



March 2, 2009

Mr. Frank Sowers, P.E.  
NYSDEC, Region 8  
6274 East Avon-Lima Road  
Avon, NY 14414-9519

Re: Work Plan  
Vapor Intrusion Investigation  
Batesville Casket Company  
40 Pixley Industrial Parkway

Former ITT Rochester Form Machine Facility  
Site #8-28-112  
Town of Gates, Monroe County  
Order on Consent: Index # B8-0614-02-05

File: 3356/35273

Dear Mr. Sowers:

On behalf of ITT Corporation (ITT), this Work Plan presents an approach to conduct a vapor intrusion (VI) investigation at the Batesville Casket Company building ("Batesville facility") located at 40 Pixley Industrial Parkway adjacent to the Former ITT Rochester Form Machine (RFM) Facility (#8-28-112) in the Town of Gates, New York. This VI investigation is required by New York State Department of Environmental Conservation (NYSDEC) pursuant to the Order on Consent No. B8-0614-02-05, the NYSDEC's directive in the e-mail from Frank Sowers to ITT and O'Brien & Gere ("OBG") dated September 8, 2008, and the conference call with NYSDEC, ITT and OBG on September 11, 2008. This investigation is being performed as a component of the Remedial Investigation Phase II Work Plan Addendum dated August 2007 for off-Site vapor intrusion sampling, which the NYSDEC considers necessary for completion of the Remedial Investigation.

## **PREVIOUS SAMPLING**

Previous soil vapor sampling was conducted at two sample locations located along the western portion of the former RFM Site, adjacent to the Batesville facility. Sampling results from this event indicated that there were detectable levels of 1,1,1-trichloroethane (TCA) in the soil vapor samples at each of the two sampling locations.

## **ADDITIONAL INVESTIGATION**

ITT proposes to collect concurrent sub-slab and indoor air samples (sample pair) at the Batesville facility to assess the current and future potential for intrusion of TCA soil vapors to indoor air.

Access for the Batesville facility will be negotiated prior to the initiation of sampling activities. If necessary, NYSDEC may provide support in obtaining access to the Batesville facility. Implementation of VI sampling activities in this Work Plan are contingent upon ITT obtaining any necessary access privileges.

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On January 28, 2009, O'Brien & Gere met with NYSDEC, Monroe County Department of Health, and Batesville representatives to select sampling locations within the Batesville building. The number and location of proposed samples are presented in Figure 1. We also discussed that the sampling be conducted during the heating season to present worst-case conditions for vapor intrusion; doors normally closed, heating systems in normal operation.

Sampling duration will be approximately 8 hours per sample. The attached sample collection procedures, and the quality assurance/quality control, data evaluation and reporting, management of investigation derived waste, health and safety procedures, and community relations used for other vapor intrusion investigations for this site, including those set forth in the RI Phase II Work Plan Addendum will be followed and are in general conformance with the New York State Department of Health (NYSDOH) vapor intrusion guidance document<sup>1</sup>. One ambient air sample will be collected upwind of the building and one duplicate sub-slab sample will be collected as part of this sampling event.

A building survey and chemical inventory will be conducted at the time of sample collection period and documented on a building survey form found in the NYSDOH vapor intrusion guidance document.

Samples (canisters) will be delivered under routine Chain-of-Custody protocols to Test America of Burlington, Vermont, which is certified by the Environmental Laboratory Approval Program (ELAP) and certified by NYSDOH for USEPA Method TO-15. Samples will be analyzed via Method TO-15 for the compounds that were evaluated for other vapor intrusion investigations for this site.<sup>2</sup> All samples will be collected in canisters that were individually-certified clean.

Analytical QA/QC requirements of Method TO-15 will be followed by the laboratory. Data will be validated and a data usability summary report (DUSR) will be prepared. Data qualifiers will be identified in the result tables, figures and in subsequent reporting.

Results will be evaluated to assess potential vapor intrusion of 1,1,1-TCA. The interpretation of the results will be based on the NYSDOH Soil Vapor/Indoor Air matrices. Other compounds, such as gasoline related compounds (alkanes and benzene, toluene, ethylbenzene, and total xylenes), methylene chloride, trichloroethene (TCE), and tetrachloroethylene (PCE) will be reported but will not be considered a RFM-related compound, and any follow-on actions to address impacts related to these compounds will not be the responsibility of ITT. Of course, ITT reserves all of its rights to seek cost recovery and/or contribution with respect to any and all actions it undertakes with respect to the Site, including all off-Site activities.

