #:	Name:	Contact #:	Name:	Contact #:

E COLI OUTBREAK QUESTIONNAIRE – 2008/10/13

QUESTION	RESPONSE		
2. Did you eat a hamburger (other than Harvey's) in the two weeks before you got sick (14 days)?	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
a. If yes: On what date(s)	Date (Y-M-D):	Date (Y-M-D):	Date (Y-M-D):
b. Where was it purchased?	<input type="checkbox"/> Harvey's <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Harvey's <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Harvey's <input type="checkbox"/> Other, specify:
c. What type of burger was it?	Beef <input type="checkbox"/> Chicken <input type="checkbox"/> Vegetable <input type="checkbox"/> Other <input type="checkbox"/> specify:	Beef <input type="checkbox"/> Chicken <input type="checkbox"/> Vegetable <input type="checkbox"/> Other <input type="checkbox"/> specify:	Beef <input type="checkbox"/> Chicken <input type="checkbox"/> Vegetable <input type="checkbox"/> Other <input type="checkbox"/> specify:
d. What was on the burger?	Lettuce <input type="checkbox"/> Tomatoes <input type="checkbox"/> Onions <input type="checkbox"/> Cheese <input type="checkbox"/> Pickles <input type="checkbox"/> BBQ sauce <input type="checkbox"/> Ketchup <input type="checkbox"/> Mayonnaise <input type="checkbox"/> Other, specify:	Lettuce <input type="checkbox"/> Tomatoes <input type="checkbox"/> Onions <input type="checkbox"/> Cheese <input type="checkbox"/> Pickles <input type="checkbox"/> BBQ sauce <input type="checkbox"/> Ketchup <input type="checkbox"/> Mayonnaise <input type="checkbox"/> Other, specify:	Lettuce <input type="checkbox"/> Tomatoes <input type="checkbox"/> Onions <input type="checkbox"/> Cheese <input type="checkbox"/> Pickles <input type="checkbox"/> BBQ sauce <input type="checkbox"/> Ketchup <input type="checkbox"/> Mayonnaise <input type="checkbox"/> Other, specify:
e. Did anyone else eat with you	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>
f. Who else ate with you?	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:
3. Did you eat pizza in the two weeks (14 days) before you got sick?	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
a. If yes: On what date(s)	Date (Y-M-D):	Date (Y-M-D):	Date (Y-M-D):
b. Where was it purchased?	<input type="checkbox"/> Topper's <input type="checkbox"/> Little Caesar's <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Topper's <input type="checkbox"/> Little Caesar's <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Topper's <input type="checkbox"/> Little Caesar's <input type="checkbox"/> Other, specify:
c. What was on the pizza?			
d. Did anyone else eat with you	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>
e. Who else ate with you?	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:
f. What else did you eat with the pizza?			

E COLI OUTBREAK QUESTIONNAIRE – 2008/10/13 (Continued)

QUESTION	RESPONSE		
4. Did you shop at Sobeys' in the 14 days before you got sick?	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
If yes:	Date (Y-M-D):	Date (Y-M-D):	Date (Y-M-D):
	Fruit: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes, specify:</i>		
	Vegetables: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes, specify:</i>		
	Lettuce: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes:</i> Pre-bagged <input type="checkbox"/>		
	Pre-packaged deli meats: Y <input type="checkbox"/> N <input type="checkbox"/> <input type="checkbox"/> <i>If yes, specify:</i>		
	Deli-counter meats: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes, specify:</i>		
	Other meats: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes, specify:</i>		
5. Did you eat roast pork in the 14 days before you got sick?	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
	<i>If Yes:</i> Purchased raw <input type="checkbox"/> Pre-cooked <input type="checkbox"/>		
	Brand:		
	Where purchased:		
	Date of purchase (Y-M-D):		
	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>		

Appendix D

Case questionnaire for case control study

QUESTIONNAIRE						
QUESTION	RESPONSE 1	RESPONSE 2	RESPONSE 2	RESPONSE 3	RESPONSE 3	RESPONSE 3
6. Did you eat at Harvey's/Swiss Chalet on Algonquin Ave in North Bay between September 22 nd and October 12 th ?	<input type="checkbox"/> Y; <input type="checkbox"/> N; <input type="checkbox"/> Can't Remember					
a. If yes: On what date(s)	Date (Y-M-D):	Time (24:00):	Date (Y-M-D):	Time (24:00):	Date (Y-M-D):	Time (24:00):
b. Location	<input type="checkbox"/> In-store; <input type="checkbox"/> Drive-thru		<input type="checkbox"/> In-store; <input type="checkbox"/> Drive-thru		<input type="checkbox"/> In-store; <input type="checkbox"/> Drive-thru	
c. What did you order:	Single Burger: <input type="checkbox"/> Original bacon cheeseburger <input type="checkbox"/> Original cheeseburger <input type="checkbox"/> Original hamburger <input type="checkbox"/> Angus burger with cheese & bacon <input type="checkbox"/> Angus burger with cheese <input type="checkbox"/> Angus burger Double Burger: <input type="checkbox"/> Double original bacon cheese burger <input type="checkbox"/> Double original cheeseburger <input type="checkbox"/> Double original hamburger Other burger / sandwich: <input type="checkbox"/> Grilled chicken sandwich <input type="checkbox"/> Grilled chicken BLT sandwich <input type="checkbox"/> Veggie burger	Other: <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips Salad: <input type="checkbox"/> Entrée garden salad <input type="checkbox"/> Entrée chicken salad Other: <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips Sides: <input type="checkbox"/> French fries <input type="checkbox"/> Onion rings <input type="checkbox"/> Poutine <input type="checkbox"/> Chicken Soup Other, specify:	Single Burger: <input type="checkbox"/> Original bacon cheeseburger <input type="checkbox"/> Original cheeseburger <input type="checkbox"/> Original hamburger <input type="checkbox"/> Angus burger with cheese & bacon <input type="checkbox"/> Angus burger with cheese <input type="checkbox"/> Angus burger Double Burger: <input type="checkbox"/> Double original bacon cheese burger <input type="checkbox"/> Double original cheeseburger <input type="checkbox"/> Double original hamburger Other burger / sandwich: <input type="checkbox"/> Grilled chicken sandwich <input type="checkbox"/> Grilled chicken BLT sandwich <input type="checkbox"/> Veggie burger	Salad: <input type="checkbox"/> Entrée garden salad <input type="checkbox"/> Entrée chicken salad Other: <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips Sides: <input type="checkbox"/> French fries <input type="checkbox"/> Onion rings <input type="checkbox"/> Poutine <input type="checkbox"/> Chicken Soup Other, specify:	Single Burger: <input type="checkbox"/> Original bacon cheeseburger <input type="checkbox"/> Original cheeseburger <input type="checkbox"/> Original hamburger <input type="checkbox"/> Angus burger with cheese & bacon <input type="checkbox"/> Angus burger with cheese <input type="checkbox"/> Angus burger Double Burger: <input type="checkbox"/> Double original bacon cheese burger <input type="checkbox"/> Double original cheeseburger <input type="checkbox"/> Double original hamburger Other burger / sandwich: <input type="checkbox"/> Grilled chicken sandwich <input type="checkbox"/> Grilled chicken BLT sandwich <input type="checkbox"/> Veggie burger	Salad: <input type="checkbox"/> Entrée garden salad <input type="checkbox"/> Entrée chicken salad Other: <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips Sides: <input type="checkbox"/> French fries <input type="checkbox"/> Onion rings <input type="checkbox"/> Poutine <input type="checkbox"/> Chicken Soup Other, specify:
1. What was on the burger?	<input type="checkbox"/> Lettuce; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Pickles; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> BBQ sauce; <input type="checkbox"/> Spicy buffalo sauce; <input type="checkbox"/> Ketchup; <input type="checkbox"/> Mayonnaise; <input type="checkbox"/> Mustard; <input type="checkbox"/> Relish; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Lettuce; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Pickles; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> BBQ sauce; <input type="checkbox"/> Spicy buffalo sauce; <input type="checkbox"/> Ketchup; <input type="checkbox"/> Mayonnaise; <input type="checkbox"/> Mustard; <input type="checkbox"/> Relish; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Lettuce; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Pickles; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> BBQ sauce; <input type="checkbox"/> Spicy buffalo sauce; <input type="checkbox"/> Ketchup; <input type="checkbox"/> Mayonnaise; <input type="checkbox"/> Mustard; <input type="checkbox"/> Relish; <input type="checkbox"/> Other, specify:	
2. What was in the salad:	<input type="checkbox"/> Chicken; <input type="checkbox"/> Bacon; <input type="checkbox"/> Lettuce; <input type="checkbox"/> Cucumbers; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Carrots; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Feta; <input type="checkbox"/> Pickles; <input type="checkbox"/> Green Olives; <input type="checkbox"/> Black Olives; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Chicken; <input type="checkbox"/> Bacon; <input type="checkbox"/> Lettuce; <input type="checkbox"/> Cucumbers; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Carrots; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Feta; <input type="checkbox"/> Pickles; <input type="checkbox"/> Green Olives; <input type="checkbox"/> Black Olives; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Chicken; <input type="checkbox"/> Bacon; <input type="checkbox"/> Lettuce; <input type="checkbox"/> Cucumbers; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Carrots; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Feta; <input type="checkbox"/> Pickles; <input type="checkbox"/> Green Olives; <input type="checkbox"/> Black Olives; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> Other, specify:	

QUESTIONNAIRE			
QUESTION	RESPONSE 1	RESPONSE 2	RESPONSE 3
3. What dressing / Dipping Sauces / Gravy:	<input type="checkbox"/> None <input type="checkbox"/> Gravy; Dipping Sauce: <input type="checkbox"/> BBQ dipping sauce; <input type="checkbox"/> Honey mustard dipping sauce; <input type="checkbox"/> Sweet n' sour dipping sauce; <input type="checkbox"/> Plum sauce; Dressing: <input type="checkbox"/> Caesar; <input type="checkbox"/> Balsamic; <input type="checkbox"/> Asian Sesame; <input type="checkbox"/> Ranch; <input type="checkbox"/> Italian; <input type="checkbox"/> Other, specify:	<input type="checkbox"/> None <input type="checkbox"/> Gravy; Dipping Sauce: <input type="checkbox"/> BBQ dipping sauce; <input type="checkbox"/> Honey mustard dipping sauce; <input type="checkbox"/> Sweet n' sour dipping sauce; <input type="checkbox"/> Plum sauce; Dressing: <input type="checkbox"/> Caesar; <input type="checkbox"/> Balsamic; <input type="checkbox"/> Asian Sesame; <input type="checkbox"/> Ranch; <input type="checkbox"/> Italian; <input type="checkbox"/> Other, specify:	<input type="checkbox"/> None <input type="checkbox"/> Gravy; Dipping Sauce: <input type="checkbox"/> BBQ dipping sauce; <input type="checkbox"/> Honey mustard dipping sauce; <input type="checkbox"/> Sweet n' sour dipping sauce; <input type="checkbox"/> Plum sauce; Dressing: <input type="checkbox"/> Caesar; <input type="checkbox"/> Balsamic; <input type="checkbox"/> Asian Sesame; <input type="checkbox"/> Ranch; <input type="checkbox"/> Italian; <input type="checkbox"/> Other, specify:
d. What drinks were consumed:	<input type="checkbox"/> No drink; <input type="checkbox"/> Milk; <input type="checkbox"/> Milkshake; <input type="checkbox"/> Pepsi; <input type="checkbox"/> Diet Pepsi; <input type="checkbox"/> Root beer; <input type="checkbox"/> Lipton lemon brisk ice-tea; <input type="checkbox"/> OJ; <input type="checkbox"/> Apple juice; <input type="checkbox"/> White milk; <input type="checkbox"/> Chocolate milk; <input type="checkbox"/> Coffee; <input type="checkbox"/> Tea; <input type="checkbox"/> Seven up; <input type="checkbox"/> Bottled water; <input type="checkbox"/> Other, specify:	<input type="checkbox"/> No drink; <input type="checkbox"/> Milk; <input type="checkbox"/> Milkshake; <input type="checkbox"/> Pepsi; <input type="checkbox"/> Diet Pepsi; <input type="checkbox"/> Root beer; <input type="checkbox"/> Lipton lemon brisk ice-tea; <input type="checkbox"/> OJ; <input type="checkbox"/> Apple juice; <input type="checkbox"/> White milk; <input type="checkbox"/> Chocolate milk; <input type="checkbox"/> Coffee; <input type="checkbox"/> Tea; <input type="checkbox"/> Seven up; <input type="checkbox"/> Bottled water; <input type="checkbox"/> Other, specify:	<input type="checkbox"/> No drink; <input type="checkbox"/> Milk; <input type="checkbox"/> Milkshake; <input type="checkbox"/> Pepsi; <input type="checkbox"/> Diet Pepsi; <input type="checkbox"/> Root beer; <input type="checkbox"/> Lipton lemon brisk ice-tea; <input type="checkbox"/> OJ; <input type="checkbox"/> Apple juice; <input type="checkbox"/> White milk; <input type="checkbox"/> Chocolate milk; <input type="checkbox"/> Coffee; <input type="checkbox"/> Tea; <input type="checkbox"/> Seven up; <input type="checkbox"/> Bottled water; <input type="checkbox"/> Other, specify:
e. Did you eat part of someone else's meal?	<input type="checkbox"/> Y; <input type="checkbox"/> N If yes, provide details:	<input type="checkbox"/> Y; <input type="checkbox"/> N If yes, provide details:	<input type="checkbox"/> Y; <input type="checkbox"/> N If yes, provide details:

