

engineering and constructing a better tomorrow

April 15, 2011

Indiana Department of Environmental Management Voluntary Remediation Program 100 N. Senate Avenue MC 66-30V IGCN N1101 Indianapolis, IN 46204-2251

Attention: Loan Pham, Project Manager

Subject: Off-Property Vapor Intrusion Evaluation Honeywell Industrial Complex, South Bend, Indiana IDEM Site Number: 6980601

Dear Ms. Pham:

MACTEC Engineering and Consulting, Inc. (MACTEC), on behalf of Honeywell International, Inc. (Honeywell), is submitting the above-referenced memorandum for your review. Per your request, we have enclosed two (2) hard copies and one electronic copy on CD.

If you have any immediate questions or concerns, please call Craig Kielty at 231 922-9050.

Sincerely,

MACTEC Engineering and Consulting, Inc.

Steven D. Murray Principal Project Manager

Principal Project Scientist

Enclosure

cc: Chuck Geadelmann, Honeywell International Eric Kloss, Honeywell Aerospace Marc Nelson, St. Joseph County Health Department



MACTEC Engineering and Consulting, Inc.

MEMORANDUM	
DATE:	April 15, 2011
FROM:	Steven Buyze (Mactec Engineering and Consulting, Inc.)
SUBJECT:	Off-Property Vapor Intrusion Evaluation
	South Bend, Indiana
PROJECT #:	3310102016
то:	Ms. Loan Pham – Indiana Department of Environmental Management
COPY TO:	Chuck Geadelmann (Honeywell International);
	Deborah Barsotti, Steve Murray, Craig Kielty (Mactec)

Memorandum

INTRODUCTION

Historically, low levels of chlorinated solvents have been detected in shallow groundwater northeast of the Honeywell Complex in South Bend, Indiana (Figure 1). This off-property area is occupied by residential homes and a park. The groundwater in this area is 14 to 15 feet below ground surface (bgs) and is not used as drinking water. The shallow groundwater is too deep to permit direct contact exposures (e.g., via digging into the ground), but is shallow enough to be a potential source of vapors to indoor air. Therefore, persons in the residential area have no contact with contaminated groundwater, but could potentially be exposed to vapors that may migrate from the groundwater to soil gas in the unsaturated zone, which in turn may migrate to indoor air within the residential homes (vapor intrusion [VI]). In 2000, Honeywell performed an off-site soil gas survey as part of voluntary site investigation. Results indicated no detectable volatile organic compounds (VOCs) at a depth of three feet in 11 off-site soil gas sampling locations.

The Indiana Department of Environmental Management (IDEM) has published Draft Vapor Intrusion Guidance (IDEM *Draft Vapor Intrusion Pilot Program Guidance* – April 26, 2006) which identifies a technical approach to evaluate the potential completeness and significance of the VI migration and exposure pathway. For chlorinated VOC groundwater plumes, the IDEM suggests a step-wise approach that consists of first determining if chlorinated VOCs are detected in soil or groundwater within 100 feet of an occupied residence at concentrations greater than the soil and groundwater screening levels presented in the IDEM guidance document. Evaluation of recent groundwater data collected from wells within the residential area indicated that groundwater concentrations at wells S9 and S14 were at or slightly above screening levels for a 30-year exposure scenario. Consequently, Honeywell performed a soil gas investigation in 2009 to further evaluate the VI pathway. Results indicated that of the 16 samples collected; only one sample exhibited a concentration over IDEM soil gas screening criteria. The detection of trichloroethene (TCE) at 35 parts per billion by volume (ppbv) in the deep (10 feet bgs) soil gas sample at location SV-6 slightly exceeded the IDEM soil gas screening level of 22 ppbv. Figure 2 shows recent groundwater analytical results as well as soil gas results from the 2009 investigation.

Following a discussion of the results and a subsequent meeting with IDEM, Honeywell was asked to conduct sub-slab soil gas samples in combination with indoor air sampling in residential homes adjacent to the Honeywell Complex to evaluate whether the groundwater to indoor air pathway was complete. The targeted study area would encompass homes within 1,000 feet of groundwater screening level exceedances. Further, IDEM asked that sampling be conducted on two separate occasions (winter and summer) to evaluate seasonal variation. This memorandum provides the methodology and results of the first sampling event carried out during the winter season (February 2011). The summer season event is tentatively scheduled for late July 2011.

METHODS

Mactec Engineering and Consulting, Inc. (Mactec) designed and conducted the VI study utilizing IDEM's 2006 *Draft Vapor Intrusion Pilot Program Guidance*. Access permission was received from 11 of the 25 possible residential dwellings located in the study area. Following access approvals and scheduling, Mactec entered the residential structures to install one sub-slab vapor sample point per basement, one indoor air sample point within each basement and one indoor air sample point within each primary floor living space. In addition, background ambient air sample locations were selected at outdoor locations for each sampling day. Sampling was conducted over a three week period from February 2, 2011 through February 19, 2011. Indoor Air Building Survey Checklists from IDEM's 2006 *Draft Vapor Intrusion Pilot Program Guidance* were completed by the occupants of the dwellings and Mactec field personnel. Copies of completed Indoor Air Building Survey Checklist are located in Appendix A.

Sub-Slab Vapor Sample Point Placement

Typical sub-slab soil vapor collection point construction is shown on Figure 3. Sub-slab soil vapor sample points were installed as follows:

- 1. 2-inch hole was cored through the concrete slab using a hammer drill
- 2. Soil was removed utilizing a stainless steel push sampler
- 3. 6-inch by ¹/₂-inch stainless steel screen was place in boring connected to ¹/₄-inch outside dimension (OD) polyethylene tubing
- 4. Sub-slab soil vapor point borings were backfilled with #5 filter sand to within one inch of the bottom of concrete slab
- 5. Hydrated bentonite was placed in the remainder of the boring up to the top of the concrete slab
- 6. A push-connect union was placed on ¹/₄ inch tubing at surface of concrete
- 7. A three-way valve was attached to a luer lock fitting approximately two to three feet from concrete surface
- 8. Utilizing a 60 milliliter (mL) luer lock syringe, the soil vapor sample point was purged of soil vapor amounting to three times the volume of the soil vapor sample point boring.

Sample Collection

Mactec collected sub-slab samples and ambient indoor air samples into 6-liter summa canisters connected to air trains consisting of a particle filter, flow regulator and pressure gauge. Flow regulators were calibrated in the laboratory to draw samples over a 24 hour period. Sample collection start and stop times and initial and final canister pressures were recorded on a sample log sheet. Sample log sheets are located in Appendix B.

Sub-slab soil vapor samples were collected by the following process:

- 1. Dead air space was purged from stainless steel screen and tubing by purging three times the volume of the screen and tubing with a 60 mL luer lock syringe
- 2. 6-liter summa canister was connected to air train
- 3. ¹/₄-inch OD polyethylene tubing was attached to empty port of three-way valve with luer lock connection fitting
- 4. Remaining end of ¹/₄-inch OD tubing was connected to air train with laboratory supplied compression fitting
- 5. Three-way and summa canister valves were opened
- 6. Began collecting sample

Both basement and primary living space sample locations were established and samples were collected at each residence in the same manner. Air trains were connected to the 6-liter summa canisters and then canisters were placed on a stand to elevate the sample port to approximately three feet from the floor surface. Valves located on summa canisters were then opened and sample collection began.

Outdoor background sample locations were also established and samples collected from upwind and downwind of residences being monitored. Background samples were collected into 6-liter summa canisters fitted with air trains, which were left hanging on elevated hooks for the 24-hour collection period. Laboratory supplied "candy canes" (candy cane shaped pieces of stainless steel) were attached to the air trains to prevent moisture from entering the summa canisters.

Figures 4 through 8 present the VI intrusion sample locations by date with wind direction and location of background sample locations. Appendix C contains historic meteorological information from each sampling day.

After the 24-hour collection period, canisters were retrieved from the residences. Stop times and final pressures were noted on the sample logs and valves were closed. In the case of the sub-slab sample points, the tubing was then removed from the flow regulators and union connection located at the surface concrete. A plug was then used to seal the union. Sample air trains and canisters were separated and packed for shipment to the laboratory for analysis of select VOCs using USEPA TO-15 low level analysis.

With the exception of the sub-slab soil vapor sample collected at Home 11, each sub-slab sample was collected at the same time as the corresponding indoor air samples. For Home 11, on February 18, Mactec field personnel arrived on-site to retrieve the sub-slab and ambient air samples and observed that the summa canister regulator had not moved indicating the potential that no sample was collected. After further inspection, the three-way valve was not completely open and no air had been collected into the summa canister. The valve was then activated and summa canister retrieved the following day. No background samples were collected in conjunction with that sample.

RESULTS

Analytical results are presented on Table 1 and analytical laboratory reports are located in Appendix D. Indoor ambient air results were compared to Residential Indoor Air Action Levels (RIAALs) for a 30 year exposure duration as presented in IDEM's *Draft Vapor Intrusion Pilot Program Guidance Supplement*, dated February 4, 2010. Sub-slab sample results were compared to Residential Sub-Slab Screening Levels for a 30 year exposure duration as presented in the same document. For compounds with no established sub-slab screening level, a factor of ten times the indoor air action level was used to calculate a sub-slab screening level.

Sub-slab sample analytical results indicated the presence of six VOCs beneath basement concrete slabs. However, none of these detections exceeded an established or calculated sub-slab screening level for the most stringent 30 year exposure duration.

Indoor air sample results indicated the presence of nine VOCs in either the basement or primary living space. RIAALs were not exceeded in six of the 11 residences. One or more RIAAL was exceeded in the remaining five residences. The RIAAL was exceeded for benzene (Home 1 basement and primary, Home 8 basement and primary, and Home 11 primary); 1,2 dichloroethane (1,2 DCA) (Home 2 and Home 6 primary) and TCE (Home 11 basement).

In outdoor air samples, low levels of benzene were detected in each upwind and downwind sample collected for each days sampling. Low levels of tetrachloroethene were detected in the upwind and downwind sample collected on February 3.

CONCLUSIONS

With the completion of the first of two sampling events, Mactec has evaluated the potential for subsurface VI into the residential structures located within the study area. No screening level exceedances have been observed in sub-slab samples collected during the first sampling event. As a result, although RIAAL exceedances for three VOCs were observed in indoor air, there is no definitive evidence that the exceedances are related to VI from a subsurface source, i.e., the subsurface to indoor air pathway is not complete. Mactec believes the likely source of VOCs in indoor air above RIAALs is attributable to sources and/or activities in the homes and from potential outdoor air contributions.

Benzene was detected in each sample (sub-slab, indoor air and background air) collected during the first sampling event. Benzene has not been detected in off-site groundwater wells located within the study area nor was it observed to exceed the sub-slab screening level; however, benzene was observed to exceed the RIAAL in the indoor air of three residences. Survey information collected from these three residences showed potential sources or activities from within or outside the home. Specifically, Home 1 underwent a recent kitchen renovation which included painting of the entire room. Home 8 has an attached garage and is in closest proximity to the main thoroughfare. The resident from Home 11 indicated that her hobbies include painting and she smokes tobacco products on a regular basis. Tobacco smoke is known to contain benzene as well as other VOCs.

Similarly, the source of 1,2-DCA in Home 2 and Home 6 is likely from an indoor source within the home since no detections were observed in the sub-slab sample. Although no specific products were identified as containing 1,2-DCA during the survey, 1,2-DCA can be found in degreasers, paint removers and result from out gassing of molded plastic consumer products.

TCE was detected above the RIAAL in Home 11 basement sample. TCE was also detected in the sub-slab sample at 0.050 ppbv however, well below the sub-slab screening level of 2.3 ppbv. TCE is found in degreasing solvents, auto parts cleaner, adhesives, paint remover, spot remover, nail polish and polish remover. During the survey, it was noted that the resident is a cosmetologist by occupation and paints as a hobby. These may be factors as to the presence of TCE at this location.

The second sample event is scheduled to be completed in July of 2011. This round of sampling will identify any seasonal fluctuations in the soil vapors.

Table 1
Residential Indoor Ambient Air and Sub-Slab Soil Vapor Comparison Table
Honeywell - South Bend

	RIAALs 30 Year	Sub-Slab 30		Home 1	Home 1	Home 1	Home 2	Home 2	Home 2	Home 3	Home 3	Home 3	Home 4	Home 4	Home 4
Compound	Exposure	Year Exposure	Sample ID	Basement	Primary	Sub-Slab									
compound	Duration	Duration	Sample Date	2/2/2011	2/2/2011	2/2/2011	2/2/2011	2/2/2011	2/2/2011	2/2/2011	2/2/2011	2/2/2011	2/3/2011	2/3/2011	2/3/2011
	Duration	Duration	Analyzed Date	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011
Benzene	0.78	7.8	ppbv	1.9	2.1	0.60	0.20	0.20	0.30	0.31	0.30	0.30	0.41	0.36	0.57
sec-Butylbenzene	NC	NC	ppbv	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	8.8	88*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1-Dichloroethane	130	1300*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
cis-1,2-Dichloroethene	9.2	92*	ppbv	0.093	0.10	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	0.15	<0.080	<0.080	<0.080
trans-1,2-Dichloroethene	18	180*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1-Dichloroethene	52	520*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,2-Dichloropropane	0.21	2.1*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Isopropylbenzene	82	820*	ppbv	<0.16	<0.16	0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
n-Propylbenzene	30	300*	ppbv	<0.16	<0.16	0.26	<0.16	<0.16	<0.16	<0.16	<0.16	0.21	<0.16	<0.16	0.17
Tetrachloroethene	0.47	4.7	ppbv	<0.080	<0.080	0.46	<0.080	<0.080	0.39	<0.080	<0.080	0.39	<0.080	<0.080	0.36
1,1,1-Trichloroethane	420	4200*	ppbv	<0.080	<0.080	0.13	<0.080	<0.080	0.25	<0.080	<0.080	0.10	<0.080	0.11	<0.080
Trichloroethene	0.23	2.3	ppbv	0.067	0.078	0.13	<0.040	<0.040	0.36	<0.040	<0.040	0.14	<0.040	0.081	0.065
Vinyl chloride	0.85	8.5	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
tert-Butylbenzene	NC	NC	ppbv	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	0.18	1.8	ppbv	0.084	0.11	<0.080	<0.080	0.20	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080

Notes:

RIAALs = Residential Indoor Air Action Level

NC = No criteria given by the Indiana Department of Environmental Management

ppbv = Part Per Billion by Volume

* = Sub-Slab 30 year Exposure Duration screening levels determined by increasing RIAALs by factor of 10

Bold = Exceeds RIAALs 30 year Exposure Duration if a basement or primary living space sample or exceeds Sub-Slab

30 year Exposure Duration if a sub-slab sample.

Sample Key:

P = Primary Living Space Ambient Air Sample

SS = Sub-slab soil vapor sample

B = Basement Ambient Air Sample

Table 1
Residential Indoor Ambient Air and Sub-Slab Soil Vapor Comparison Table
Honeywell - South Bend

	RIAALs 30 Year	Sub-Slab 30	Comula ID	Home 5	Home 5	Home 5	Home 6	Home 6	Home 6	Home 7	Home 7	Home 7	Home 8	Home 8	Home 8
Compound	Exposure	Year Exposure	Sample ID	Basement	Primary	Sub-Slab									
•	Duration	Duration	Sample Date	2/3/2011	2/3/2011	2/3/2011	2/4/2011	2/4/2011	2/4/2011	2/10/2011	2/10/2011	2/10/2011	2/10/2011	2/10/2011	2/10/2011
			Analyzed Date	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/11/2011	2/17/2011	2/17/2011	2/17/2011	2/17/2011	2/17/2011	2/17/2011
Benzene	0.78	7.8	ppbv	0.28	0.35	0.22	0.33	0.31	0.35	0.34	0.34	2.80	1.7	1.7	0.54
sec-Butylbenzene	NC	NC	ppbv	<0.16	0.71	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	8.8	88*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1-Dichloroethane	130	1300*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
cis-1,2-Dichloroethene	9.2	92*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
trans-1,2-Dichloroethene	18	180*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1-Dichloroethene	52	520*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,2-Dichloropropane	0.21	2.1*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Isopropylbenzene	82	820*	ppbv	<0.16	0.60	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
n-Propylbenzene	30	300*	ppbv	<0.16	1.90	0.23	<0.16	<0.16	<0.16	<0.16	<0.16	0.21	0.25	0.31	<0.16
Tetrachloroethene	0.47	4.7	ppbv	<0.080	<0.080	0.87	<0.080	<0.080	1.0	0.14	0.26	0.39	<0.080	<0.080	0.79
1,1,1-Trichloroethane	420	4200*	ppbv	<0.080	0.089	1.2	<0.080	<0.080	<0.080	<0.080	<0.080	0.26	<0.080	<0.080	0.69
Trichloroethene	0.23	2.3	ppbv	<0.040	<0.040	0.044	<0.040	<0.040	0.060	<0.040	<0.040	0.10	<0.040	<0.040	0.12
Vinyl chloride	0.85	8.5	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
tert-Butylbenzene	NC	NC	ppbv	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	0.18	1.8	ppbv	<0.080	<0.080	<0.080	0.11	0.20	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080

Notes:

RIAALs = Residential Indoor Air Action Level

NC = No criteria given by the Indiana Department of Environmental Management

ppbv = Part Per Billion by Volume

* = Sub-Slab 30 year Exposure Duration screening levels determined by increasing RIAALs by factor of 10

Bold = Exceeds RIAALs 30 year Exposure Duration if a basement or primary living space sample or exceeds Sub-Slab

30 year Exposure Duration if a sub-slab sample.

Sample Key:

P = Primary Living Space Ambient Air Sample

SS = Sub-slab soil vapor sample

B = Basement Ambient Air Sample

Table 1
Residential Indoor Ambient Air and Sub-Slab Soil Vapor Comparison Table
Honeywell - South Bend

	RIAALs 30 Year	Sub-Slab 30	Sample ID	Home 9 Basement	Home 9 Primary	Home 9 Sub-Slab	Home 10 Basement	Home 10 Primary	Home 10 Sub-Slab	Home 11 Basement	Home 11 Primary	Home 11 Sub-Slab	BG-1-0211	BG-2-0211	BG-3-0211
Compound	Exposure	Year Exposure	Sample Date	2/10/2011	2/10/2011	2/10/2011	2/18/2011	2/18/2011	2/18/2011	2/18/2011	2/18/2011	2/19/2011	2/2/2011	2/2/2011	2/3/2011
	Duration	Duration	Analyzed Date	2/17/2011	2/17/2011	2/17/2011	3/1/2011	3/1/2011	3/1/2011	3/1/2011	3/1/2011	2/28/2011	2/11/2011	2/11/2011	2/11/2011
Benzene	0.78	7.8	ppbv	0.26	0.26	0.19	0.33	0.69	0.31	0.37	0.90	0.21	0.19	0.17	0.25
sec-Butylbenzene	NC	NC	ppbv	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	8.8	88*	ppbv	<0.080	<0.080	<0.080	<0.080	0.089	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1-Dichloroethane	130	1300*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
cis-1,2-Dichloroethene	9.2	92*	ppbv	<0.080	<0.080	<0.080	<0.080	0.096	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
trans-1,2-Dichloroethene	18	180*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1-Dichloroethene	52	520*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,2-Dichloropropane	0.21	2.1*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Isopropylbenzene	82	820*	ppbv	<0.16	<0.16	<0.16	<0.16	<0.16	0.34	<0.16	<0.16	0.29	<0.16	<0.16	<0.16
n-Propylbenzene	30	300*	ppbv	<0.16	<0.16	<0.16	<0.16	0.16	0.25	<0.16	<0.16	0.17	<0.16	<0.16	<0.16
Tetrachloroethene	0.47	4.7	ppbv	<0.080	<0.080	0.22	<0.080	0.20	0.25	<0.080	<0.080	0.19	<0.080	<0.080	0.058
1,1,1-Trichloroethane	420	4200*	ppbv	<0.080	<0.080	0.25	<0.080	<0.080	0.18	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Trichloroethene	0.23	2.3	ppbv	<0.040	<0.040	<0.040	0.040	<0.040	0.050	0.26	<0.040	0.050	<0.040	<0.040	<0.040
Vinyl chloride	0.85	8.5	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
tert-Butylbenzene	NC	NC	ppbv	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	0.18	1.8	ppbv	<0.080	<0.080	<0.080	0.085	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080

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B = Basement Ambient Air Sample

Table 1 Residential Indoor Ambient Air and Sub-Slab Soil Vapor Comparison Table Honeywell - South Bend

Compound	RIAALs 30 Year Exposure Duration	Sub-Slab 30 Year Exposure Duration	Sample ID Sample Date Analyzed Date	BG-4-0211 2/3/2011 2/11/2011	BG-5-0211 2/4/2011 2/11/2011	BG-6-0211 2/4/2011 2/11/2011	BG-7-0211 2/10/2011 2/17/2011	BG-8-0211 2/10/2011 2/18/2011	BG-9-0211 2/18/2011 3/1/2011	BG-10-0211 2/18/2011 3/1/2011
Benzene	0.78	7.8	ppbv	0.28	0.21	0.23	0.27	0.27	0.15	0.14
sec-Butylbenzene	NC	NC	ppbv	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	8.8	88*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1-Dichloroethane	130	1300*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
cis-1,2-Dichloroethene	9.2	92*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
trans-1,2-Dichloroethene	18	180*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1-Dichloroethene	52	520*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,2-Dichloropropane	0.21	2.1*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Isopropylbenzene	82	820*	ppbv	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
n-Propylbenzene	30	300*	ppbv	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Tetrachloroethene	0.47	4.7	ppbv	0.17	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	420	4200*	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Trichloroethene	0.23	2.3	ppbv	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Vinyl chloride	0.85	8.5	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
tert-Butylbenzene	NC	NC	ppbv	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	0.18	1.8	ppbv	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080

Notes:

RIAALs = Residential Indoor Air Action Level

NC = No criteria given by the Indiana Department of Environmental Management

ppbv = Part Per Billion by Volume

* = Sub-Slab 30 year Exposure Duration screening levels determined by increasing RIAALs by factor of 10

Bold = Exceeds RIAALs 30 year Exposure Duration if a basement or primary living space sample or exceeds Sub-Slab

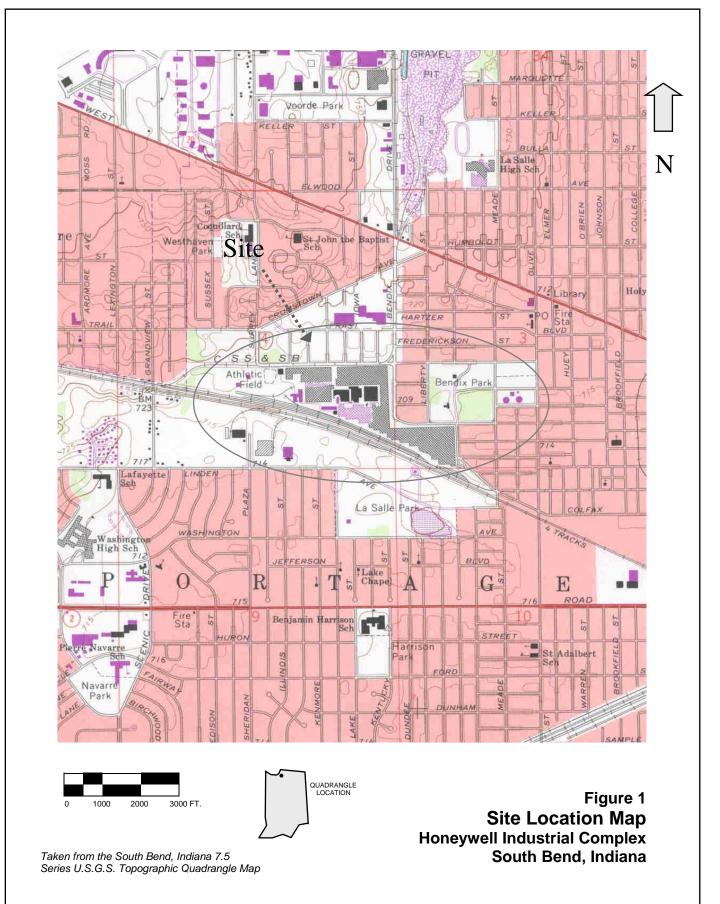
30 year Exposure Duration if a sub-slab sample.

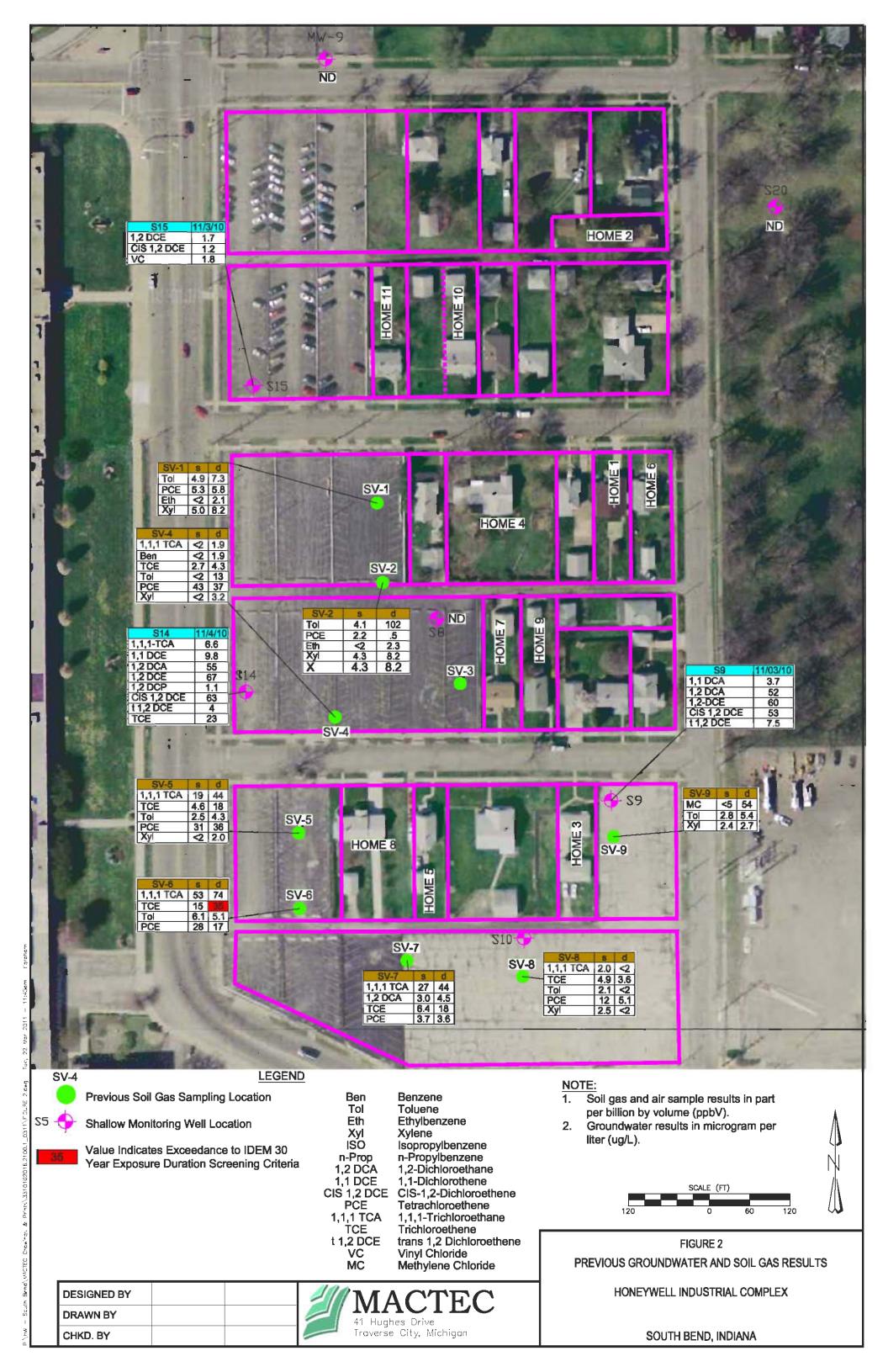
Sample Key:

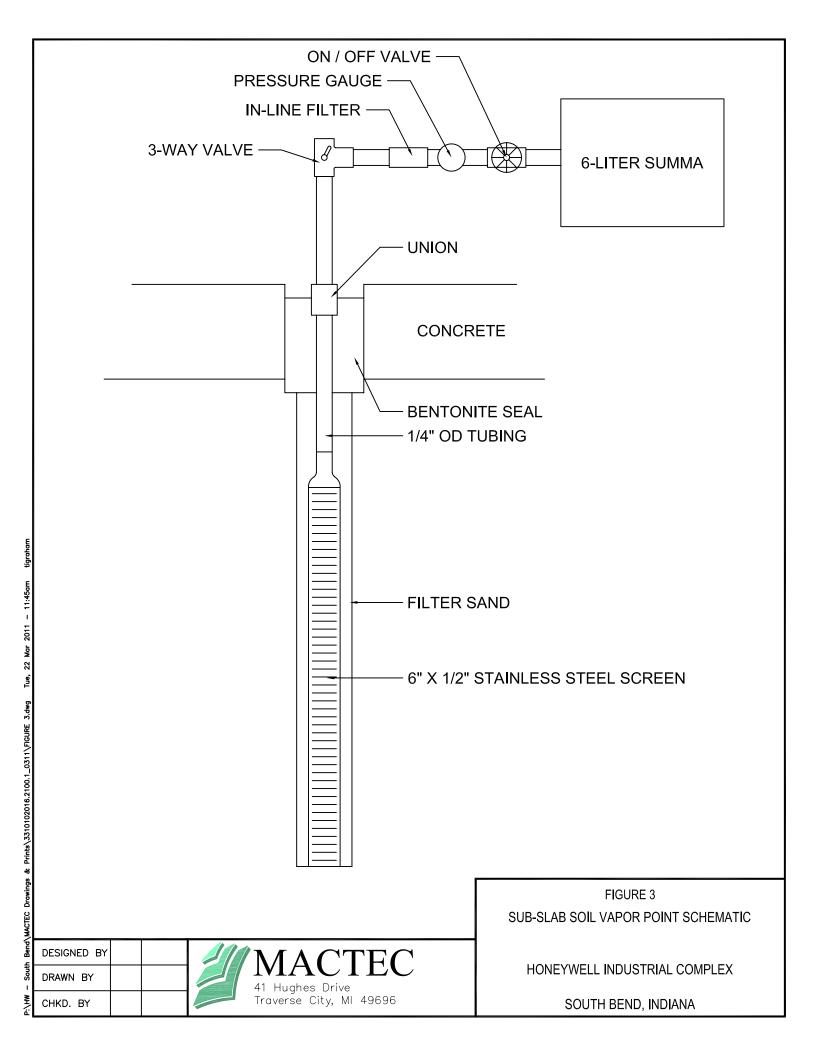
P = Primary Living Space Ambient Air Sample