Preliminary unvalidated data in the form of summary tables, laboratory reports, figure of sampling locations, and field forms will be submitted to NYSDEC and NYSDOH with the monthly progress report submitted to NYSDEC and NYSDOH. Upon receipt of the final DUSR, a draft letter report to the Batesville property owner will be prepared and promptly submitted to NYSDEC and NYSDOH for comment. State law requires that testing results be delivered to property owners within 30 days

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<sup>1</sup> "Guidance for Evaluating Soil Vapor Intrusion in the State of New York", NYSDOH, October 2006.

<sup>2</sup> "Remedial Investigation Phase II Work Plan Addendum," Appendix A, O'Brien & Gere Engineers, Inc. August 2007.

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after receipt of validated data, so these efforts will be scheduled in order to meet that statutory deadline.

The final sampling report containing validated data will be submitted and will consist of the following:

- Sampling program overview
- Sampling and analytical methods
- Field forms
- QA/QC results and discussion
- Laboratory reports, data sheets and Chain-of-Custody Forms (Category B documentation), waste manifests, etc.
- Results and discussion
- Data evaluation (including Tables and Figures)
- Conclusions and Recommendations

The intent is to conduct this sampling by the end of this heating season (typically, the end of March 2009). Once we receive written approval of this work plan, we will notify the property owner and schedule the sampling. We will inform NYSDEC immediately thereafter of the sampling schedule. In the meantime, please contact Teresa Olmsted of ITT at (714) 630-3175 or me at (315) 437-6100 if you have any questions regarding this information.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.



Mark A. Distler  
Vice President

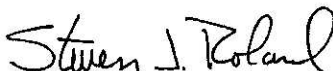
Attachments: Certification  
Figure 1  
Sub-Slab Vapor Sample Collection Procedures  
Indoor Air Sample Collection Procedures  
Ambient Air Sample Collection Procedures

cc: T. Olmsted & L. Hall – ITT Corporation  
D. McNaughton – NYSDOH  
J. Kosmala – Monroe County Dept. of Public Health (electronic copy only)  
J. Hausbeck – NYSDEC  
M. Peters – Stockli Greene Slevin & Peters, LLP  
G. Swenson – O'Brien & Gere Engineers, Inc.  
T. Bigelow – Batesville Casket Company, Inc.

## Certification

**Site #8-28-112) - ITT Corporation - Town of Gates, New York  
Remedial Investigation – Vapor Intrusion Investigation – Batesville Casket Company**

The undersigned certifies that I have reviewed the attached document and that the document meets the requirements of the Order on Consent (B8-0614-02-05) between the New York State Department of Environmental Conservation (NYSDEC) and ITT Corporation (ITT) dated August 19, 2003, with an effective date of August 29, 2003 (Consent Order). To the best of my knowledge, this work plan also conforms with applicable state, federal and local regulations, generally accepted practices in the environmental profession and O'Brien & Gere standards.



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Steven J. Roland, P.E.  
Executive Vice President  
Professional Engineer License No. NY 60437-1  
Date: 8/17/07  
O'Brien & Gere Engineers, Inc.  
5000 Brittonfield Parkway  
East Syracuse, New York 13057



**FIGURE 1**



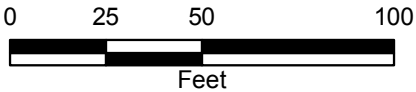
**LEGEND**

- SAMPLE TYPE**
- PROPOSED INDOOR AIR SAMPLE
  - PROPOSED SUB-SLAB SAMPLE

NOTE:  
SUB-SLAB AND INDOOR AIR SAMPLE  
LOCATIONS ARE APPROXIMATE.

FORMER ITT ROCHESTER FORM  
MACHINE FACILITY  
TOWN OF GATES, NEW YORK  
SITE #8-28-112

**PROPOSED  
VAPOR INTRUSION  
SAMPLING LOCATIONS**



JANUARY 2009  
3356/35273



## **SUB-SLAB VAPOR SAMPLE COLLECTION PROCEDURES**

This set of procedures outlines the general steps to collect sub-slab vapor samples. The site-specific Sampling and Analysis Work Plan should be consulted for proposed sample locations, sample depths, and sampling duration.