Appendix E

Control questionnaire for case control study

CALL ATTEMPTS STATUS

Date (yy/mm/dd)	Time (24:00)	Inspector (first & last name)	Interview complete	If yes: Interview with:	Left message	No answer	To call back	Date & time to call back
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/> Client <input type="checkbox"/> Proxy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/> Client <input type="checkbox"/> Proxy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/> Client <input type="checkbox"/> Proxy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

CONTROL DEMOGRAPHICS					
Last name:	First name:	<input type="checkbox"/> Male <input type="checkbox"/> Female	DOB (yy/mm/dd):	Parental Consent: N/A <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
Home Ph: ()	Work Ph: ()	Cell Ph: ()	Other Ph: ()	Prefer: <input type="checkbox"/> H <input type="checkbox"/> W <input type="checkbox"/> C <input type="checkbox"/> Other	
Address at time of eating at Harvey's \ Swiss Chalet					
Mail: Y <input type="checkbox"/> N <input type="checkbox"/>	Unit # - House # - Street name:	City:	Postal Code (L#L#L#):	If not residential - Name of place:	
Permanent address (if not "as above" complete address details below)					
<input type="checkbox"/> As above <input type="checkbox"/> Different	Unit # - House # - Street name:	City:	Postal Code (L#L#L#):		
Mail: Y <input type="checkbox"/> N <input type="checkbox"/>					
Completed by proxy Y <input type="checkbox"/>; N <input type="checkbox"/> - PROXY DETAILS					
Last name:	First name:	<input type="checkbox"/> Male <input type="checkbox"/> Female	Relationship to case:		
			<input type="checkbox"/> Parent <input type="checkbox"/> Other family member <input type="checkbox"/> Spouse/partner <input type="checkbox"/> Other		
Home Ph: ()	Work Ph: ()	Cell Ph: ()	Cottage/Other Ph: ()	Prefer: <input type="checkbox"/> H <input type="checkbox"/> W <input type="checkbox"/> C <input type="checkbox"/> Other	
SIGNS, SYMPTOMS & ADDITIONAL EXPOSURES					
SIGNS & SYMPTOMS: Have you experienced any of the following symptoms since September 22nd?*			<p>*If symptoms – do not continue Control interview - complete Case History Form version 3</p>		
Intoxication:					
Diarrhea* Y <input type="checkbox"/> N <input type="checkbox"/>					
If yes: # times/day					
If yes: Bloody Y <input type="checkbox"/> N <input type="checkbox"/>					
Fever: Y <input type="checkbox"/> N <input type="checkbox"/>					
Vomiting: Y <input type="checkbox"/> N <input type="checkbox"/>					
Abdominal cramps: Y <input type="checkbox"/> N <input type="checkbox"/>					

CONTROL QUESTIONNAIRE						
QUESTION	RESPONSE 1		RESPONSE 2		RESPONSE 3	
7. Did you eat at Harvey's/Swiss Chalet on Algonquin Ave in North Bay between September 22 nd and October 12 th ?	<input type="checkbox"/> Y; <input type="checkbox"/> N; <input type="checkbox"/> Can't Remember		<input type="checkbox"/> Y; <input type="checkbox"/> N; <input type="checkbox"/> Can't Remember		<input type="checkbox"/> Y; <input type="checkbox"/> N; <input type="checkbox"/> Can't Remember	
a. If yes: On what date(s)	Date (Y-M-D):	Time (24:00):	Date (Y-M-D):	Time (24:00):	Date (Y-M-D):	Time (24:00):
b. Location	<input type="checkbox"/> In-store; <input type="checkbox"/> Drive-thru		<input type="checkbox"/> In-store; <input type="checkbox"/> Drive-thru		<input type="checkbox"/> In-store; <input type="checkbox"/> Drive-thru	
c. What did you order:	<p>Single Burger:</p> <input type="checkbox"/> Original bacon cheeseburger <input type="checkbox"/> Original cheeseburger <input type="checkbox"/> Original hamburger <input type="checkbox"/> Angus burger with cheese & bacon <input type="checkbox"/> Angus burger with cheese <input type="checkbox"/> Angus burger <p>Double Burger:</p> <input type="checkbox"/> Double original bacon cheese burger <input type="checkbox"/> Double original cheeseburger <input type="checkbox"/> Double original hamburger <p>Other burger / sandwich:</p> <input type="checkbox"/> Grilled chicken sandwich <input type="checkbox"/> Grilled chicken BLT sandwich <input type="checkbox"/> Veggie burger	<p>Other:</p> <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips <p>Salad:</p> <input type="checkbox"/> Entrée garden salad <input type="checkbox"/> Entrée chicken salad <p>Sides:</p> <input type="checkbox"/> French fries <input type="checkbox"/> Onion rings <input type="checkbox"/> Poutine <input type="checkbox"/> Chicken Soup <p>Other, specify:</p>	<p>Single Burger:</p> <input type="checkbox"/> Original bacon cheeseburger <input type="checkbox"/> Original cheeseburger <input type="checkbox"/> Original hamburger <input type="checkbox"/> Angus burger with cheese & bacon <input type="checkbox"/> Angus burger with cheese <input type="checkbox"/> Angus burger <p>Double Burger:</p> <input type="checkbox"/> Double original bacon cheese burger <input type="checkbox"/> Double original cheeseburger <input type="checkbox"/> Double original hamburger <p>Other burger / sandwich:</p> <input type="checkbox"/> Grilled chicken sandwich <input type="checkbox"/> Grilled chicken BLT sandwich <input type="checkbox"/> Veggie burger	<p>Salad:</p> <input type="checkbox"/> Entrée garden salad <input type="checkbox"/> Entrée chicken salad <p>Other:</p> <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips <p>Sides:</p> <input type="checkbox"/> French fries <input type="checkbox"/> Onion rings <input type="checkbox"/> Poutine <input type="checkbox"/> Chicken Soup <p>Other, specify:</p>	<p>Single Burger:</p> <input type="checkbox"/> Original bacon cheeseburger <input type="checkbox"/> Original cheeseburger <input type="checkbox"/> Original hamburger <input type="checkbox"/> Angus burger with cheese & bacon <input type="checkbox"/> Angus burger with cheese <input type="checkbox"/> Angus burger <p>Double Burger:</p> <input type="checkbox"/> Double original bacon cheese burger <input type="checkbox"/> Double original cheeseburger <input type="checkbox"/> Double original hamburger <p>Other burger / sandwich:</p> <input type="checkbox"/> Grilled chicken sandwich <input type="checkbox"/> Grilled chicken BLT sandwich <input type="checkbox"/> Veggie burger	<p>Salad:</p> <input type="checkbox"/> Entrée garden salad <input type="checkbox"/> Entrée chicken salad <p>Other:</p> <input type="checkbox"/> Hot dog <input type="checkbox"/> Chicken strips <p>Sides:</p> <input type="checkbox"/> French fries <input type="checkbox"/> Onion rings <input type="checkbox"/> Poutine <input type="checkbox"/> Chicken Soup <p>Other, specify:</p>
1. What was on the burger?	<input type="checkbox"/> Lettuce; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Pickles; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> BBQ sauce; <input type="checkbox"/> Spicy buffalo sauce; <input type="checkbox"/> Ketchup; <input type="checkbox"/> Mayonnaise; <input type="checkbox"/> Mustard; <input type="checkbox"/> Relish; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Lettuce; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Pickles; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> BBQ sauce; <input type="checkbox"/> Spicy buffalo sauce; <input type="checkbox"/> Ketchup; <input type="checkbox"/> Mayonnaise; <input type="checkbox"/> Mustard; <input type="checkbox"/> Relish; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Lettuce; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Pickles; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> BBQ sauce; <input type="checkbox"/> Spicy buffalo sauce; <input type="checkbox"/> Ketchup; <input type="checkbox"/> Mayonnaise; <input type="checkbox"/> Mustard; <input type="checkbox"/> Relish; <input type="checkbox"/> Other, specify:	
2. What was in the salad:	<input type="checkbox"/> Chicken; <input type="checkbox"/> Bacon; <input type="checkbox"/> Lettuce; <input type="checkbox"/> Cucumbers; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Carrots; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Feta; <input type="checkbox"/> Pickles; <input type="checkbox"/> Green Olives; <input type="checkbox"/> Black Olives; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Chicken; <input type="checkbox"/> Bacon; <input type="checkbox"/> Lettuce; <input type="checkbox"/> Cucumbers; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Carrots; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Feta; <input type="checkbox"/> Pickles; <input type="checkbox"/> Green Olives; <input type="checkbox"/> Black Olives; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> Other, specify:		<input type="checkbox"/> Chicken; <input type="checkbox"/> Bacon; <input type="checkbox"/> Lettuce; <input type="checkbox"/> Cucumbers; <input type="checkbox"/> Tomatoes; <input type="checkbox"/> Carrots; <input type="checkbox"/> Onions; <input type="checkbox"/> Cheese; <input type="checkbox"/> Feta; <input type="checkbox"/> Pickles; <input type="checkbox"/> Green Olives; <input type="checkbox"/> Black Olives; <input type="checkbox"/> Hot peppers; <input type="checkbox"/> Other, specify:	
3. What dressing /	<input type="checkbox"/> None		<input type="checkbox"/> None		<input type="checkbox"/> None	