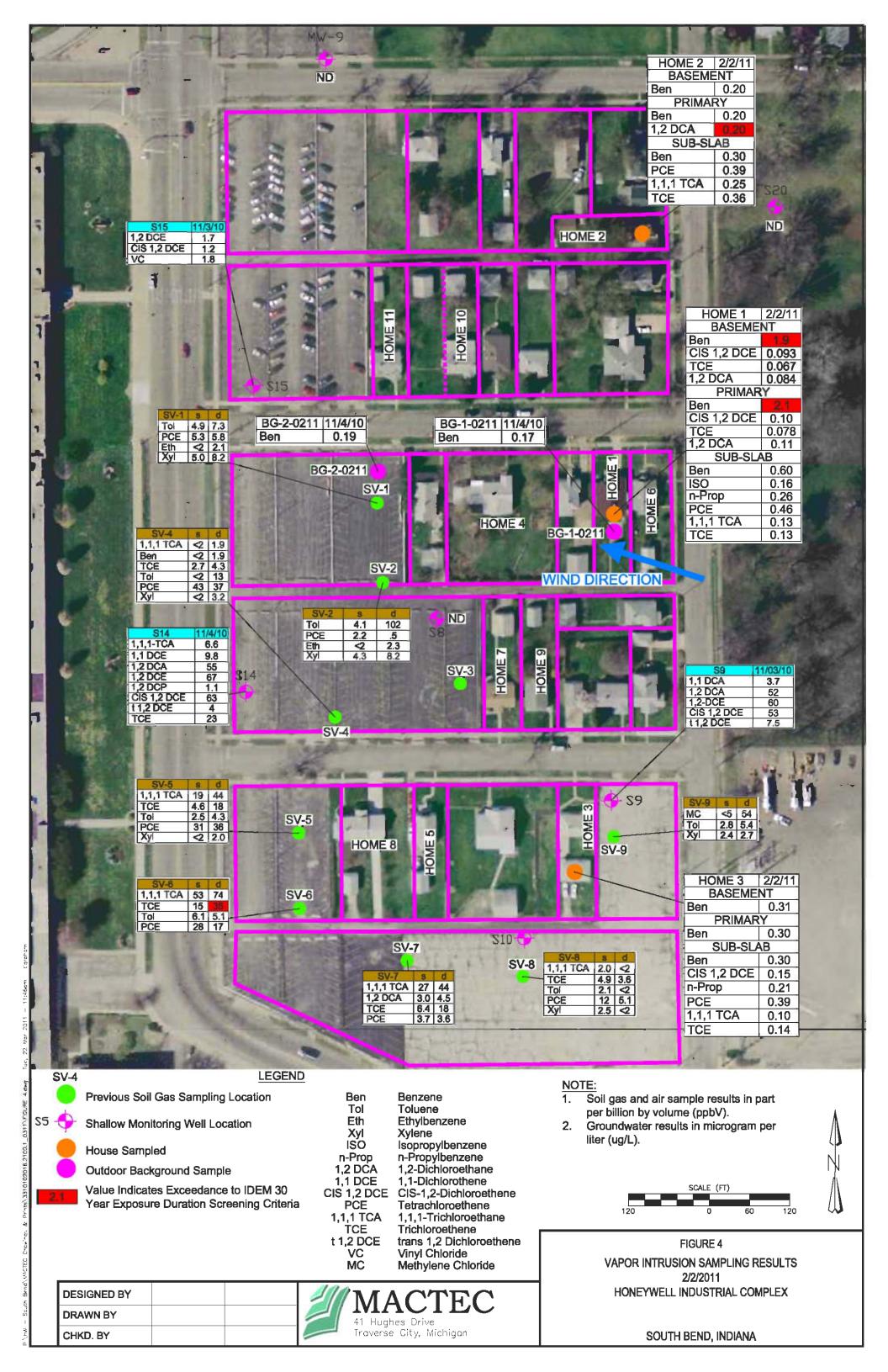
SS = Sub-slab soil vapor sample

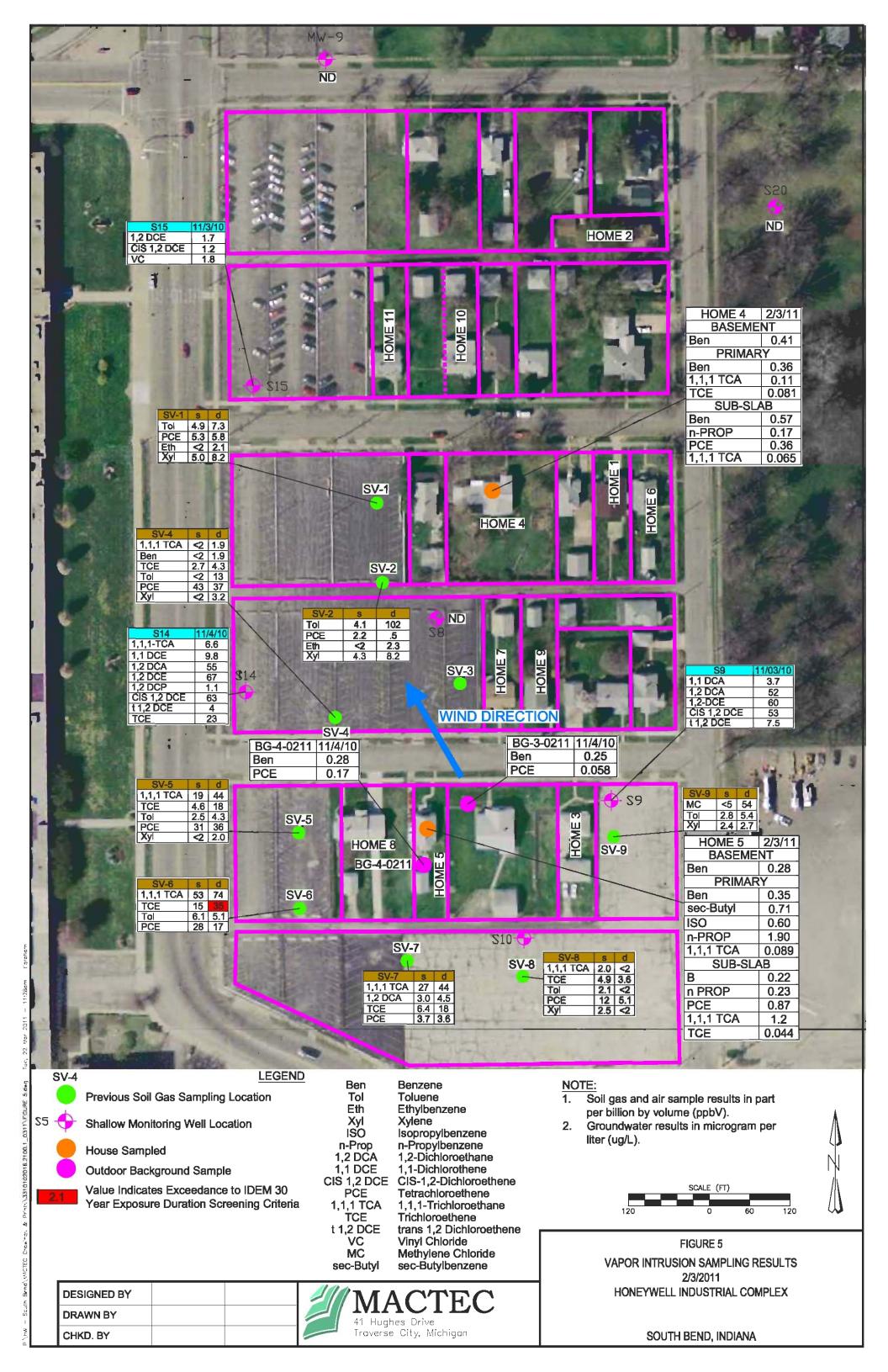
B = Basement Ambient Air Sample

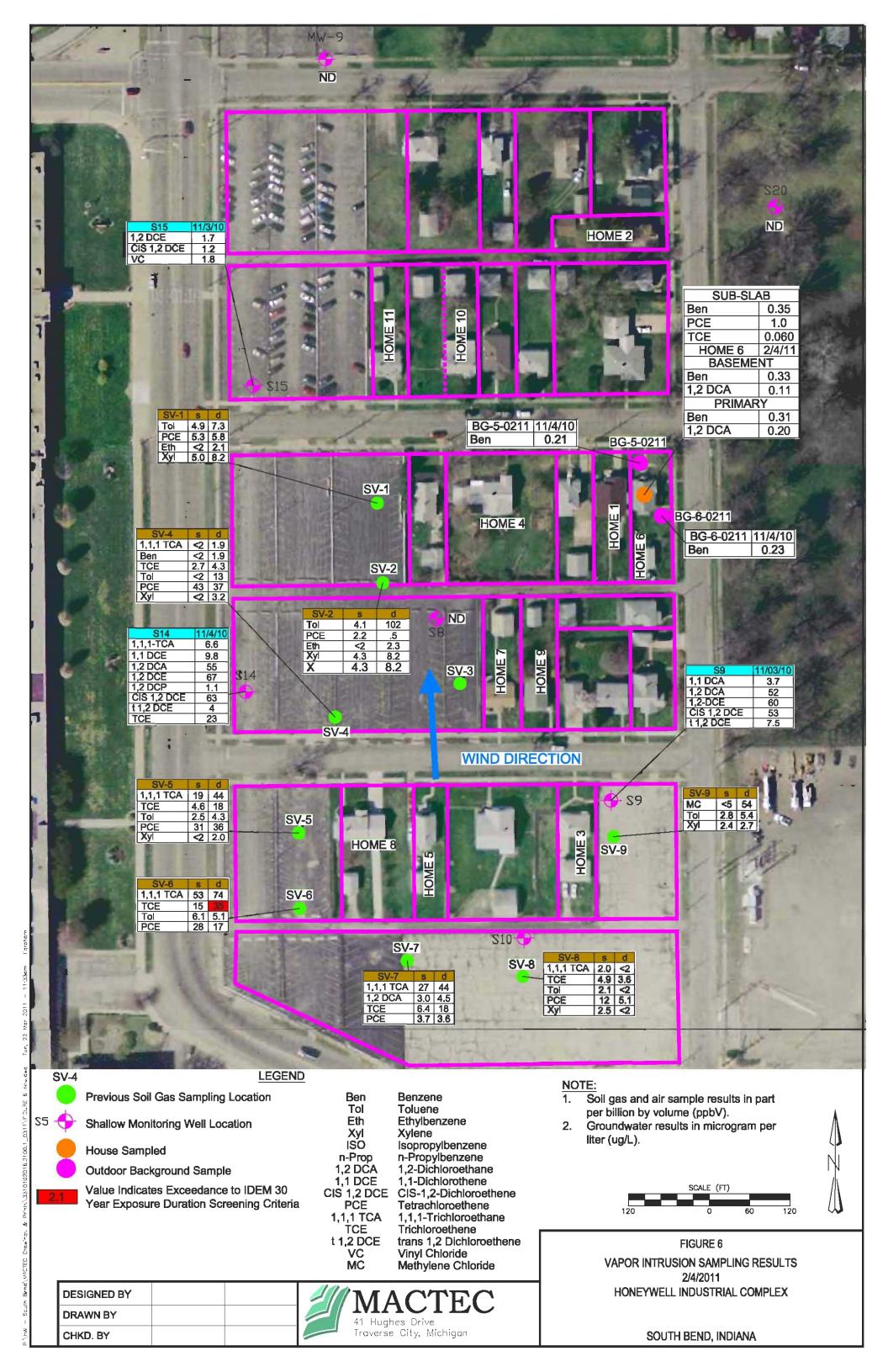


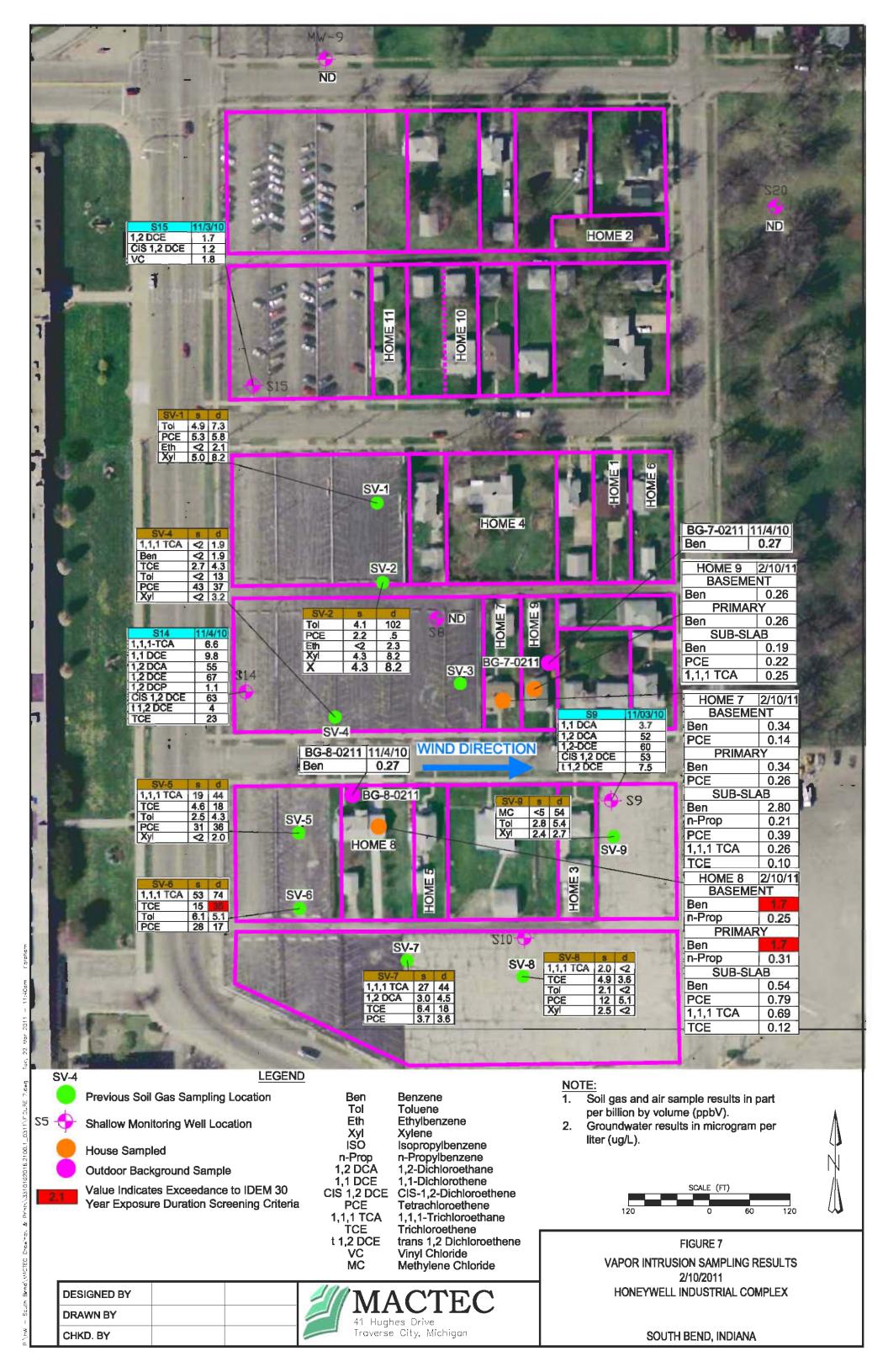


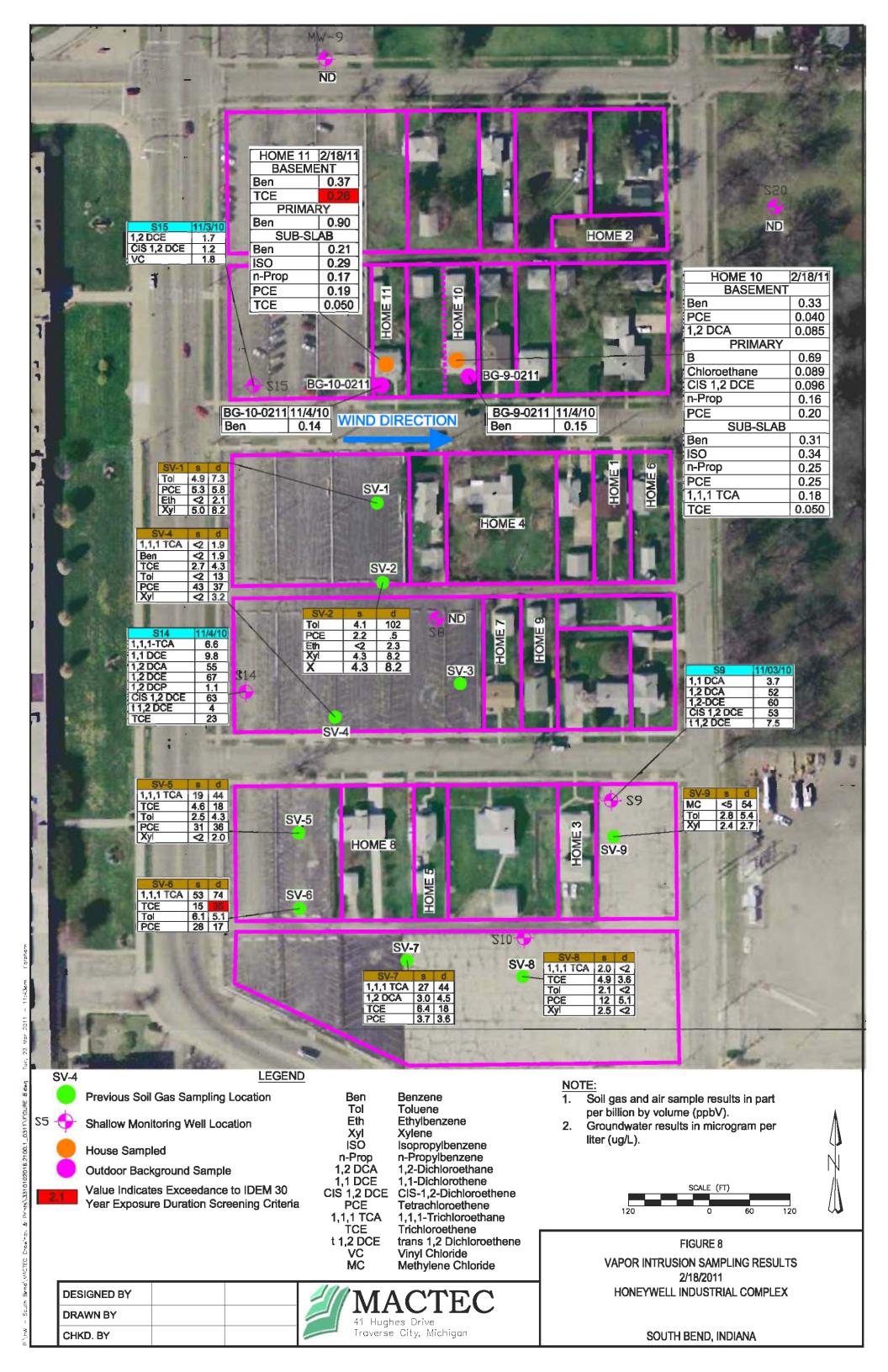












APPENDIX A

INDOOR AIR BUILDING SURVEY CHECKLIST



INDOOR AIR BUILDING SURVEY CHECKLIST

Preparer's Name:	TEVE BUYZE	Date: <u>Z-Z-11</u>
Preparer's Affiliation:	MACTE	Phone #: <u>1-23</u> 63(-602)
Site Name: <u>HWS</u> E	2	Site # 331010Z016
Site Address (include	city and zip): HONFYWELL SOUTH BEND	INSUSTRIAL COMPLEX
Part I – Occupants	SOUTH BEND	, In DIANA
List of Current Occupa	ants/Occupation (include child	lren)
Name (Age)	Address:	Sex Occupation
	(Lot # or apt. #)	(M/F)
Ella M Riffel	719 GOODLAND	FLRED
····		

Name (Age)	Address:	Sex (M/F)	Occupation
	(Lot # or apt. #)	(M/F)	
Ella M Riffel	719 GOODLAND	2.F	RETIREN
	4177.10	all in the work of the out	2
		in the second	
en e			
	E.		

Part II – Building Characteristics

Building type (residential)/ multi-family residential / office / strip mall / commercial / industrial /
other
Describe building: 1-510R 1/2 basement 1/2 CLAW Year constructed: 1930
Sensitive population: day care / nursing home / hospital / school) other (specify):
Number of floors at or above grade:
Number of floors below grade: (full basement / crawl space / slab on grade) SCE ABOUR
Depth of basement below grade surface: $\underline{6}$ ft. Basement size: $\underline{400}$ ft ²
Basement floor construction: concrete)/ dirt / slab / stone / other (specify):
Foundation walls: poured concrete cinder blocks / stone / other (specify):

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Basement sump present? Yes / No Sump pump? Yes / No Water in sump? Yes / No	
Significant cracks present in basement floor? Yes No	
Significant cracks present in basement walls? Yes No	
Are the basement walls or floor sealed with waterproof paint or epoxy coatings? (Yes) No $P_{4/N}$	7
Is there a whole house fan? Yes No	/
Septic system? Yes / Yes (but not used) / No	
Irrigation/private well? Yes (but not used) (No	
Type of ground cover outside of building: grass / concrete / asphalt / other (specify)	
Sub-slab vapor/moisture barrier in place? Yes / No Don't know DIDN'T SEE DURING COR	4 <i>~</i> G
Type of heating system (circle all that apply): hot air circulation heat pump other (specify):	
Type or ventilation system (circle all that apply): <u>central air conditioning</u> mechanical fans bathroom ventilation fans individual air conditioning units kitchen range hood fan outside air intake Type of fuel utilized (circle all that apply): Natural gas electric) fuel oil / wood / coal / solar / kerosene / other (specify):	
Part III – Outside Contaminant Sources	
Contaminated site within 50-ft (BTEX) or 100-ft (Chlorinated)?	
If yes: Site Name: Site Number:	
Other stationary sources nearby (gas stations, emission stacks, etc.):	
Heavy vehicular traffic nearby (or other mobile sources):	

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Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

Potential Sources	Location (s)	Removed
		(Yes / No / NA)
Gasoline storage cans	ADDREE GARAGE	HA NO
Gas-powered equipment		
(mowers, etc)	(SARA96	NO
Kerosene storage cans	NORE	NA
Paints / thinners / strippers	BASEMENT/GARAGE	NO
Cleaning solvents	NONE	NA
Oven cleaners	NONE	NA
Carpet / upholstery cleaners	NONF	NA
Other house cleaning products	Kitchell	NO
Moth balls	NONE	NA
Polishes / waxes	KITCHEN	NA
Insecticides	KITCHEN	NO
Furniture / floor remover	NONE	NA
Nail polish / polish remover	LIVING ROOM/ SPARE ROOM	NO
Hairspray	BATHROOM	110
Cologne / perfume	BEDROOM	NO
Air fresheners	LIVING ROOM/BATH ROOM/ KITCHEN	NA
Fuel tank (inside building)	2 IN BASEMEN NOT USED IN 30 Yrs.	NA
Wood stove or fireplace	DIMNING ROOM NOT IN USE	NA
New Furniture / upholstery	NONE	
New carpeting flooring	NONE	NA
Hobbies – glues, paints,	USED TO PAINT BUT NOT	
lacquers, photographic	IN FIVE YEARS	NA.
darkroom chemicals, etc		,
Scented trees, wreaths,	DERACE A	
potpourri, etc.	POTPORTSI IN LIVING Room	20
Other (specify):		

Part V – Miscellaneous Items

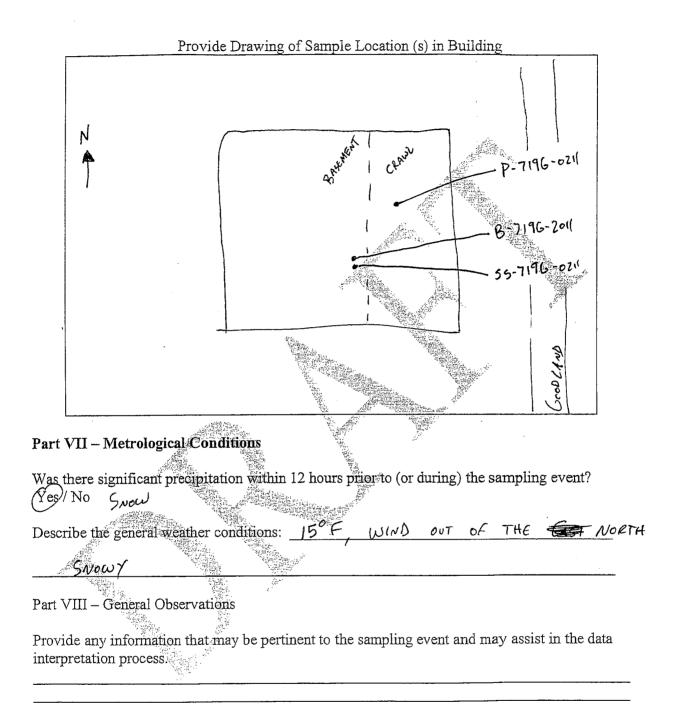
Do an	y occupants of the building smoke?	Yes / No) How o	often?	<u> </u>	
	Last time someone smoked in the bu	uilding?		hours / days ago	ZwKs	Ago
Does t	he building have an attached garage o	lirectly conr	nected to living spa	ace? Yes / No	$\hat{\mathcal{O}}$	
	If so, is a car usually parked in the g	arage?	Yes / No			
	Are gas-powered equipment or cans	of gasoline/	fuels stored in the	garage? Yes/N	То	
		_	······································			

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Do the occupants of the building have their clothes dry cleaned? Yes No
If yes, how often? Weekly / monthly / 3-4 times a year
When was the last dry cleaned garment brought home?
Do any of the occupants use solvents in work? Yes No
If yes, what types of solvents are used?
If yes, are their clothes washed at work? Yes / No
Have any pesticides/herbicides been applied around the building or in the yard? $(Y_{es}) / N_{o}$
If so, when and which chemicals? For ANTS BLACK ROUND TRAPS IN KITCKEN
Has there ever been a fire in the building? Yes / No If yes, when?
Has painting or staining been done in the building in the last 6 months? Y_{es}/N_{o}
If yes, when? and where?
Part VI – Sampling Information
Company/Consultant: MACTEC Phone number: (231) 922- 9050
Sample Source: Indoor Air Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas
Sampler Type: 400 mL – 1.0 L. Summa Canister (6 L. Summa Canister) Other (specify):
Analytical Method: TO-144 TO-15 TO-15 SIM / other:
Laboratory: TEST AMERICA
Sample locations (floor, room): Sub SLAB, BASEMENT, PRIMARY LIVING SPACE
Field/Sample ID# <u>55-7196-0211</u> Field/Sample ID #
Field/Sample ID# $B - 7196 - 0211$ Field/Sample ID #
Field/Sample ID# $(-7196-021)$ Field/Sample ID #
Were "Instructions for Occupants" followed? Yes / No
If not, describe modifications:

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Recommended Instructions for Residents

The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical.
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.
- Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).
- Do not operate or store automobiles in an attached garage.



INDOOR AIR BUILDING SURVEY CHECKLIST

Preparer's Name: <u>STEVE</u> BUYZE	Date: <u>Z-3-1/</u>
Preparer's Affiliation: MACTEC	Phone #: <u>731631-6021</u>
Site Name: HWSB	Site # <u>3310102016</u>
Site Address (include city and zip): <u>Howey WELC</u>	INDUSTRIAL COMPLEX
Part I – Occupants	2 DYPIANA

List of Current Occupants/Occupation (include children)

Name (Age)	Address:		Sex	Occupation
	(Lot # or apt. #)		(M/F)	
Kimberly DAVIS	3002 (on		š F	EUSURANCE SPECIALIST RETIRED
Therese DAUIS	3007 LONG	ley Hue	F.	RETIRED
đ		Sec. 4	and the	
			2 2	

Part II – Building Characteristics

Building type residential / multi-family residential / office / strip mall / commercial / industrial /
other
Describe building: 1-STOR BUNG/OW 3/4 basement Year constructed: 1930
Sensitive population: day care / nursing home / hospital / school / other (specify):
Number of floors at or above grade:
Number of floors below grade: (full basement / crawl space / slab on grade)
Depth of basement below grade surface: ft. Basement size: $\frac{450}{100}$ ft ²
Basement floor construction: concrete/ dirt / slab / stone / other (specify):
Foundation walls: poured concrete cinder blocks) stone / other (specify):
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Basement sump present? Yes (No)	Sump pump?	Yes / No	Water in sump? Yes / No
Significant cracks present in baseme	nt floor?	Yes	INO
Significant cracks present in baseme	nt walls?	Yes	No
Are the basement walls or floor seale	ed with waterpr	oof paint o	or epoxy coatings? Yes No
Is there a whole house fan?	Yes No		
Septic system?	Yes / Yes (bu	ıt not used)	No
Irrigation/private well?	Yes / Yes (bu	it not used)	No
Type of ground cover outside of buil	ding: grass/c	oncrete / a	sphalt / other (specify)
Sub-slab vapor/moisture barrier in pl Type of barrier:	ace? Yes /No)/Don't kn 	IOW
	at apply): radiation ter radiation		steam radiation neater electric baseboard
Type or ventilation system (circle all central air conditioning individual air conditioning ur other (specify): <u>cytopost</u> 1	its kitchen		bathroom ventilation fans d fan outside air intake
Type of fuel utilized (circle all that a Natural gas) electric / fuel of		′ solar / ker	osene / other (specify):
Part III – Outside Contaminant So	ources		
Contaminated site within 50-ft (BTE		hlorinated)	?
If yes: Site Name:		Site Numb	per:
Other stationary sources nearby (gas	stations, emissi	on stacks,	etc.):
Heavy vehicular traffic nearby (or ot	her mobile sour	-ces):	

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

Potential Sources	Location (s)		Removed
			(Yes / No / NA)
Gasoline storage cans	GARAGE		NO
Gas-powered equipment	1		. / 2
(mowers, etc)	(JARAGE		No
Kerosene storage cans	NONE		NA
Paints / thinners / strippers	BACK PORCH		NO
Cleaning solvents	Through OUT.	THE HOUSE	NO
Oven cleaners	NONF		NA
Carpet / upholstery cleaners	NONE A		NA
Other house cleaning products	KITCHEN B	ATHROM	10
Moth balls	NONE		NA
Polishes / waxes	KITCHEN		NO
Insecticides	BATHROOM		NO
Furniture / floor remover	NONE		NA
Nail polish / polish remover	NONE		/N/A
Hairspray	NONE		NIA
Cologne / perfume	LINEN CLOSE		NO
Air fresheners	BATHROOM A	UTO MATO IN LIVING R	
Fuel tank (inside building)	NONE	, 	NA
Wood stove or fireplace	NONE		NA
New Furniture / upholstery	NONE		
New carpeting / flooring	NONE	· · · · · · · · · · · · · · · · · · ·	NA
Hobbies glues, paints,	AID		
lacquers, photographic	7 V V		
darkroom chemicals, etc			
Scented trees, wreaths,	110		
potpourri, etc.	NO		· · · · · · · · · · · · · · · · · · ·
Other (specify):	NO		

Part V – Miscellaneous Items

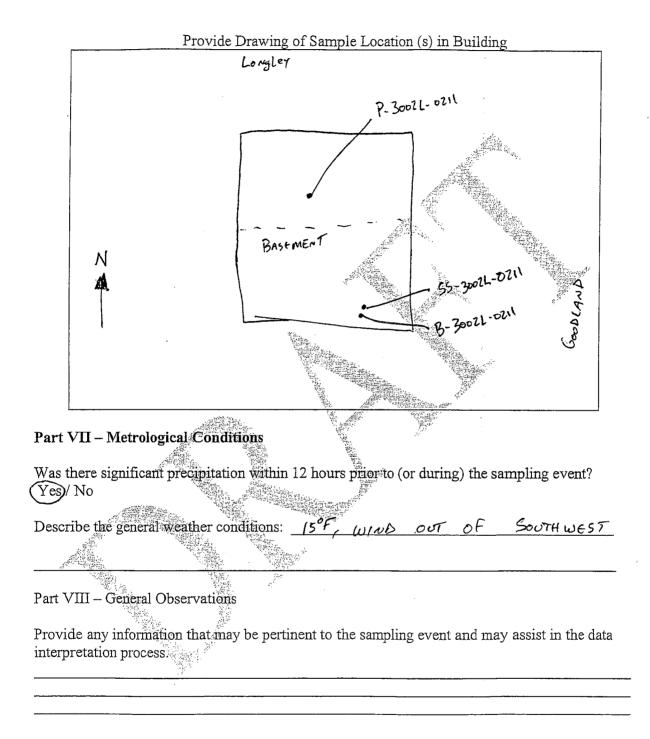
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Do any occupants of the building smoke?	Yes / No) How ofte	en?
Last time someone smoked in the b	uilding? <u>5</u>	6 hc	ours days ago
Does the building have an attached garage	directly conr	ected to living space	? Yes No
If so, is a car usually parked in the g	garage?	Yes / No	
		:	

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? Yes / No

Do the occupants of the building have their clothes dry cleaned? Yes No
If yes, how often? Weekly / monthly / 3-4 times a year
When was the last dry cleaned garment brought home?
Do any of the occupants use solvents in work? Yes No
If yes, what types of solvents are used?
If yes, are their clothes washed at work? Yes / No
Have any pesticides/herbicides been applied around the building or in the yard? Yes N_g
If so, when and which chemicals?
Has there ever been a fire in the building? Yes (No) If yes, when?
Has painting or staining been done in the building in the last 6 months? Yes (No)
If yes, when? and where?
Part VI – Sampling Information
Company/Consultant: MACTEC Phone number: (231)922 - 9050
Sample Source: Indoor Air, Sub-Slab, Near Slab Soil Gas / Exterior Soil Gas
Sampler Type: 400 mL – 1.0 L Summa Canister / 6 L Summa Canister / Other
(specify):
Analytical Method: TO-14A (TO-157 TO-15 SIM / other:
Laboratory: TEST AMERICA Sample locations (floor, room): SUB-SLAB, BASEMENT, PRIMARY LIVING SPAC
Field/Sample ID# <u>55-3002 L - 2011</u> Field/Sample ID #
Field/Sample ID# B-3002L-2011 Field/Sample ID #
Field/Sample ID# $P = 3002L = 201$ Field/Sample ID #
Were "Instructions for Occupants" followed? Yes / No
If not, describe modifications:

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Recommended Instructions for Residents

The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical.
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.

• Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).

• Do not operate or store automobiles in an attached garage.



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INDOOR AIR BUILDING SURVEY CHECKLIST

Preparer's Affiliation: $MACTEC$ Phone #: $73 - 927 - 9050$
Site Name: <u>HWSB</u> Site # <u>3310102016</u>
Site Address (include city and zip): HONEYWELL INDUSTRIAL COMPLEX SOUTH BEND ENDIANA
Part I – Occupants
List of Current Occupants/Occupation (include children)
Name (Age)Address:SexOccupation(Lot # or apt. #)(M/F)
JAMIE SESCANO 3006 LONGLEY AVE F GRAD: STUDENT
JESUS SEITANO GRAD STUDENT
EMA SECTANO + F G MONTHS
Part II – Building Characteristics
Building type residential / multi-family residential / office / strip mall / commercial / industrial /
Describe building: <u>1-570RY BASEMENT</u> Year constructed: <u>1968</u>
Sensitive population: day care / nursing home / hospital / school / other (specify): <u>School Ack</u> oss PARI
Number of floors at or above grade:
Number of floors below grade:(full basementy crawl space / slab on grade)
Depth of basement below grade surface: ft. Basement size: $\frac{1000}{100}$ ft ²
Basement floor construction: concrete) dirt / slab / stone / other (specify):
Foundation walls: poured concrete / cinder blocks / stone / other (specify):

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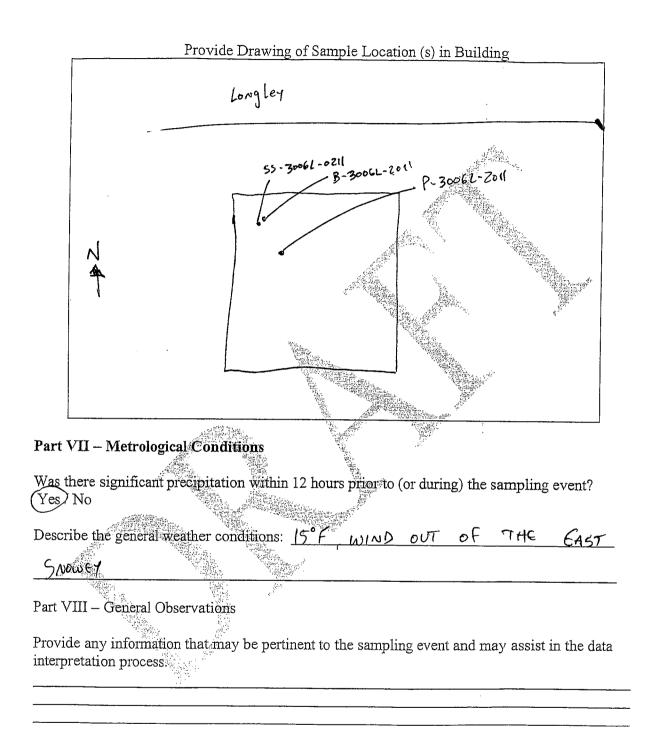
Basement sump present? Yes No Sump pump? Yes / No Water in sump? Yes / No
Significant cracks present in basement floor? (Yes/No MINOR AND Catched Significant cracks present in basement walls? (Yes/No PATCHED
Are the basement walls or floor sealed with waterproof paint or epoxy coatings? (Yes/No Water product
Is there a whole house fan? Yes No
Septic system? Yes / Yes (but not used) No
Irrigation/private well? Yes (but not used) (No
Type of ground cover outside of building: grass concrete / asphalt / other (specify)
Sub-slab vapor/moisture barrier in place? Yes No Don't know Type of barrier:
Type of heating system (circle all that apply): hot air circulation hot air radiation wood steam radiation hot air circulation hot air radiation wood steam radiation heat pump hot water radiation kerøsene heater electric baseboard
Type or ventilation system (circle all that apply): <u>central air conditioning</u> <u>mechanical fans</u> <u>bathroom ventilation fans</u>
individual air conditioning units kitchen range hood fan outside air intake
Type of fuel utilized (circle all that apply): Natural gas electric / fuel oil / wood / coal / solar / kerosene / other (specify):
Part III – Outside Contaminant Sources
Contaminated site within 50-ft (BTEX) or 100-ft (Chlorinated)?
If yes: Site Name: Site Number:
Other stationary sources nearby (gas stations, emission stacks, etc.):
Heavy vehicular traffic nearby (or other mobile sources):

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

Potential Sources	Location (s)	
		Removed
Gasoline storage cans	(SASA9P	(Yes / No / NA)
Gas-powered equipment		NO NO
(mowers, etc)	L GARAGE	No
Kerosene storage cans		
Paints / thinners / strippers	GARAGE BASEMENT	NA
Cleaning solvents	BASEMENT / SIL	10
Oven cleaners	DATENS / KIICKEN SINC UNDER	1 10
Carpet / upholstery cleaners		<i>N/A</i> _
Other house cleaning products	KITCHEN BATHROOM CLOSETS	//A
Moth balls		
Polishes / waxes	GARAGE	- TUA
Insecticides		NO
Furniture / floor remover	BASEMENT	NIA
Nail polish / polish remover	BAS EXTH ROOMS	NO
Hairspray	BATH ROOMS	NO
Cologne / perfume	BATHROOM	NO
Air fresheners		NO NA NO
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New Furniture / upholstery	NEW BED IN BEDROOM	NA
New carpeting / flooring	Contraction Contraction	NO
Hobbies glues, paints,	Saccel	NA
lacquers, photographic	<i>фоссер.</i> Хм <i>Мф</i>	
darkroom chemicals, etc		•
Scented trees, wreaths,		
potpourri, etc.		NA
Other (specify):	SCENTED CAT LITTIC ,	
	BASEMENT, INSENSE	
Part V – Miscellaneous Items		
ري. م		
Do any occupants of the building	smoke? Yes / No How often?	
	<u> </u>	
Last time someone smoked	l in the building? hours /	dorre
	mourb/	days ago
Does the building have an attached	l garage directly connected to living space?	Yes / No
		110
If so, is a car usually parke	d in the garage? (Yes)/No (N WW	TER
Are gas normand	<u> </u>	
ruc gas-powered equipmer	it or cans of gasoline/fuels stored in the garage?	TYPE NO
		105 110
DEW Dratt Vapor Intrusion Pilo	t Program Guidance – April 26, 2006	Dege IV
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Do the occupants of the building have their clothes dry cleaned? Yes \overline{No}		
If yes, how often? Weekly / monthly / 3-4 times a year		
When was the last dry cleaned garment brought home?		
Do any of the occupants use solvents in work? Yes No		
If yes, what types of solvents are used?		
If yes, are their clothes washed at work? Yes / No		
Have any pesticides/herbicides been applied around the building or in the yard? Yes No		
If so, when and which chemicals?		
Has there ever been a fire in the building? Yes / No? If yes, when?		
Has painting or staining been done in the building in the last 6 months?		
If yes, when? Dec Zo-30 th and where? <u>Kitchen</u>		
Part VI – Sampling Information		
Company/Consultant: <u>MACTEC</u> Phone number: (231) <u>972</u> - <u>9050</u>		
Sample Source: Indoor And Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas		
Sampler Type: 400 mL – 1.01. Summa Cariister / 6 L Summa Canister / Other		
Analytical Method: TO-14A (TO-137 FO-15 SIM / other:		
Laboratory: TEST AMERICA		
Sample locations (floor, room): Besement Tub-slab Field/Sample ID# 55-3006L-0211 Field/Sample ID# B-3006L-0211		
Field/Sample ID# P-3006L-0211 Field/Sample ID #		
Field/Sample ID# Field/Sample ID #		
Were "Instructions for Occupants" followed? Yes / No		
If not, describe modifications:		



The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical.
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.

• Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).

• Do not operate or store automobiles in an attached garage.



Preparer's Name: 5	TEVE BUYZE	Date: 2-2-11		
Preparer's Affiliation: MACTEC		Phone #:		
Site Name: <u>HW5B</u>	· · · · · · · · · · · · · · · · · · ·	Site # _ <u>7310 10 2016</u>		
Site Address (include	city and zip): <u>Howeywell</u>	INDUSTRUL COMP	(6 <u>x</u>	
Part I - Occupants				
List of Current Occupa	ants/Occupation (include chi	dren)		
Name (Age)	Address:	Sex Occupati	on	
	(Lot # or apt. #)	(M/F)		
LOUIS VICEN	3018 Longley AUE	F Ketil	57	
	0,			
	Real Pro-	1955g		

Part II – Building Characteristics

Building type: residential / multi-family residential / office / strip mall / commercial / industrial / Describe building: 1-510013/4 base MENT Year constructed: 1934Sensitive population: day care / nursing home / hospital / school / other (specify): ______ Number of floors at or above grade: ______ Number of floors below grade: _______ (full basement / crawl space / slab on grade) 3/4 basement / 1/4 Cr. Depth of basement below grade surface: _______ fn. Basement size: 1200 ft² Basement floor construction: concrete / dirt / slab / stone / other (specify): _______ Foundation walls: poured concrete cinder blocks stone / other (specify): _______

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Basement sump present? Yes / No Sump pump? Yes / No Water in sump? Yes / No				
Significant cracks present in basement floor? Yes / No				
Significant cracks present in basement walls? Yes No				
Are the basement walls or floor sealed with waterproof paint or epoxy coatings? Ves/No P_{AV}	- ا ئە			
Is there a whole house fan? Yes No				
Septic system? Yes (but not used) No				
Irrigation/private well? Yes / Yes (but not used) No				
Type of ground cover outside of building: grass) concrete / asphalt / other (specify)				
Sub-slab vapor/moisture barrier in place? Yes No/ Don't know Type of barrier:				
Type of heating system (circle all that apply): hot air circulation hot air radiation wood steam radiation heat pump hot water radiation kerosene heater electric baseboard other (specify):				
Type or ventilation system (circle all that apply): (central air conditioning) mechanical fans) bathroom ventilation fans				
individual air conditioning units kitchen range hood fan outside air intake other (specify):				
Type of fuel utilized (circle all that apply):				
Natural gas) electric / fuel oil / wood / coal / solar / kerosene / other (specify):				
Part III – Outside Contaminant Sources				
Contaminated site within 50-ft (BTEX) or 100-ft (Chlorinated)?				
If yes: Site Name: Site Number:				
Other stationary sources nearby (gas stations, emission stacks, etc.):				
Heavy vehicular traffic nearby (or other mobile sources):				

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

Potential Sources	Location (s)	Removed
	,	·	(Yes / No / NA)
Gasoline storage cans	GARAGE		ND
Gas-powered equipment			
(mowers, etc)	GARAGE (GARAGE NONE BAGEMENT KITCHEN, BATHROOM, B NONE KITCHEN, BASEMENT KITCHEN		NO
Kerosene storage cans	NONE		NA
Paints / thinners / strippers	BAGEMENT		No
Cleaning solvents	KITCHEN BATHROOM B	ASEMENT	ND
Oven cleaners	NONE		NO
Carpet / upholstery cleaners	KITCHEN, BAGEMENT		AD
Other house cleaning products	KITCHEN		No
Moth balls	NONE		NO
Polishes / waxes	LITCHEN .		A(V
Insecticides	KITCHEN BASEN	LENT	SO
Furniture / floor remover	THE BASEMENT		<u> </u>
Nail polish / polish remover	NONF		AVD
Hairspray	NONE	Magnat .	NO
Cologne / perfume	NONE		ND
Air fresheners	NONE	6	ND
Fuel tank (inside building)	NONE		NA
Wood stove or fireplace	NONE		NA
New Furniture / upholstery	NONE		
New carpeting / flooring	NONE		NA
Hobbies – glues, paints,			•
lacquers, photographic	Sveing		
darkroom chemicals, etc			
Scented trees, wreaths,			10
potpourri, etc.	NONE		NO
Other (specify):	LAST THURG. BROKEN GAG	VALUE	
	OUTGIDE BIDg.	······································	

Part V – Miscellaneous Items

Do any occupants of the building smoke? Yes / How often? Last time someone smoked in the building? hours / days ago Does the building have an attached garage directly connected to living space? Ye\$ / No (⁽Yes)/ No If so, is a car usually parked in the garage? Are gas-powered equipment or cans of gasoline/fuels stored in the garage?

Do the occupants of the building have their clothes dry cleaned? Yes / If yes, how often? Weekly / monthly / 3-4 times a year When was the last dry cleaned garment brought home? Do any of the occupants use solvents in work? Yes XNo If yes, what types of solvents are used? If yes, are their clothes washed at work? Yes / No Have any pesticides/herbicides been applied around the building or in the yard? Yes / If so, when and which chemicals? Has there ever been a fire in the building? Yes //No If yes, when? Has painting or staining been done in the building in the last 6 months? Yes If yes, when? and where? Part VI - Sampling Information Company/Consultant: MACTEC Phone number: (231) 922 - 9050 Sample Source: (Indoor Any Sub-Slab) Near Slab Soil Gas / Exterior Soil Gas Sampler Type: 400 mL - 1.0 L Summa Canister (6 L Summa Canister)/ Other (specify): Analytical Method: TO-14A (TO-15/TO-15 SIM / other: Laboratory: TEST AMERICA Sample locations (Toor, room): Sub-SLAB, BASEMENT, PRIMARY LIVING SPACE

 Field/Sample ID#

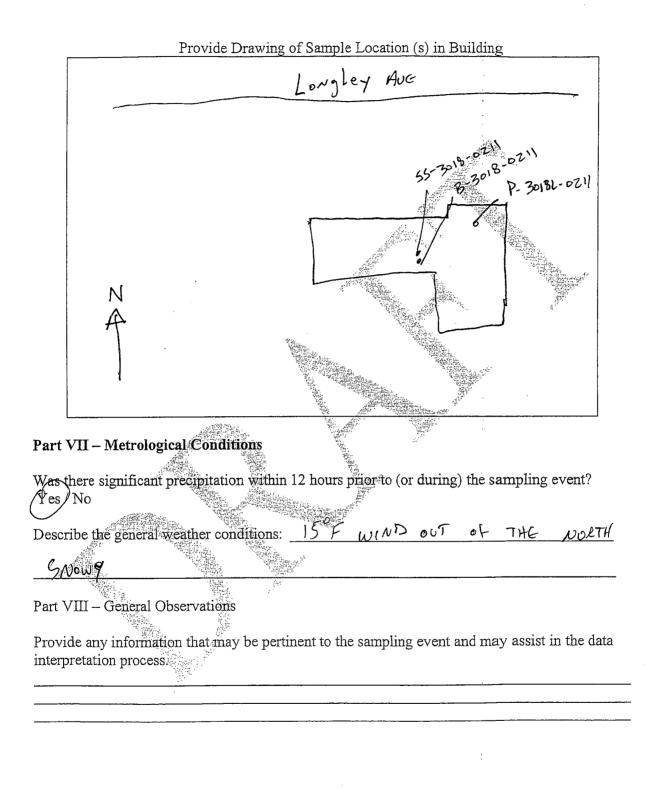
 Field/Sample ID#

 Field/Sample ID#

 Field/Sample ID#

 Field/Sample ID# <u>P-3018 L-0211</u> Field/Sample ID # _____ Were "Instructions for Occupants" followed? Yes / No If not, describe modifications:

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The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.
- Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).
- Do not operate or store automobiles in an attached garage.



Preparer's Name: STEVEN	BUYZE	Date: 🗾	2-18-11	~
Preparer's Affiliation: MACTEC		Phone #:	231962-	9050
Site Name: <u>HWSB</u>		Site #	31010201	6
Site Address (include city and zip):	HONEYWEL	2 n	DUSTRIAL	COMPLEX
Part I – Occupants	SOUTH B	END I	NDIANA	

List of Current Occupants/Occupation (include children)

Name (Age)	Address:		Sex 3	Occupation	
7	(Lot # or apt. #)		(MI/F) ¹		
STEPHENIE GRUNDY		gLe y 学校		Carbon and A	U
				2017 2017 2017	
		an a			

J.NAVAILABLE

Part II - Building Characteristics

Building type: residential / multi-family residential / office / strip mall / commercial / industrial / other

Describe building:		Year constructed:	
Training and	2017		

Sensitive population: day care / nursing home / hospital / school / other (specify):

Number of floors at or above grade: _____

Number of floors below grade: _____ (full basement / crawl space / slab on grade)

Depth of basement below grade surface: _____ ft. Basement size: _____ ft^2

Basement floor construction: concrete / dirt / slab / stone / other (specify): _____

Foundation walls: poured concrete / cinder blocks / stone / other (specify):

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Basement sump present? Yes / No	Sump pump?	Yes / No	Water in sump? Yes / No
Significant cracks present in baseme			/No
Significant cracks present in basement	nt walls?	Yes	/No
Are the basement walls or floor seale	d with waterp	roof paint c	r epoxy coatings? Yes / No
Is there a whole house fan?	Yes / No		
Septic system?	Yes / Yes (bı	ıt not used)	/ <i>No</i>
Irrigation/private well?	Yes / Yes (bu	t not used)	/No
Type of ground cover outside of build	ling: grass/c	oncrete / as	phalt / other (specify)
Sub-slab vapor/moisture barrier in pla Type of barrier:	.ce? Yes / No	/Don't kn 	ow
Type of heating system (circle all that hot air circulation hot air r heat pump hot wate other (specify):	apply): adiation r radiation	wood kerøsene h	steam radiation eater electric baseboard
Type or ventilation system (circle all t central air conditioning individual air conditioning unit other (specify):	mechan	ical fans range hood	bathroom ventilation fans fan outside air intake
Type of fuel utilized (circle all that app Natural gas / electric / fuel oil /	oly): wood / coal / ;	solar / kero	sene / other (specify):
Part III – Outside Contaminant Sour			
Contaminated site within 50-ft (BTEX)	or 100-ft (Ch	lorinated)?	
If yes: Site Name:			r:
Other stationary sources nearby (gas sta	ations, emissio	n stacks, et	c.):
Heavy vehicular traffic nearby (or other	mobile source	es):	
			A second s

Part IV -- Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

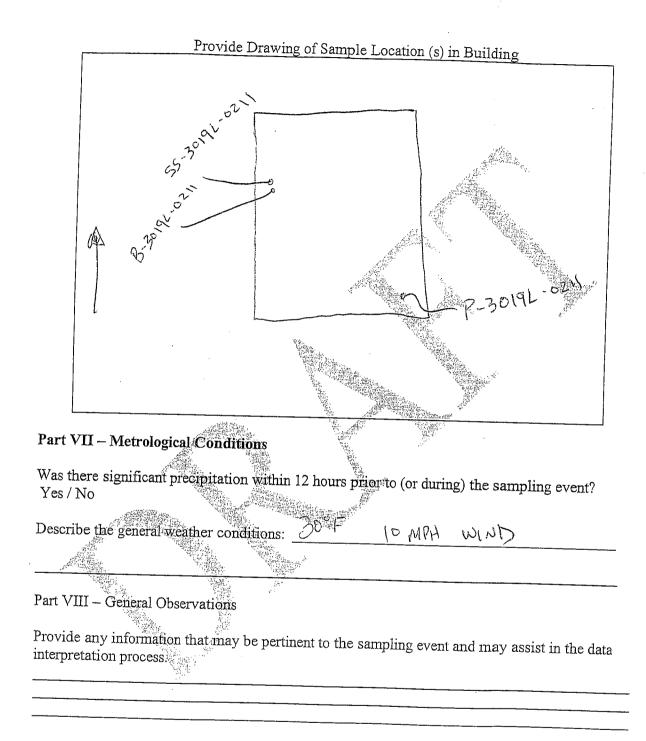
Potential Sources	Location (s)	
	Location (s)	Removed
Gasoline storage cans	2.44图影响	(Yes/No/NA)
Gas-powered equipment		<u> </u>
(mowers, etc)		
Kerosene storage cans		
Paints / thinners / strippers		
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners		TENTIC:
Other house cleaning products		
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor remover		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New Furniture / upholstery		
New carpeting / flooring		NA
Hobbies -glues, paints,		1111
lacquers, photographic		
darkroom chemicals, etc		
Scented trees, wreaths,		
potpourri, etc.		
Other (specify):		
Sec. 2		

Part V - Miscellaneous Items

Do any occupants of the building smoke?	Yes / No	How often?	
Last time someone smoked in the bu	uilding?	hours / d	ays ago
Does the building have an attached garage of	lirectly com	nected to living space?	Yes / No
If so, is a car usually parked in the g	arage?	Yes / No	
Are gas-powered equipment or cans	of gasoline/	fuels stored in the garage?	Yes / No

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Do the occupants of the building have their clothes dry cleaned? Yes / No
If yes, how often? Weekly / monthly / 3-4 times a year
When was the last dry cleaned garment brought home?
Do any of the occupants use solvents in work? Yes / No
If yes, what types of solvents are used?
If yes, are their clothes washed at work? Yes / No
Have any pesticides/herbicides been applied around the building or in the yard? Yes / No
If so, when and which chemicals?
Has there ever been a fire in the building? Yes / No If yes, when?
Has painting or staining been done in the building in the last 6 months? Yes / No
If yes, when? and where?
Part VI – Sampling Information
Company/Consultant: <u>MACTEC</u> Phone number: (23,) <u>922</u> - <u>9050</u>
Sample Source: Indoor Air (Sub-Slab) Near Slab Soil Gas / Exterior Soil Gas
Sampler Type: 400 mL – 1.0 L Summa Canïster / 6 L Summa Canister / Other (specify):
Analytical Method: TO-14A/ TO-15/TO-15 SIM / other:
Laboratory: TEST AMERICA
Sample locations (floor, room): Sub-SLAB, BASEMENT, PRIMARY LIVING SPACE
Field/Sample ID# 3019 Lowgley Field/Sample ID # $P-3019L-0211$
Field/Sample ID# $55-3019 L - 021$ Field/Sample ID #
Field/Sample ID# B-3019L-6211 Field/Sample ID #
Were "Instructions for Occupants" followed? Yes / No
If not, describe modifications:



The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical.
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.

• Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).

• Do not operate or store automobiles in an attached garage.



Preparer's Name:	JEVEN BUYZ	<u>E</u> 1	Date: <u>2-</u> 9		
Preparer's Affiliation:	MACTEC	F	Phone #:3	-631-6021	_
Site Name: HW6B		S	Site # $33)$	0102016	
Site Address (include	city and zip): HowE	YWELL	TNDUSTR	IAL COMPLEX	
Part I – Occupants		ξ.	INDIAN	↑	Anny 41 ⁴⁷ Anny 41 ⁴⁷ Anny 41 ⁴⁷
List of Current Occup		ude childr	1	· · · · · · · · · · · · · · · · · · ·	
Name (Age)	Address: (Lot # or apt. #)		Sex (M/F)	Occupation	MAILING
SLIAGLA FREDRICK			S F	COMETALGIST	PO BOX 791
ROBERT FREDRICK			M	STUNENT	PO BOX 791 South Bend, Fr 46624
MALIK FREDRICK			M	STUDENT	
·					46627
		and the second second			
A					
		¥.		· · · · · · · · · · · · · · · · · · ·	
Part II – Building Ch	aracteristics				
Building type (residential) multi-family residential / office / strip mall / commercial / industrial / other					
Describe building:	- STORY, 3 be ?	Z·bA.	Year con	nstructed: 1940) ⁽ >
Sensitive population:	day care / nursing ho	me / hosp	ital (school) c	other (specify):	
Number of floors at or above grade:					
Number of floors below grade:(full basement) crawl space / slab on grade)					
Depth of basement bel	ow grade surface:	2ft	Basement size	<u>950</u> ft ²	
Basement floor constru	uction: concrete)/ dir	t / slab / st	tone / other (sp	ecify):	
Foundation walls: po	oured concrete cinder	rblocks	stone / other (s	pecify):	
IDEM Draft Vapor In	trusion Pilot Program	m Guidar	nce – April 26	, 2006 Page	e IV - 1

Basement sump present? Yes No Sun	np pump? Yes / No Water in sump? Yes / No
Significant cracks present in basement flo	
Significant cracks present in basement wa	alls? (Yes) No NOT VISABLE BECAUSE of
Are the basement walls or floor sealed wi	alls? $(Yes)/No$ NOT VISABLE BECAUSE of PANELING th waterproof paint or epoxy coatings? $(Yes)/No$ PAINT
Is there a whole house fan? Ye	
Septic system? Ye.	s / Yes (but not used) / No
Irrigation/private well? Yes	s / Yes (but not used)
Type of ground cover outside of building:	grass concrete / asphalt / other (specify)
Sub-slab vapor/moisture barrier in place? Type of barrier:	
Type of heating system (circle all that apply hot air circulation hot air radiat heat pump hot water rad other (specify):	y); ion wood steam radiation liation kerosene heater electric baseboard
Type or ventilation system (circle all that a central air conditioning bloge / individual air conditioning units) other (specify):	pply): mechanical fans kitchen range hood fan outside air intake
Type of fuel utilized (circle all that apply): Natural gas (electric) fuel oil //.woo Part III – Outside Contaminant Sources	d / coal / solar / kerosene / other (specify):
1 M 1 M 1 M 1 M 1 M 1 M 1 M 1 M 1 M 1 M	
If yes: Site Name:	
	e, emission stacks, etc.):
Heavy vehicular traffic nearby (or other mob	vile sources):

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

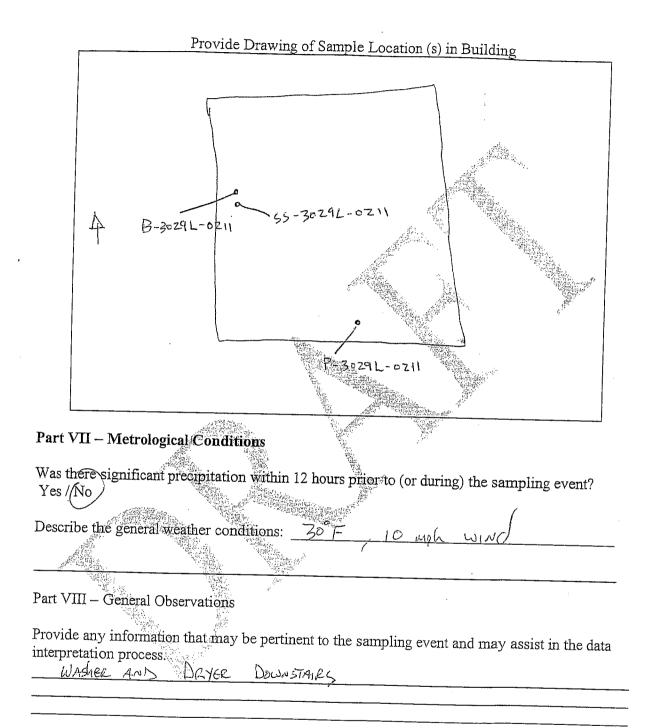
Potential Sources	Location (s)		Removed
Gasoline storage cans	GARAGE	and the second	(Yes/No/NA)
Gas-powered equipment (mowers, etc)	GARAGE NONE BASEMENT GAR		NO
Kerosene storage cans	NONE		NA
Paints / thinners / strippers	BASEMENT GAR	AGE Vere	NO
Cleaning solvents	GABAGE HOUSE		NO
Oven cleaners	BASEMENT		n10
Carpet / upholstery cleaners	NONE	No. Van	NIA
Other house cleaning products	House		NO
Moth balls	NONE	······································	NIA
Polishes / waxes	BASEMENT	à.	NO
Insecticides	BASEMENT GARA	GE	NO
Furniture / floor remover	NONF		NO
Nail polish / polish remover	UPSTAIRS (HOUSE)		NO
Hairspray	UPSTAIRS (HOUSE)		NO
Cologne / perfume	REFRIDGRATOR	<i>.</i>	20
Air fresheners	IPSTAIRS DOWNSTAL	RS	10
Fuel tank (inside building)	MONE		NA
Wood stove or fireplace	NONE		NA
New Furniture / upholstery	NONE		
New carpeting / flooring	NONE		NA
Hobbies – glues, paints,	PAINTING IN HOUS	54	
lacquers, photographic			ASID .
darkroom chemicals, etc			1.0
Scented trees, wreaths,	NONE		A 5 [A
potpourri, etc.	7007E		NA
Other (specify):		· · · · · · · · · · · · · · · · · · ·	

Part V – Miscellaneous Items

2.5.