### **Sub-Slab Vapor Probe Installation**

Temporary sampling probes will be installed using the following procedures:

- If appropriate, record weather information (temperature, barometric pressure, relative humidity, wind speed, and wind direction) at the beginning of the sampling event. Record substantial changes to these conditions that may occur during the course of sampling. The information may be measured with on-site equipment or obtained from a reliable source of local measurements (e.g., a local airport).
- Insert a section of food-grade Teflon® or other appropriate tubing through a 3/8-inch (approx.) hole drilled through the slab. If necessary, advance the drill bit 2 to 3 inches into the sub-slab material to create an open cavity.
- Install the tubing inlet to the specified sampling depth below the slab.
- Seal the annular space between the hole and tubing using 100% beeswax or another inert, non-shrinking sealing compound such as permagum®.

### **Sub-Slab Vapor Sample Collection**

Sub-slab vapor samples will be collected by following the steps outlined below.

- Purge the tubing using a vacuum pump or gas-tight syringe (~60 cc). Calculate the volume of air (volume =  $\pi r^2 h$ ) in the tubing and purge one to three tubing volumes prior to sample collection at a rate no greater than 0.2 liter per minute (lpm).
- Use an evacuated Summa® passivated (or equivalent) canister to collect the sub-slab vapor sample. The canister will be provided by the laboratory, along with a flow controller

equipped with an in-line particulate filter and a vacuum gauge. The flow controller will be pre-calibrated by the laboratory for the desired flow rate or duration of sample collection. The canisters will be batch certified as clean by the laboratory.

- Remove the protective brass plug from canister. Connect the pre-calibrated flow controller to the canister.
- Record the identification numbers for the canister and flow controller. Record the initial canister pressure on the vacuum gauge (check equipment-specific instructions for taking this measurement). A canister with a significantly different pressure than originally recorded by the testing laboratory should not be used for sampling. Record these numbers and values on the chain-of-custody form for each sample.
- Connect the tubing from the sub-slab vapor sampling probe to the flow controller.
- Open the valve on the canister. Record the time that the valve is opened (beginning of sampling) and the canister pressure on the vacuum gauge.
- Photograph the canister and the area surrounding the canister.
- Monitor the vacuum pressure in the canister routinely during sampling.
- Stop sample collection after the scheduled duration of sample collected, but when the canister still has a minimum amount of vacuum remaining. Check with the laboratory supplying the canister and flow controller for the ideal final vacuum pressure. Typically, the minimum vacuum is between 2 and 5 inches of mercury, but not zero. If there is no vacuum remaining, the sample will be rejected and collected again in a new canister.
- Record the final vacuum pressure and close the canister valve. Record the date and time that sample collection was stopped.
- Remove the flow controller from the canister and replace the protective brass plug.

- Attach labels/tags (sample name, time/date of sampling, etc.) to the canister as directed by the laboratory.
- Place the canister and other laboratory-supplied equipment in the packaging provided by the laboratory.
- Enter the information required for each sample on the chain-of-custody form, making sure to include the identification numbers for the canister and flow controller, and the initial and final canister pressures on the vacuum gauge.
- Include the required copies of the chain-of-custody form in the shipping packaging, as directed by the laboratory. The field crew will retain a copy of the chain-of-custody for the project file.
- Deliver or ship the samples to the laboratory as soon as practical.



## INDOOR AIR SAMPLE COLLECTION PROCEDURES

This set of procedures outlines the general steps to collect indoor air samples. The site-specific Sampling and Analysis Work Plan should be consulted for proposed sampling locations and other indoor air requirements (inventory, etc.).

Indoor air samples will be collected by following the steps outlined below:

- Record outdoor weather information (temperature, barometric pressure, relative humidity, wind speed, and wind direction) and indoor temperature and humidity at the beginning of the sampling event. Record substantial changes to these conditions that may occur during the course of sampling. The information may be measured with on-site equipment or obtained from a reliable source of local measurements (e.g., a local airport).
- Use an evacuated Summa<sup>®</sup> passivated (or equivalent) stainless-steel canister to collect the outdoor air sample. The canister will be provided by the laboratory, along with a flow controller equipped with an in-line particulate filter and a vacuum gauge. The flow controller will be pre-calibrated by the laboratory for the desired flow rate or duration of sample collection. The canisters will be individually certified as clean by the laboratory.
- Place the canister at the sampling location. If the sample should be collected from breathing height (e.g., 3 to 5 feet above ground), then mount the canister on a stable platform such that the sample inlet will be at the proper height.
- Remove the protective brass plug from canister. Connect the pre-calibrated flow controller to the canister.
- Record the identification numbers for the canister and flow controller. Record the initial canister pressure on the vacuum gauge (check equipment-specific instructions for taking this measurement). A canister with a significantly different pressure than originally recorded by the testing laboratory should not be used for sampling. Record these numbers and values on the chain-of custody form for each sample.