<p>Dipping Sauces / Gravy:</p>	<p><input type="checkbox"/> Gravy; Dipping Sauce: <input type="checkbox"/> BBQ dipping sauce; <input type="checkbox"/> Honey mustard dipping sauce; <input type="checkbox"/> Sweet n' sour dipping sauce; <input type="checkbox"/> Plum sauce; Dressing: <input type="checkbox"/> Caesar; <input type="checkbox"/> Balsamic; <input type="checkbox"/> Asian Sesame; <input type="checkbox"/> Ranch; <input type="checkbox"/> Italian; <input type="checkbox"/> Other, specify:</p>	<p><input type="checkbox"/> Gravy; Dipping Sauce: <input type="checkbox"/> BBQ dipping sauce; <input type="checkbox"/> Honey mustard dipping sauce; <input type="checkbox"/> Sweet n' sour dipping sauce; <input type="checkbox"/> Plum sauce; Dressing: <input type="checkbox"/> Caesar; <input type="checkbox"/> Balsamic; <input type="checkbox"/> Asian Sesame; <input type="checkbox"/> Ranch; <input type="checkbox"/> Italian; <input type="checkbox"/> Other, specify:</p>	<p><input type="checkbox"/> Gravy; Dipping Sauce: <input type="checkbox"/> BBQ dipping sauce; <input type="checkbox"/> Honey mustard dipping sauce; <input type="checkbox"/> Sweet n' sour dipping sauce; <input type="checkbox"/> Plum sauce; Dressing: <input type="checkbox"/> Caesar; <input type="checkbox"/> Balsamic; <input type="checkbox"/> Asian Sesame; <input type="checkbox"/> Ranch; <input type="checkbox"/> Italian; <input type="checkbox"/> Other, specify:</p>			
<p>d. What drinks were consumed:</p>	<p><input type="checkbox"/> No drink; <input type="checkbox"/> Milk; <input type="checkbox"/> Milkshake; <input type="checkbox"/> Pepsi; <input type="checkbox"/> Diet Pepsi; <input type="checkbox"/> Root beer; <input type="checkbox"/> Lipton lemon brisk ice-tea; <input type="checkbox"/> OJ; <input type="checkbox"/> Apple juice; <input type="checkbox"/> White milk; <input type="checkbox"/> Chocolate milk; <input type="checkbox"/> Coffee; <input type="checkbox"/> Tea; <input type="checkbox"/> Seven up; <input type="checkbox"/> Bottled water; <input type="checkbox"/> Other, specify:</p>	<p><input type="checkbox"/> No drink; <input type="checkbox"/> Milk; <input type="checkbox"/> Milkshake; <input type="checkbox"/> Pepsi; <input type="checkbox"/> Diet Pepsi; <input type="checkbox"/> Root beer; <input type="checkbox"/> Lipton lemon brisk ice-tea; <input type="checkbox"/> OJ; <input type="checkbox"/> Apple juice; <input type="checkbox"/> White milk; <input type="checkbox"/> Chocolate milk; <input type="checkbox"/> Coffee; <input type="checkbox"/> Tea; <input type="checkbox"/> Seven up; <input type="checkbox"/> Bottled water; <input type="checkbox"/> Other, specify:</p>	<p><input type="checkbox"/> No drink; <input type="checkbox"/> Milk; <input type="checkbox"/> Milkshake; <input type="checkbox"/> Pepsi; <input type="checkbox"/> Diet Pepsi; <input type="checkbox"/> Root beer; <input type="checkbox"/> Lipton lemon brisk ice-tea; <input type="checkbox"/> OJ; <input type="checkbox"/> Apple juice; <input type="checkbox"/> White milk; <input type="checkbox"/> Chocolate milk; <input type="checkbox"/> Coffee; <input type="checkbox"/> Tea; <input type="checkbox"/> Seven up; <input type="checkbox"/> Bottled water; <input type="checkbox"/> Other, specify:</p>			
<p>e. Did you eat part of someone else's meal?</p>	<p><input type="checkbox"/> Y; <input type="checkbox"/> N If yes, provide details:</p>	<p><input type="checkbox"/> Y; <input type="checkbox"/> N If yes, provide details:</p>	<p><input type="checkbox"/> Y; <input type="checkbox"/> N If yes, provide details:</p>			
<p>OTHER WELL CONTROLS</p>						
<p>Did you eat at Harvey's \ Swiss Chalet with anyone else?</p>	<p>Name:</p>	<p>Contact #:</p>	<p>Name:</p>	<p>Contact #:</p>	<p>Name:</p>	<p>Contact #:</p>

Appendix F Employee interview questionnaire

CALL ATTEMPTS

Date (yyyy/mm/dd)	Time (24:00)	Inspector (first & last name)	Interview complete	If yes: Interview with:	Left message	No answer	To call back	Date & time to call back
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/> Client <input type="checkbox"/> Proxy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/> Client <input type="checkbox"/> Proxy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/> Client <input type="checkbox"/> Proxy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

STATUS

Meets Case Definition	Date (yyyy/mm/dd)	Inspector Initials (FL)
Y <input type="checkbox"/> N <input type="checkbox"/>		
Y <input type="checkbox"/> N <input type="checkbox"/>		
Y <input type="checkbox"/> N <input type="checkbox"/>		

The North Bay Parry Sound District Health Unit is currently investigating E. coli O157 illness connected to North Bay. This confidential questionnaire asks about illness, foods you may have eaten and other potential exposures. Your answers may help us determine the source of the outbreak. Your assistance is very much appreciated.

Complaint # (format):	iPHIS Outbreak # (format):	Case Id # (format):
-----------------------	----------------------------	---------------------

SECTION 1: DEMOGRAPHICS					
Last name:		First name:		<input type="checkbox"/> Male <input type="checkbox"/> Female	
DOB (yyyy/mm/dd):		Parental Consent: N/A <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>			
Home Ph: ()		Work Ph: ()		Cell Ph: ()	
Other Ph: ()		Prefer: <input type="checkbox"/> H <input type="checkbox"/> W <input type="checkbox"/> C <input type="checkbox"/> Other			
Address at time of illness					
Mail: Y <input type="checkbox"/> N <input type="checkbox"/>		Unit # - House # - Street name:		City:	
				Postal Code (L#L#L#):	
If not residential - Name of place:					
Permanent address (if not "as above" complete address details below)					
<input type="checkbox"/> As above <input type="checkbox"/> Different		Unit # - House # - Street name:		City:	
Mail: Y <input type="checkbox"/> N <input type="checkbox"/>				Postal Code (L#L#L#):	
Mailing Address (if "No" in above sections, complete mailing address below)					
If "No" in above sections then complete mailing address		Unit # - House # - Street name or PO BOX #:		City:	
				Postal Code (L#L#L#):	

SECTION 2: CLINICAL ILLNESS	
History of clinical illness:	
Have <u>you</u> been sick with diarrhea since September 1, 2008? Y <input type="checkbox"/> N <input type="checkbox"/>	Has <u>anyone else in your household</u> been sick with diarrhea since September 1, 2008? Y <input type="checkbox"/> N <input type="checkbox"/>
If answered YES, please complete 'symptoms' section below	If answered YES, please complete 'symptoms' section
Symptoms	
When did your symptoms first begin? (yyyy/mm/dd)	When did their symptoms first begin? (yyyy/mm/dd)
Are you still sick? Y <input type="checkbox"/> N <input type="checkbox"/> If no, when did your symptoms end? (yyyy/mm/dd) If yes, what are your symptoms now?	Are they still sick? Y <input type="checkbox"/> N <input type="checkbox"/> If no, when did their symptoms end? (yyyy/mm/dd) If yes, what are their symptoms now?
Which of the following symptoms did <u>you</u> experience?	Which of the following symptoms did <u>they</u> experience?
Bloody diarrhea Y <input type="checkbox"/> N <input type="checkbox"/>	Bloody diarrhea Y <input type="checkbox"/> N <input type="checkbox"/>
Diarrhea (≥ 3 loose stools in 24 hrs) Y <input type="checkbox"/> N <input type="checkbox"/>	Diarrhea (≥ 3 loose stools in 24 hrs) Y <input type="checkbox"/> N <input type="checkbox"/>
Abdominal pain Y <input type="checkbox"/> N <input type="checkbox"/>	Abdominal pain Y <input type="checkbox"/> N <input type="checkbox"/>
Vomiting Y <input type="checkbox"/> N <input type="checkbox"/>	Vomiting Y <input type="checkbox"/> N <input type="checkbox"/>
Fever Y <input type="checkbox"/> N <input type="checkbox"/>	Fever Y <input type="checkbox"/> N <input type="checkbox"/>
Other Y <input type="checkbox"/> N <input type="checkbox"/> Please describe	Other Y <input type="checkbox"/> N <input type="checkbox"/> Please describe
Did you seek medical treatment? Y <input type="checkbox"/> N <input type="checkbox"/> If yes, Where did you go? Name of physician? Were you hospitalized? Y <input type="checkbox"/> N <input type="checkbox"/> Date hospitalized (yyyy/mm/dd):	Did they seek medical treatment? Y <input type="checkbox"/> N <input type="checkbox"/> If yes, Where did you go? Name of physician? Were you hospitalized? Y <input type="checkbox"/> N <input type="checkbox"/> Date hospitalized (yyyy/mm/dd):
Did you submit a stool specimen? Y <input type="checkbox"/> N <input type="checkbox"/>	Did you submit a stool specimen? Y <input type="checkbox"/> N <input type="checkbox"/>

Have you been in close contact with anyone else (work, school) who has been sick with diarrhea since September 1, 2008? Y N

If yes, when? _____ Name of contact (if willing to provide) _____

Please list their symptoms:

NBPSDHU Specimen Collection					
Have you submitted a stool sample? Y <input type="checkbox"/> N <input type="checkbox"/> If no, are you willing to? Yes <input type="checkbox"/> Refuse <input type="checkbox"/> N/A <input type="checkbox"/>	Specimen Type	Specimen #	Date Collected (yyyy/mm/dd):	Results	Details (e.g. Pathogen):
	<input type="checkbox"/> Stool <input type="checkbox"/> Blood <input type="checkbox"/> Vomitus			<input type="checkbox"/> Confirmed <input type="checkbox"/> Presumptive <input type="checkbox"/> Suspect <input type="checkbox"/> Negative	

SECTION 3: EMPLOYMENT HISTORY

Employed at : Harvey's Swiss Chalet
 Full time Part time

Do you work anywhere else? Y N
 If yes, please list _____

Please indicate which activities you are typically involved in:

Food preparation	Y <input type="checkbox"/> N <input type="checkbox"/>	Cleaning and sanitation	Y <input type="checkbox"/> N <input type="checkbox"/>
Serving food through the drive-thru	Y <input type="checkbox"/> N <input type="checkbox"/>	Management	Y <input type="checkbox"/> N <input type="checkbox"/>
Serving food through the restaurant	Y <input type="checkbox"/> N <input type="checkbox"/>	Work at till	Y <input type="checkbox"/> N <input type="checkbox"/>

Other: _____

Since September 1, 2008, have you been involved in any activities you are not typically involved in? Y N
 If yes, please list and include dates _____

Since September 1, 2008, have you missed work for any reason? Y N

SECTION 4: EXPOSURE HISTORY

Do you have any pets at home? Y N
 If yes, what type? _____

Have you handled any pet food or treats since September 1, 2008? Y N
 If yes, what and when? _____

Have you had contact with any other animals since September 1, 2008 (farm, petting zoo, pet store) ? Y N
 If yes, please describe and provide dates _____

Have you traveled anywhere in the past month? Y N
 If yes, where? _____
 Dates of travel? _____

Recreational water use since September 1, 2008? Y <input type="checkbox"/> N <input type="checkbox"/>	If yes, dates (yyyy/mm/dd):	If yes, location:
Ingestion of water from unprotected sources (e.g. stream, lake, etc) since September 1, 2008? Y <input type="checkbox"/> N <input type="checkbox"/>	If yes, dates (yyyy/mm/dd):	If yes, location:
Home water source: <input type="checkbox"/> Municipal <input type="checkbox"/> Private (i.e. drilled well, dug well, surface water)	If private, specify treatment type:	If private, indicate the most recent bacteriological water test results: Test date (yyyy/mm/dd): Test result:

FOOD & DRINK HISTORY

Do you have any special dietary requirements? Y N If yes, list:

October 12 th , 2008		Date (yyyy/mm/dd):				
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>
October 11 th , 2008		Date (yyyy/mm/dd):				
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>

2. If food was prepared outside the home, indicate the place where it was prepared

FOOD & DRINK HISTORY continued....						
October 10 th , 2008	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>
October 9 th , 2008	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>