Do any occupants of the building smoke?	(Yes) No	How often?	Every DAY
Last time someone smoked in the b	<u> </u>		
Does the building have an attached garage	directly connected ·	to living space?	Yes No
If so, is a car usually parked in the	garage? Yes / J	No	
Are gas-powered equipment or can	s of gasoline/fuels s	tored in the garage?	Yes / No

Do the occupants of the building have their clothes dry cleaned? Yes No
If yes, how often? Weekly / monthly / 3-4 times a year
When was the last dry cleaned garment brought home?
Do any of the occupants use solvents in work?
If yes, what types of solvents are used? <u>Polyth Removers</u>
If yes, are their clothes washed at work? Yes / No
Have any pesticides/herbicides been applied around the building or in the yard? V_{es} No
If so, when and which chemicals? <u>LAST SUMMER INSECT Killer</u> AROUND Has there ever been a fire in the building? <u>Yes No?</u> If yes, when?
Has there ever been a fire in the building? Yes No If yes, when?
Has painting or staining been done in the building in the last 6 months?
If yes, when? OCTOR NOU. and where? FRONT DOOR
Part VI – Sampling Information
Company/Consultant: MACTEC Phone number: (231) 922- 9050
Sample Source: Indoor Air / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas
Sampler Type: 400 mL – 1.0 L Summa Cariister (6 L Summa Canister) Other
(specify)
Analytical Method: TO-14A (TO-15 / TO-15 SIM / other:
Laboratory: <u>TEST AMERICA</u>
Sample locations (floor, room):
Field/Sample ID# $55 - 3029(L - 021)$ Field/Sample ID #
Field/Sample ID# B - 3029L - 0211 Field/Sample ID #
Field/Sample ID# P-3029L-0211 Field/Sample ID #
Were "Instructions for Occupants" followed? Yes / No
If not, describe modifications:



The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.

• Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).

• Do not operate or store automobiles in an attached garage.



Preparer's Name: 5	TEVE BUYZE	Date:	2-1-11	
Preparer's Affiliation:	MACTEC	Phone #:	23 631-	6021
Site Name: <u>HWSE</u>	2	Site #	3310102016	
Site Address (include	city and zip): <u>Hower</u> ו South	WELL INDU	STRAL COMPL	ex
Part I – Occupants	2007H	REND THUN	4~ 4	
List of Current Occupa	ants/Occupation (includ	e children)		·*
Name (Age)	Address:	Sex	Occupation	1

Name (Age)	Address:		bex 👋 🛞	Occupation
	(Lot # or apt. #)		(M/F)	
Michael B. Rosema	N 3010-Rogers	STREET	M	NONF
	U			
	40° 8			
			يني بين ماني	
		24 A A A A A A A A A A A A A A A A A A A		
	weetsets all the states as	all all shows and		

Part II – Building Characteristics

Building type (residential /)multi-family residential / office / strip mall / commercial / industrial /
other
Describe building: 1-STORY, 14 BASEMENT Year constructed: 1927
Sensitive population: day care / nursing home / hospital (school) other (specify):
Number of floors at or above grade:
Number of floors below grade: (full basement / crawl space / slab on grade) //4 RASEMENT
Depth of basement below grade surface: ft . Basement size: goo ft ²
Basement floor construction: concrete) dirt / slab / stone / other (specify):
Foundation walls: poured concrete (cinder blocks) stone / other (specify):
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Basement sump present?	Sump pump? Yes No Water in sump? Yes No
Significant cracks present in basemen	
Significant cracks present in basemen	It walls? Yes No NOTE: WALLS COURED WITH WOOD PANEL
Are the basement walls or floor sealed	d with waterproof paint or epoxy coatings? (Yes)/No PAINT
Is there a whole house fan?	Yes/No UPSTAIRS ROOMS HAVE Ceiling FANS
Septic system?	Yes / Yes (but not used) / No
Irrigation/private well?	Yes / Yes (but not used) /(No
Type of ground cover outside of building	ing: grass concrete / asphalt / other (specify)
Sub-slab vapor/moisture barrier in plac Type of barrier:	ve? Yes / No / Don't know
heat pump hot water other (specify): Type or ventilation system (circle all that central air conditioning) individual air conditioning units other (specify):	diation wood steam radiation radiation kerosene heater electric baseboard at apply): mechanical fans bathroom ventilation fans kitchen range hood fan outside air intake
Type of fuel utilized (circle all that apply Natural gas) electric / fuel oil / w Part III – Outside Contaminant Source	wood / coal / solar / kerosene / other (specify):
Contaminated site within 50-ft (BTEX) o	or 100-ft (Chlorinated)?
If yes: Site Name:	Site Number:
Other stationary sources nearby (gas stational station of the stational station of the station o	ions, emission stacks, etc.):
Heavy vehicular traffic nearby (or other n	nobile sources):

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Part IV - Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

Potential Sources	Location (s)	Removed
		(Yes / No / NA)
Gasoline storage cans	(JALAGE	NO NO
Gas-powered equipment	A fort	
(mowers, etc)	GARAGE	· · · ·
Kerosene storage cans	NONE	NA NA
Paints / thinners / strippers	GARAGE	NO
Cleaning solvents	GARAGE NONE	1 ma 21 mile
Oven cleaners	KITCHEN	NO
Carpet / upholstery cleaners	NONE	NO NA
Other house cleaning products	NONE	0/0/P
Moth balls	NONE	NA
Polishes / waxes	NONE	NA
Insecticides	NONE	107
Furniture / floor remover	NONF	
Nail polish / polish remover	NONE	
Hairspray	NONE	
Cologne / perfume	NONE	
Air fresheners	NONE	
Fuel tank (inside building)	NONE	NA
Wood stove or fireplace	NONE	NA
New Furniture / upholstery	MONE	
New carpeting / flooring	NONE	NA
Hobbies – glues, paints,	IN GARAGE GLASS DESIGN	
lacquers, photographic	LN ON TO CULTURE DESIGN	
darkroom chemicals, etc		
Scented trees, wreaths,	NONE, GARAND	
potpourri, etc.	North Change	
Other (specify):		

Part V – Miscellaneous Items

Do any occupants of the building smoke?

Yes / No

How often?

Last time someone smoked in the building? ______ hours / days ago

Does the building have an attached garage directly connected to living space?

Yes /No

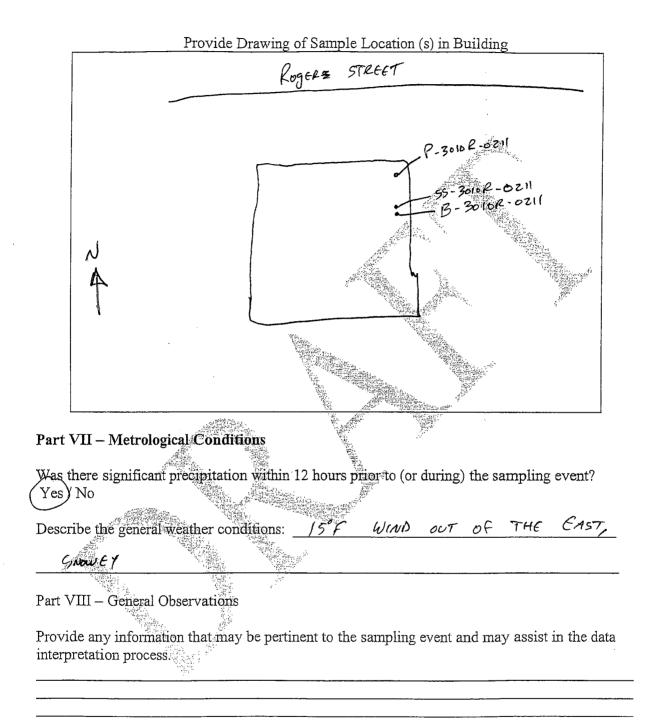
If so, is a car usually parked in the garage? Yes / No

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? (Ye)

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Do the occupants of the building have their clothes dry cleaned? (Yes)/No
If yes, how often? Weekly /(monthly)/ 3-4 times a year
When was the last dry cleaned garment brought home? $2 - \omega k_s AGO$
Do any of the occupants use solvents in work? Yes / No
If yes, what types of solvents are used?
If yes, are their clothes washed at work? Yes / No
Have any pesticides/herbicides been applied around the building or in the yard? Yes \sqrt{No}
If so, when and which chemicals?
Has there ever been a fire in the building? Yes / No. If yes, when?
Has painting or staining been done in the building in the last 6 months? Yes N_{o}
If yes, when? and where?
Part VI – Sampling Information
Company/Consultant: MACTEC Phone number: (231) 922 - 9050
Sample Source: (Indoor Air)/Sub-Slad/ Near Slab Soil Gas / Exterior Soil Gas
Sampler Type: 400 mL - 1.0 L Summa Canister / 6 L Summa Canister / Other
(specify): Analytical Method: TO-14A / TO-15 TO-15 SIM / other:
Laboratory: TEST AMERICA
Sample locations (floor, room): SUB SLAB, BASEMENT, PRIMARY LIVING SPACE
Field/Sample ID# 55-3010 R - 0211 Field/Sample ID #
Field/Sample ID# <u>B-3010 R-0211</u> Field/Sample ID #
Field/Sample ID# $P - 3010 R - 0211$ Field/Sample ID #
Were "Instructions for Occupants" followed? Yes / No
If not, describe modifications:

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The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical.
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.

• Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).

• Do not operate or store automobiles in an attached garage.



Preparer's Name: <u>57</u>	EUE BUYZE	Date: <u>2-9</u>	-1)	
Preparer's Affiliation: 🖊	1ACTEC	Phone #: 7.3	922-9050	
Site Name: HWSB		Site # <u>33/010</u>		
Site Address (include city	and zip): Hovey well	INDUSTRIAL	COMPLEX	
Part I – Occupants	SOUTH BE		INA .	 -
List of Current Occupants	of Occupation (include chil	dren)	i i i i i i i i i i i i i i i i i i i	
Name (Age) Ac	ddress:	Sex	Occupation	
	ot # or apt. #)	(M/F)	Socupution	
PATRICIA (BYRD)	DEFLICKSON	F I	Police office	20
NOTE: Z DAY	YS A WEEK			-
2	013 Roger STROET			
		2 39 30 1 		
		2		
h				
		·		
Part II – Building Chara	eteristics			
Building type: residential	multi-family residential	office / strip mal	1/0000000000000000000000000000000000000	
other		onnee / surp mai	1 / commercial / indus	strial /
Describe building: 1-670	RY, Full BASEMENT	Year cons	structed: 1957 a	R 19/7
Sensitive population: day				<u></u> /6/
Number of floors at or abo				
Number of floors below gra	ade: (full basen	nent) crawl space	:/slab on grade)	
Depth of basement below g	rade surface: ft.	Basement size.	800 ft ²	
Basement floor construction	n concrete/ dirt / slab / ;	stone / other (spec	cify):	
Foundation walls: poured	concrete /cinder blocks	stone / other (spe	cify):	
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	sin ingran Gulua	nue – April 26, 2	2006 Page IV	- 1

Basement sump present? Yes / No Sump pump? Yes / No Water in sump? Yes / No
Significant cracks present in basement floor? Yes No
Significant cracks present in basement walls? Yes No
Are the basement walls or floor sealed with waterproof paint or epoxy coatings? $(Yes)/No$ PAINT
Is there a whole house fan? Yes / No
Septic system? Yes / Yes (but not used) (No
Irrigation/private well? Yes / Yes (but not used) / No
Type of ground cover outside of building: grass / concrete / asphalt / other (specify)
Sub-slab vapor/moisture barrier in place? Yes / No / Con t know Type of barrier:
Type of heating system (circle all that apply); hot air circulation hot water radiation kerosene heater electric baseboard
Type or ventilation system (circle all that apply): central air conditioning individual air conditioning units other (specify):
Type of fuel utilized (circle all that apply): Natural gas electric / fuel oil / wood / coal / solar / kerosene / other (specify):
Part III – Outside Contaminant Sources
Contaminated site within 50-ft (BTEX) or 100-ft (Chlorinated)?
If yes: Site Name: Site Number:
Other stationary sources nearby (gas stations, emission stacks, etc.):
Heavy vehicular traffic nearby (or other mobile sources):

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Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

Potential Sources	Location (s)	Removed
		(Yes / No / NA)
Gasoline storage cans	Detruched GrorAge (MAYbe)	1/0
Gas-powered equipment		
(mowers, etc)	I I ONTE	
Kerosene storage cans	NONE	
Paints / thinners / strippers	Atom PAWT IN BASEMON	T NO
Cleaning solvents	BASEMENT	<u> </u>
Oven cleaners	NONE	
Carpet / upholstery cleaners	NONE	1207. JAN
Other house cleaning products	BASEMIENT	2000 (2000) 2000 (2000)
Moth balls	NONE	
Polishes / waxes	NONE	
Insecticides	NONE	
Furniture / floor remover	NONE	
Nail polish / polish remover	NONE	
Hairspray	NONE	
Cologne / perfume	NONE	
Air fresheners	NONE	
Fuel tank (inside building)	NONE	NA
Wood stove or fireplace	NONE	NA
New Furniture / upholstery	MANE	
New carpeting / flooring	NONE	NA
Hobbies - glues, paints,		11/1
lacquers, photographic	NONE	
darkroom chemicals, etc		
Scented trees, wreaths,		
potpourri, etc.	NONE	
Other (specify):		

Part V – Miscellaneous Items

Do any occupants of the building smoke?

Yes No

How often?

Last time someone smoked in the building? ______ hours / days ago

Does the building have an attached garage directly connected to living space?

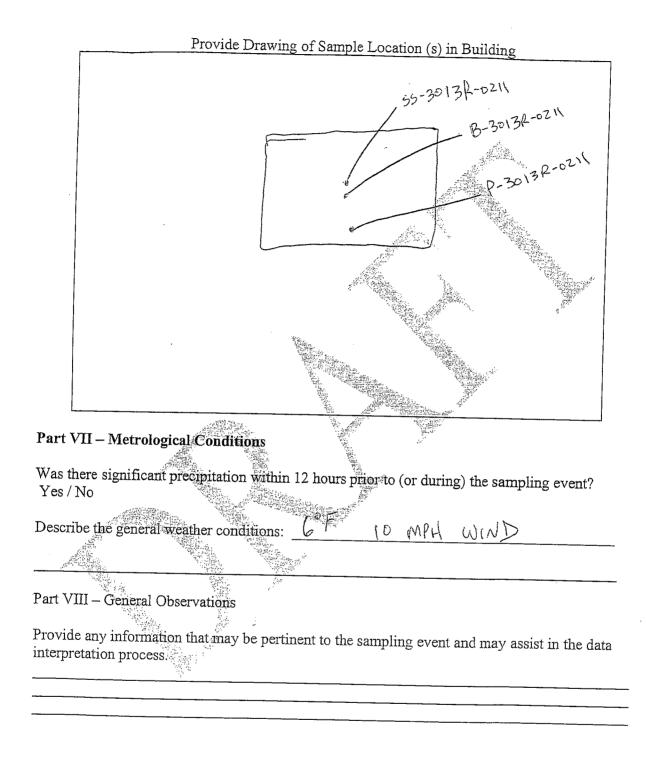
If so, is a car usually parked in the garage? Yes / No

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? Yes / No

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Do the occupants of the building have their clothes dry cleaned? Yes No
If yes, how often? Weekly / monthly / 3-4 times a year
When was the last dry cleaned garment brought home?
Do any of the occupants use solvents in work? Yes No
If yes, what types of solvents are used?
If yes, are their clothes washed at work? Yes / No
Have any pesticides/herbicides been applied around the building or in the yard? Yes / Ko
If so, when and which chemicals?
Has there ever been a fire in the building? Yes No. If yes, when?
Has painting or staining been done in the building in the last 6 months? Yes / No
If yes, when? and where?
Part VI – Sampling Information
Company/Consultant: $MACTEC$ Phone number: $(Z3^1) \underline{922} - \underline{9250}$
Sample Source: Indoor Air/(Sub-Slab) Near Slab Soil Gas / Exterior Soil Gas
Sampler Type: 400 mL - 1.0 L Summa Canister (6 L Summa Canister) / Other
(specify):
Analytical Method: TO-14A (TO-15) TO-15 SIM / other:
Laboratory. TEST AMERICA
Sample locations (floor, room): Sub-SLAB, BASEMENT, PRIMARY LIVING SPACE
Field/Sample ID# $57-30132 - 0211$ Field/Sample ID #
Field/Sample ID# $B - 30132 - 0211$ Field/Sample ID#
Field/Sample ID# $P-3013R - 0211$ Field/Sample ID #
Were "Instructions for Occupants" followed? Yes / No
If not, describe modifications:

.



The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical.
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.

• Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).

• Do not operate or store automobiles in an attached garage.



Preparer's Name:	TEVE BUYZ	<u> </u>	Date: 29-	11 <u>Alles</u>		-	
Preparer's Affiliation:	MACTEC	P	hone #: <u>7.3)</u>	922-905	50		
Site Name: <u>HWSP</u>	>	S	lite # <u>331</u>	0102016			
Site Address (include			INDUSTRI D INDIA		<u>167</u>	-	
Part I – Occupants	ĴĊ	UTH DE					
List of Current Occup	ants/Occupation (ir	nclude childr	en)				
Name (Age)	Address: (Lot # or apt. #)		Sex (M/F)	Occupation			
LPANNE ThielMANN		ST. WWW		and the second second			
STEPHENS					hel	~	- 1
Robert LTRPhens			M	PARILAGE	INANOLES	Layed-off	ZWAS
NOAH STEPHENS			M	1 Je Je			
<u>- 28.1/1938</u>							
33 27							
······							
Part II – Building Cl	naracteristics						
Building type: residen other			-				
Describe building:	STOL- 7 2 60	, L ba	Year co	nstructed:(929		
Sensitive population:	day care / nursing	home / hosp	ital (school) o	other (specify	·):		
Number of floors at or	r above grade:						
Number of floors belo	w grade:	_ (full basem	ent) crawl spa	ice / slab on g	rade)		
Depth of basement be	low grade surface:	5,5 ft.	Basement size	: <u>700</u> †ft ²			
Basement floor constr	uction: concrete)	dirt / slab / s	tone / other (sj	pecify):			
Foundation walls: p	oured concrete (cir	nder blocks)	stone / other (specify):			
	-trucian Dilat Drag				Dece 11/	1	

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Basement sump present? Yes No Sump pump? Yes / No Water in sump? Yes / No
Significant cracks present in basement floor? Yes (No)
Significant cracks present in basement walls? (Yes/No Repaired
Are the basement walls or floor sealed with waterproof paint or epoxy coatings? $(Yes) No$ $(A \lor N)$
Is there a whole house fan? Yes No
Septic system? Yes / Yes (but not used) (No
Irrigation/private well? Yes / Yes (but not used) (No
Type of ground cover outside of building: (grass) concrete / asphalt / other (specify)
Sub-slab vapor/moisture barrier in place? Yes No/ Don't know Type of barrier:
Type of heating system (circle all that apply): hot air circulation hot air radiation wood steam radiation heat pump hot water radiation kerosene heater electric baseboard other (specify):
Type or ventilation system (circle all that apply): central air conditioning individual air conditioning units kitchen range hood fan outside air intake
Type of fuel utilized (cincle all that apply): Natural gas) electric / fuel oil//wood / coal / solar / kerosene / other (specify):
Part III – Outside Contaminant Sources
Contaminated site within 50-ft (BTEX) or 100-ft (Chlorinated)?
If yes: Site Name: Site Number:
Other stationary sources nearby (gas stations, emission stacks, etc.):
Heavy vehicular traffic nearby (or other mobile sources):

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Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

Potential Sources	Location (s)	Removed
	<u></u>	(Yes / No / NA)
Gasoline storage cans	ATOT GARAGE	NO
Gas-powered equipment		NO
(mowers, etc)	(SARAGE	100
Kerosene storage cans	NONE	
Paints / thinners / strippers	GARAGE MARK	ND
Cleaning solvents	KI tobers BATTA room	NO
Oven cleaners	NONE	
Carpet / upholstery cleaners	NONE	
Other house cleaning products	12, telnen Bathroom	NO
Moth balls	GARAGE	ND
Polishes / waxes	Kitchen	NO
Insecticides	(BARAGE K. F. Wen	NO
Furniture / floor remover	L'HOUN	NO
Nail polish / polish remover	A)ONT	
Hairspray	WONE	
Cologne / perfume	LUING Room BATHIOON	ND
Air fresheners	Bathkan	
Fuel tank (inside building)	NONE	NA
Wood stove or fireplace	NONE	NA
New Furniture / upholstery	NONE	NO
New carpeting / flooring	ATOME	NA
Hobbies – glues, paints,	NONE	
lacquers, photographic	NON-	
darkroom chemicals, etc		
Scented trees, wreaths,	NONF	
potpourri, etc.		
Other (specify):		

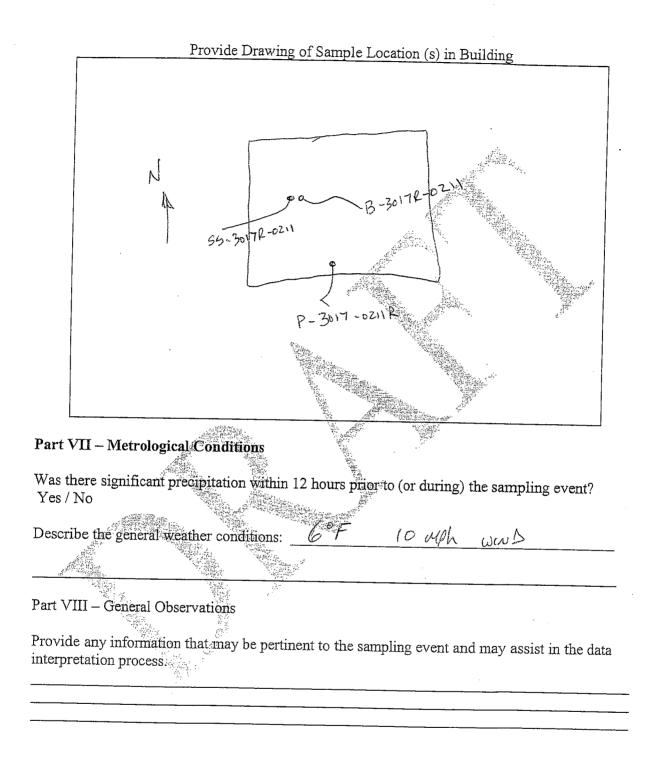
Part V – Miscellaneous Items

Do any occupants of the building smoke?	Yes/No	How often? 1/2	DAY OUTSIDE
Last time someone smoked in the bu	uilding? <u>NEVER</u>	hours / days	ago
Does the building have an attached garage of	directly connected to liv	ving space? Yes	No
If so, is a car usually parked in the g	garage? Yes / No		
Are gas-powered equipment or cans	s of gasoline/fuels store	d in the garage? Ye	es / No

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Do the occupants of the building have their clothes dry cleaned? Yes No
If yes, how often? Weekly / monthly / 3-4 times a year
When was the last dry cleaned garment brought home?
Do any of the occupants use solvents in work? Yes No
If yes, what types of solvents are used?
If yes, are their clothes washed at work? Yes / No
Have any pesticides/herbicides been applied around the building or in the yard? Wes / No
If so, when and which chemicals? <u>4-5 Months Ago home Defense</u>
Has there ever been a fire in the building? Yes No
Has painting or staining been done in the building in the last 6 months?
If yes, when? <u>6 Months Ago</u> and where? <u>huing Room</u>
Part VI – Sampling Information
Company/Consultant: MACTEC Phone number: (231) <u>922</u> - <u>9050</u>
Sample Source: Indoor Air Sub-Slab Near Slab Soil Gas / Exterior Soil Gas
Sampler Type: 400 mL – 1.0 L Summa Canister / 6 L Summa Canister / Other (specify):
Analytical Method: TO-14A / TO-15 TO-15 SIM / other:
Laboratory: <u>TEST AMERICA</u>
Sample locations (floor, room): Sub-SLAB, BASEMENT, PRIMARY LIVING SPACE
Field/Sample ID# $\leq 3017R - 0211$ Field/Sample ID #
Field/Sample ID# $B = 3017k = 0211$ Field/Sample ID #
Field/Sample ID# $P = 3017 R - 0Z11$ Field/Sample ID #
Were "Instructions for Occupants" followed? Yes / No
If not, describe modifications:

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Recommended Instructions for Residents

The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.
- Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).
- Do not operate or store automobiles in an attached garage.



INDOOR AIR BUILDING SURVEY CHECKLIST

Preparer's Affiliation: MACTEC Phone #: $23\sqrt{9229050}$ Site Name: HWSB Site # 33101020146 Site Address (include city and zip): HONEYWELL $EUDUSTRIAL$ COMPLEX Part I - Occupants SOUTH DEND, TUDIANA List of Current Occupants/Occupation (include children) Name (Age) Address: Sex Occupation Name (Age) Address: Sex Occupation (M/F) HAP Kitchen 3034 Roge(5 57464 M IccTIRED 16 y (5)
Site Address (include city and zip): HONEYWELL INDUSTRIAL COMPLEX Part I - Occupants SOUTH BEND, INDIANA List of Current Occupants/Occupation (include children) Name (Age) Address: Sex Occupation Name (Age) Address: Sex Occupation (Lot # or apt. #) (M/F) Occupation
List of Current Occupants/Occupation (include children) Name (Age) Address: (Lot # or apt. #) Sex (M/F)
List of Current Occupants/Occupation (include children) Name (Age) Address: (Lot # or apt. #) Sex (M/F)
Name (Age)Address: (Lot # or apt. #)Sex (M/F)Occupation
Name (Age)Address: (Lot # or apt. #)Sex (M/F)Occupation
(Lot # or apt. #)
Part II – Building Characteristics Building type: (residential)/ multi-family residential / office / strip mall / commercial / industrial /
Describe building: 1-STOPY 1-BASEMENT ATTAChed GarAge Year constructed: 1929
Sensitive population: day care / nursing home / hospital / school / other (specify):
Number of floors at or above grade:
Number of floors below grade: (full basement) crawl space / slab on grade)
Depth of basement below grade surface: $(\ell_{e} ft. Basement size: 90 ft^{2})$
Basement floor construction: (concrete) dirt / slab / stone / other (specify): <u>AND</u> floc /
Foundation walls: poured concrete (cinder blocks)/ stone / other (specify):
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Basement sump present? Yes / No Sump pump? Yes / No Water in sump? Yes / No	
Significant cracks present in basement floor? Yes No	
Significant cracks present in basement walls? $Yes(No)$	
Are the basement walls or floor sealed with waterproof paint or epoxy coatings? $(Y_{es})/N_{o}$	-
Is there a whole house fan? Yes No	
Septic system? Yes / Yes (but not used) (No)	
Irrigation/private well? Yes / Yes (but not used) / Ng	
Type of ground cover outside of building: grass concrete / asphalt / other (specify)	
Sub-slab vapor/moisture barrier in place? Yes No Don't know Type of barrier:	
Type of heating system (circle all that apply): hot air circulation hot air radiation wood steam radiation	
heat pump hot water radiation kerosene heater electric baseboard other (specify):	
Type or ventilation system (circle all that apply): (central air conditioning) mechanical fans bathroom ventilation fans	
individual air conditioning units kitchen range hood fan outside air intake	
Type of fuel utilized (circle all that apply): Natural gas (electric / fuel oil / wood / coal / solar / kerosene / other (specify):	
Brit	
Part III – Outside Contaminant Sources	
Contaminated site within 50-ft (BTEX) or 100-ft (Chlorinated)?	
If yes: Site Name: Site Number:	
Other stationary sources nearby (gas stations, emission stacks, etc.):	
Heavy vehicular traffic nearby (or other mobile sources):	

Part IV - Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to the indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the start of the indoor air sampling event.

Location (s)	Removed
	(Yes/No/NA)
NONE	
ATTACHEO	
NONE	
NONE	
	1.000 gar
1. 21 M Marca	
Ph. 5, 40	
NONE	NA
	NA
NONE	INA
	NA
NONE	
	·
NONE	
	NONE ATTACHEO GARAGE NONE NONE NONE NONE NONE

Part V - Miscellaneous Items

Do any occupants of the building smoke?

Yes /

Yes Y No

How often?

Last time someone smoked in the building? ______ hours / days ago

Does the building have an attached garage directly connected to living space?

If so, is a car usually parked in the garage?

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? Ye

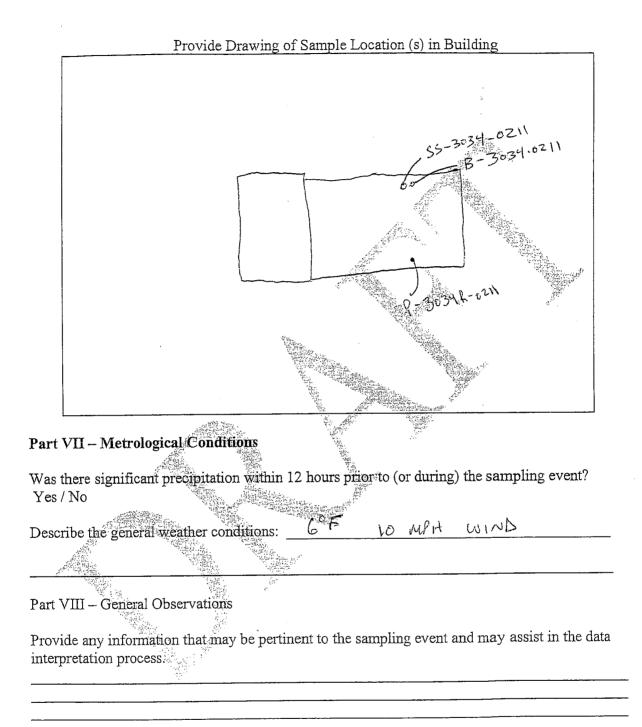
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Do the occupants of the building have their clothes dry cleaned?
If yes, how often? Weekly / monthly 3-4 times a year
When was the last dry cleaned garment brought home?
Do any of the occupants use solvents in work? Yes No
If yes, what types of solvents are used?
If yes, are their clothes washed at work? Yes / No
Have any pesticides/herbicides been applied around the building or in the yard? Yes (No)
If so, when and which chemicals?
Has there ever been a fire in the building? Yes / No. If yes, when?
Has painting or staining been done in the building in the last 6 months? Yes / No
If yes, when? and where?
Part VI – Sampling Information
Company/Consultant: <u>MARTEC</u> Phone number: (231) <u>922</u> - <u>9050</u>
Sample Source: Indoor Air Sub-Slab Near Slab Soil Gas / Exterior Soil Gas
Sampler Type: 400 mL – 1.01. Summa Canister (6 L Summa Canister) Other (specify):
Analytical Method: TO-14A TO-15/ TO-15 SIM / other:
Laboratory: TEST AMERICA
Sample locations (floor, room): SUB-SLAB, BASEMENT PRIMARY FLOOR
Field/Sample ID# $\frac{-3034}{-3034}$ Koger STREET Field/Sample ID # $\begin{array}{c} P - 3034 \\ R - 021 \end{array}$
Field/Sample ID# $56-3034$ $56-21$ Field/Sample ID #
Field/Sample ID# B-3634K-0211 Field/Sample ID # Were "Instructions for Occupants" followed? Yes / No
If not, describe modifications:

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Recommended Instructions for Residents

The following is a suggested list for residents to follow (to the extent practical) in order to reduce interference in obtaining representative samples. IDEM suggests that these items be followed starting at least 48 hours prior to and during the sampling event.