- Open the valve on the vacuum pressure in the canister. Record the time that the valve was opened (beginning of sampling) and the canister pressure on the vacuum gauge.
- Photograph the canister and the area surrounding the canister.
- Monitor the vacuum pressure in the canister routinely during sampling. During monitoring, note the vacuum pressure on the gauge.
- Stop sample collection after the scheduled duration of sample collection, but make sure that the canister still has a minimum amount of vacuum remaining. Check with the laboratory supplying the canister and flow controller for the ideal final vacuum pressure. Typically, the minimum vacuum is between 2 and 5 inches of mercury, but not zero. If there is no vacuum remaining, the sample will be rejected and collected again in a new canister.
- Record the final vacuum pressure and close the canister valves. Record the date and time that sample collection was stopped.
- Remove the flow controller from the canister and replace the protective brass plug.
- Attach labels/tags (sample name, time/date of sampling, etc.) to the canister as directed by the laboratory.
- Place the canister and other laboratory-supplied equipment in the packaging provided by the laboratory.
- Enter the information required for each sample on the chain-of-custody form, making sure to include the identification numbers for the canister and flow controller, and the initial and final canister pressures on the vacuum gauge.
- Include the required copies of the chain-of-custody form in the shipping packaging, as directed by the laboratory. The field crew will retain a copy of the chain-of-custody for the project file.
- Deliver or ship the samples to the laboratory as soon as practical.

## **AMBIENT AIR SAMPLE COLLECTION PROCEDURES**

This set of procedures outlines the general steps to collect ambient air samples. The site-specific Sampling and Analysis Work Plan should be consulted for proposed sample locations and sampling duration.

The following procedures will be followed for the collection of ambient air samples:

- Select a location upwind of the building or other area that is being evaluated.
- Record weather information (i.e., temperature, barometric pressure, relative humidity, wind speed, and wind direction) at the beginning of the sampling event. Record substantial changes to these conditions that may occur during the course of sampling. The information may be measured with on-site equipment or obtained from a reliable source of local measurements (e.g., a local airport).
- Use an evacuated Summa<sup>®</sup> passivated (or equivalent) stainless-steel canister to collect the ambient air sample. The canister will be provided by the laboratory, along with a flow controller equipped with an in-line particulate filter and a vacuum gauge. The flow controller will be pre-calibrated by the laboratory for the desired flow rate or duration of sample collection. The canisters will be individually certified as clean by the laboratory.
- Place the canister at the sampling location. If the sample should be collected from breathing height (e.g., 3 to 5 feet above ground), then mount the canister on a stable platform such that the sample inlet will be at the proper height.
- Remove the protective brass plug from canister. Connect the pre-calibrated flow controller to the canister.
- Record the identification numbers for the canister and flow controller. Record the initial canister pressure on the vacuum gauge (check equipment-specific instructions for taking this measurement). A canister with a significantly different pressure than originally recorded by the testing laboratory should not be used for sampling. Record these numbers and values on the chain-of custody form for each sample.

- Open the valve on the vacuum pressure in the canister. Record the time that the valve was opened (beginning of sampling) and the canister pressure on the vacuum gauge.
- Photograph the canister and the area surrounding the canister.
- Monitor the vacuum pressure in the canister routinely during sampling. During monitoring, note the vacuum pressure on the gauge.
- Stop sample collection after the scheduled duration of sample collection but make sure that the canister still has a minimum amount of vacuum remaining. Check with the laboratory supplying the canister and flow controller for the ideal final vacuum pressure. Typically, the minimum vacuum is between 2 and 5 inches of mercury, but not zero. If there is no vacuum remaining, the sample will be rejected and collected again in a new canister.
- Record the final vacuum pressure and close the canister valves. Record the date and time that sample collection was stopped.
- Remove the flow controller from the canister and replace the protective brass plug.
- Attach labels/tags (sample name, time/date of sampling, etc.) to the canister as directed by the laboratory.
- Place the canister and other laboratory-supplied equipment in the packaging provided by the laboratory.
- Enter the information required for each sample on the chain-of-custody form, making sure to include the identification numbers for the canister and flow controller, and the initial and final canister pressures on the vacuum gauge.
- Include the required copies of the chain-of-custody form in the shipping packaging, as directed by the laboratory. The field crew will retain a copy of the chain-of-custody for the project file.
- Deliver or ship the samples to the laboratory as soon as practical.