2. If food was prepared outside the home, indicate the place where it was prepared

FOOD & DRINK HISTORY continued....						
October 8 th , 2008	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>
October 7 th , 2008	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>

2. If food was prepared outside the home, indicate the place where it was prepared

FOOD & DRINK HISTORY continued....						
October 6 th , 2008	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Place ² :
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Food:
Food:	Food:	Food:	Food:	Food:	Food:	
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>
October 5 th , 2008	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Place ² :
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Food:
Food:	Food:	Food:	Food:	Food:	Food:	
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/> Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>

2. If food was prepared outside the home, indicate the place where it was prepared



FOOD & DRINK HISTORY continued....						
October 4 th , 2008	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>
October 3 rd , 2008	Date (yyyy/mm/dd):					
Breakfast	Pre-Lunch Snacks	Lunch	Post-Lunch Snacks	Dinner	Dessert	Post-Dinner Snacks
Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):	Time (24:00):
Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :	Place ² :
Food:	Food:	Food:	Food:	Food:	Food:	Food:
Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:	Drinks:
Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown	Water: <input type="checkbox"/> Bottle <input type="checkbox"/> Private <input type="checkbox"/> Municipal <input type="checkbox"/> Unknown
Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>
Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>	Sample collected: Y <input type="checkbox"/> N <input type="checkbox"/>

2. If food was prepared outside the home, indicate the place where it was prepared

E COLI OUTBREAK QUESTIONNAIRE – 2008/10/13

QUESTION	RESPONSE		
8. Have you eaten a hamburger in the past two weeks (14 days)?	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
a. If yes: On what date(s)	Date (Y-M-D):	Date (Y-M-D):	Date (Y-M-D):
b. Where was it purchased?	<input type="checkbox"/> Harvey's <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Harvey's <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Harvey's <input type="checkbox"/> Other, specify:
c. What type of burger was it?	Beef <input type="checkbox"/> Chicken <input type="checkbox"/> Vegetable <input type="checkbox"/> Other <input type="checkbox"/> specify:	Beef <input type="checkbox"/> Chicken <input type="checkbox"/> Vegetable <input type="checkbox"/> Other <input type="checkbox"/> specify:	Beef <input type="checkbox"/> Chicken <input type="checkbox"/> Vegetable <input type="checkbox"/> Other <input type="checkbox"/> specify:
d. What was on the burger?	Lettuce <input type="checkbox"/> Tomatoes <input type="checkbox"/> Onions <input type="checkbox"/> Cheese <input type="checkbox"/> Pickles <input type="checkbox"/> BBQ sauce <input type="checkbox"/> <input type="checkbox"/> Ketchup <input type="checkbox"/> Mayonnaise <input type="checkbox"/> Other, specify:	Lettuce <input type="checkbox"/> Tomatoes <input type="checkbox"/> Onions <input type="checkbox"/> Cheese <input type="checkbox"/> Pickles <input type="checkbox"/> BBQ sauce <input type="checkbox"/> Ketchup <input type="checkbox"/> Mayonnaise <input type="checkbox"/> Other, specify:	Lettuce <input type="checkbox"/> Tomatoes <input type="checkbox"/> Onions <input type="checkbox"/> Cheese <input type="checkbox"/> Pickles <input type="checkbox"/> BBQ sauce <input type="checkbox"/> Ketchup <input type="checkbox"/> Mayonnaise <input type="checkbox"/> Other, specify:
e. Did anyone else eat with you	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
f. Who else ate with you?	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:
g. <i>If ate at Harvey's</i> : What else did you eat:			
9. Have you eaten pizza in the past two weeks (14 days)?	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
a. If yes: On what date(s)	Date (Y-M-D):	Date (Y-M-D):	Date (Y-M-D):
b. Where was it purchased?	<input type="checkbox"/> Topper's <input type="checkbox"/> Little Caesar's <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Topper's <input type="checkbox"/> Little Caesar's <input type="checkbox"/> Other, specify:	<input type="checkbox"/> Topper's <input type="checkbox"/> Little Caesar's <input type="checkbox"/> Other, specify:
c. What was on the pizza?			
d. Did anyone else eat with you	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
e. Who else ate with you?	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:	Name: Contact details: Name: Contact details: Name: Contact details: Name: Contact details:
f. What else did you eat with the pizza?			

E COLI OUTBREAK QUESTIONNAIRE – 2008/10/13 (Continued)

QUESTION	RESPONSE		
10. Have you shopped at Sobeys's in the last 14 days	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
If yes:	Date (Y-M-D):	Date (Y-M-D):	Date (Y-M-D):
	Fruit: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes, specify:</i>		
	Vegetables: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes, specify:</i>		
	Lettuce: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes:</i> Pre-bagged <input type="checkbox"/>		
	Pre-packaged deli meats: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes, specify:</i>		
	Deli-counter meats: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes, specify:</i>		
	Other meats: Y <input type="checkbox"/> N <input type="checkbox"/> <i>If yes, specify:</i>		
11. Have you eaten roast pork in the last 14 days?	Y <input type="checkbox"/> N <input type="checkbox"/> Can't Remember <input type="checkbox"/>		
	<i>If Yes:</i> Purchased raw <input type="checkbox"/> Pre-cooked <input type="checkbox"/> Brand: Where purchased: Date of purchase (Y-M-D): Sample available: Y <input type="checkbox"/> N <input type="checkbox"/>		

Appendix G

Onion preparation interview questionnaire

CALL ATTEMPTS

Date (yy/mm/dd)	Time (24:00)	Inspector (first & last name)	Interview complete	Left message	No answer	To call back	Date & time to call back
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			Y <input type="checkbox"/> N <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Employee Name:

We want to take you back to Sunday October 5th to Tuesday October 7th, you may want to look at your diary/agenda to help recall.

- What days & shifts did you work (cross check with schedule)?
- What did you do (go through each day with them in detail):

Oct 5	Oct 6	Oct 7

- Did you do anything differently on those days (i.e. work for someone else or do something you don't ordinarily do)?
- Were there particularly busy periods that week? Particularly slow periods?
- Any time they were short-staffed? Any new staff?

As a Harvey's prep person, is one of your tasks to prep the whole Spanish onions? Y; N

If yes: proceed to Q 2

If No: Who usually preps the onions?

Does anyone else ever do it?

2. Did you help with any onion deliveries between Sunday Oct 5th and Tuesday October 7th Y N Can't Remember

If No: Proceed to Q 3

- If yes: What was your role?
-
- Is this an activity you normally do? Y; N
 If yes: Can you recall the delivery dates: Y; N If yes, dates: _____
- *Was there anything different about the raw product? Y; N; Can't Remember
 *If yes, specify:
-
- *What is the packaging for the onions off the truck? (mesh bag, plastic bag, paper bag, other?)
- *Were any of these onions used right away? (right off the truck without storage) Y; N; Can't Remember
 o * If yes, were you the one who prepped them or did someone else?
- *Where were the onions stored upon delivery (ask exact location in cooler)?
-
- *How were they stored (hanging, shelved, etc)?
-
- *Were they taken out of their original packaging? Y; N; Can't Remember
 o If yes, specify:
- *What other produce or food products were stored in close proximity to the onions?
-

* If possible, be specific to each date of delivery (if provided)

3. Did you prep onions between Sunday Oct 5th and Tuesday October 7th Y; N; Can't Remember

- *If yes, what dates:
- *If yes: Can you recall anything different from a produce, prep, storage or employee standpoint that was different on those days?
- *Was the quantity of onions prepped larger than usual?
- *Was the quality of onions different from normal?

- *Were the whole or chopped onions stored differently?
- *Was the onion chopper cleaned differently, or by someone who does not normally clean it?
- *Were the onions prepped in a different location or with other produce?
- Did you notice anything else different, even if it seems unrelated?

* If possible ask question for each day employee worked over that time period

4. Describe to me in detail the steps you went through on Sun Oct 5, Mon Oct 6, Tues Oct 7th in prepping the onions, starting from when you obtain the product from the cooler

Prompts	Oct 5	Oct 6	Oct 7
Storage whole onions: Where & how stored?			
In original packaging?			
Does it differ for opened versus unopened onion bags?			
What other produce or food products are stored in close proximity?			
Did you notice any item stored in the produce section of the cooler that seemed out of place/not in its usual place?			
Storage prepped onions: Where & how stored?			
What other produce or food products are stored in close proximity?			
Are new prepped onions added into already cut onions?			
Prepping:			

Prompts	Oct 5	Oct 6	Oct 7
Wash hands prior to prep & where?			
What equipment is used for prepping (utensils, cutting board, personal, food processing equipment)?			
Where is the equipment stored? (detail for each piece of equip) Where is the onion dicer stored?			
How would you know if the equipment was clean prior to use?			
Do you use the protective glove? If yes, on which hand? Do you wear a vinyl glove? If yes, on which hand?			
How do you know how many onions to dice on a given day? Does the quantity vary on a weekday compared to weekend day?			
Where are the onions cut & peeled?			
How are the onion peels and ends discarded & when in the prepping process?			
Are there other produce or food products out on the bench or being prepped while the onions are being prepped?			
Do you ever throw whole onions away? Why?			

Prompts	Oct 5	Oct 6	Oct 7
Do you multi-task while prepping – what else do you do?			
Where do you use the onion dicer?			
How are the diced onions placed into the storage container?			
How long are diced onions left at room temperature before being placed into the cooler? In the morning? During the day? During busy periods?			
Topped up? Fresh container?			
Cleaning: How & where do you clean the onion dicer? Is it disassembled?			
When do you clean it (i.e. after each use, etc)?			
How & when do you clean the chopping board, knife, etc?			
How & when does the cutting glove get cleaned?			
Is the dicer cleaned between chopping tomato ends on Swiss Chalet and chopping onions? Who cleans it after the tomatoes – Swiss Chalet or Harvey's?			

Prompts	Oct 5	Oct 6	Oct 7
Where does the tomato dicing on the Swiss Chalet side occur? Who dices the tomato ends on the Swiss Chalet side?			