- Do not open windows, fireplace opening or vents
- Do not keep doors open.
- Do not operate ventilation fans.
- Do not use air fresheners or odor eliminators.
- Do not smoke in the house to the extent practical.
- Do not use wood stoves, fireplace or auxiliary heating equipment (e.g., kerosene heater)
- Do not use paints or varnishes.
- Do not use cleaning products (e.g., bathroom cleaners, furniture polish, appliance cleaners, and floor cleaners).
- Do not use cosmetics, including hair spray, nail polish, nail polish remover, perfume, etc.
- Do not partake in indoor hobbies that use solvents.
- Do not apply pesticides.

• Do not store containers of gasoline, oil or petroleum-based or other solvents within the house or attached garage (except for fuel oil tanks).

• Do not operate or store automobiles in an attached garage.

APPENDIX B

SAMPLE LOG SHEETS

Sampler: SGB

Site Location: Honeywell South Bend, IN

DATE	2/1/2011	2/1/2011	2/1/2011
Sample Identification	SS-3006L-0211	SS-719G-0211	SS-3010R-0211
Sampling Depth	-3" to -9"	-3" to -9"	-2.5" to 8.5"
Purge Volume (mL)	924mL	924mL	924mL
Canister ID	6957	6580	2995
Flow regulator ID	K478	K473	K397
Initial Canister Pressure (inches of Hg)	-30	-29	-27
Initial Time	1133	1511	1656
Final Canister Pressure (inches of Hg)	-7	-5.5	-5
Final Time	1158	1601	1713
Sampler / Notes			
Sample Identification	B-3006L-0211	B-719G-0211	B-3010R-0211
Sampling Depth	3'	3'	3'
Purge Volume	n/a	n/a	n/a
Canister ID	6654	1349	1362
Flow regulator ID	K148	K115	К128
Initial Canister Pressure	-31	-29	· -29.5
Initial Time	1138	1515	1658
Final Canister Pressure	-5	-5	-5.5
Final Time	1156	1600	1716
Notes			
Sample Identification	P-3006L-0211	P-719G-0211	P-3010R-0211
Sampling Depth	3'	3'	3'
Purge Volume	n/a	n/a	n/a
Canister ID	1529	1516	1132
Flow regulator ID	K331	K158	K142
Initial Canister Pressure	-29	-30	-27
Initial Time	1141	1522	1702
Final Canister Pressure	-5.5	-8.5	-6.5
Final Time	1200	1600	1726
Notes			
Sample Identification	BG-1-0211	BG-2-0211	
Sampling Depth	6	6	
Purge Volume	n/a	n/a	
Canister ID	92098	1133	
Flow regulator ID	K340	K177	
Initial Canister Pressure	-29.5	-28	
Initial Time	1153	1730	
Final Canister Pressure	0	-5	
Final Time	1328	1736	
Notes			

Sampler: SGB

Site Location: Honeywell South Bend, IN

Project	Number	3310102016
FIUJELL	Number.	2210102010

DATE	2/2/2011	2/2/2011	Project Number: 3310102016
Sample Identification	SS-3018L-0211	SS-3026R-0211	· · · · · · · · · · · · · · · · · · ·
Sampling Depth	-3" to -9"	-3.5" to -9.5"	
Purge Volume (mL)	924mL	924mL	
Canister ID	6611	6349	
Flow regulator ID	K395	K133	
Initial Canister Pressure (inches of Hg)	-28	-30	
Initial Time	1024	1419	
Final Canister Pressure (inches of Hg)	-7	-5.5	
Final Time	1053	1426	
Sampler / Notes	1055	1420	I
Sample Identification	B-3018L-0211	B-3026R-0211	
Sampling Depth	3'	3'	
Purge Volume	n/a	n/a	
Canister ID	6385	0120	
Flow regulator ID	K379	K371	
Initial Canister Pressure	-28	-30	
Initial Time	1027	1421	
Final Canister Pressure	-5	-6.5	
Final Time	1053	1425	· · · · · · · · · · · · · · · · · · ·
Notes	1000	1120	
Sample Identification	P-3018L-0211	P-3026R-0211	
Sampling Depth	3'	3'	
Purge Volume	n/a	n/a	
Canister ID	0063	9019	
Flow regulator ID	K334	K355	
Initial Canister Pressure	-28.5	-28.5	
Initial Time	1030	1424	
Final Canister Pressure	-6	-3.5	
Final Time	1059	1424	
Notes		/	L
Sample Identification	BG-3-0211	BG-2-0211	
Sampling Depth	5	5	
Purge Volume	n/a	n/a	
Canister ID	12327	1536	
Flow regulator ID	K378	K390	
Initial Canister Pressure	-28.5	-30	
Initial Time	1040	1430	
Final Canister Pressure	-5.5	-6	
Final Time	1106	1436	
Notes			

Sampler: SGB
Site Location: Honeywell South Bend, IN

Project Number: 3310102016

DATE	2/3/2011	2/3/2011		
Sample Identification	SS-3002L-0211			
Sampling Depth	-2.5" to -8.5"			
Purge Volume (mL)	924mL			-
Canister ID	6587			
Flow regulator ID	К219			
Initial Canister Pressure (inches of Hg)	-29			
Initial Time	1028			
Final Canister Pressure (inches of Hg)	-3.5			
Final Time	1052		:	
Sampler / Notes				·····
Sample Identification	B-3002L-0211			
Sampling Depth	3'	· · · · · · · · · · · · · · · · · · ·		
Purge Volume	n/a			
Canister ID	6605			
Flow regulator ID	K122			
Initial Canister Pressure	-29.5			
Initial Time	1030			
Final Canister Pressure	-4.5	· ·		
Final Time	1051			
Notes				• • • • • • • • • • • • • • • • • • • •
Sample Identification	P-3002L-0211			
Sampling Depth	3'			
Purge Volume	n/a			
Canister ID	04399	· · ·		
Flow regulator ID	K325			
Initial Canister Pressure	-29			
Initial Time	1033			
Final Canister Pressure	0			
Final Time	1050	· · · · · · · · · · · · · · · · · · ·		
Notes	·	·		
Sample Identification	BG-5-0211	BG-6-0211		
Sampling Depth	6	6		
Purge Volume	n/a	n/a		
Canister ID	1007N	04329		
Flow regulator ID	К309	K295		
Initial Canister Pressure	-30	-29		
Initial Time	1041	1045		
Final Canister Pressure	-4	-4.5		
Final Time	1100	1101	1	· · · · · · · · · · · · · · · · · · ·
Notes				L

Sampler: SGB

Site Location: Honeywell South Bend, IN

Project Number: 3310102016

DATE	2/9/2011	2/9/2011	2/9/2011	
Sample Identification	SS-3017R-0211	SS-3034R-0211	SS-3013R-0211	
Sampling Depth	-3" to -9"	-3" to -9"	-1.5" to 7.5"	
Purge Volume (mL)	924mL	924mL	924mL	· · · · · · · · · · · · · · · · · · ·
Canister ID	1115	6381	1362N	
Flow regulator ID	K287	, КЗ91	K482	
Initial Canister Pressure (inches of Hg)	-30	-28.5	-28.5	
Initial Time	0921	1504	1302	
Final Canister Pressure (inches of Hg)	-4.0	-0.5	-4.5	
Final Time	0939	1504	1321	······································
Sampler / Notes			· · · · · · · · · · · · · · · · · · ·	
Sample Identification	B-3017R-0211	B-3034R-0211	B-3013R-0211	
Sampling Depth	3'	3'	3'	
Purge Volume	n/a	n/a	n/a	
Canister ID	12878	1125	S1491	
Flow regulator ID	k477	K174	K316	
Initial Canister Pressure	-28	-30	-29.5	
Initial Time	0924	1504	1304	
Final Canister Pressure	-4.5	-7.5	-4.5	
Final Time	0937	1504	1320	
Notes				
Sample Identification	P-3017R-0211	P-3034R-0211	P-3013R-0211	
Sampling Depth	3'	3'	3'	
Purge Volume	n/a	n/a	n/a	
Canister ID	12462	1403	7473	
Flow regulator ID	k437	K310	K339	
Initial Canister Pressure	-30	-29.5	-30	
Initial Time	0926	1506	1306	
Final Canister Pressure	-5	-6	-1	
Final Time	0943	1510	1329	
Notes				
Sample Identification		BG-8-0211	BG-9-0211	
Sampling Depth		5	5	
Purge Volume		n/a	n/a	
Canister ID		6592	7496	
Flow regulator ID		К388	K110	
Initial Canister Pressure		-28.5	-29	
Initial Time		1515	1317	
Final Canister Pressure		6.5	1332	
Final Time		1515	0	
Notes		·	<u>.</u>	

Sampler: SGB

Site Location: Honeywell South Bend, IN

Project Number: 3310102016

Site Location: Honeywell South Bend, IN			Project Number: 3310102016
DATE	2/17/2011	2/17/2011	
Sample Identification	SS-3019L-0211	SS-3029L-0211	
Sampling Depth	-4" to -10"	-4" to -10"	
Purge Volume (mL)	924mL	924mL	
Canister ID	1147	62273	
Flow regulator ID	K483	K168	
Initial Canister Pressure (inches of Hg)	-27.5	-29	
Initial Time	0846	1133	
Final Canister Pressure (inches of Hg)	-4	-6	
Final Time	0856	1137	
Sampler / Notes			
Sample Identification	B-3019L-0211	B-3029L-0211	
Sampling Depth	3'	3'	
Purge Volume	n/a	n/a	
Canister ID	6350	2966	
Flow regulator ID	K462	K124	
Initial Canister Pressure	-29	-28.5	
Initial Time	0846	1133	
Final Canister Pressure	-7	-5.5	
Final Time	0856	1147	
Notes			
Sample Identification	P-3019L-0211	P-3029L-0211	
Sampling Depth	3'	3'	
Purge Volume	n/a	n/a	
Canister ID	6520	93245	
Flow regulator ID	K216	K284	
Initial Canister Pressure	-29	-29	
Initial Time	0849	1132	
Final Canister Pressure	-6	-5.5	
Final Time	0858	1207	
Notes			
Sample Identification	BG-9-0211	BG-10-0211	
Sampling Depth	5	5	
Purge Volume	n/a	n/a	
Canister ID	L4426	6370	
Flow regulator ID	K314	К200	
Initial Canister Pressure	-30	-29	
Initial Time	0858	1137	
	0000		
Final Canister Pressure	-5.5	-6	
Final Canister Pressure		-6 1307	

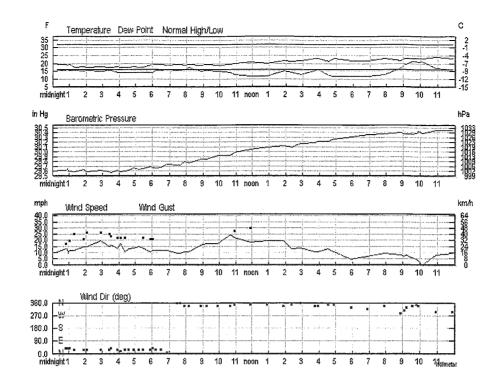
APPENDIX C

HISTORIC METEOROLOGICAL INFORMATION

History for KSBN, Indiana Wednesday, February 2, 2011 — View Current Conditions

Wednesday, February 2, 2011

Previous Day	February 2 2011 View		Next Day »
Daily Weekly Monthly Custom			
	Actual	Average	Record
	Temperature		
Mean Temperature	21 °F	~	
Max Temperature	24 °F	-	- ()
Min Temperature	18 °F	-	- ()
	Degree Days		
Heating Degree Days	44		
Month to date heating degree of	ays 91		
	Moislure		
Dew Point	15 °F		
Average Humidity	81		
Maximum Humidity	96		
Minimum Humidity	65		
	Precipitation		
Precipitation	-	-	- ()
Month to date precipitation	0.99		
Year to date precipitation	3.15		
	Snow		
Snow	5.00 in	-	- ()
Month to date snowfall	13.4		
Snow Depth	12.00 in		
	Sea Level Pressure		
Sea Level Pressure	29.93 in		
	Wind		
Wind Speed	13 mph (North)		
Max Wind Speed	26 mph		
Max Gust Speed	31 mph		
Visibility	3 miles		
Events	Fog , Snow		



Hourly Observations

Time (EST)	Temp.	Dew Point	Humidity	Sea Level Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:18 AM	19.4 °F	15.8 °F	86%	29.61 in	0.8 miles	NE	10.4 mph	17.3 mph	0.04 in	Snow	Light Snov
12:50 AM	19.4 °F	15.8 °F	86%	29.61 in	0.5 miles	NE	12.7 mph	17.3 mph	0.09 in	Snow	Snow
12:54 AM	19.0 °F	16.0 °F	88%	29.64 in	0.5 miles	NE	12.7 mph	-	0.10 in	Snow	Snow
12:58 AM	19.4 °F	15.8 °F	86%	29.60 in	0.2 miles	NE	9.2 mph	18.4 mph	0.00 in	Snow	Heavy Snow
1:02 AM	19.4 °F	15.8 °F	86%	29.60 in	0.5 miles	NE	11.5 mph	19.6 mph	0.01 in	Snow	Snow
1:19 AM	17.6 °F	15.8 °F	93%	29.58 in	0.8 miles	NNE	11.5 mph	25.3 mph	0.02 in	Snow	Light Snov
1:54 AM	18.0 °F	15.1 °F	88%	29.63 in	0.5 miles	NNE	15.0 mph	20.7 mph	0.07 in	Snow	Snow
2:04 AM	17.6 °F	15.8 °F	93%	29.59 in	0.8 miles	NNE	15.0 mph	26.5 mph	0.02 in	Snow	Light Snov
2:54 AM	18.0 °F	15.1 °F	88%	29.61 in	0.8 miles	NNE	19.6 mph	26.5 mph	0.04 in	Snow	Light Snor
3:25 AM	17.6 °F	15.8 °F	93%	29.58 in	1.0 miles	NNE	15.0 mph	25.3 mph	0.02 in	Snow	Light Sno
3:31 AM	17.6 °F	15.8 °F	93%	29.57 in	1.0 miles	NE	16.1 mph	23.0 mph	0.02 in	Snow	Light Sno
3:54 AM	18.0 °F	14.0 °F	84%	29.62 in	1.5 miles	NNE	13.8 mph	21.9 mph	0.02 in	Snow	Light Sno
4:06 AM	17.6 °F	14.0 °F	86%	29.58 in	1.2 miles	NNE	17.3 mph	21.9 mph	0.00 in	Snow	Light Sno
4:23 AM	17.6 °F	14.0 °F	86%	29.60 in	2.0 miles	NNE	10.4 mph	21.9 mph	0.01 in	Snow	Light Sno
4:34 AM	17.6 °F	14.0 °F	86%	29.61 in	2.0 miles	NNE	12.7 mph	-	0.01 in	Snow	Light Sno
4:54 AM	18.0 °F	14.0 °F	84%	29.66 in	2.0 miles	NNE	13.8 mph	· _	0.01 in	Snow	Light Sno
5:13 AM	17.6 °F	14.0 °F	86%	29.63 in	1.8 miles	NNE	15.0 mph	25.3 mph	0.00 in	Snow	Light Sno
5:29 AM	17.6 °F	14.0 °F	86%	29.64 in	1.5 miles	NNE	13.8 mph	21.9 mph	0.01 in	Snow	Light Sno
5:54 AM	19.0 °F	14.0 °F	81% .	29.69 in	1.5 miles	NNE	10.4 mph	20.7 mph	0.02 in	Snow	Light Sno
6:02 AM	19.4 °F	14.0 °F	80%	29.66 in	1.2 miles	NE	11.5 mph	20.7 mph	0.00 in	Snow	Light Sno
6:12 AM	19.4 °F	15.8 °F	86%	29.66 in	1.0 miles	NNE	11.5 mph	•	0.00 in	Snow	Light Sno
6:31 AM	19.4 °F	15.8 °F	86%	29.68 in	1.0 miles	NNE	11.5 mph	-	0.00 in	Snow	Light Sno

6:54 AM	19.0 °F	16.0 °F	88%	29.74 in	1.0 miles	North	11.5 mph	-	0.02 in	Snow	Light Sno
7:29 AM	19.4 °F	15.8 °F	86%	29.72 in	1.0 miles	North	9.2 mph	•	0.00 in	Snow	Light Sno
7:37 AM	19.4 °F	15.8 °F	86%	29.73 in	0.8 miles	North	9.2 mph	· · · · ·	0.01 in	Snow	Light Sno
7:54 AM	19.0 °F	16.0 °F	88%	29.80 in	1.0 miles	NNW	10.4 mph	-	0.02 in	Snow	Light Sno
8:09 AM	19.4 °F	17.6 °F	93%	29.77 in	1.0 miles	NNW	10.4 mph	• 	0.00 in	Snow	Light Sno
8:54 AM	19.0 °F	15.1 °F	85%	29.85 in	2.0 miles	NNW	16.1 mph	-	0.01 in	Snow	Light Sno
9:13 AM	19.4 °F	15.8 °F	86%	29.84 in	1.2 miles	NNW	17.3 mph	· -	0.00 in	Snow	Light Sno
9:54 AM	19.0 °F	15.1 °F	85%	29.93 in	1.0 miles	NNW	17.3 mph	-	0.00 in	Snow	Light Sno
10:39 AM	19.4 °F	14.0 °F	80%	29.93 in	1.0 miles	NNW	24.2 mph	31.1 mph	0.00 in	Snow	Light Sno
10:54 AM	19.9 °F	12.9 °F	74%	29.99 in	3.0 miles	North	21.9 mph	27.6 mph	0.00 in	Snow	Light Sno
11:54 AM	21.0 °F	12.0 °F	68%	30.05 in	8.0 miles	North	18.4 mph	29.9 mph	0.00 in		Mostly Cloudy
12:54 PM	19.9 °F	12.0 °F	71%	30.09 in	10.0 miles	North	19.6 mph	•	N/A		Mosily Cloudy
1:54 PM	21.9 °F	15.1 °F	75%	30.13 in	9.0 miles	NNW	19.6 mph	•	0.01 in	Snow	Light Sno
2:21 PM	21.2 °F	14.0 °F	74%	30.10 in	9.0 miles	North	12.7 mph	~	0.00 in	Snow	Light Sno
2:54 PM	21.9 °F	12.9 °F	68%	30.17 in	9.0 miles	North	13.8 mph		0.00 in		Overcas
3:45 PM	23.0 °F	15.8 °F	74%	30.18 in	7.0 miles	NNW	10.4 mph	-	0.00 in	Snow	Light Sno
3:54 PM	23.0 °F	16.0 °F	74%	30.22 in	6.0 miles	NNW	10.4 mph	-	0.00 in	Snow	Light Sno
4:32 PM	21.2 °F	12.2 °F	68%	30.22 in	9.0 miles	North	12.7 mph	· · · · · · · · ·	0.00 in		Overcas
4:54 PM	23.0 °F	12.0 °F	63%	30.27 in	10.0 miles	North	10.4 mph	-	0.00 in	C NA SI CALIFULAS.	Overcas
5:54 PM	21.9 °F	12.0 °F	66%	30.31 in	10.0 miles	NNW	4.6 mph	-	N/A		Overcas
6:54 PM	21.9 °F	12.0 °F	66%	30.35 in	10.0 miles	NW	6.9 mph	. -	N/A		Mostly Cloudy
7:54 PM	23.0 °F	12.9 °F	65%	30.38 in	10.0 miles	NNW	9.2 mph	• • • • • • • • •	N/A		Mostly Cloudy
8:54 PM	21.9 °F	17.1 °F	82%	30.41 in	2.5 miles	WNW	8.1 mph	-	0.00 in	Snow	Light Sno
9:07 PM	23.0 °F	19.4 °F	86%	30.37 in	0.8 miles	NW	6.9 mph	•	0.00 in	Snow	Light Sno
9:14 PM	23.0 °F	19.4 °F	86%	30.37 in	0.5 miles	NNW	8.1 mph		0.01 in	Fog , Snow	Snow
9:34 PM	23.0 °F	21.2 °F	93%	30.38 in	1.0 miles	NNW	5.8 mph	-	0.04 in	Snow	Light Sno
9:48 PM	23.0 °F	21.2 °F	93%	30.39 in	3.0 miles	North	4.6 mph		0.05 in	Snow	Light Sno
9:54 PM	23.0 °F	21.0 °F	92%	30.43 in	5.0 miles	NNW	3.5 mph	-	0.05 in	Snow	Light Sno
10:07 PM	23.0 °F	21.2 °F	93%	30.39 in	5.0 miles	Calm	Calm	• • • •	0.00 in	Snow	Light Sno
10:54 PM	24.1 °F	17.1 °F	75%	30.45 in	10.0 miles	WNW	8.1 mph	-	0.00 in		Overcas
11:54 PM	23.0 °F	16.0 °F	74%	30.45 in	10.0 miles	WNW	9.2 mph	·····	0.00 in		Overcas

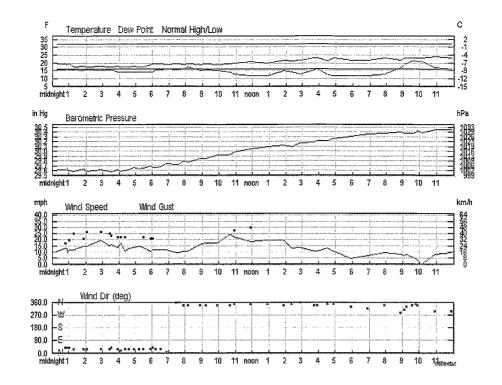
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CBF

Keeping old credit card accounts open can improve your credit score Aci TRUE FALSE

COSTA PRICA No Artificial Ingredients	Complete packages including round-trip airfare, hotel, transfers & more! History for KSBI Wednesday, February 2, 2011 – V Wednesday, February 2, 2011 – V	iew Current Conditions	Book Now	
« Previous Day	•	011 View		Next Day :
Daily Weekly Monthly Custom			·	
		Actual	Average	Record
	Temperature		-	
Mean Ten	perature	21 °F	-	
Max Tem	perature	24 °F	-	- ()
Min Tem	perature	18 °F	-	- ()
	Degree Days			
Heating De	gree Days	44		
Month to date hea	ting degree days	91		
	Moisture			
Dew I	Point	15 °F		
Average		81		
Maximum		96		
Minimum		65		
	Precipitation			
Precipi		-	•	- ()
Month to date		0.99		
Year to date		3.15		
<u>^</u>	Snow	r 00 i-		0
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Month to da		13.4 12.00 in		
Snow	Sea Level Press			
Sea Level		29.93 in		
Sea Level	Wind	20.00 At		
Wind 5		13 mph (North)		
Max Win		26 mph		
Max Gus		31 mph		
Visib		3 miles		
Eve	•	Fog , Snow		
= Trace of Precipitation, MM = Missing Va		· • • • • • • • • • • • • • • • • • • •	Sources	WS Daily Sumr



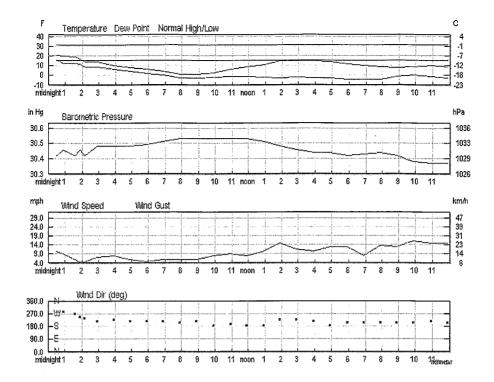
Hourly	Observations
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Time (EST)	Temp.	Dew Point	Humidity	Sea Level Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:18 AM	19.4 °F	15.8 °F	86%	29.61 in	0.8 miles	NE	10.4 mph	17.3 mph	0.04 in	Snow	Light Snow
12:50 AM	19.4 °F	15.8 °F	86%	29.61 in	0.5 miles	NE	12.7 mph	17.3 mph	0.09 in	Snow	Snow
12:54 AM	19.0 °F	16.0 °F	88%	29.64 in	0.5 miles	NE	12.7 mph	-	0.10 in	Snow	Snow
12:58 AM	19.4 °F	15.8 °F	86%	29.60 in	0.2 miles	NE	9.2 mph	18.4 mph	0.00 in	Snow	Heavy Snow
1:02 AM	19.4 °F	15.8 °F	86%	29.60 in	0.5 miles	NE	11.5 mph	19.6 mph	0.01 in	Snow	Snow
1:19 AM	17.6 °F	15.8 °F	93%	29.58 in	0.8 miles	NNE	11.5 mph	25.3 mph	0.02 in	Snow	Light Snow
1:54 AM	18.0 °F	15.1 °F	88%	29.63 in	0.5 miles	NNE	15.0 mph	20.7 mph	0.07 in	Snow	Snow
2:04 AM	17.6 °F	15.8 °F	93%	29.59 in	0.8 miles	NNE	15.0 mph	26.5 mph	0.02 in	Snow	Light Snow
2:54 AM	18.0 °F	15.1 °F	88%	29.61 in	0.8 miles	NNE	19.6 mph	26.5 mph	0.04 in	Snow	Light Snow
3:25 AM	17.6 °F	15.8 °F	93%	29.58 in	1.0 miles	NNE	15.0 mph	25.3 mph	0.02 in	Snow	Light Snow
3:31 AM	17.6 °F	15.8 °F	93%	29.57 in	1.0 miles	NE	16.1 mph	23.0 mph	0.02 in	Snow	Light Snow
3:54 AM	18.0 °F	14.0 °F	84%	29.62 in	1.5 miles	NNE	13.8 mph	21.9 mph	0.02 in	Snow	Light Snow
4:06 AM	17.6 °F	14.0 °F	86%	29.58 in	1.2 miles	NNE	17.3 mph	21.9 mph	0.00 in	Snow	Light Snow
4:23 AM	17.6 °F	14.0 °F	86%	29.60 in	2.0 miles	NNE	10.4 mph	21.9 mph	0.01 in	Snow	Light Snow
4:34 AM	17.6 °F	14.0 °F	86%	29.61 in	2.0 miles	NNE	12.7 mph	-	0.01 in	Snow	Light Snow
4:54 AM	18.0 °F	14.0 °F	84%	29.66 in	2.0 miles	NNE	13.8 mph	-	0.01 in	Snow	Light Snow
5:13 AM	17.6 °F	14.0 °F	86%	29.63 in	1.8 miles	NNE	15.0 mph	25.3 mph	0.00 in	Snow	Light Snov
5:29 AM	17.6 °F	14.0 °F	86%	29.64 in	1.5 miles	NNE	13.8 mph	21.9 mph	0.01 in	Snow	Light Snov
5:54 AM	19.0 °F	14.0 °F	81%	29.69 in	1.5 miles	NNE	10.4 mph	20.7 mph	0.02 in	Snow	Light Snow
6:02 AM	19.4 °F	14.0 °F	80%	29.66 in	1.2 miles	NE	11.5 mph	20.7 mph	0.00 in	Snow	Light Snow
6:12 AM	19.4 °F	15.8 °F	86%	29.66 in	1.0 miles	NNE	11.5 mph	•	0.00 in	Snow	Light Snow
6:31 AM	19.4 °F	15.8 °F	86%	29.68 in	1.0 miles	NNE	11.5 mph	-	0.00 in	Snow	Light Snow

6:54 AM	19.0 °F	16.0 °F	88%	29.74 in	1.0 miles	North	11.5 mph	,	0.02 in	Snow	Light Snov
7:29 AM	19.4 °F	15.8 °F	86%	29.72 in	1.0 miles	North	9.2 mph	• •	0.00 in	Snow	Light Snov
7:37 AM	19.4 °F	15.8 °F	86%	29.73 in	0.8 miles	North	9.2 mph	•	0.01 in	Snow	Light Snov
7:54 AM	19.0 °F	16.0 °F	88%	29.80 in	1.0 miles	NNW	10.4 mph	-	0.02 in	Snow	Light Snov
8:09 AM	19.4 °F	17.6 °F	93%	29.77 in	1.0 miles	NNW	10.4 mph	-	0.00 in	Snow	Light Snow
8:54 AM	19.0 °F	15.1 °F	85%	29.85 in	2.0 miles	NNW	16.1 mph		0.01 in	Snow	Light Snow
9:13 AM	19.4 °F	15.8 °F	86%	29.84 in	1.2 miles	NNW	17.3 mph	-	0.00 in	Snow	Light Snov
9:54 AM	19.0 °F	15.1 °F	85%	29.93 in	1.0 miles	NNW	17.3 mph	-	0.00 in	Snow	Light Snov
10:39 AM	19.4 °F	14.0 °F	80%	29.93 in	1.0 miles	NNW	24.2 mph	31.1 mph	0.00 in	Snow	Light Snow
10:54 AM	19.9 °F	12.9 °F	74%	29.99 in	3.0 miles	North	21.9 mph	27.6 mph	0.00 in	Snow	Light Snow
11:54 AM	21.0 °F	12.0 °F	68%	30.05 in	8.0 miles	North	18.4 mph	29.9 mph	0.00 in		Mostly Cloudy
12:54 PM	19.9 °F	12.0 °F	71%	30.09 in	10.0 miles	North	19.6 mph	-	N/A		Mostly Cloudy
1:54 PM	21.9 °F	15.1 °F	75%	30.13 in	9.0 miles	NNW	19.6 mph	-	0.01 in	Snow	Light Snow
2:21 PM	21.2 °F	14.0 °F	74%	30.10 in	9.0 miles	North	12.7 mph	-	0.00 in	Snow	Light Snov
2:54 PM	21.9 °F	12.9 °F	68%	30.17 in	9.0 miles	North	13.8 mph		0.00 in	• • • •	Overcast
3:45 PM	23.0 °F	15.8 °F	74%	30.18 in	7.0 miles	NNW	10.4 mph	•	0.00 in	Snow	Light Snov
3:54 PM	23.0 °F	16.0 °F	74%	30.22 in	6.0 miles	NNW	10.4 mph	-	0.00 in	Snow	Light Snow
4:32 PM	21.2 °F	12.2 °F	68%	30.22 in	9.0 miles	North	12.7 mph	-	0.00 in		Overcast
4:54 PM	23.0 °F	12.0 °F	63%	30.27 in	10.0 miles	North	10.4 mph	-	0.00 in		Overcast
5:54 PM	21.9 °F	12.0 °F	66%	30.31 in	10.0 miles	NNW	4.6 mph	-	N/A		Overcast
6:54 PM	21.9 °F	12.0 °F	66%	30.35 in	10.0 miles	NW	6.9 mph	-	N/A		Mostly Cloudy
7:54 PM	23.0 °F	12.9 °F	65%	30.38 in	10.0 miles	NNW	9.2 mph		N/A		Mostly Cloudy
8:54 PM	21.9 °F	17.1 °F	82%	30.41 in	2.5 miles	WNW	8.1 mph		0.00 in	Snow	Light Snov
9:07 PM	23.0 °F	19.4 °F	86%	30.37 in	0.8 miles	NW	6.9 mph	n an	0.00 in	Snow	Light Snov
9:14 PM	23.0 °F	19.4 °F	86%	30.37 in	0.5 miles	NNW	8.1 mph	· · · · · · · · · · · · · · · · · · ·	0.01 in	Fog , Snow	Snow
9:34 PM	23.0 °F	21.2 °F	93%	30.38 in	1.0 miles	NNW	5.8 mph	• • •	0.04 in	Snow	Light Snov
9:48 PM	23.0 °F	21.2 °F	93%	30.39 in	3.0 miles	North	4.6 mph	• • •	0.05 in	Snow	Light Snov
9:54 PM	23.0 °F	21.0 °F	92%	30.43 in	5.0 miles	NNW	3.5 mph	· · · · ·	0.05 in	Snow	Light Snov
10:07 PM	23.0 °F	21.2 °F	93%	30.39 in	5.0 miles	Calm	Calm	• • • •	0.00 in	Snow	Light Snov
10:54 PM	24.1 °F	17.1 °F	75%	30.45 in	10.0 miles	WNW	8.1 mph	•	0.00 in		Overcast
11:54 PM	23.0 °F	16.0 °F	74%	30.45 in	10.0 miles	WNW	9.2 mph		0.00 in		Overcast