5. Do you recall anyone being sick in the first week of October?

Appendix H

Summary of environmental samples from CPHL

Environmental Samples - Harvey's /Swiss Chalet, North Bay, OB# 2008-2247-041

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Sample No.	Submitter (Health Unit)	Sender #	Lab Number	Location	Description	Received dd/mm/yy	HPC	Coliform	E.coli	TGNC	C. perf	S. aureus	B. cereus	Salmonella	E. coli O157:H7	Date Reported
1	North Bay, 681 Commercial St	1	F2875	Harvey's/Swiss Chalet	Cooked Burger-Regular	14-Oct-08	< 1,000	<3	<3	< 1,000	< 100	< 100	< 100	ND	ND	21-Oct-08
2	North Bay, 681 Commercial St	2	F2876	Harvey's/Swiss Chalet	Cooked Burger-Angus	14-Oct-08	3,000	<3	<3	< 1,000	< 100	< 100	< 100	ND	ND	21-Oct-08
3	North Bay, 681 Commercial St	3	F2877	Harvey's/Swiss Chalet	Thawed Burger - regular, Raw	14-Oct-08										21-Oct-08
4	North Bay, 681 Commercial St	4	F2878	Harvey's/Swiss Chalet	Thawed Burger - Angus, Raw	14-Oct-08										21-Oct-08
5	North Bay, 681 Commercial St	5	F2879	Harvey's/Swiss Chalet	Frozen Burger - Regular, Raw	14-Oct-08										21-Oct-08
6	North Bay, 681 Commercial St	6	F2880	Harvey's/Swiss Chalet	Frozen Burger - Angus, Raw	14-Oct-08										21-Oct-08
7	North Bay, 681 Commercial St	7	F2881	Harvey's/Swiss Chalet	Lettuce	14-Oct-08		>2,400	<3	>200,000		< 100	< 100	ND	ND	21-Oct-08
8	North Bay, 681 Commercial St	8	F2882	Harvey's/Swiss Chalet	Onions	14-Oct-08		>2,400	<3	>200,000		< 100	< 100	ND	ND	21-Oct-08
9	North Bay, 681 Commercial St	9	F2883	Harvey's/Swiss Chalet	Tomatoes	14-Oct-08		>2,400	<3	>200,000		< 100	< 100	ND	ND	21-Oct-08
10	North Bay, 681 Commercial St	10	F2884	Harvey's/Swiss Chalet	Chicken , Precooked, Frozen	14-Oct-08	< 1,000	<3	<3	< 1,000		< 100	< 100	ND	ND	21-Oct-08
11	North Bay, 681 Commercial St	11	F2885	Harvey's/Swiss Chalet	Cooked Burger, Regular, #2	14-Oct-08	< 1,000	4	<3	< 1,000	< 100	< 100	< 100	ND	ND	21-Oct-08
12	North Bay, 681 Commercial St	12	F2886	Harvey's/Swiss Chalet	Cooked Burger, Angus, #2	14-Oct-08	< 1,000	<3	<3	< 1,000	< 100	< 100	< 100	ND	ND	21-Oct-08
13	North Bay, 681 Commercial St	13	F2887	Harvey's/Swiss Chalet	Grilled Chicken	14-Oct-08	1,000	<3	<3	< 1,000	< 100	< 100	< 100	ND	ND	21-Oct-08
14	North Bay, 681 Commercial St	14	F2888	Harvey's/Swiss Chalet	Mayonnaise	14-Oct-08	1,000	<3	<3	< 1,000		< 100	< 100	ND	ND	21-Oct-08
15	North Bay, 681 Commercial St	15	F2889	Harvey's/Swiss Chalet	Peppers	14-Oct-08	< 1,000	<3	<3	< 1,000		< 100	< 100	ND	ND	21-Oct-08
16	North Bay, 681 Commercial St	16	F2890	Harvey's/Swiss Chalet	Pickles	14-Oct-08	2,000	<3	<3	< 1,000		< 100	< 100	ND	ND	21-Oct-08
17	North Bay, 681 Commercial St	1	F2907	Harvey's/Swiss Chalet	Mustard	17-Oct-08	< 1,000	<3	<3	< 1,000		< 100	< 100	ND	ND	22-Oct-08
18	North Bay, 681 Commercial St	2	F2908	Harvey's/Swiss Chalet	Lettuce (Oct 18)	17-Oct-08		>2,400	<3	>200,000		< 100	< 100	ND	ND	22-Oct-08
19	North Bay, 681 Commercial St	3	F2909	Harvey's/Swiss Chalet	Lettuce (Oct 15)	17-Oct-08		>2,400	<3	>200,000		< 100	< 100	ND	ND	22-Oct-08
20	North Bay, 681 Commercial St	4	F2910	Harvey's/Swiss Chalet	Cheese slices	17-Oct-08		<3	<3	< 1,000		< 100	< 100	ND	ND	22-Oct-08
21	North Bay, 681 Commercial St	5	F2911	Harvey's/Swiss Chalet	Ketchup	17-Oct-08	< 1,000	<3	<3	< 1,000		< 100	< 100	ND	ND	22-Oct-08
22	North Bay, 681 Commercial St	6	F2912	Harvey's/Swiss Chalet	BBQ Sauce	17-Oct-08	< 1,000	<3	<3	< 1,000		< 100	< 100	ND	ND	22-Oct-08
23	North Bay, 681 Commercial St	7	F2913	Harvey's/Swiss Chalet	Chicken Burger	17-Oct-08	2,000	<3	<3	< 1,000	< 100	< 100	< 100	ND	ND	22-Oct-08
24	North Bay, 681 Commercial St	8	F2914	Harvey's/Swiss Chalet	Veggie Burger	17-Oct-08	7,000	<3	<3	< 1,000		< 100	< 100	ND	ND	22-Oct-08
25	North Bay, 681 Commercial St	9	F2915	Harvey's/Swiss Chalet	Bacon-sliced	17-Oct-08	< 1,000	<3	<3	< 1,000	< 100	< 100	< 100	ND	ND	22-Oct-08
26	North Bay, 681 Commercial St	10	F2916	Harvey's/Swiss Chalet	Pea meal	17-Oct-08										22-Oct-08
27	North Bay, 681 Commercial St	11	F2917	Harvey's/Swiss Chalet	Relish	17-Oct-08	< 1,000	<3	<3	< 1,000		< 100	< 100	ND	ND	22-Oct-08
28	North Bay, 681 Commercial St	12	F2918	Harvey's/Swiss Chalet	Hot Dog	17-Oct-08	2,000	4	<3	< 1,000	< 100	< 100	< 100	ND	ND	22-Oct-08
29	North Bay, 681 Commercial St	13	F2919	Harvey's/Swiss Chalet	Frozen Chicken Burger	17-Oct-08	1,000	<3	<3	< 1,000	< 100	< 100	< 100	ND	ND	22-Oct-08
30	North Bay, 681 Commercial St	14	F2920	Harvey's/Swiss Chalet	Hot Peppers	17-Oct-08	< 1,000	<3	<3	< 1,000		< 100	< 100	ND	ND	22-Oct-08
31	North Bay, 681 Commercial St	15	F2921	Harvey's/Swiss Chalet	Onion Rings	17-Oct-08	< 1,000	<3	<3	< 1,000		< 100	< 100	ND	ND	22-Oct-08
32																
33	North Bay, 681 Commercial St	1	F2921	Harvey's/Swiss Chalet	Ice (from ice machine)	19-Oct-08	<10/ml	O/100 ml	O/100 ml							21-Oct-08
34	North Bay, 681 Commercial St	2	F2921	Harvey's/Swiss Chalet	Ice (from ice machine)	19-Oct-08	<10/ml	O/100 ml	O/100 ml							21-Oct-08
35	North Bay, 681 Commercial St	3	F2921	Harvey's/Swiss Chalet	Ice - Arctic Glacier	19-Oct-08	<10/ml	O/100 ml	O/100 ml							21-Oct-08

Environmental Samples - Harvey's /Swiss Chalet, North Bay, OB# 2008-2247-041

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Sample No.	Submitter (Health Unit)	Sender #	Lab Number	Location	Description	Received dd/mm/yy	HPC	Coliform	E.coli	TGNC	C. perf	S. aureus	B. cereus	Salmonella	E. coli O157:H7	Date Reported
36	North Bay, 681 Commercial St.	1	F2956	Harvey's/Swiss Chalet	Cheese Curds	22-Oct-08		150	<3	< 1,000			< 100	ND	ND	31-Oct-08
37	North Bay, 681 Commercial St.	1	F2966	Harvey's/Swiss Chalet	Mixed Lettuce	23-Oct-08									ND	31-Oct-08
38	North Bay, 681 Commercial St.	2	F2969	Harvey's/Swiss Chalet	Iceberg Lettuce	23-Oct-08									ND	31-Oct-08
38	North Bay, 681 Commercial St.	3	F2970	Harvey's/Swiss Chalet	Romaine Lettuce	23-Oct-08									ND	31-Oct-08
39	North Bay, 681 Commercial St.	1	F2985	Harvey's/Swiss Chalet	Romaine Lettuce	24-Oct-08									ND	31-Oct-08
40	North Bay, 681 Commercial St.	2	F2986	Harvey's/Swiss Chalet	Romaine Lettuce	24-Oct-08									ND	31-Oct-08
41	North Bay, 681 Commercial St.	3	F2987	Harvey's/Swiss Chalet	Romaine Lettuce	24-Oct-08									ND	31-Oct-08
42	North Bay, 681 Commercial St.	4	F2988	Harvey's/Swiss Chalet	Romaine Lettuce	24-Oct-08									ND	31-Oct-08
43	North Bay, 681 Commercial St.	1	F3052	Harvey's/Swiss Chalet	Glove	25-Oct-08									ND	1-Nov-08
44	North Bay, 681 Commercial St.	2	F3053	Harvey's/Swiss Chalet	Glove	25-Oct-08									ND	1-Nov-08
45	North Bay, 681 Commercial St.	3	F3054	Harvey's/Swiss Chalet	Glove	25-Oct-08									ND	1-Nov-08
46	North Bay, 681 Commercial St.	1	F3061	Harvey's/Swiss Chalet	Chopped onions	25-Oct-08									ND	1-Nov-08
47	North Bay, 681 Commercial St.	2	F3062	Harvey's/Swiss Chalet	Chopped onions	25-Oct-08									ND	1-Nov-08
48	North Bay, 681 Commercial St.	3	F3063	Harvey's/Swiss Chalet	Chopped onions	25-Oct-08									ND	1-Nov-08
49	North Bay, 681 Commercial St.	4	F3064	Harvey's/Swiss Chalet	Chopped onions	25-Oct-08									ND	1-Nov-08
50	North Bay, 681 Commercial St.	5	F3065	Harvey's/Swiss Chalet	Black diamond cheese slices	25-Oct-08									ND	1-Nov-08
51	North Bay, 681 Commercial St.	6	F3066	Harvey's/Swiss Chalet	Spanish onion (whole)	25-Oct-08									ND	1-Nov-08
52	North Bay, 681 Commercial St.	7	F3067	Harvey's/Swiss Chalet	Red onion (whole)	25-Oct-08									ND	1-Nov-08
53	North Bay, 681 Commercial St.	1	F3163	Harvey's/Swiss Chalet	Ribs	29-Oct-08									ND	5-Nov-08
54	North Bay, 681 Commercial St.	2	F3164	Harvey's/Swiss Chalet	Whole Chicken, Raw	29-Oct-08									ND	5-Nov-08
55	North Bay, 681 Commercial St.	3	F3165	Harvey's/Swiss Chalet	Shrimp, Raw	29-Oct-08									ND	5-Nov-08
56	North Bay, 681 Commercial St.	4	F3166	Harvey's/Swiss Chalet	Cooked Chicken, Bag 1	29-Oct-08									ND	5-Nov-08
57	North Bay, 681 Commercial St.	5	F3167	Harvey's/Swiss Chalet	Cooked Chicken	29-Oct-08									ND	5-Nov-08
58	North Bay, 681 Commercial St.	6	F3168	Harvey's/Swiss Chalet	Cooked Ribs	29-Oct-08									ND	5-Nov-08
59	North Bay, 681 Commercial St.	7	F3169	Harvey's/Swiss Chalet	Rice	29-Oct-08									ND	5-Nov-08
60	North Bay, 681 Commercial St.	8	F3170	Harvey's/Swiss Chalet	Cut Potatoes	29-Oct-08									ND	5-Nov-08
61	North Bay, 681 Commercial St.	9	F3171	Harvey's/Swiss Chalet	Coleslaw	29-Oct-08									ND	5-Nov-08
62	North Bay, 681 Commercial St.	10	F3172	Harvey's/Swiss Chalet	Hot Peppers	29-Oct-08									ND	5-Nov-08
63	North Bay, 681 Commercial St.	11	F3173	Harvey's/Swiss Chalet	Mashed Potato	29-Oct-08									ND	5-Nov-08
64	North Bay, 681 Commercial St.	12	F3174	Harvey's/Swiss Chalet	Cabbage (Red)	29-Oct-08									ND	5-Nov-08
65	North Bay, 681 Commercial St.	13	F3175	Harvey's/Swiss Chalet	Mixed Vegetables	29-Oct-08									ND	5-Nov-08
66	North Bay, 681 Commercial St.	14	F3176	Harvey's/Swiss Chalet	Green Onions (Processed)	29-Oct-08									ND	5-Nov-08
67	North Bay, 681 Commercial St.	15	F3177	Harvey's/Swiss Chalet	Green Onions	29-Oct-08									ND	5-Nov-08
68	North Bay, 681 Commercial St.	16	F3178	Harvey's/Swiss Chalet	Raw Potatoes	29-Oct-08									ND	5-Nov-08

Environmental Samples - Harvey's /Swiss Chalet, North Bay, OB# 2008-2247-041

Printed 12/1/2008
2:14 PM

Sample No	Submitter (Health Unit)	Sender #	Lab Number	Location	Description	Received dd/mm/yy	HPC	Coliform	E.coli	TGNC	C. perf	S. aureus	B. cereus	Salmonella	E. coli O157:H7	Date Reported
69	North Bay, 681 Commercial St.	17	F3179	Harvey's/Swiss Chalet	Sour Cream & Chives	29-Oct-08									ND	5-Nov-08
70	North Bay, 681 Commercial St.	1	F3294	Harvey's/Swiss Chalet	Mini Burgers	31-Oct-08									ND	5-Nov-08
71	North Bay, 681 Commercial St.	2	F3295	Harvey's/Swiss Chalet	Swiss Burger	31-Oct-08									ND	5-Nov-08
72	North Bay, 681 Commercial St.	3	F3296	Harvey's/Swiss Chalet	Chicken Burger	31-Oct-08									ND	5-Nov-08
73	North Bay, 681 Commercial St.	4	F3297	Harvey's/Swiss Chalet	Onion Bag	31-Oct-08									ND	5-Nov-08
74	North Bay, 681 Commercial St.		F3467	Harvey's/Swiss Chalet	Angus	14-Nov-08	<1,000	<3	<3	<1,000	<100	<100	<100	ND	ND	19-Nov-08
75	North Bay, 681 Commercial St.		F3468	Harvey's/Swiss Chalet	Original	14-Nov-08	<1,000	<3	<3	<1,000	<100	<100	<100	ND	ND	19-Nov-08
76	North Bay, 681 Commercial St.		F3478	Harvey's/Swiss Chalet	Romaine	15-Nov-08		<<3	<3	>200,000		<100	<100	ND	ND	21-Nov-08
77	North Bay, 681 Commercial St.		F3479	Harvey's/Swiss Chalet	Rotissarie	15-Nov-08	1,000	<3	<3	<1,000	<100	<100	<100	ND	ND	21-Nov-08
78	North Bay, 681 Commercial St.		F 3517	Harvey's/Swiss Chalet	Pickels whole	19-Nov-08	<1,000	<3	<3	<1,000	pH=3.96	<100	<100	ND	ND	25-Nov-08
79	North Bay, 681 Commercial St.		F 3518	Harvey's/Swiss Chalet	Pickels sliced	19-Nov-08	2,000	<3	<3	<1,000	pH=3.94	<100	<100	ND	ND	25-Nov-08
80	North Bay, 681 Commercial St.		F 3519	Harvey's/Swiss Chalet	Harveys house salad	19-Nov-08	>2,400					<100	<100	ND	ND	25-Nov-08
81	North Bay, 681 Commercial St.		F 3528	Harvey's/Swiss Chalet	Sliced Harveys Tomatoes	20-Nov-08		<3	<3	10,000		<100	<100	ND	ND	26-Nov-08
82	North Bay, 681 Commercial St.		F 3565	Harvey's/Swiss Chalet	Carrots shaved Wed.	22-Nov-08		>2,400	<3	>200,000		<100	<100	ND	ND	
83	North Bay, 681 Commercial St.		F 3566	Harvey's/Swiss Chalet	Tomatloe ends diced	22-Nov-08		>2,400	<3	>200,000		<100	<100		ND	
84	North Bay, 681 Commercial St.		F3620	Harvey's/Swiss Chalet	Whashed whole tomatoes	27-Nov-08				19,000			<100			
85	North Bay, 681 Commercial St.		F 3621	Harvey's/Swiss Chalet	Tomatoes not washed	27-Nov-08				2,000			<100			
86	North Bay, 681 Commercial St.		F 3622	Harvey's/Swiss Chalet	Swiss house salad	27-Nov-08				>200,000			<100			
87	North Bay, 681 Commercial St.		F 3623	Harvey's/Swiss Chalet	Romaine washed	27-Nov-08				<1,000			<100			
88	North Bay, 681 Commercial St.		F 3624	Harvey's/Swiss Chalet	Romaine not washed	27-Nov-08				>200,000			<100			

Appendix I

Summary of environmental samples from CFIA


10/30/2008 10:18 7054955998

CFIA NORTH BAY

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Food Product Sampling Submission - 2008FPS-0000056874-4

Page 1 of 2

CANADIAN FOOD INSPECTION AGENCY REPORT OF ANALYSIS FOOD PRODUCT SAMPLING SUBMISSION	
	Canadian Food Inspection Agency / Agence canadienne d'inspection des aliments Version 3.02 Serial: 1916665
Number of Laboratories Receiving Sample: 1 Number of Jobs Authorized: 1	
This report shall not be reproduced, except in full, without the written approval of the laboratory.	
Job System ID:	2008FPS-0000056874-4
Lab Job No.:	MIS-FI-2008-MI-01286
Job Reference No.:	2008FPSS-0000085872-4
Job Status:	Authorized
Laboratory:	GREATER TORONTO AREA LABORATORY 2301 MIDLAND AVENUE SCARBOROUGH, ON M1P 4R7 Telephone: (905) 795-9666 Fax: (905) 795-9673
Submitted By:	CFIA Inspector MAREK GRABOWSKI TORONTO DISTRICT OFFICE 1124 FINCH AVE W TORONTO, ON M3J 2E2 Telephone: (416) 665-5055 Fax: (416) 665-5066
Program:	MANUFACTURED FOODS
Function:	DOMESTIC
Category:	Product Inspection/Certification/Renewal
Sample Plan:	2006_FS300 - Domestic: Micro and Extraneous Matter complaints - including investigations and Est. assessments
Country of Origin:	CANADA
Sampled At:	SUMMIT FOOD SERVICE DISTRIBUTORS INC.
Facility:	SUMMIT FOOD SERVICE DISTRIBUTORS INC. 6270 KENWAY DRIVE MISSISSAUGA, ON L5T2N3
Manufacturer:	CARDINAL MEAT SPECIALIST
Product of:	CARA OPERATIONS LTD
Inspection Type:	Directed
Job Priority:	Verification Sample, under detention
Inspector Priority:	routine intelligence
Number of Units Submitted:	5
IMS No.:	00000000039127
Sampled:	2008-10-25
Received:	2008-10-25
Biased:	No
Accompanying Documents:	No
Temperature of Reception:	-10 C
Process:	GRINDING
Total Weight (Kg):	697.6
# Units Per Case:	120
Container Type:	Paper/cardboard, laminated
Storage Required:	Frozen
HS Code:	020230503807
Product:	Meat
Class:	Meat & Poultry
Sub-Class:	Meat/meat products
Lot:	SKD 21 OCT 02/08
Number of Cases:	64
Unit Size:	90.7 g
Best Before or Expiry Date:	NA
Common Name:	Beef Burger
Brand:	HARVEY'S ORIGINAL Beef Burgers
Lab Sample No.:	MIS-FI-2008-MI-01286-0001
Insp. Sample No.:	1 - 5
Identification Code:	SKD 21 OCT 02/08
Description:	HARVEY'S ORIGINAL BURGERS
Sample Condition:	Good
Sample Assessed:	Satisfactory

http://webapp.inspection.gc.ca/lsts/lstsROA/ROA_FOOD_PROD.ASP?ID=2008FPS-000... 2008/10/30



Method:	MFLP-30		
Comments		For meat products, each of the 5 sub-samples is enriched individually using a 65 gram analytical unit size, which have been pooled for screening.	
E. coli O157		Not Detected / 65 grams///Non D�etect� / 65 grammes	
Test Assessed:	Satisfactory		
Job Authorized:	2008-10-27	Authorized by: Houssam El Menini	Authorized
Job Assessed:	Satisfactory	Date Assessed:	2008-10-27
These results relate only to the samples as tested by this laboratory.			

http://webapp.inspection.gc.ca/lsts/lstsROA/ROA_FOOD_PROD.ASP?ID=2008FPS-000... 2008/10/30

CANADIAN FOOD INSPECTION AGENCY	
REPORT OF ANALYSIS	
FOOD PRODUCT SAMPLING SUBMISSION	
Version 3.02 Serial: 1918803	
Number of Laboratories Receiving Sample:	1
Number of Jobs Authorized:	1
This report shall not be reproduced, except in full, without the written approval of the laboratory.	
Job System ID:	2008FPS-0000056869-4
Job Reference No.:	2008FPSS-0000085666-4
Lab Job No.:	OTT-FD-2008-MI-0649
Job Status:	Authorized
Laboratory:	OTTAWA LABORATORY (CARLING) - FOOD CHEMISTRY AND MICROBIOLOGY 960 CARLING AVE OTTAWA, ON K1A 0C6 Telephone: (613) 759-1207 Fax: (613) 759-126C
Submitted By:	CFIA Inspector CHELSEA QU OTTAWA DISTRICT OFFICE 38 AURIGA DR OTTAWA, ON K2E 8A5 Telephone: (613) 274-7374 Fax: (613) 274-738C
Program:	MANUFACTURED FOODS
Function:	DOMESTIC
Category:	Product Inspection/Certification/Renewal
Sample Plan:	2008_FS300 - Domestic:Micro and Extraneous Matter complaints - including investigations and Est. assessments
Manufacturer:	CARDINAL MEAT SPECIALISTS EST. 352A
Inspection Type:	Directed
Inspector Priority:	service standard
Number of Units Submitted:	5
IMS No.:	00000000039127
Sampled:	2008-10-25
Shipped:	2008-10-25
Received:	2008-10-25
Process:	FREEZING
Total Weight (Kg):	24
# Units Per Case:	32
Container Type:	Paper/cardboard
Storage Required:	Frozen
Product:	Beef
Lot:	3 SE238
Number of Cases:	5
Unit Size:	5 kg
Common Name:	ANGUS BEEF BURGERS
Brand:	CARDINAL
Label Claim:	SE238
Lab Sample No.:	OTT-FD-2008-MI-0649-0001
Insp. Sample No.:	O2008FSM0578
Identification Code:	1-5
Description:	5 CASES OF CARDINAL ANGUS BEEF BURGERS PRODUCTION DATE SEPT. 23
Method:	MFLP-30
	E. coli O157 Not Detected / 65 grams//Non D�tect� / 65 grammes
	E. coli O157 Not Detected / 65 grams//Non D�tect� / 65 grammes
	E. coli O157 Not Detected / 65 grams//Non D�tect� / 65 grammes
	E. coli O157 Not Detected / 65 grams//Non D�tect� / 65 grammes

http://webapp.inspection.gc.ca/lsts/lstsROA/ROA_FOOD_PROD.ASP?ID=2008FPS-000... 2008/10/30



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CANADIAN FOOD INSPECTION AGENCY
REPORT OF ANALYSIS
FOOD PRODUCT SAMPLING SUBMISSION

Version 3.02
Serial: 1916862

Number of Laboratories Receiving Sample: 1 **Number of Jobs Authorized:** 1

This report shall not be reproduced, except in full, without the written approval of the laboratory.