R RadioShack.

contraction of the second s	nat's On Now pruary 22, 2011-11:43:42 am		ericans on ed Ship Killed		
	Hist	ory for KSBN, I	ndiana		
	Thursday, F	ebruary 3, 2011 — View Cur	rrent Conditions		
		Thursday, February 3, 20	011		
Previous Day	Febru	uary 3 2011	View		Next Day »
ily Weekly Monthly	Custom				
ily Weekly Monthly					
			Actual	Average	Record
		Temperature			
	Mean Temperature		12 °F	~	
	Max Temperature		23 °F	~	-()
	Min Temperature	Decres	0 °F	-	- ()
	Heating Degree Days	Degree Days	53		
b <i>4</i> /	nth to date heating degree days		144		
1010	nin to date nearing degree days	Moisture			
	Dew Point	in order of	2 °F		
	Average Humidity		67		
	Maximum Humidity		87		
	Minimum Humidity		46		
		Precipitation			
	Precipitation		-	-	- ()
	Month to date precipitation		0.99		
	Year to date precipitation		3.15		
		Snow			
	Snow		0.00 in	-	- ()
	Month to date snowfall		13.4		
	Snow Depth		10.00 in		
		Sea Level Pressure			
	Sea Level Pressure		30.46 in		
		Wind			
	Wind Speed		10 mph (SW)		
	Max Wind Speed		18 mph		
	Max Gust Speed		24 mph		
	Visibility		10 miles		
	Events				



Hourly	Observations
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Time (EST)	Temp.	Dew Point	Humidity	Sea Level Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:30 AM	21.2 °F	15.8 °F	80%	30.42 in	10.0 miles	WNW	10.4 mph	*	N/A	900	Overcasi
12:54 AM	19.9 °F	12.9 °F	74%	30.46 in	10.0 miles	WNW	9.2 mph	-	N/A		Mostly Cloudy
1:35 AM	19.4 °F	12.2 °F	74%	30.42 in	10.0 miles	West	5.8 mph	-	N/A	:	Mostly Cloudy
1:54 AM	17.1 °F	12.0 °F	81%	30.46 in	10.0 miles	WSW	4.6 mph		N/A		Mostiy Cloudy
2:09 AM	14.0 °F	8.6 °F	79%	30.42 in	10.0 miles	WSW	4.6 mph	· · · · · · · · · · · · · · · · · · ·	N/A		Scattered Clouds
2:54 AM	14.0 °F	9.0 °F	80%	30.48 in	10.0 miles	SW	6.9 mph	. -	N/A		Clear
3:54 AM	10.0 °F	6.1 °F	84%	30.48 in	10.0 miles	SW	8.1 mph	-	N/A		Clear
4:54 AM	8.1 °F	3.9 °F	83%	30.48 in	10.0 miles	SW	5.8 mph	-	N/A		Clear
5:54 AM	6.1 °F	1.9 °F	83%	30.49 in	10.0 miles	SW	4.6 mph	-	N/A		Clear
6:54 AM	3.9 °F	-0.0 °F	84%	30.51 in	10.0 miles	SW	5.8 mph	-	N/A		Clear
7:54 AM	1.0 °F	-2.9 °F	83%	30.53 in	9.0 miles	SSW	5.8 mph	-	N/A		Clear
8:54 AM	1.0 °F	-2.9 °F	83%	30.53 in	10.0 miles	SW	5.8 mph	-	N/A		Clear
9:54 AM	3.0 °F	-2.0 °F	80%	30.53 in	10.0 miles	South	8.1 mph	-	N/A		Clear
10:54 AM	6.1 °F	-0.9 °F	73%	30.53 in	10.0 miles	SSW	9.2 mph	-	N/A		Clear
11:54 AM	9.0 °F	-0.9 °F	64%	30.53 in	10.0 miles	South	8.1 mph	•	N/A		Clear
12:54 PM	10.9 °F	-2.0 °F	56%	30.51 in	10.0 miles	South	10.4 mph	-	N/A		Clear
1:54 PM	15.1 °F	-2.9 °F	45%	30.48 in	10.0 miles	SW	15.0 mph	· _	N/A		Clear
2:54 PM	15.1 °F	-2.0 °F	47%	.30.46 in	10.0 miles	SW	11.5 mph	-	N/A		Clear
3:54 PM	15.1 °F	-2.9 °F	45%	30.44 in	10.0 miles	SW	10.4 mph	. -	N/A		Clear
4:54 PM	14.0 °F	-2. 9 °F	47%	30.44 in	10.0 miles	South	12.7 mph	-	N/A		Clear
5:54 PM	12.0 °F	-4.0 °F	49%	30.42 in	10.0 miles	SSW	12.7 mph	-	N/A		Clear

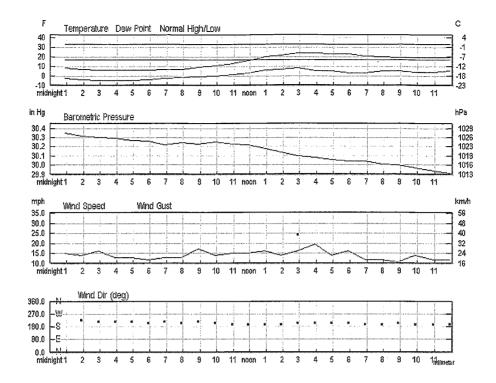
6:54 PM	10.0 °F	-4.0 °F	53%	30.43 in	10.0 miles	SSW	8.1 mph	-	N/A	Clear
7:54 PM	9.0 °F	-4.0 °F	56%	30.44 in	10.0 miles	SSW	13.8 mph		N/A	Clear
8:54 PM	8.1 °F	-0.9 °F	67%	30.42 in	10.0 miles	SSW	12.7 mph		N/A	Clear
9:54 PM	9.0 °F	-0.0 °F	67%	30.38 in	10.0 miles	SSW	16.1 mph	-	N/A	Clear
10:54 PM	10.0 °F	-0.9 °F	61%	30.37 in	10.0 miles	SW	15.0 mph	-	N/A	Clear
11:54 PM	9.0 °F	-2.9 °F	59%	30.37 in	10.0 miles	SSW	15.0 mph	21.9 mph	N/A	Clear
				Show full MET	ARS METAR FAQ	Comma D	elimited File			

12 pm	3 pm	Ð
		zipcar

History for KSBN, Indiana Friday, February 4, 2011 — View Current Conditions

Friday, February 4, 2011

Previous Day	February 4 2011 View		Next Day »
Daily Weekly Monthly Custom			
	Actual	Average	Record
	Temperature		
Mean Temperature	15 °F	-	
Max Temperature	24 °F	-	- ()
Min Temperature	6 °F	-	- ()
	Degree Days		
Heating Degree Days	50		
Month to date heating degree da	lys 194		
	Moisture		
Dew Point	1 °F		
Average Humidity	56		
Maximum Humidity	69		
Minimum Humidity	42		
	Precipitation		
Precipitation	-	-	- ()
Month to date precipitation	0.99		
Year to date precipitation	3.15		
	Snow		
Snow	0.00 in	-	- ()
Month to date snowfall	13.4		
Snow Depth	10.00 in		
	Sea Level Pressure		
Sea Level Pressure	30.15 in		
	Wind		
Wind Speed	14 mph (SSW)		
Max Wind Speed	22 mph	· · · · · · · · · · · · · · · · · · ·	
Max Gust Speed	26 mph		
Visibility	10 miles		
Events			
= Trace of Precipitation, MM = Missing Value		Source: N	WS Daily Summ



Hourly	Observations
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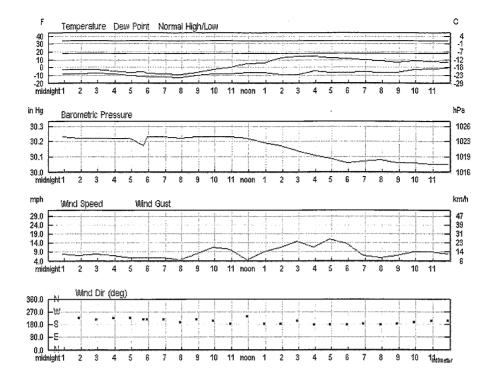
Time (EST)	Temp.	Dew Point	Humidity	Sea Level Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Condition
12:54 AM	8.1 °F	-2.9 °F	61%	30.35 in	10.0 miles	SW	15.0 mph	*	N/A		Clear
1:54 AM	7.0 °F	-4.0 °F	61%	30.32 in	10.0 miles	SW	13.8 mph	-	N/A		Clear
2:54 AM	6.1 °F	-5.1 °F	60%	30.30 in	10.0 miles	sw	16.1 mph	· · ·	N/A		Clear
3:54 AM	6.1 °F	-5.1 °F	60%	30.29 in	10.0 miles	SW	12.7 mph	силтикалык токулары жана :	N/A		Clear
4:54 AM	6.1 °F	-5.1 °F	60%	30.27 in	10.0 miles	sw	12.7 mph	. .	N/A		Clear
5:54 AM	6.1 °F	-4.0 °F	63%	30.26 in	10.0 miles	SSW	11.5 mph	•	N/A		Clear
6:54 AM	7.0 °F	-2.9 °F	64%	30.22 in	10.0 miles	SW	12.7 mph		N/A		Clear
7:54 AM	7.0 °F	-2.0 °F	67%	30.24 in	10.0 miles	SSW	12.7 mph	-	N/A	• · · · ·	Clear
8:54 AM	9.0 °F	-0.9 °F	64%	30.23 in	10.0 miles	SW	17.3 mph	23.0 mph	N/A	·	Clear
9:54 AM	10.9 °F	-0.0 °F	61%	30.25 in	10.0 miles	SSW	13.8 mph	-	N/A		Clear
10:54 AM	12.9 °F	1.0 °F	59%	30.23 in	10.0 miles	SSW	15.0 mph	-	N/A		Clear
11:54 AM	16.0 °F	3.0 °F	57%	30.22 in	10.0 miles	SSW	15.0 mph	-	N/A		Clear
12:54 PM	19.9 °F	6.1 °F	55%	30.18 in	10.0 miles	SSW	16.1 mph	-	N/A		Clear
1:54 PM	21.9 °F	7.0 °F	53%	30.14 in	9.0 miles	SSW	13.8 mph	20.7 mph	N/A		Clear
2:54 PM	24.1 °F	8.1 °F	51%	30.10 in	10.0 miles	SSW	16.1 mph	24.2 mph	N/A		Clear
3:54 PM	24.1 °F	5.0 °F	44%	30.08 in	10.0 miles	SSW	19.6 mph	-	N/A		Clear
4:54 PM	23.0 °F	5.0 °F	46%	30.06 in	10.0 miles	SSW	13.8 mph	25.3 mph	N/A		Clear
5:54 PM	23.0 °F	3.0 °F	42%	30.04 in	10.0 miles	SSW	16.1 mph	-	N/A		Clear
6:54 PM	21.0 °F	3.0 °F	46%	30.04 in	10.0 miles	SSW	11.5 mph	-	N/A		Clear
7:54 PM	19.9 °F	5.0 °F	52%	30.01 in	10.0 miles	ssw	11.5 mph	•	N/A		Clear
8:54 PM	19.0 °F	5.0 °F	54%	30.00 in	10.0 miles	SSW	10.4 mph	-	N/A		Clear
9:54 PM	19.0 °F	3.9 °F	52%	29.97 in	10.0 miles	SSW	13.8 mph	-	N/A		Clear
10:54 PM	19.0 °F	3.9 °F	52%	29.94 in	10.0 miles	SSW	11.5 mph	-	N/A		Clear

11:54 PM	19.0 °F	5.0 °F	54%	29.91 in	10.0 miles	SSW	11.5 mph	-	N/A	Clear
			5	Show full METARS	METAR FAQ C	omma Delimit	ed File			
ſ				· · · · · · ·		6				
						Optir	nus T	a	Mobiles	

History for KSBN, Indiana Thursday, February 10, 2011 — View Current Conditions

Thursday, February 10, 2011

« Previous Day	Februa	ry 10 2011	View	99 <i>7 - 1</i> 997 - 199	Next Day »
Daily Weekly Monthly Cu	stom				
			Actual	Average	Record
		Temperature			
M	ean Temperature		3 °F	~	
N	ax Temperature		1 4 °F	-	- ()
N	lin Temperature		-9 °F	-	- ()
		Degree Days			
Hea	ting Degree Days		62		
Month to c	late heating degree days		492		
		Moisture			
	Dew Point		-7 °F		
A	verage Humidity		60		
Ma	aximum Humidity		83		
M	nimum Humidity		36		
		Precipitation			
	Precipitation		-	-	- ()
Month	to date precipitation		1.23		,
Year	to date precipitation		3.39		
		Snow			
	Snow		T in	-	- ()
Mor	th to date snowfall		18.5		
	Snow Depth		11.00 in		
		Sea Level Pressure			
Se	a Level Pressure		30.16 in		
		Wind			
	Wind Speed		9 mph (SSW)		
N	ax Wind Speed		18 mph		
٨	lax Gust Speed		23 mph		
	Visibility		10 miles		
	Events		Snow		
= Trace of Precipitation, MM = Miss	ing Value			Source: N	WS Daily Summ



Hourly Observations

Time (EST)	Temp.	Dew Point	Humidity	Sea Level Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:54 AM	-2.9 °F	-8.0 °F	79%	30.2 3 in	10.0 miles	SW	8.1 mph	-	N/A		Scattered Clouds
1:54 AM	-2.9 °F	-8.0 °F	79%	30.22 in	10.0 miles	SW	6.9 mph	.	N/A		Mostly Cloudy
2:54 AM	-2.9 °F	-7.1 °F	82%	30.22 in	9.0 miles	SW	8.1 mph	-	N/A		Mostly Cloudy
3:54 AM	-4.0 °F	-8.0 °F	83%	30.22 in	5.0 miles	SW	6.9 mph	-	0.00 in	Snow	Light Snow
4:54 AM	-6.0 °F	-9.9 °F	83%	30.22 in	7.0 miles	SW	5.8 mph	· · ·	0.00 in	Snow	Light Snow
5:41 AM	-5.8 °F	-11.2 °F	77%	30.17 in	9.0 miles	SW	5.8 mph		0.00 in		Scattered Clouds
5:54 AM	-7.1 °F	-11.9 °F	79%	30.23 in	10.0 miles	SW	5.8 mph		0.00 in		Partly Cloudy
6:54 AM	-8.0 °F	-11.9 °F	83%	30.23 in	10.0 miles	SW	5.8 mph	-	N/A		Clear
7:54 AM	-9.0 °F	-13.0 °F	83%	30.22 in	9.0 miles	SSW	4.6 mph	·····	N/A		Clear
8:54 AM	-6.0 °F	-9.9 °F	83%	30.23 in	8.0 miles	SW	8.1 mph	-	N/A		Clear
9:54 AM	-2.9 °F	-8.0 °F	79%	30.23 in	10.0 miles	SSW	11.5 mph	-	N/A		Clear
10:54 AM	-0.0 °F	-8.0 °F	69%	30.23 in	10.0 miles	South	10.4 mph	-	N/A		Clear
11:54 AM	5.0 °F	-6.0 °F	61%	30.22 in	10.0 miles	wsw	4.6 mph	-	N/A		Clear
12:54 PM	6.1 °F	-6.0 °F	58%	30.19 in	10.0 miles	South	9.2 mph	-	0.00 in		Clear
1:54 PM	12.9 °F	-9.0 °F	37%	30.17 in	10.0 miles	South	11.5 mph	-	N/A		Clear
2:54 PM	14.0 °F	-9.0 °F	35%	30.14 in	10.0 miles	SSW	15.0 mph	21.9 mph	N/A		Clear
3:54 PM	14.0 °F	-4.0 °F	45%	30.11 in	10.0 miles	South	11.5 mph	-	N/A		Clear
4:54 PM	12.9 °F	-6.0 °F	43%	30.09 in	10.0 miles	South	16.1 mph	-	N/A		Clear
5:54 PM	12.0 °F	-6.0 °F	44%	30.06 in	10.0 miles	South	13.8 mph	-	N/A		Clear
6:54 PM	10.0 °F	-5.1 °F	51%	30.07 in	10.0 miles	South	6.9 mph	-	N/A		Clear
7:54 PM	9.0 °F	-6.0 °F	51%	30.08 in	10.0 miles	South	5.8 mph		N/A		Clear

8:54 PM	7.0 °F	-6.0 °F	55%	30.06 in	10.0 miles	South	6.9 mph	-	N/A	Clear
9:54 PM	9.0 °F	-2.9 °F	59%	30.06 in	10.0 miles	SSW	9.2 mph	-	N/A	Clear
10:54 PM	8.1 °F	-2.0 °F	64%	30.05 in	10.0 miles	SSW	9.2 mph	-	N/A	Clear
11:54 PM	7.0 °F	-0.9 °F	70%	30.05 in	10.0 miles	SSW	8.1 mph	-	N/A	Clear
Show full METARS METAR FAQ Comma Delimited File										



APPENDIX D

LABORATORY ANALYTICAL REPORTS



THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

2011

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H1B100401

Steven Murray

Mactec Engineering & Consultan 41 Hughes Drive Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Q:

Jamie A. McKinney Project Manager

(0201)16215 TONA

February 15, 2011

EXECUTIVE SUMMARY - Detection Highlights

H1B100401

PARAM	ETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
P-3026R-0211	02/03/11 14:25 001				
Isopro n-Prop	ne utylbenzene opylbenzene oylbenzene -Trichloroethane	0.35 0.71 0.60 1.9 0.089	0.080 0.16 0.16 0.16 0.080	ppb (v/v) ppb (v/v) ppb (v/v) ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15
SS-3002L-021	1 02/0 4/11 10:52 002				
Trich	chloroethene loroethene	0.35 1.0 0.060	0.080 0.080 0.040	ppb (v/v) ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15
B-3002L-0211	02/04/11 10:51 003				
Benzer 1,2-D:	ne ichloroethane	0.33 0.11	0.080 0.080	ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15
P-3002L-0211	02/04/11 10:50 004				
Benzer 1,2-D:	ne ichloroethane	0.31 0.20	0.080 0.080	ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15
BG-5-0211 02,	/04/11 11:00 005		•		
Benzer	ne	0.21	0.080	ppb(v/v)	EPA-2 TO-15
BG-6-0211 02,	/04/11 11:01 006				
Benzei	ne	0.23	0.080	ppb(v/v)	EPA-2 TO-15
B-719G-0211	02/02/11 16:00 007				/
Benzei	ne .	0.20	0.080	ppb (v/v)	EPA-2 TO-15
B-3010R-0211	02/02/11 17:16 008				
Benzer	ne	0.31	0.080	ppb (v/v)	EPA-2 TO-15
P-3010R-0211	02/02/11 17:26 009		•		
Benzei	ne	0.30	0.080	ppb(v/v)	EPA-2 TO-15

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

H1B100401

			REPORTING		ANALYTICAL
	PARAMETER	RESULT	LIMIT	UNITS	METHOD
SS-301	LOR-0211 02/02/11 17:13 010				
				,	
	Benzene	0.30	0.080	ppb(v/v)	EPA-2 TO-15
	cis-1,2-Dichloroethene	0.15	0.080	ppb(v/v)	EPA-2 TO-15
	n-Propylbenzene	0.21	0.16	ppb(v/v)	EPA-2 TO-15
	Tetrachloroethene	0.39	0.080	ppb(v/v)	EPA-2 TO-15
	1,1,1-Trichloroethane	0.10	0.080	ppb (v/v)	EPA-2 TO-15
	Trichloroethene	0.14	0.040	ppb(v/v)	EPA-2 TO-15
P-7190	G-0211 02/02/11 16:00 011				
					·
	Benzene	0.20	0.080	ppb(v/v)	EPA-2 TO-15
	1,2-Dichloroethane	0.20	0.080	ppb(v/v)	EPA-2 TO-15
					•
SS-719	G-0211 02/02/11 16:01 012				
	Benzene	0.30	0.080	ppb(v/v)	EPA-2 TO-15
	Tetrachloroethene	0.39	0.080	ppb(v/v)	EPA-2 TO-15
	1,1,1-Trichloroethane	0.25	0.080	ppb(v/v)	EPA-2 TO-15
	Trichloroethene	0.36	0.040	ppb(v/v)	EPA-2 TO-15
	•				

3

ANALYTICAL METHODS SUMMARY

H1B100401

PARAMETE	R	ANALYTICAL METHOD
Volatile	Organics by TO15	EPA-2 TO-15
Referenc	es:	
EPA-2	"Compendium of Methods for the Determir Organic Compounds in Ambient Air", EPA- January 1999.	

SAMPLE SUMMARY

H1B100401

<u>WO #</u>	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MD8T5	001	P-3026R-0211	02/03/11	
MD8T7	002	SS-3002L-0211	02/04/11	10:52
MD8T8	003	B-3002L-0211	02/04/11	10;51
MD8T9	004	P-3002L-0211	02/04/11	10:50
MD8VA	005	BG-5-0211	02/04/11	11:00
MD8VD	006	BG-6-0211	02/04/11	11:01
MD8VE	007	B-719G-0211	02/02/11	16:00
MD8VF	008	B-3010R-0211	02/02/11	17:16
MD8VG	009	P-3010R-0211	02/02/11	17:26
MD8VJ	010	SS-3010R-0211	02/02/11	17:13
MD8VK	011	P-719G-0211	02/02/11	16:00
MD8VM	012	SS-719G-0211	02/02/11	16:01

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.

- All calculations are performed before rounding to avoid round-off errors in calculated results.

- Results noted as "ND" were not detected at or above the stated limit.

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

- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor,

paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE H1B100401

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

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The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, Iowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #TN001, New York DOH Lab #10781, North Carolina DPH Lab #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHHR Cert #9955C, Wisconsin DNR Lab #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

7

Client Sample ID: P-3026R-0211

GC/MS Volatiles

Lot-Sample #:	H1B100401-001	Work Order #:	MD8T51AA	Matrix AIR
Date Sampled:	02/03/11 14:25	Date Received:	02/08/11	
Prep Date	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045116			•
Dilution Factor:	1 .	Method:	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.35	0.080	ppb(v/v)
sec-Butylbenzene	0.71	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	0.60	0.16	ppb(v/v)
n-Propylbenzene	1.9	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	0.089	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	

120

4-Bromofluorobenzene

(60 - 140)

Client Sample ID: SS-3002L-0211

GC/MS Volatiles

Lot-Sample #:	H1B100401-002	Work Order #:	MD8T71AA	Matrix AIR
Date Sampled:	02/04/11 10:52	Date Received:	02/08/11	
Prep Date	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045116			
Dilution Factor:	1	Method	EPA-2 TO-15	•

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.35	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	· ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	1.0	0.080	ppb (v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	0.060	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	114	(60 - 140	<u>)</u> .

Client Sample ID: B-3002L-0211

GC/MS Volatiles

Lot-Sample #:				Matrix:
Date Sampled:	02/04/11 10:51	Date Received:	02/08/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045116			
Dilution Factor:	1	Method	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.33	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	\mathbf{ND}	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	\mathbf{ND}	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	0.11	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	111	(60 - 140)	ł

AIR

Client Sample ID: P-3002L-0211

GC/MS Volatiles

1		Work Order #: MD8T91AA	
Date Sampled:	02/04/11 10:50	Date Received: 02/08/11	-
Prep Date:	02/11/11	Analysis Date: 02/11/11	
Prep Batch #:	1045116		
Dilution Factor:	1	Method EPA-2 TO	-15

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Benzene	0.31	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	0.20	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_

4-Bromofluorobenzene

112

(60 - 140)

ix....: AIR

Client Sample ID: BG-5-0211

GC/MS Volatiles

Lot-Sample #:	H1B100401-005	Work Order #:	MD8VA1AA	Matrix AIR
Date Sampled:	02/04/11 11:00	Date Received:	02/08/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045116			
Dilution Factor:	1	Method:	EPA-2 TO-15	

		REPORTING	ł
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.21	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	109	(60 - 140))

Client Sample ID: BG-6-0211

GC/MS Volatiles

DEDODETNO

Lot-Sample #:	H1B100401-006	Work Order #:	MD8VD1AA	Matrix AIR
Date Sampled:	02/04/11 11:01	Date Received:	02/08/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045116	·		
Dilution Factor:	1	Method	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.23	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
SURROGATE 4-Bromofluorobenzene	PERCENT RECOVERY 110	RECOVERY LIMITS (60 - 140)	-

•••

Client Sample ID: B-719G-0211

GC/MS Volatiles

Lot-Sample #:	H1B100401-007	Work Order #:	MD8VE1AA	Matrix AIR
Date Sampled:	02/02/11 16:00	Date Received:	02/08/11	
Prep Date:	02/11/11	Analysis Date	02/11/11	
Prep Batch #:	1045116 .			
Dilution Factor.	1	Method .	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.20	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	· ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
•	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	· 112	(60 - 140)

Client Sample ID: B-3010R-0211

GC/MS Volatiles

Lot-Sample #:	H1B100401-008	Work Order #: MD8VF1AA	Matrix AIR
Date Sampled:	02/02/11 17:16	Date Received: 02/08/11	
Prep Date:	02/11/11	Analysis Date: 02/11/11	
Prep Batch #:	1045116		
Dilution Factor:	1	Method EPA-2 TO-15	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.31	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	111	(60 - 140)	

Client Sample ID: P-3010R-0211

GC/MS Volatiles

Lot-Sample #:	H1B100401-009	Work Order #: MD8VG1AA	Mat
Date Sampled:	02/02/11 17:26	Date Received: 02/08/11	
Prep Date:	02/11/11	Analysis Date: 02/11/11	
Prep Batch #:	1045116		
Dilution Factor:	1	Method EPA-2 TO-15	

atrix..... AIR

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.30	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	. 111	(60 - 140)	

Client Sample ID: SS-3010R-0211

GC/MS Volatiles

Lot-Sample #:	H1B100401-010	Work Order #:	MD8VJ1AA	ŀ
Date Sampled:	02/02/11 17:13	Date Received:	02/08/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045116 .			
Dilution Factor:	1	Method:	EPA-2 TO-15	

Matrix..... AIR

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.30	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	0.15	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	0.21	0.16	ppb(v/v)
Tetrachloroethene	0.39	0.080	ppb(v/v)
1,1,1-Trichloroethane	0.10	0.080	ppb(v/v)
Trichloroethene	0.14	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	117	(60 - 140))

Client Sample ID: P-719G-0211

GC/MS Volatiles

Lot-Sample #:	H1B100401-011	Work Order #: MD8VK1AA M	la
Date Sampled:	02/02/11 16:00	Date Received: 02/08/11	
Prep Date:	02/11/11	Analysis Date: 02/11/11	
Prep Batch #:	1045116		
Dilution Factor:	1	Method: EPA-2 TO-15	

		REPORTIN	ſĠ
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.20	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	. ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	$\mathbf{N}\mathbf{D}$	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v).
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	0.20	0.080	ppb(v/v)
	PERCENT	RECOVERY	r'

RECOVERY

111

SURROGATE	
4-Bromofluorobenzene	

LIMITS (60 - 140) Matrix..... AIR

Client Sample ID: SS-719G-0211

GC/MS Volatiles

Lot-Sample #:	H1B100401-012	Work Order #:	MD8VM1AA	Matrix AIR
Date Sampled:	02/02/11 16:01	Date Received:	02/08/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045116			
Dilution Factor:	1	Method:	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.30	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	0.39	0.080	ppb(v/v)
1,1,1-Trichloroethane	0.25	0.080	ppb(v/v)
Trichloroethene	0.36	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	113	(60 - 140))

METHOD BLANK REPORT

GC/MS Volatiles

Prep Batch #...: 1045116

Client Lot #: H1B100401	Work Order #: MEDV91AA	Matrix AIR
MB Lot-Sample #: H1B140000-116		
	Prep Date: 02/11/11	

Analysis Date..: 02/11/11 Dilution Factor: 1

		REPORTIN	1G	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
Benzene	ND	0.080	ppb(v/v)	EPA-2 TO-15
sec-Butylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
tert-Butylbenzene	ND	0.20	ppb(v/v)	EPA-2 TO-15
Chloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1-Dichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,2-Dichloroethane	ND ·	0.080	ppb(v/v)	EPA-2 TO-15
1,1-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,2-Dichloropropane	. ND	0.080	ppb(v/v)	EPA-2 TO-15
Isopropylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
n-Propylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
Trichloroethene	ND	0.040	ppb(v/v)	EPA-2 TO-15
Vinyl chloride	ND	0.080	ppb(v/v)	EPA-2 TO-15
	PERCENT	RECOVERY	Z	
SURROGATE	RECOVERY	LIMITS		
4-Bromofluorobenzene	111	(60 - 14	40)	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #:	H1B100401	Work Order #.	MEDV91A	C Matrix AIR
LCS Lot-Sample#:	H1B140000-116			
Prep Date:	02/11/11	Analysis Date	: 02/11/1	1
Prep Batch #:	1045116			· ·
Dilution Factor:	1			