Job System ID: 2008FPS-0000056870-4 **Job Reference No.:** 2008FPSS-0000085867-

Lab Job No.: OTT-FD-2008-MI-0650 **Job Status:** Authorized

Laboratory: OTTAWA LABORATORY (CARLING) - FOOD CHEMISTRY AND MICROBIOLOGY **Telephone:** (613) 759-1207
960 CARLING AVE **Fax:** (613) 759-1266
OTTAWA, ON K1A 0C6

Submitted By: CFIA Inspector CHELSEA QU **Telephone:** (613) 274-7374
OTTAWA DISTRICT OFFICE **Fax:** (613) 274-7386
38 AURIGA DR
OTTAWA, ON K2E 8A5

Program: MANUFACTURED **Category:** Product Inspection/Certification/Renewal
FOODS

Function: DOMESTIC **Sample Plan:** 2008_FS300 - Domestic: Micro and Extraneous Matter
complaints - including investigations and Est. assessments

Manufacturer: CARDINAL MEAT SPECIALISTS EST.
352A

Inspection Type: Directed **Number of Units Submitted:** 5
Inspector Priority: service standard **IMS No.:** 00000000039127

Sampled: 2008-10-25 **Biased:**
Shipped: 2008-10-25 **Accompanying Documents:** No
Received: 2008-10-25 **Temperature of Reception:** -8°C

Process: FREEZING **Lot:** 4 SE308
Total Weight (Kg): 24 **Number of Cases:** 5
Units Per Case: 32 **Unit Size:** 5 kg
Container Type: Paper/cardboard **Common Name:** ANGUS BEEF BURGERS
Storage Required: Frozen **Brand:** CARDINAL
Product: Beef **Label Claim:** SE308


Lab Sample No.: OTT-FD-2008-MI-0650-0001 **Insp. Sample No.:** O2008FSM0579

Identification Code: 1-5 **Description:** 5 CASES OF CARDINAL ANGUS BEEF
BURGERS PRODUCTION DATE SEPT. 30


Method: MFLP-30

E. coli O157	Not Detected / 65 grams///Non D�tect� / 65 grammes
E. coli O157	Not Detected / 65 grams///Non D�tect� / 65 grammes
E. coli O157	Not Detected / 65 grams///Non D�tect� / 65 grammes
E. coli O157	Not Detected / 65 grams///Non D�tect� / 65

http://webapp.inspection.gc.ca/lsts/lstsROA/ROA_FOOD_PROD.ASP?ID=2008FPS-000... 2008/10/30

CANADIAN FOOD INSPECTION AGENCY REPORT OF ANALYSIS FOOD PRODUCT SAMPLING SUBMISSION			
	Canadian Food Inspection Agency	Agence canadienne d'inspection des aliments	Version 3.07 Serial: 1918672
Number of Laboratories Receiving Sample: 1		Number of Jobs Authorized: 1	
This report shall not be reproduced, except in full, without the written approval of the laboratory.			
Job System ID:	2008FPS-0000055282-4	Job Reference No.:	2008FPSS-0000083632-4
Lab Job No.:	MIS-FI-2008-MI-01193	Job Status:	Authorized
Laboratory:	GREATER TORONTO AREA LABORATORY 2301 MIDLAND AVENUE SCARBOROUGH, ON M1P 4R7	Telephone:	(905) 795-9666
		Fax:	(905) 795-9673
Submitted By:	CFIA Inspector NICOLE SENECA NORTH BAY DISTRICT OFFICE 107 SHIRREFF AVE NORTH BAY, ON P1B 7K8	Telephone:	(705) 495-5996
		Fax:	(705) 495-5996
Program:	MANUFACTURED FOODS	Category:	Product Inspection/Certification/Renewal
Function:	DOMESTIC	Sample Plan:	2008_FS300 - Domestic Micro and Extraneous Matter complaints - including investigations and Est. assessments
Sampled At: HARVEY'S RESTAURANT 1899 ALGONQUIN AVENUE NORTH BAY, ON P1B 4Y			
Inspection Type:	Directed	Number of Units Submitted:	1
		IMS No.:	00000000039127
Sampled:	2008-10-15	Scheduled	
Shipped:	2008-10-16	Accompanying Documents:	No
Received:	2008-10-17	Temperature of Reception:	-3C
Container Type:	Paper/cardboard	Lot:	VAR 034 08SE28
Storage Required:	Refrigerated	Number of Cases:	1
Product:	Cheddar	Unit Size:	10 kg
Class:	Dairy products	Common Name:	Cheddar Cheese Curd for Poutine
Sub-Class:	Cheese	Brand:	St-albert
Lab Sample No.:	MIS-FI-2008-MI-01193-0001	Insp. Sample No.:	2008SNS04
Identification Code:	UPC 10621861 45030 7	Description:	5 X 2 Kg 743 42%MF
Sample Assessed:	Satisfactory		
Method:	MFLP-30 E. coli O157	Not Detected / 125 grams / Non D�tect� / 125 grammes	
Job Authorized:	2008-10-20	Authorized by:	Houssam El Menini
Job Assessed:	Satisfactory	Date Assessed:	2008-10-20
These results relate only to the samples as tested by this laboratory.			

http://webapp.inspection.gc.ca/lsts/lstsROA/ROA_FOOD_PROD.ASP?ID=2008FPS-000... 2008/10/30

CANADIAN FOOD INSPECTION AGENCY REPORT OF ANALYSIS FOOD PRODUCT SAMPLING SUBMISSION			
	Canadian Food Inspection Agency	Agence canadienne d'inspection des aliments	Version 3.02 Serial: 1916674
Number of Laboratories Receiving Sample: 1		Number of Jobs Authorized: 1	
This report shall not be reproduced, except in full, without the written approval of the laboratory.			
Job System ID:	2008FPS-0000055276-4	Job Reference No.:	2008FPSS-0000083619-4
Lab Job No.:	MIS-FI-2008-MI-01195	Job Status:	Authorized
Laboratory:	GREATER TORONTO AREA LABORATORY 2301 MIDLAND AVENUE SCARBOROUGH, ON M1P 4R7	Telephone:	(905) 795-9666
		Fax:	(905) 795-9673
Submitted By:	CFIA Inspector NICOLE SENECA NORTH BAY DISTRICT OFFICE 107 SHIRREFF AVE NORTH BAY, ON P1B 7K8	Telephone:	(705) 495-5995
		Fax:	(705) 495-5995
Program:	MANUFACTURED FOODS	Category:	Product Inspection/Certification/Renewal
Function:	DOMESTIC	Sample Plan:	2008_FS300 - Domestic:Micro and Extraneous Matter complaints - including investigations and Est. assessments
Sampled At: HARVEY'S RESTAURANT 1899 ALGONQUIN AVENUE NORTH BAY, ON P1B 4Y			
Inspection Type:	Directed	Number of Units Submitted:	1
		IMS No.:	000000000039127
Sampled:	2008-10-15	Scheduled:	No
Shipped:	2008-10-16	Accompanying Documents:	No
Received:	2008-10-17	Temperature of Reception:	-3C
Container Type:	Paper/cardboard	Lot:	SKD 07 SEP22/08
Storage Required:	Frozen	Number of Cases:	1
Product:	Vegetable	Unit Size:	4 kg
Class:	Multiple Foods	Common Name:	Harvey's Veggie Burger
Sub-Class:	Vegetables, vegetable products	Brand:	Cardinal Harvey's
Lab Sample No.:	MIS-FI-2008-MI-01195-0001	Insp. Sample No.:	2008SNS03
Identification Code:	UPC 100 60176 05525	Description:	18 11 48 pcsX 90.7 g net 4.35 Kg Veggie Burger
Sample Assessed:	Satisfactory		
Method:	MFLP-30 E. coli O157	Not Detected / 65 grams//Non D�tect� / 65 grammes	
Job Authorized:	2008-10-20	Authorized by:	Houssam El Menini
Job Assessed:	Satisfactory	Date Assessed:	2008-10-18
These results relate only to the samples as tested by this laboratory.			

http://webapp.inspection.gc.ca/lsts/lstsROA/ROA_FOOD_PROD.ASP?ID=2008FPS-000... 2008/10/30



Canadian Food Inspection Agency
Agence canadienne d'inspection des aliments

CANADIAN FOOD INSPECTION AGENCY
REPORT OF ANALYSIS
FOOD PRODUCT SAMPLING SUBMISSION

Version 3.02
Serial: 1916675

Number of Laboratories Receiving Sample: 1

Number of Jobs Authorized: 1

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Job System ID: 2008FPS-0000055347-4

Job Reference No.: 2008FPSS-0000083712-4

Lab Job No.: MIS-FI-2008-MI-01191

Job Status: Authorized

Laboratory: GREATER TORONTO AREA LABORATORY
2301 MIDLAND AVENUE
SCARBOROUGH, ON M1P 4R7

Telephone: (905) 795-966E
Fax: (905) 795-967Z

Submitted By: CFIA Inspector NICOLE SENECAI
NORTH BAY DISTRICT OFFICE
107 SHIRREFF AVE
NORTH BAY, ON P1B 7K8

Telephone: (705) 495-599E
Fax: (705) 495-599E

Program: MANUFACTURED FOODS

Category: Product Inspection/Certification/Renewal

Function: IMPORT

Sample Plan: 2008_FS301 - Imported: Micro and Extraneous Matter complaints - including investigations and Est. assessments

Country of Origin: UNITED STATES
Sampled At: HARVEY'S RESTAURANT
1899 ALGONQUIN AVENUE
NORTH BAY, ON P1B 4Y

Inspection Type: Directed

Number of Units Submitted: 1
IMS No.: 00000000039127

Sampled: 2008-10-15
Shipped: 2008-10-15
Received: 2008-10-17

Scheduled
Accompanying Documents: No
Temperature of Reception: -4C

Container Type: Plastic, film
Storage Required: Refrigerated
Product: Lettuce
Class: Vegetables and Lentils
Sub-Class: Vegetables

Lvl: OCT 15 S274D 05 10.24
Unit Size: 2 kg
Common Name: shred, lettuce
Brand: unavailable

Lab Sample No.: MIS-FI-2008-MI-01191-0001

Insp. Sample No.: 2008SNS06

Identification Code: OCT15 S274 B05 16:24
Sample Assessed: Satisfactory
Sample Assessment Comment: 25 grams weighed

Description: K in star Product of USA

Method: MFLP-30
E. coli O157 Not Detected///Non D etect 

Test Assessment Comment: 25 grams weighed

Job Authorized: 2008-10-20

Authorized by: Houssam El Menini

Authorized

Job Assessed: Satisfactory

Date Assessed: 2008-10-20

http://webapp.inspection.gc.ca/lsts/lstsROA/ROA_FOOD_PROD.ASP?ID=2008FPS-000... 2008/10/30

Canadian Food
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d'inspection des aliments
CANADIAN FOOD INSPECTION AGENCY
REPORT OF ANALYSIS
FOOD PRODUCT SAMPLING SUBMISSION
Version 3.02
Serial: 1916677
Number of Laboratories Receiving Sample: 1 **Number of Jobs Authorized:** 1

This report shall not be reproduced, except in full, without the written approval of the laboratory.
Job System ID: 2008FPS-0000055246-4 **Job Reference No.:** 2008FPSS-0000083586-4

Lab Job No.: MIS-FI-2008-MI-01194 **Job Status:** Authorized

Laboratory: GREATER TORONTO AREA LABORATORY **Telephone:** (905) 795-9666
 2301 MIDLAND AVENUE **Fax:** (905) 795-9673
 SCARBOROUGH, ON M1P 4R7

Submitted By: CFIA Inspector NICOLE SENECAI **Telephone:** (705) 495-5995
 NORTH BAY DISTRICT OFFICE **Fax:** (705) 495-5998
 107 SHIRREFF AVE
 NORTH BAY, ON P1B 7K8

Program: MANUFACTURED **Category:** Product Inspection/Certification/Renewal
 FOODS
Function: DOMESTIC **Sample Plan:** 2006_FS300 - Domestic:Micro and Extraneous Matter
 complaints - including investigations and Est. assessments

Sampled At: HARVEY'S RESTAURANT
 1899 ALGONQUIN AVENUE
 NORTH BAY, ON P1E 4Y

Inspection Type: Directed **Number of Units Submitted:** 1
IMS No.: 00000000039127

Sampled: 2008-10-15 **Scheduled**
Shipped: 2008-10-16 **Accompanying Documents:** No
Received: 2008-10-17 **Temperature of Reception:** -4C

Container Type: Paper/cardboard **Lot:** SKD 13 SEP 26/08
Storage Required: Frozen **Number of Cases:** 1
Product: Beef **Unit Size:** 11 kg
Class: Multiple Foods **Common Name:** Beef Burgers
Sub-Class: Meat/meat products **Brand:** Cardinal

Lab Sample No.: MIS-FI-2008-MI-01194-0001 **Insp. Sample No.:** 2008SNS01


Identification Code: UPC 1006017605519 5 **Description:** Est # 352 1145 120 PCS\ 90.7 g net
 10.9 Kg

Sample Assessed: Satisfactory
Sample Assessment Comment: 2 subsamples, 65 g weighed per subsample, 130 g total


Method: MFLP-30 **Not Detected///Non D etect **
 E. coli O157


Job Authorized: 2008-10-20 **Authorized by:** Houssam El Menini **Authorized**
Job Assessed: Satisfactory **Date Assessed:** 2008-10-20
 20

http://webapp.inspection.gc.ca/lsts/lstsROA/ROA_FOOD_PROD.ASP?ID=2008FPS-000... 2008/10/30

CANADIAN FOOD INSPECTION AGENCY REPORT OF ANALYSIS FOOD PRODUCT SAMPLING SUBMISSION			
		Canadian Food Inspection Agency / Agence canadienne d'inspection des aliments	
Version 3.02 Serial: 1916679			
Number of Laboratories Receiving Sample: 1		Number of Jobs Authorized: 1	
This report shall not be reproduced, except in full, without the written approval of the laboratory.			
Job System ID:	2008FPS-0000055329-4	Job Reference No.:	2008FPSS-0000083890-4
Lab Job No.:	MIS-FI-2008-MI-01192	Job Status:	Authorized
Laboratory:	GREATER TORONTO AREA LABORATORY 2301 MIDLAND AVENUE SCARBOROUGH, ON M1P 4R7	Telephone:	(905) 795-9666
Submitted By:	CFIA Inspector NICOLE SENECA NORTH BAY DISTRICT OFFICE 107 SHIRREFF AVE NORTH BAY, ON P1B 7K8	Fax:	(905) 795-9673
Program:	MANUFACTURED FOODS	Category:	Product Inspection/Certification/Renewal
Function:	DOMESTIC	Sample Plan:	2008_FS300 - Domestic: Micro and Extraneous Matter complaints - including investigations and Est. assessments
Sampled At: HARVEY'S RESTAURANT 1899 ALGONQUIN AVENUE NORTH BAY, ON P1B 4Y			
Inspection Type:	Directed	Number of Units Submitted:	1
		IMS No.:	00000000039127
Sampled:	2008-10-15	Scheduled	
Shipped:	2008-10-16	Accompanying Documents:	No
Received:	2008-10-17	Temperature of Reception:	-2C
Container Type:	Plastic, film	Lot:	8199 EST611 L4 1452
Storage Required:	Frozen	Unit Size:	3 kg
Product:	Meat	Common Name:	Frankfurters saucisses fumees
Class:	Meat & Poultry	Brand:	CARA
Sub-Class:	Multiple foods		
Lab Sample No.:	MIS-FI-2008-MI-01192-0001	Insp. Sample No.:	2008SNS 05
Identification Code:	8199 EST 611 L4 1452	Description:	3 Kg Est 611 Frankfurters shrink wrap
Sample Assessed:	Satisfactory		
Method:	MFLP-30 E. coli O157	Not Detected / 65 grams / Non D�tect� / 65 grammes	
Job Authorized:	2008-10-20	Authorized by:	Houssam El Menini
Job Assessed:	Satisfactory	Date Assessed:	2008-10-20
These results relate only to the samples as tested by this laboratory.			

http://webapp.inspection.gc.ca/lsts/lstsROA/ROA_FOOD_PROD.ASP?ID=2008FPS-000... 2008/10/30

CANADIAN FOOD INSPECTION AGENCY REPORT OF ANALYSIS FOOD PRODUCT SAMPLING SUBMISSION			
 Canadian Food Inspection Agency		Agence canadienne d'inspection des aliments	
Version 3.02 Serial: 1910680			
Number of Laboratories Receiving Sample: 1		Number of Jobs Authorized: 1	
This report shall not be reproduced, except in full, without the written approval of the laboratory.			
Job System ID:	2008FPS-0000055253-4	Job Reference No.:	2008FPSS-0000083593-4
Lab Job No.:	MIS-FI-2008-MI-01190	Job Status:	Authorized
Laboratory:	GREATER TORONTO AREA LABORATORY 2301 MIDLAND AVENUE SCARBOROUGH, ON M1P 4R7	Telephone:	(905) 795-9866
Submitted By:	CFIA Inspector NICOLE SENECAI NORTH BAY DISTRICT OFFICE 107 SHIRREFF AVE NORTH BAY, ON P1B 7K8	Fax:	(905) 795-9673
Program:	MANUFACTURED FOODS	Category:	Product Inspection/Certification/Renewal
Function:	DOMESTIC	Sample Plan:	2008_FS300 - Domestic:Micro and Extraneous Matter complaints - including investigations and Est. assessments
Sampled At: HARVEY'S RESTAURANT 1899 ALGONQUIN AVENUE NORTH BAY, ON P1B 4Y			
Inspection Type:	Directed	Number of Units Submitted:	1
		IMS No.:	00000000039127
Sampled:	2008-10-15	Scheduled	
Shipped:	2008-10-16	Accompanying Documents:	No
Received:	2008-10-17	Temperature of Reception:	-5C
Container Type:	Paper/cardboard	Lot:	03SE098
Storage Required:	Frozen	Number of Cases:	1
Product:	Beef	Unit Size:	4.8 kg
Class:	Meat & Poultry	Common Name:	Angus Beef Burgers
Sub-Class:	Meat/meat products	Brand:	Cardinal
Lab Sample No.:	MIS-FI-2008-MI-01190-0001	Insp. Sample No.:	2008S NS 02
Identification Code:	DELIVERED 10/02/08	Description:	HARVEY'S 1815 32 PCS Angus beef burgers
Sample Assessed:	Satisfactory		
Method:	MFLP-30		
	E. coli O157	Not Detected / 65 grams//Non D�tect� / 65 grammes	
Job Authorized:	2008-10-20	Authorized by:	Houssam El Menini
Job Assessed:	Satisfactory	Date Assessed:	2008-10-20
These results relate only to the samples as tested by this laboratory.			

CANADIAN FOOD INSPECTION AGENCY REPORT OF ANALYSIS FOOD PRODUCT SAMPLING SUBMISSION			
	Canadian Food Inspection Agency	Agence canadienne d'inspection des aliments	Version 3.02 Serial: 1910659
Number of Laboratories Receiving Sample: 1		Number of Jobs Authorized: 1	
This report shall not be reproduced, except in full, without the written approval of the laboratory.			
Job System ID:	2008FPS-000055355-4	Job Reference No.:	2008FPSS-0000083721-4
Lab Job No.:	MIS-FI-2008-MI-01189	Job Status:	Authorized
Laboratory:	GREATER TORONTO AREA LABORATORY 2301 MIDLAND AVENUE SCARBOROUGH, ON M1P 4R7	Telephone:	(905) 795-9666
		Fax:	(905) 795-9673
Submitted By:	CFIA Inspector NICOLE SENECAI NORTH BAY DISTRICT OFFICE 107 SHIRREFF AVE NORTH BAY, ON P1B 7K8	Telephone:	(705) 495-5996
		Fax:	(705) 495-5998
Program:	MANUFACTURED FOODS	Category:	Product Inspection/Certification/Renewal
Function:	IMPORT	Sample Plan:	2006_FS001 - Imported, Micro and Extraneous Matter complaints - including investigations and Est. assessments
Country of Origin: UNITED STATES			
Sampled At: HARVEY'S RESTAURANT 1899 ALGONQUIN AVENUE NORTH BAY, ON P1B 4Y			
Inspection Type:	Directed	Number of Units Submitted:	1
		IMS No.:	00000000039127
Sampled:	2008-10-15	Scheduled	
Shipped:	2008-10-16	Accompanying Documents:	No
Received:	2008-10-17	Temperature of Reception:	1C
Container Type:	Paper/cardboard	Lot:	03 EX7 GR#14136H
Storage Required:	Refrigerated	Unit Size:	10 count
Product:	Tomato	Common Name:	Tomatoes
Class:	Vegetables and Lentils	Brand:	King's Choice
Sub-Class:	Vegetables	Label Claim:	Product of USA
Lab Sample No.:	MIS-FI-2008-MI-01189-0001	Insp. Sample No.:	2008SNS07
Identification Code:	WHOLE TOMATOES	Description:	10 tomatoes in plastic bag
Sample Assessed:	Satisfactory		
Sample Assessment	25 grams weighed		
Comment:			
Method:	MFLP-30 E. coli O157	Not Detected///Non D�tect�	
Job Authorized:	2008-10-20	Authorized by:	Houssam El Merini
Job Assessed:	Satisfactory	Date Assessed:	2008-10-20

Appendix J
Photograph of Harvey's onion dicer



10.0

Glossary of Terms

Analytic study: A study designed to examine association, or hypothesized causal relationships. It is usually concerned with identifying or measuring the effects of risk factors or is concerned with the health effects of specific exposure(s).^[7]

Case control study: The observational epidemiologic study of persons with the disease of interest and a suitable control group of persons without the disease.^[7]

Case definition: A set of diagnostic criteria that must be fulfilled in order to identify a person as a case of a particular disease. It can be based on clinical, laboratory, or combined clinical and laboratory criteria.^[7]

Epidemic curve: A graphic plotting of the distribution of cases by time of onset.^[7]

Epidemiologist: An investigator who studies the occurrence of disease or other health-related conditions or events in defined populations.^[7]

Exposure: Proximity and/or contact with a source of a disease agent in such a manner that effective transmission of the agent or harmful effects of the agent may occur.^[7]

Exposure curve: A graphic plotting of the distribution of cases by time of exposure.^[7]

Field Epidemiology: Investigations that are initiated in response to urgent public health problems. A primary goal of field epidemiology is to inform, as quickly as possible, the processes of selecting and implementing interventions to lessen or prevent illness or death when such problems arise.^[9]

Incubation period: The time interval between invasion by an infectious agent and appearance of the first sign or symptom of the disease in question.^[7]

Index case: The first case to be discovered by the health care system during an outbreak.^[8]

Infectious period: The time period during which a person can transmit disease.^[8]

Media advisory: A media advisory notifies and invites media to an event or activity. It is sent by email and fax.

Media conference: A media conference is a presentation media can attend and listen to statements about a particular news item from a spokesperson of an organization. Media may ask questions and get interviews from the spokesperson. It is an opportunity for journalists to get photos, video and sound clips.

Media release: This is a written statement to inform journalists at newspapers, radio, TV and internet-based media about new information. Media releases are sent by email and fax.

Media teleconference: This is similar to a media conference, except media participate by teleconference. It is an opportunity for media who are unable to attend the media conference to hear the spokesperson, ask questions and get some sound clips.

Multivariate analysis: A set of techniques used when the variation in several variables has to be studied simultaneously.

Point Source (or Common Source): Outbreak due to exposure of a group of persons to a noxious influence that is common to the individuals in the group. When the exposure is brief and essentially simultaneous, the resultant cases all develop within one incubation period of the disease.^[7]

Sampling bias: Systematic error due to study of nonrandom sample of a population.^[7]

Statistical significance: Statistical methods allow an estimate to be made of the probability of the observed or greater degree of association between independent and dependent variables under the null hypothesis. Usually the level of statistical significance is stated by the P value.^[7]

Traceback investigation: A method used by authorized inspectors to determine and document, with a high degree of confidence, the distribution and the final destination of food products (i.e. meat, poultry, fish, seafood, dairy, eggs, fresh fruit or vegetable) that has been contaminated or associated with a foodborne illness.

11.0

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