	PERCENT	RECOVERY	
PARAMETER	RECOVERY	LIMITS	METHOD
Vinyl chloride	102	(70 - 130)	EPA-2 TO-15
Chloroethane	94	(70 - 130)	EPA-2 TO-15
1,1-Dichloroethene	108	(70 - 130)	EPA-2 TO-15
trans-1,2-Dichloroethene	109	(70 - 130)	EPA-2 TO-15
1,1-Dichloroethane	101	<u>(</u> 70 - 130)	EPA-2 TO-15
cis-1,2-Dichloroethene	104	(70 - 130)	EPA-2 TO-15
1,1,1-Trichloroethane	108	(70 - 130)	EPA-2 TO-15
1,2-Dichloroethane	93	(70 - 130)	EPA-2 TO-15
Benzene	102	(70 - 130)	. EPA-2 TO-15
1,2-Dichloropropane	98	(70 - 130)	EPA-2 TO-15
Trichloroethene	98	(70 - 130)	EPA-2 TO-15
Tetrachloroethene	93	(70 - 130)	EPA-2 TO-15
Isopropylbenzene	106	(70 - 130)	EPA-2 TO-15
n-Propylbenzene	108	(70 - 130)	EPA-2 TO-15
tert-Butylbenzene	103	(70 - 130)	EPA-2 TO-15
sec-Butylbenzene	106	(70 - 130)	EPA-2 TO-15
		PERCENT	RECOVERY
SURROGATE		RECOVERY	LIMITS
4-Bromofluorobenzene		116	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #:	H1B100401	Work Order #	: MEDV91AC	Matrix: AIR
LCS Lot-Sample#:				
Prep Date	02/11/11	Analysis Dat	e: 02/11/11	
Prep Batch #:	1045116			
Dilution Factor:	1			

	SPIKE	MEASURED		PERCENT	
PARAMETER	AMOUNT	AMOUNT	UNITS	RECOVERY	METHOD
Vinyl chloride	5.0	5.1	ppb(v/v)	102	EPA-2 TO-15
Chloroethane	5.0	4.7	ppb(v/v)	94	EPA-2 TO-15
1,1-Dichloroethene	5.0	5.4	ppb(v/v)	108	EPA-2 TO-15
trans-1,2-Dichloroethene	5.0	5.5	ppb(v/v)	109	EPA-2 TO-15
1,1-Dichloroethane	5.0	5.0	ppb(v/v)	101	EPA-2 TO-15
cis-1,2-Dichloroethene	5.0	5.2	ppb (v/v)	104	EPA-2 TO-15
1,1,1-Trichloroethane	5.0	5.4	ppb(v/v)	108	EPA-2 TO-15
1,2-Dichloroethane	5.0	4.7	ppb(v/v)	93	EPA-2 TO-15
Benzene	5.0	5.1	ppb(v/v)	102	EPA-2 TO-15
1,2-Dichloropropane	5.0	4.9	ppb(v/v)	98	EPA-2 TO-15
Trichloroethene	5.0	4.9	ppb(v/v)	98	EPA-2 TO-15
Tetrachloroethene	5.0	4.7	ppb (v/v)	93	EPA-2 TO-15
Isopropylbenzene	5.0	5.3	ppb(v/v)	106	EPA-2 TO-15
n-Propylbenzene	5.0	5.4	ppb(v/v)	108	EPA-2 TO-15
tert-Butylbenzene	5.0	5.2	ppb(v/v)	103	EPA-2 TO-15
sec-Butylbenzene	5.0	5.3	ppb(v/v)	106	EPA-2 TO-15
			DEGOUEDI		
		PERCENT	RECOVERY	•	
				-	
4-BromorLuorobenzene		116	(60 - 140)		
SURROGATE 4-Bromofluorobenzene		RECOVERY 116	LIMITS (60 - 140)	-	

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NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results. Bold print denotes control parameters

TestAmerica	THE LEADER IN ENVIRONMENTAL TESTING	cocs		(uo	lioas	Səjor	1 u; Aj	speci	Indoor Alr Manbient Air Soil Gas Landfill Gas Other (please							@ Ambient	ge stagt e	873804403616	Justody Seals	present.								
estAr	HE LEADER IN ENV	l of ((uo	secil	sətor	ı ui V	lioads	EPA 25C							Received	12 Cans, 12 Flows,	1881380										
•									EPA 3C TO-14A CC-15		×	X	ΪXΪ	X	<u>ر</u> ک	2 Baxes	12 Cans	Fud Ex Sis	UBA a) shu					~		218/11 040		
HIGUNDAD HIGUNDAD	liability with respect to the collection and shipment of these samples.	sampled By: SGB	•						Flow Controller ID Canister ID	K371 0120	K219 6587	<122 6605	K325 04379	K309 1007N	K295 04329										ATTACHED	let in		
าain of Cus	ct to the collection and :					me			Canister Canister Vacuum in Vacuum in Field, "Hg Flow (Start) (Ston)	-6.5	-29-35 K	5-454	0	-4	-4.5	Temperature (Fahrenheit)	ent			Pressure (inches of Hg)	ent			~	\smile	Capieters Received by:	Received by:	· Received by:
samples Cł	s no liability with respe	Steve Morlay	2506-226	Steve Bugge		vsis Turnaround Time		specify)	Time Stop	14:25-	0.2		10:50	11 11:00-30	o(1)	Тетр	Ambient			Press	Ambient				TTUENTS	12:00 pm		
Canister Sa	TestAmerica assumes no	Project Manager:	Phone: 231-9	Site Contact: Sf <u>47676</u> TAL Contact: M		Anaivsis		Rush (Specify)	Sample Date(s) Time Start	4	2/3/11/2 10:28		0:33	11-101	V 10:45		Interior	Start	Stop		Interior	Start	Stop	*	B CONSTI	Date/Time/ 2/4/2011	Date/Time:	Date/Time:
TAL Knoxville 5815 Middlebrook Pike	Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315	Client Contact Information	Company: MACTEC	Hughes Drive Traverse City, MD	-226-19	UL -	Site/location: South Revel, TN		Comila Idontification	P-2016R-0211	55-3002 L-0211	8-3021-021	P- 20021-07-11	11	0	Sampled by :			-					Special Instructions/QC Requirements & Comments:	RUN TO- 15, 215T B	Canisters Shipped by:	Samples Relinquished by:	Relinquished by:

TAL Knoxville 5815 Middlebrook Pike	Canister S	r Sam	ples	Chain	of CL	HIRNDHOI HIRDDHOI HIRDDHOI	Record			D	TestAmeric		Ľ	5	Ū	σ	
Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315	TestAmerica assumes		bility with re	spect to the	e collection a	no liability with respect to the collection and shipment of these samples.	these sample.	vi		THE LE	THE LEADER IN ENVIRONMENTAL TESTING	N ENVI	RONM	ENTAI	- TES1	LING	
Client Contact Information	Project Manager:	er: Steve		Murta	4	Sampled By:	568				e T		cocs				
Company: MACTE C	Phone: 231-9	126-	- 205	0													
Address: 41 Highes Dr. Site Contact: City/State/ZIDTraverse City, MI 49696 TAL Contact:	Site Contact: TAL Contact:	Steve	tool	×							(ua					(ua	
Phone: 23/-922-9050											3996					ljoes	
1 2 2 1	A	Analvsis Turnaround Timė	Irnaround	Timė							səjoi					səjo	
end, TN	Standard	dard (Specify)	ify) X					<u></u>			u ui V					y.ju.u	
PO# 5 3286	Rus															ticeq	
					Canister					0		od∕ <u>I</u> rə				s əscəlq	
Sample Identification	Sample Date(s) Ti	Time Start T	Time Stop	Vacuum in Field, "Hg (Start)	5	Flow Controller ID	Canister ID	21-01	а41-от 56 А9Э	SS A93	I MT2A I) 1941O	idues	noobni nəidmA	soli Ga	liftbnsJ	Ofper (F	
R-7196-0211	A)600	62-	، کر	JCIIS	1349	X			-						
R-2010R-0211	2-1-11+	1658 1	1716	-2%5	-5,5	K128	1362	X									
- 021	<u> </u>	1702 1	1726	-27	-65	KI42	1132	×									
-6211		1656 1	1713	-27	-5	15397	5682	X									
- 71965-0211	1 11-2-2	15221	1600 -	30	- 2,5	K158	1576	X									
-0211		151/ 1	1601	-2.9	-5,5	1473	6580	X									
			Ţ	emperature	Temperature (Fahrenheit)												
	Inte	Interior	A	Ambient													
	Start			-													
	Stop									ļ							
			٩	Pressure (inches of Hg)	hes of Hg)												
•	Inte	Interior	4	Ambient													
	Start																
	Stop	:			·												
structions/QC Requirements & Commen	<u>+</u> -			ATT	ATACHEN												
KUN 10-15 LISI 2 C	DULICNOT																
Canisters Stringped by	Date/Time:/3/it		191		Canisters R	Canisters Received by:	Lunia	Ash		940							
d by:	Date/Time:				Received by:	у: (¹											
Relinquished by:	Date/Time:				Received by	oy:											2
										1						2	23

 \mathbf{A}

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Lot Number: \\\&\\\\\\\

	Yes	Å,	NA	Yes No NA If No, what was the problem?	Comments/Actions Taken
abels match COC?		7		I a Do not match COC I b Incomplete information I to Marking smeared I d Label torn I f COC not received	10P-30268-0211 Chain 5 1425 Stor T.ME. TO3 50 1424 Stor T.ME.

Review Items	Yes	۶,	NA	If No, what was the problem?	Cômments/Actions Taken
1 Do cample container lahels match COC?				W1a Do not match COC	10D-27210R-0211 Chain Sous
(The Dates Times)				Th Incomplete information	1425 Stor T. Me. TO.
		7	<u> </u>	□ 1c Marking smeared	T.Me.
			_	D 1d Label torn	49
				🗆 1e No label	
				□ 1f COC not received	
				🛙 1g Other:	
2. Is the cooler temperature within limits? (> freezing				🗆 2a Temp Blank =	
temp. of water to 6°C, VOST: 10°C)			7	□ 2b Cooler Temp =	
				C Cooling initiated for recently	
				collected samples, ice present.	
3. Were samples received with correct chemical		-	7	🛙 3a Sample preservative =	
		T		A A Not	
4. Wele custouy seals present intact on cooler and or containanc?		5		a the Not present	
		,			
5 Wran all af the counter listed on the COC received?	T	T		C & Sampler received not on COC	
	7			□ 54 Samptes received-on COC	
				D C I - I.	
6. Were all of the sample containers received intact?	7			L to Leaking	
				U 6b Broken	
7. Were VOA samples received without headspace?	Ň		2	Ta Headspace (VOA only)	
8. Were samples received in appropriate containers?	>			🗆 8a Improper container	
9. Did you check for residual chlorine, if necessary?			7	□ 9a Could not be determined due	
•	`			to matrix interference	
10. Were samples received within holding time?	>			10 Holding time expired	
11. For rad samples, was sample activity info. provided?			2	□ Incomplete information	
12. For 1613B water samples is pH<9?			5	If no, was pH adjusted to pH 7 - 9	
				with sulfuric acid?	
13. Are the shipping containers intact?]			🗆 13a Leaking	
	•			□ 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	>			D 14a Not relinquished	
15. Are tests/parameters listed for each sample?	>			□ 15a Incomplete information	
16. Is the matrix of the samples noted?	~			D 15a Incomplete information	
17. Is the date/time of sample collection noted?	~			□ 15a Incomplete information	
18. Is the client and project name/# identified?	7			□ 15a Incomplete information	
19. Was the sampler identified on the COC?	>				
ructions: N	4				
Sample Receiving Associate: FpULTHAN 9, Ach	LEN	رې		Date: 2 8/11	QA026R22.doc, 012811
				•	

10/0 CULTURE CARACTER

Test America - Knoxville Air Canister Dilution Log	Lot Number: <u>HIB100401</u>
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		— r							r	<u> </u>			
	Comments	golg		8984	9019	8984	plop	9037	2206	9028	9039	Ą	thob
	Final Pres. Pf (psig)												
	Vol (mL)												
	Serial Dilution Can #									-			
ilutions	Third InCan Final Pf (psig)												
Subsequent Dilutions	Second In-can Final Pres. Pf (psig)												
Subs	First InCan Final Pres. Pf (psig)												
	Final Pres. Pf (psig)												
	Initial Pres. Pi (in)												
	Pbarr (in)												
	S							3					
	Analyst/Date											-	
	Adj. Initial Pres. (- in or + psig)												·
4	Pres. upon receipt (-in or + psig)	-2.8	-2.5	-3,2	+0.3	-0.9	-3.1	-29.	-39	Za)-	5.t-	6'H-	·4.5
	Can #	6668	6587	6605	04399	1007N	04329	1349	1362	1132	2995	1516	6580
Initial Can Pressure	Sample ID	MD8T5	MD8T7	MD8T8	MD8T9	MD8VA	MD8VD	MD8VE	MD8VF	MD8VG	MD8VJ	MD8VK	MD8VM
	Pbari (in)	9.02											*
	Tedlar Bag Time	10.PG AN											->>
	Analyst/Date	2210-11											æ

MS038 Revision 8

Original Chain of Custody Documentation

TAL Knoxville

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Testamerica The leader in environmental testing

Client Contact Information	Project Manager: Steve	Norlay	Samp	Sampled By:	56B				_ of		cocs				
Company: MACTEC	Phone: 231-922-905	20 0						_							
Hughes Dr	Steve 1	d'and							((
- 2202 -276-					ł										
Project Name: 4 11 < 1000	Analysis Turnaround Time	und Time							seto						
Site/location: South R. J. T.	Sta								u ui /					u ui v	
PO# < 1220 86	Rush (Specify)								Gioecifi	90-34 1				Aiceo	
1	- -									2998L		ír	S		
	Samnle	Canister Vacuum in Field "Ho	Canister Vacuum in Field 'Ho Flow (Elow Controller	34	-14V -12	A 3C	A 25C	ner (Pleas	(T əlqm	οοι Αίτ	iA frieidi	ssƏ lifbr sƏ lifbr	ier (Plea	
Sample Identification	Date(s) Time Start Time Stop	(Start)			Canister ID	-+	еь/	/d3		<u> 1948</u>				_	
· P-30268-0211	2/2/11-1 14:21 14:25	-30	-6.5 K	K371 01	0710										
0211	2/3/4/10 10:28 10:52	-129-10	-3.5 K	K219 65	6587 >	$\langle \cdot \rangle$									
8-30026-0211	10:30 0:21	-29.5	-4:5 KI	K122 66	6605	$\overline{\checkmark}$									
P-3022-0211	10:33 10:50	67-0	N V	K325 04	(43540)										
86-5-0211	00:11 11:00	-30	J-T	K309 100	(NLOO)	×	-								
86-6-0211	1.	-29 -	4.5	K295 04	04329)	\mathbf{X}									
Sampled by :		Temperature (Fahrenheit)	(Fahrenheit)			<i>ч</i> С	2 Baxes	œ	ر رو	Re ceived	0	4 V	Ambien-	J.	C B A
	Interior	Ambient				12(a Cans, la Flous,	2	E P	57	3	T-Bars	SVS	त	
	Start					Feol	Fed Ex Sig	\$ 1 8	5	873804403614	041	36	و		
	Stop					සු	CBA alslu	8/11	Ŋ	hpot sh		Seals	. 14		
		Pressure (inches of Hg)	hes of Hg)						۲	HOH	Pre	present	+.		
	Interior	Ambient	-							5	-				
	Start														
	Stop														
Special Instructions/QC Requirements & Comments:			6		د										
RUN TO-IS, LIST B	CONSTITU	ENTS	(ATT	HJAT	ĆŊ,	\frown									
Canisters Shipped by	Date/Time/ 2/4/2011 12:00 pm		Capisters Received by	Ved by:		N N	040111816								1
Samples Relinquished by:	Date/Time:		Received by:	0											
Relinquished by:	Date/Time:		Received by:							·					
								1							

5815 Middlebrook Pike Knoxville, TN 37921 **TAL Knoxville**

HIMMUI Canister Samples Chain of Custody Record

mes no liability with respect to the collection and shipment of these samples TectAmerica as

TestAmerica

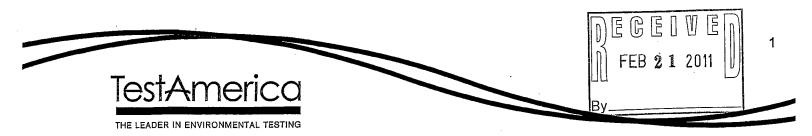
THE LEADER IN ENVIRONMENTAL TESTING

	of cocs							EPA 25C ASTM D-1946 Other (Please a Sample Type Soil Gas Soil Gas Soil Gas Ciher (Please a																		1	
								EPA 3C																	218111 940		
								31-0T 441-0T			X	 人	\times	X								:			2181	ł	
iese samples	560							Canister ID	1349	1362	1132	2995	1576	6580											U.M.D.		
TestAmenca assumes no liability with respect to the collection and shipment of these samples.	Sampled Bv: ²			•				Flow Controller ID	KIIS	K128	142	K397	K158	K473							e.		/		Canisters Received by:) :/c	.kc
ne collection	5	6	. .					Canister Vacuum în Field, 'Hg (Stop)	ر بر	-5,5	-65	5	- &,5	-5,5	Temperature (Fahrenheit)				ches of Hg)				-	ATACHED	Canisters F	Received by:	Received by:
respect to th	Murca	20	al c		nd Timè			Canister Vacuum in Field, "Hg (Start)	-29	-21,5	-27	-27	-30	-29	Temperature	Ambient			Pressure (inches of Hg)	Ambient			1.	(AT			
o liability with	Steve		28 202 24 Ave		Analysis Turnaround Time	(Specify) X	cify)	Time Stop	009(1716	1726	1713	1600	1601										Ę	2191		
assumes n	·	31-922	ΨZ		Analysis	Standard (S	Rush (Specify)	Time Start	1515	1653	1702	1656	1522	121		Interior				Interior				TUEN	3/11		
I ESCAMENCA (Project Manager	Phone: 131-9	Site Contact:				8	Sample Date(s)	2-1-11	2-1-11	41-12-2	2-1-11>	4 11-2-2	11-2-2			Start	Stop			Start	Stop		LON STITUENTS	Date/Time:	Date/Time:	Date/Time:
phone 865-291-3000 fax 865-584-4315	Client Contact Information	Company: MACTE C		-972-9050	Project Name: How well SR None Threese	Sevel, TN		Sample Identification	8-7196-0211	8-30108-0211		10R-0211	-0211	0211		•							Special Instructions/QC Requirements & Comments:	RUN TO-IS LIST B C	Canister Shipped by	Samples Relinquished by:	Relinquished by:

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H1B100401 Analytical Report	1
Sample Receipt Documentation	22
Total Number of Pages	25

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TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H1B100402

Steven Murray

Mactec Engineering & Consultan 41 Hughes Drive Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney Project Manager

(2) 102011 110

February 15, 2011

EXECUTIVE SUMMARY - Detection Highlights

H1B100402

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
P-3018L-0211 02/03/11 10:59 001				
Benzene 1,1,1-Trichloroethane Trichloroethene	0.36 0.11 0.081	0.080 0.080 0.040	ppb (v/v) ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15
BG-3-0211 02/03/11 11:06 002			**	
Benzene	0.25	0.080	ppb (v/v)	EPA-2 TO-15
Trichloroethene	0.058	0.040	ppb(v/v)	EPA-2 TO-15
BG-4-0211 02/03/11 14:36 003				
Benzene	0.28	0.080	ppb (v/v)	EPA-2 TO-15
Tetrachloroethene	0.17	0.080	ppb(v/v)	EPA-2 TO-15
B-3018L-0211 02/03/11 10:53 004				
Benzene	0.41	0.080	ppb(v/v)	EPA-2 TO-15
SS-3018L-0211 02/03/11 10:53 005				•
Benzene	0.57	0.080	ppb(v/v)	EPA-2 TO-15
n-Propylbenzene	0.17	0.16	ppb (v/v)	EPA-2 TO-15
Tetrachloroethene	0.36	0.080	ppb(v/v)	EPA-2 TO-15
Trichloroethene	0.065	0.040	ppb (v/v)	EPA-2 TO-15
SS-3026R-0211 02/03/11 14:26 006	· .			· ·
Benzene	0.22	0.080	ppb(v/v)	EPA-2 TO-15
n-Propylbenzene	0.23	0.16	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	0.87	0.080	ppb(v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	1.2	0.080	ppb(v/v)	EPA-2 TO-15
Trichloroethene	0.044	0.040	ppb(v/v)	EPA-2 TO-15
SS-3006L-0211 02/02/11 11:58 007				
Benzene	0.60	0.080	ppb(v/v)	EPA-2 TO-15
Isopropylbenzene	0.16	0.16	ppb(v/v)	EPA-2 TO-15
n-Propylbenzene	0.26	0.16	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	0.46	0.080	ppb (v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	0.13	0.080	ppb(v/v)	EPA-2 TO-15
Trichloroethene	0.13	0.040	ppb(v/v)	EPA-2 TO-15

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

H1B100402

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-3006L-0211 02/02/11 11:56 008				
Benzene cis-1,2-Dichloroethene Trichloroethene 1,2-Dichloroethane	1.9 0.093 0.067 0.084	0.080 0.080 0.040 0.080	ppb (v/v) ppb (v/v) ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15
P-3006L-0211 02/02/11 12:00 009				
Benzene cis-1,2-Dichloroethene Trichloroethene 1,2-Dichloroethane	2.1 0.10 0.078 0.11	0.080 0.080 0.040 0.080	ppb (v/v) ppb (v/v) ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15
BG-1-0211 02/02/11 13:20 010		•		
Benzene	0.19	0.080	ppb (v/v)	EPA-2 TO-15
BG-2-0211 02/02/11 17:36 011		•		
Benzene	0.17	0.080	ppb (v/v)	EPA-2 TO-15
B-3026R-0211 02/03/11 14:25 012		•		
Benzene	0.28	0.080	ppb(v/v)	EPA-2 TO-15

ANALYTICAL METHODS SUMMARY

H1B100402

PARAMETER	ANALYTICAL METHOD
Volatile Organics by TO15	EPA-2 TO-15
References:	
TOT 9	

EPA-2

"Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H1B100402

WO #	SAMDT.R#	CLIENT SAMPLE ID	D DATE SAMPLED	SAMP TIME
<u>WO #</u>	, , , , , , , , , , , , , , , , , , ,	CUTRWY OWNERD TO		<u></u>
MD8V0	001	P-3018L-0211	02/03/11	10:59
MD8V3	002	BG-3-0211	02/03/11	11:06
MD8V4	003	BG-4-0211	02/03/11	14:36
MD8V5	004	B-3018L-0211	02/03/11	10:53
MD8V6	005	SS-3018L-0211	02/03/11	10:53
MD8V7	006	SS-3026R-0211	02/03/11	14:26
MD8V8	007	SS-3006L-0211	02/02/11	11:58
MD8V9	008	B-3006L-0211	02/02/11	11:56
MD8WA	009	P-3006L-0211	02/02/11	12:00
MD8WC	010	BG-1-0211	02/02/11	13:20
MD8WD	011	BG-2-0211	02/02/11	17:36
MD8WE	012	B-3026R-0211	02/03/11	14:25

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.

- All calculations are performed before rounding to avoid round-off errors in calculated results.

- Results noted as "ND" were not detected at or above the stated limit.

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

- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE H1B100402

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

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The original chain of custody documentation is included with this report.

Sample Receipt

There were no problems with the condition of the samples received.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, Iowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #TN001, New York DOH Lab #10781, North Carolina DPH Lab #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHHR Cert #9955C, Wisconsin DNR Lab #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Client Sample ID: P-3018L-0211

GC/MS Volatiles

Lot-Sample #:	H1B100402-001	Work Order #:	MD8V01AA	Matrix AIR
Date Sampled:	02/03/11 10:59	Date Received:	02/09/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045116			
Dilution Factor:	1	Method:	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.36	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	0.11	0.080	ppb(v/v)
Trichloroethene	0.081	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb (v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	111	(60 - 140)	

Client Sample ID: BG-3-0211

GC/MS Volatiles

Lot-Sample #	H1B100402-002	Work Order #: MD8V31AA	М
Date Sampled:	02/03/11 11:06	Date Received: 02/09/11	
Prep Date:	02/11/11	Analysis Date: 02/11/11	
Prep Batch #:	1045116		
Dilution Factor:	1	Method EPA-2 TO-15	

Matrix..... AIR

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.25	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0,080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)·
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	0.058	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	109	(60 - 140)	-

a

Client Sample ID: BG-4-0211

GC/MS Volatiles

Lot-Sample #:			
Date Sampled:	02/03/11 14:36	Date Received:	02/09/11
Prep Date:	02/11/11	Analysis Date:	02/11/11
Prep Batch #:	1045116		
Dilution Factor:	1	Method:	EPA-2 TO-15

Matrix..... AIR

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.28	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	0.17	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	109	(60 - 140)

Client Sample ID: B-3018L-0211

GC/MS Volatiles

Lot-Sample #:	H1B100402-004	Work Order #:	MD8V51AA	Matrix AIR
Date Sampled:	02/03/11 10:53	Date Received:	02/09/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	•
Prep Batch #:	1045118			
Dilution Factor:	1	Method	EPA-2 TO-15	

Method..... EPA-2 TO-15

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.41	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ŊD	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	97	(60 - 140)	

Client Sample ID: SS-3018L-0211

GC/MS Volatiles

Lot-Sample #:	H1B100402-005	Work Order #:	MD8V61AA	Matrix AIR
Date Sampled:	02/03/11 10:53	Date Received:	02/09/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045118			
Dilution Factor:	1	Method	EPA-2 TO-15	

Method.

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.57	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	0.17	0.16	ppb(v/v)
Tetrachloroethene	0.36	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	0.065	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	100	(60 - 140)	

Client Sample ID: SS-3026R-0211

GC/MS Volatiles

Lot-Sample #:	H1B100402-006	Work Order #:	MD8V71AA Matri
Date Sampled:	02/03/11 14:26	Date Received:	02/09/11
Prep Date:	02/11/11	Analysis Date:	02/11/11
Prep Batch #:	1045118		
Dilution Factor:	1	Method	EPA-2 TO-15

cix..... AIR

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.22	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	0.23	0.16	ppb (v/v)
Tetrachloroethene	0.87	0.080	ppb(v/v)
1,1,1-Trichloroethane	1.2	0.080	ppb(v/v)
Trichloroethene	0.044	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	98	(60 - 140)

Client Sample ID: SS-3006L-0211

GC/MS Volatiles

Lot-Sample #:	H1B100402-007	Work Order #:	MD8V81AA	Matrix AIR
Date Sampled:	02/02/11 11:58	Date Received:	02/09/11	
Prep Date:	02/11/11	Analysis Date	02/11/11	
Prep Batch #:	1045118			
Dilution Factor:	1	Method:	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.60	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	0.16	0.16	ppb (v/v)
n-Propylbenzene	0.26	0.16	ppb(v/v)
Tetrachloroethene	0.46	0.080	$ppb(\mathbf{v}/\mathbf{v})$
1,1,1-Trichloroethane	0.13	0.080	ppb(v/v)
Trichloroethene	0.13	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
· · ·	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	99	(60 - 140))

Client Sample ID: B-3006L-0211

GC/MS Volatiles

Lot-Sample #:	H1B100402-008	Work Order #:	MD8V91AA	Matrix AIR
Date Sampled:	02/02/11 11:56	Date Received:	02/09/11	
Prep Date:	02/11/11	Analysis Date:	0.2/11/11	
Prep Batch #:	1045118			
Dilution Factor:	1	Method	EPA-2 TO-15	

	REPORTING	
RESULT	LIMIT	UNITS
1.9	0.080	ppb(v/v)
ND	.0.16	ppb(v/v)
ND	0.080	ppb(v/v)
ND .	0.080	ppb(v/v)
0.093	0.080	ppb(v/v)
ND	0.16	ppb(v/v)
ND	0.16	ppb(v/v)
ND	0.080	ppb(v/v)
ND	0.080	ppb(v/v)
0.067	0.040	ppb(v/v)
ND	0.080	ppb(v/v)
ND	0.20	ppb(v/v)
0.084	0.080	ppb(v/v)
PERCENT	RECOVERY	
RECOVERY	LIMITS	-
98	(60 - 140)	
	1.9 ND ND O.093 ND ND ND ND ND ND ND ND ND O.067 ND ND O.084 PERCENT RECOVERY	RESULT LIMIT 1.9 0.080 ND 0.16 ND 0.080 ND 0.16 ND 0.16 ND 0.080 ND 0.20 0.084 0.080 PERCENT RECOVERY PERCOVERY LIMITS

Client Sample ID: P-3006L-0211

GC/MS Volatiles

Lot-Sample #:			
Date Sampled:	02/02/11 12:00	Date Received:	02/09/11
Prep Date:	02/11/11	Analysis Date:	02/11/11
Prep Batch #:	1045118 ·		
Dilution Factor:	1	Method	EPA-2 TO-15

atrix..... AIR

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	2.1	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	0.10	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	.ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	0.078	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	0.11	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	97	(60 - 140)

Client Sample ID: BG-1-0211

GC/MS Volatiles

Lot-Sample #:				Matrix AIR
Date Sampled:	02/02/11 13:20	Date Received:	02/09/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045118			
Dilution Factor:	1	Method:	EPA-2 TO-15	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.19	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
· · ·			
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	95	(60 - 140))

Client Sample ID: BG-2-0211

GC/MS Volatiles

Lot-Sample #:	H1B100402-011	Work Order #:	MD8WD1AA	Matrix AIR
Date Sampled:	02/02/11 17:36	Date Received:	02/09/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045118			
Dilution Factor:	1	Method:	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.17	0.080	$ppb(\mathbf{v/v})$
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND .	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	97	(60 - 140))

Client Sample ID: B-3026R-0211

GC/MS Volatiles

Lot-Sample #:	H1B100402-012	Work Order #:	MD8WE1AA	Matrix AIR
Date Sampled:	02/03/11 14:25	Date Received:	02/09/11	
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045118			
Dilution Factor:	1	Method	EPA-2 TO-15	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	0.28	0.080	$\frac{\partial \mathbf{W} \mathbf{I} \mathbf{B}}{\mathbf{p} \mathbf{p} \mathbf{b} (\mathbf{v} / \mathbf{v})}$
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	(v/v) dqq
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb (v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v) ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v) ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v) ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
r, z-bichiordechane	ND	0.000	ppp(\///
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	<u>98</u>	(60 - 140)	— .)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #: H1B100402	Work Order #: MEDV91AA	Matrix AIR
MB Lot-Sample #: H1B140000-116		
	Prep Date: 02/11/11	

Analysis Date..: 02/11/11 Dilution Factor: 1

Prep	Date:	02/11/11
Prep	Batch #:	1045116

		REPORTIN	ſĠ	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
Benzene	ND	0.080	ppb(v/v)	EPA-2 TO-15
sec-Butylbenzene	ND	0,16	ppb (v/v)	EPA-2 TO-15
tert-Butylbenzene	ND	0.20	ppb (v/v)	EPA-2 TO-15
Chloroethane	ND	0.080	ppb (v/v)	EPA-2 TO-15
1,1-Dichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,2-Dichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,2-Dichloropropane	ND	0.080	ppb(v/v)	EPA-2 TO-15
Isopropylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
n-Propylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
Trichloroethene	ND	0.040	ppb(v/v)	EPA-2 TO-15
Vinyl chloride	ND	0.080	ppb(v/v)	EPA-2 TO-15
	PERCENT	RECOVERY	7	
SURROGATE	RECOVERY	LIMITS		
4-Bromofluorobenzene	111	(60 - 14	0)	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #:	H1B100402	Work Order #: MEDV91AC Matrix	: AIR
LCS Lot-Sample#:	H1B140000-116		
Prep Date:	02/11/11	Analysis Date: 02/11/11	
Prep Batch #:	1045116		
Dilution Factor:	1		

	PERCENT	RECOVERY	
PARAMETER	RECOVERY	LIMITS	METHOD
Vinyl chloride	102	(70 - 130)	EPA-2 TO-15
Chloroethane	94	(70 - 130)	EPA-2 TO-15
1,1-Dichloroethene	108	(70 - 130)	EPA-2 TO-15
trans-1,2-Dichloroethene	109	(70 - 130)	EPA-2 TO-15
1,1-Dichloroethane	101	(70 - 130)	EPA-2 TO-15
cis-1,2-Dichloroethene	104	(70 - 130)	EPA-2 TO-15
1,1,1-Trichloroethane	108	(70 - 130)	EPA-2 TO-15
1,2-Dichloroethane	93	(70 - 130)	EPA-2 TO-15
Benzene	102	(70 - 130)	EPA-2 TO-15
1,2-Dichloropropane	98	(70 - 130)	EPA-2 TO-15
Trichloroethene	98	(70 - 130)	EPA-2 TO-15
Tetrachloroethene	93	(70 - 130)	EPA-2 TO-15
Isopropylbenzene	106	(70 - 130)	EPA-2 TO-15
n-Propylbenzene	108	(70 - 130)	EPA-2 TO-15
tert-Butylbenzene	103	(70 - 130)	EPA-2 TO-15
sec-Butylbenzene	106	(70 - 130)	EPA-2 TO-15
		PERCENT	RECOVERY
SURROGATE		RECOVERY	LIMITS
4-Bromofluorobenzene		116	(60 - 140)

NOTE (S) :

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Calculations are performed before rounding to avoid round-off errors in calculated results. Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #:	H1B100402	Work Order #: MEDV91AC	Matrix AIR
LCS Lot-Sample#:	H1B140000-116		
Prep Date:	02/11/11	Analysis Date: 02/11/11	
Prep Batch #:	1045116		
Dilution Factor:	1		

	SPIKE	MEASURED		PERCENT	
PARAMETER	AMOUNT	AMOUNT	UNITS	RECOVERY	METHOD
Vinyl chloride	5.0	5.1	ppb(v/v)	102	EPA-2 TO-15
Chloroethane	5.0	4.7	ppb(v/v)	94	EPA-2 TO-15
1,1-Dichloroethene	5.0	5.4	ppb(v/v)	108	EPA-2 TO-15
trans-1,2-Dichloroethene	5.0	5.5	ppb(v/v)	109	EPA-2 TO-15
1,1-Dichloroethane	5.0	5.0	ppb(v/v)	101	EPA-2 TO-15
cis-1,2-Dichloroethene	5.0	5.2	ppb(v/v)	104	EPA-2 TO-15
1,1,1-Trichloroethane	5.0	5.4	ppb(v/v)	108	EPA-2 TO-15
1,2-Dichloroethane	5.0	4.7	ppb(v/v)	93	EPA-2 TO-15
Benzene	5.0	5.1	ppb(v/v)	102	EPA-2 TO-15
1,2-Dichloropropane	5.0	4.9	ppb(v/v)	98	EPA-2 TO-15
Trichloroethene	5.0	4.9	ppb(v/v)	98	EPA-2 TO-15
Tetrachloroethene	5.0	4.7	ppb(v/v)	93	EPA-2 TO-15
Isopropylbenzene	5.0	5.3	ppb(v/v)	106	EPA-2 TO-15
n-Propylbenzene	5.0	5.4	ppb(v/v)	108	EPA-2 TO-15
tert-Butylbenzene	5.0	5.2	ppb (v/v)	103	EPA-2 TO-15
sec-Butylbenzene	5.0	5.3	ppb(v/v)	106	EPA-2 TO-15
		PERCENT	RECOVERY		
SURROGATE		RECOVERY	LIMITS		
4-Bromofluorobenzene		116	(60 - 140)	<u> </u>	
- PIOWOII NOI ODGIIVGIIG		тто	(80 - 140)	,	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #: H1B10040	2 Work Order #: MEDW21AA	Matrix AIR
MB Lot-Sample #: H1B14000	0-118	
	Prep Date: 02/11/11	
Analysis Date: 02/11/11	Prep Batch #: 1045118	
Dilution Factor: 1		

		REPORTING	3	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
Benzene	ND	0.080	ppb(v/v)	EPA-2 TO-15
sec-Butylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
tert-Butylbenzene	ND	0.20	ppb(v/v)	EPA-2 TO-15
Chloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1-Dichloroethane	ND	0.080	ppb (v/v)	EPA-2 TO-15
1,2-Dichloroethane	ND	0.080	ppb (v/v)	EPA-2 TO-15
1,1-Dichloroethene	ND	0.080	ppb (v/v)	EPA-2 TO-15
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,2-Dichloropropane	ND	0.080	ppb(v/v)	EPA-2 TO-15
Isopropylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
n-Propylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
Trichloroethene	ND	0.040	ppb(v/v)	EPA-2 TO-15
Vinyl chloride	ND	0.080	ppb(v/v)	EPA-2 TO-15
	PERCENT	RECOVERY		
SURROGATE	RECOVERY	LIMITS		
4-Bromofluorobenzene	99	(60 - 14)))	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #:	H1B100402	Work Order #:	MEDW21AC	Matrix:
LCS Lot-Sample#:				
Prep Date:	02/11/11	Analysis Date:	02/11/11	
Prep Batch #:	1045118			
Dilution Factor:	1			

· · · · · · · · · · · · · · · · · · ·	PERCENT	RECOVERY	
PARAMETER	RECOVERY	LIMITS	METHOD
Vinyl chloride	82	(70 - 130)	EPA-2 TO-15
Chloroethane	92	(70 - 130)	EPA-2 TO-15
1,1-Dichloroethene	100	(70 - 130)	EPA-2 TO-15
trans-1,2-Dichloroethene	100	(70 - 130)	EPA-2 TO-15
1,1-Dichloroethane	99	(70 - 130)	EPA-2 TO-15
cis-1,2-Dichloroethene	101	(70 - 130)	EPA-2 TO-15
1,1,1-Trichloroethane	109	(70 - 130)	EPA-2 TO-15
1,2-Dichloroethane	94	(70 - 130)	EPA-2 TO-15
Benzene	92	(70 - 130 ⁻)	EPA-2 TO-15
1,2-Dichloropropane	88	(70 - 130)	EPA-2 TO-15
Trichloroethene	92	(70 - 130)	EPA-2 TO-15
Tetrachloroethene	92	(70 - 130)	EPA-2 TO-15
Isopropylbenzene	103	(70 - 130)	EPA-2 TO-15
n-Propylbenzene	105	(70 - 130)	EPA-2 TO-15
tert-Butylbenzene	102	(70 - 130)	EPA-2 TO-15
sec-Butylbenzene	104	(70 - 130)	EPA-2 TO-15
;			
		PERCENT	RECOVERY
SURROGATE		RECOVERY	LIMITS
4-Bromofluorobenzene		96	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results. Bold print denotes control parameters AIR

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #:	H1B100402	Work Order	#: MEDW212	AC -	Matrix AIR
LCS Lot-Sample#:	H1B140000-118				
Prep Date:	02/11/11	Analysis Da	ate: 02/11/3	11	
Prep Batch #:	1045118				
Dilution Factor:	1				•
		•			
		SDIKE	MEASURED		DEPCENT

	SPIKE	MEASURED		PERCENT	
PARAMETER	AMOUNT	AMOUNT	UNITS	RECOVERY	METHOD
Vinyl chloride	5.0	4.1	ppb(v/v)	82	EPA-2 TO-15
Chloroethane	5.0	4.6	ppb(v/v)	92	EPA-2 TO-15
1,1-Dichloroethene	5.0	5.0	ppb(v/v)	100	EPA-2 TO-15
trans-1,2-Dichloroethene	5.0	5.0	ppb(v/v)	100	EPA-2 TO-15
1,1-Dichloroethane	5.0	5.0	ppb(v/v)	99	EPA-2 TO-15
cis-1,2-Dichloroethene	5.0	5.1	ppb(v/v)	101	EPA-2 TO-15
1,1,1-Trichloroethane	5.0	5.4	ppb(v/v)	109	EPA-2 TO-15
1,2-Dichloroethane	5.0	4.7	ppb(v/v)	94	EPA-2 TO-15
Benzene	5.0	4.6	ppb(v/v)	92	EPA-2 TO-15
1,2-Dichloropropane	5.0	4.4	ppb(v/v)	88	EPA-2 TO-15
Trichloroethene	5.0	4.6	ppb(v/v)	92 .	EPA-2 TO-15
Tetrachloroethene	5.0	4.6	ppb(v/v)	92	EPA-2 TO-15
Isopropylbenzene	5.0	5.1	ppb(v/v)	103	EPA-2 TO-15
n-Propylbenzene	5.0	5.2	ppb(v/v)	105	EPA-2 TO-15
tert-Butylbenzene	5.0	5.1	ppb(v/v)	102	EPA-2 TO-15
sec-Butylbenzene	5.0	5.2	ppb(v/v)	104	EPA-2 TO-15
		PERCENT	RECOVERY		
SURROGATE		RECOVERY	LIMITS	-	
4-Bromofluorobenzene		96	(60 - 140)		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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TAL-Knoxville 5815 Middlebrook Pike Knoxville, TN 37921	phone 865-291-3000 fax 865-584-4315	Client Contact Information	Company: MACTE	Address: 41 Hashes City/State/ZipTraverse	Phone: 23 - 922	Project Name: 1	Site/location: 200	PO#5133286			ć	RG.	50		2	5	Sampled by :							Communication of the second se	2) Specia	Canister Shipped by	Samples Relinquished by	Relinquished by:	
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TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Lot Number: <u>MNANDADA</u>

Review Items	Yes No		NA IL	If No, what was the problem?	Comments/Actions Taken
		+	+		
1. Do sample container labels match CUC?	>		! 	L Ia Do not match CUC	
(IDs, Dates, Times)				□ 1b Incomplete information	
			<u>ت</u> . 	□ 1c Marking smeared	
	•			□ 1d Label torn	
	· · · · ·			🗆 1 e No label	
				□ 1f COC not received	
-				🗆 1g Other:	
2. Is the cooler temperature within limits? (> freezing				🗆 2a Temp Blank =	
temp. of water to 6 °C, VOST: 10°C)		<u>}</u>		□ 2b Cooler Temp =	
	<u>.</u>			□ 2c Cooling initiated for recently	
			ر ار	collected samples, ice present.	
3. Were samples received with correct chemical		~		🛙 3a Sample preservative =	
preservanve (excuaing Encore):			+		
4. Were custody seals present/intact on cooler and/or				□ 4a Not present	
containers?	7			4b Not intact	
-				□ 4c Other:	
5. Were all of the samples listed on the COC received?				□ 5a Samples received-not on COC	
	7			□ 5b Samples not received-on COC	
6. Were all of the sample containers received intact?				D 6a Leaking	
	2			🗆 6b Broken	
7. Were VOA samples received without headspace?				□ 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?				38 Improper container	
1.				□ 9a Could not be determined due	
		?	¥ ~	to matrix interference	
10. Were samples received within holding time?	چ ا			□ 10a Holding time expired	
+	~	7		□ Incomplète information	
12. For 1613B water samples is pH<9?		>	A F	If no, was pH adjusted to pH 7 - 9 with sulfuric acid?	
13. Are the shipping containers intact?	~	1		113a Leaking	
14. Was COC relinquished? (Signed/Dated/Timed)	Ň	+		14a Not relinquished	
15. Are tests/parameters listed for each sample?	>			🗆 15a Incomplete information	
16. Is the matrix of the samples noted?	7	-		🗆 15a Incomplete information	
17. Is the date/time of sample collection noted?	· /	[.]		D 15a Incomplete information	
		-		□ 15a Incomplete information	
19. Was the sampler identified on the COC?		-	-		
ructions:	r A V				
C					
Samule Réceivine Associate: UNA MWC			Á	Date: 2] 9] 1]	QA026R22.doc, 012811
			1		· ,

Test America - Knoxville Air Canister Dilution Log	Lot Number: <u>H1B100402</u>
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	······		r	<u> </u>	r		<u> </u>		r		r	·T	
•	Comments	gola	Golt	દ્ભઈ	qout	GHD D	gorg	thob	9033	goutf	4047	903S	ගොදු
	Final Pres. Pf (psig)												
	(mL) (mL)												
:	Serial Dilution Can #					· ·							
lutions													
Subsequent Dilutions	Second I In-can Final Pres. Pf (psig)												
Subs	First InCan Final Pres. Pf (psig)												
	Final Pres. Pf (psig)												
	Initial Pres. Pi (in)							-	:				
	Pbarr (in)				1				. :				
	e / - /					····							
	Analyst/Date												
	Adj. Initial Pres. (- in or + psig)							:					
	Pres. upon receipt (-in or + psig)	-4.1	4.1-	-35	-3.5	5.4	-3.6	-5.7	-4,3	-5%	1.2	8-1-	-39
	Can #	0063	12327	1536	6385	6611	6349	6957	6654	1529	92098	1133	0120
Initial Can Pressure	Sample ID	MD8V0	MD8V3	MD8V4	MD8V5	MD8V6	MD8V7	MD8V8	MD8V9	MD8WA	MD8WC	MD8WD	MD8WE
	Pbarr (in)	20.00											
	Tedlar Bag P Time	NA 20					-						
	Te Te Analyst/Date												Ð
	Analyst	3-10-11										a 	

28

MS038 Revision 8

Original Chain of Custody Documentation

oxville	hrook Pike
-Kno	5815 Middlehrook
TAL	5815

865_584_4315 5815 Middlebrook Pike Knoxville, TN 37921 000 100 100 fo

Canister Samples Chain of Custody Record 20H0019141

TestAmerica

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Start					CIRTIC	g	SKNS		INTRO	3-7		
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		Pressure (inches of Hg)		•			-	p	2191			
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	e		fax 865-584-4315
TAL Knoxville	5815 Middlebrook Pike	Knoxville, TN 37921	phone 865-291-3000 fax 865-584-4315

ા આગેલ્યા આગેલું આગેલું આગેલું Canister Samples Chain of Custody Record

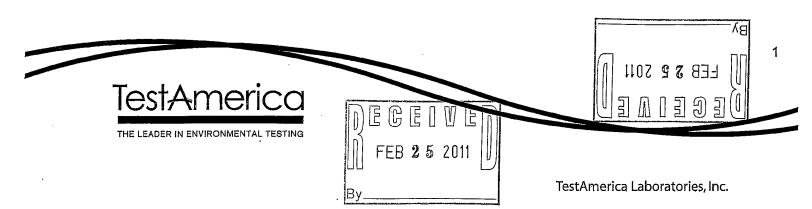
TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

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L	õ.	1 200-	}		Analysis Turnaround Time	(Specify)	ifv)		Time Stop	1158	1156	1200	1320	1736	1425										TUENTS		1191		-
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	Client Contact Information Company: MACTE C	ind radery	Phone: 731-922-9050	31-922-	Project Name: Honey sell SR Vener Trytusia	111/	PO#51221Q10	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Sample Identification	55-30062 -0211		P-30062-0211	RG-1-07-11	86-2-0211	R - 3026 R - 0211	oled by :	· -							Special Instructions/QC Requirements & Comments:	RUN TO-IS LIST B	Conjeters Of Kand her	Carriers Angle by Burge	Samples Relinquished by:	Relinquished by:

H1B100402 Analytical Report	1
Sample Receipt Documentation	25
Total Number of Pages	28



ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H1B150508

Steven Murray

Mactec Engineering & Consultan 41 Hughes Drive Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney Project Manager

110222

February 22, 2011

EXECUTIVE SUMMARY - Detection Highlights

H1B150508

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-3017R-0211 02/10/11 09:39 001				
Benzene	2,8	0.080	ppb(v/v)	EPA-2 TO-15
n-Propylbenzene	0.21	0.16	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	0.39	0.080	ppb(v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	0.26	0.080	ppb(v/v)	EPA-2 TO-15
Trichloroethene	0.10	0.040	ppb(v/v)	EPA-2 TO-15
B-3017R-0211 02/10/11 09:37 002				
Benzene	0.34	0.080.0	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	0.14	0.080	ppb(v/v)	EPA-2 TO-15
P-3017R-0211 02/10/11 09:43 003				
Benzene	0.34	0.080	ppb (v/v)	EPA-2 TO-15
Tetrachloroethene	0.26	0.080	ppb(v/v)	EPA-2 TO-15
SS-3013R-0211 02/10/11 13:21 004				
Benzene	0.19	0.080	ppb (v/v)	EPA-2 TO-15
Tetrachloroethene	0.22	0.080	ppb (v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	0.25	080.0	ppb(v/v)	EPA-2 TO-15
B-3013R-0211 02/10/11 13:20 005				
Benzene	0.26	0.080	ppb (v/v)	EPA-2 TO-15
P-3013R-0211 02/10/11 13:29 006				
Benzene	0.26	0.080	ppb (v/v)	EPA-2 TO-15
BG-7-0211 02/10/11 13:32 007				
Benzene	0.27	0.080	ppb(v/v)	EPA-2 TO-15
SS-3034R-0211 02/10/11 15:04 008				
Benzene	0.54	0.0:80	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	0.79	0.080	ppb(v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	0.69	0.080	ppb(v/v)	EPA-2 TO-15
Trichloroethene	0.12	0.040	ppb(v/v)	EPA-2 TO-15

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

H1B150508

PARAMETER	RESULT	REPORTING	UNITS	ANALYTICAL METHOD
B-3034R-0211 02/10/11 15:04 009		•		
Benzene n-Propylbenzene	1.7 0.25	0.080 0.16	ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15
P-3034R-0211 02/10/11 15:10 010				
Benzene n-Propylbenzene	1.7 0.31	0.080 0.16	ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15
BG-8-0211 02/10/11 15:15 011				
Benzene	0.27	0.080	ppb(v/v)	EPA-2 TO-15

ANALYTICAL METHODS SUMMARY

H1B150508

PARAMETER							ANALYI METHOL		
Volatile (Organics by 1	F01!	5				EPA-2	TO-15	
References	5:								
EPA-2	"Compendium	of	Methods	for	the	Determinat	ion of	Toxic	

Organic Compounds in Ambient Air", EPA-625/R-96/010b, January 1999.

SAMPLE SUMMARY

H1B150508

<u>WO #</u>	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MEF04	001	SS-3017R-0211	02/10/11	
MEF05	002	B-3017R-0211	02/10/11	09:37
MEF06	003	P-3017R-0211	02/10/11	09:43
MEF07	004	SS-3013R-0211	02/10/11	13:21
MEF08	005	B-3013R-0211	02/10/11	13:20
MEF09	006	P-3013R-0211	02/10/11	13:29
MEF1A	007	BG-7-0211	02/10/11	13:32
MEF1C	·0 0 8	SS-3034R-0211	02/10/11	15:04
MEF1D	. 009	B-3034R-0211	02/10/11	15:04
MEF1E	010	P-3034R-0211	02/10/11	
MEF1G	011	BG-8-0211	02/10/11	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.

- All calculations are performed before rounding to avoid round-off errors in calculated results.

- Results noted as "ND" were not detected at or above the stated limit.

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

- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor,

paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE H1B150508

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

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The original chain of custody documentation is included with this report.

Sample Receipt

The container label for sample P-3013R-0211 was received without a sample ID listed.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, Iowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #TN001, New York DOH Lab #10781, North Carolina DPH Lab #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHHR Cert #9955C, Wisconsin DNR Lab #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Client Sample ID: SS-3017R-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-001	Work Order #:	MEF041AA	Matrix AIR
Date Sampled:	02/10/11 09:39	Date Received:	02/15/11	
Prep Date:	02/17/11	Analysis Date:	02/17/11	
Prep Batch #:	1048373			
Dilution Factor:	1	Method	EPA-2 TO-15	

:

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	2.8	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	0.21	0.16	ppb(v/v)
Tetrachloroethene	0.39	0.080	ppb(v/v)
1,1,1-Trichloroethane	0.26	0.080	ppb(v/v)
Trichloroethene	0.10	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	106	(60 - 140)	

Client Sample ID: B-3017R-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-002	Work Order #:	MEF051AA	Matrix AIR	
Date Sampled:	02/10/11 09:37	Date Received:	02/15/11	:	
Prep Date:	02/17/11	Analysis Date:	02/17/11		
Prep Batch #:	1048373				
Dilution Factor:	1	Method	EPA-2 TO-15		

· ·		REPORTING	÷
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.34	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	.0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	0.14	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	99	(60 - 140).)

Client Sample ID: P-3017R-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-003	Work Order #:	MEF061AA	Matrix AIR
Date Sampled:	02/10/11 09:43	Date Received:	02/15/11	
Prep Date:	02/17/11	Analysis Date:	02/17/11	
Prep Batch #:	1048373			
Dilution Factor:	1	Method	EPA-2 TO-15	

Method..... EPA-2 TO-15

	·	REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Vinyl chloride	ND	0.080	$\overline{ppb(v/v)}$
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.34	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	0.26	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	99	(60 - 140)	1

Client Sample ID: SS-3013R-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-004	Work Order #:	MEF071AA	Matrix AIR
Date Sampled:	02/10/11 13:21	Date Received:	02/15/11	
Prep Date:	02/17/11	Analysis Date:	02/17/11	
Prep Batch #:	1048373			•
Dilution Factor:	1	Method	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.19	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	0.22	0.080	ppb(v/v)
1,1,1-Trichloroethane	0.25	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	-
4-Bromofluorobenzene	102	(60 - 140)	

Client Sample ID: B-3013R-0211

GC/MS Volatiles

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Lot-Sample #:	H1B150508-005	Work Order #:	MEF081AA	Matrix AIR
Date Sampled:	02/10/11 13:20	Date Received:	02/15/11	
Prep Date:	02/17/11	Analysis Date:	02/17/11	
Prep Batch #:	1048373			
Dilution Factor:	1	Method:	EPA-2 TO-15	

· ·		REPORTING	3
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.26	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	· ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb (v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	98	(60 - 140))

Client Sample ID: P-3013R-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-006	Work Order #:	MEF091AA	Matrix AIR
Date Sampled:	02/10/11 13:29	Date Received:	02/15/11	
Prep Date:	02/17/11	Analysis Date:	02/17/11	
Prep Batch #:	1048373			
Dilution Factor:	1	Method	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.26	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ŇD	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	99	(60 - 140)	-

Client Sample ID: BG-7-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-007	Work Order #:	MEF1A1AA	Matrix: A	IR
Date Sampled:	02/10/11 13:32	Date Received:	02/15/11		
Prep Date:	02/17/11	Analysis Date:	02/17/11		
Prep Batch #:	1048373				
Dilution Factor:	1	Method	EPA-2 TO-15		

		REPORTIN	G
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.27	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	98	(60 - 14	0)

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Client Sample ID: SS-3034R-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-008	Work Order #: MEF1C1AA	Matrix AIR
Date Sampled:	02/10/11 15:04	Date Received: 02/15/11	
Prep Date:	02/17/11	Analysis Date: 02/17/11	
Prep Batch #:	1048373		
Dilution Factor:	1	Method EPA-2 TO-15	· ·

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.54	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	0.79	0.080	ppb(v/v)
1,1,1-Trichloroethane	0.69	0.080	ppb(v/v)
Trichloroethene	0.12	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	101	(60 - 140))

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Client Sample ID: B-3034R-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-009	Work Order #: MEF1D1AA	Matrix AIR
Date Sampled:	02/10/11 15:04	Date Received: 02/15/11	
Prep Date:	02/17/11	Analysis Date: 02/17/11	
Prep Batch #:	1048373		
Dilution Factor:	1 '	Method EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	1.7	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	0.25	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	99	(60 - 140)

Client Sample ID: P-3034R-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-010	Work Order #:	MEF1E1AA	Matrix AIR
Date Sampled:	02/10/11 15:10	Date Received:	02/15/11	
Prep Date:	02/17/11	Analysis Date:	02/17/11	
Prep Batch #:	1048373			
Dilution Factor:	1	Method:	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	1.7	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND ·	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	0.31	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	102	(60 - 140)	

Client Sample ID: BG-8-0211

GC/MS Volatiles

Lot-Sample #:	H1B150508-011	Work Order #:	MEF1G1AA	Matrix AIR
Date Sampled:	02/10/11 15:15	Date Received:	02/15/11	
Prep Date	02/17/11	Analysis Date:	02/18/11	
Prep Batch #:	1048373			
Dilution Factor:	1	Method	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Benzene	0.27	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	99	(Ģ0 - 140)	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #: H1B150508	Work Order #: MEJ8M1AA	Matrix AIR
MB Lot-Sample #: H1B170000-373		
	Prep Date: 02/17/11	
Analysis Date: 02/17/11	Prep Batch #: 1048373	

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Analysis Date..: 02/17/11 Dilution Factor: 1

		REPORTII	NG	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
Benzene	ND	0.080	ppb(v/v)	EPA-2 TO-15
sec-Butylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
tert-Butylbenzene	ND	0.20	ppb(v/v)	EPA-2 TO-15
Chloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1-Dichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,2-Dichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,2-Dichloropropane	ND	0.080	ppb(v/v)	EPA-2 TO-15
Isopropylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
n-Propylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)	- EPA-2 TO-15
Trichloroethene	ND	0.040	ppb(v/v)	EPA-2 TO-15
Vinyl chloride	ND	0.080	ppb(v/v)	EPA-2 TO-15
	PERCENT	RECOVER	Y	
SURROGATE	RECOVERY	LIMITS	•	
4-Bromofluorobenzene	9.9	(60 - 1)	40)	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #:		Work Order #: MEJ8M1AC	Matrix AIR
LCS Lot-Sample#:	H1B170000-373		
Prep Date:	02/17/11	Analysis Date: 02/17/11	
Prep Batch #:	1048373		
Dilution Factor:	1		
		· · ·	

	PERCENT	RECOVERY	
PARAMETER	RECOVERY	LIMITS	METHOD
cis-1,2-Dichloroethene	105	(70 - 130)	EPA-2 TO-15
1,1,1-Trichloroethane	114	<u>(</u> 70 - 130)	EPA-2 TO-15
1,2-Dichloroethane	96	(70 - 130)	EPA-2 TO-15
Benzene	90	(70 - 130)	EPA-2 TO-15
1,2-Dichloropropane	80	(70 - 130)	EPA-2 TO-15
Trichloroethene	104	(70 - 130)	EPA-2 TO-15
Tetrachloroethene	92	(70 - 130)	EPA-2 TO-15
Isopropylbenzene	81	(70 - 130)	EPA-2 TO-15
n-Propylbenzene	78	(70 - 130)	EPA-2 TO-15
tert-Butylbenzene	77	(70 - 130)	EPA-2 TO-15
sec-Butylbenzene	79	(70 - 130)	EPA-2 TO-15
Vinyl chloride	85	(70 - 130)	EPA-2 TO-15
Chloroethane	95	(70 - 130)	EPA-2 TO-15
1,1-Dichloroethene	105	(70 - 130)	EPA-2 TO-15
trans-1,2-Dichloroethene	103	(70 - 130)	EPA-2 TO-15
1,1-Dichloroethane	103	(70 - 130)	EPA-2 TO-15
•		PERCENT	RECOVERY
SURROGATE		RECOVERY	LIMITS
4-Bromofluorobenzene		104	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

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GC/MS Volatiles

Client Lot #:	H1B150508	Work Order #: MEJ8M1AC	Matrix AIR
LCS Lot-Sample#:	H1B170000-373		
Prep Date:	02/17/11	Analysis Date: 02/17/11	
Prep Batch #:	1048373		
Dilution Factor:	1		

	SPIKE	MEASURED		PERCENT	
PARAMETER	AMOUNT	AMOUNT	UNITS	RECOVERY	METHOD
cis-1,2-Dichloroethene	5.0	5.2	ppb(v/v)	105	EPA-2 TO-15
1,1,1-Trichloroethane	5.0	5.7	ppb(v/v)	114	EPA-2 TO-15
1,2-Dichloroethane	5.0	4.8	ppb(v/v)	96	EPA-2 TO-15
Benzene	5.0	4.5	ppb(v/v)	90	EPA-2 TO-15
1,2-Dichloropropane	5.0	4.0	ppb(v/v)	80	EPA-2 TO-15
Trichloroethene	5.0	5.2	ppb(v/v)	104	EPA-2 TO-15
Tetrachloroethene	5.0	4.6	ppb(v/v)	92	EPA-2 TO-15
Isopropylbenzene	5.0	4.0	ppb(v/v)	81	EPA-2 TO-15
n-Propylbenzene	5.0	3.9	ppb(v/v)	78	EPA-2 TO-15
tert-Butylbenzene	5.0	3.9	ppb(v/v)	77	EPA-2 TO-15
sec-Butylbenzene	5.0	3.9	ppb(v/v)	79	EPA-2 TO-15
Vinyl chloride	5.0	4.2	ppb(v/v)	85	EPA-2 TO-15
Chloroethane	5.0	4.8	ppb (v/v)	95	EPA-2 TO-15
1,1-Dichloroethene	5,0	.5.3	ppb(v/v)	105	EPA-2 TO-15
trans-1,2-Dichloroethene	5.0	5.2	ppb(v/v)	103	EPA-2 TO-15
1,1-Dichloroethane	5.0	5.1	ppb(v/v)	103	EPA-2 TO-15
		PERCENT	RECOVERY		
SURROGATE		RECOVERY	LIMITS		
4-Bromofluorobenzene		104	(60 - 140)		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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TAL KnoxvilleCanister5815 Middlebrook PikeKnoxville, TN 37921Knoxville, TN 37921TestAmerica assurphone 865-291-3000 fax 865-584-4315TestAmerica assur	Client Contact Information Project Manager:	5 DAVE 47696 90507 ME 47696		l, th	. 90		Sample Identification Date(s)	55-3017R-0211 2/10/11	8-3018-021	P-3017R-0211	55-3013 R-0211		P-3013R-0211	Sampled by :		Start	Stop			Start	Stop Constal Instructions/DC Possificaments & Commants		RUN TO-ISALIST B CON	Canisters Shipped by Canisters Shipped by Date/Time:	Samples Relinquished by: 000 Date/Ime. 3/15/	Relinquished by: Date/Time!	

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HIBUS0208 Canister Samples Chain of Custody Record TestAmerica assumes no liability with respect to the collection and shipment of these samples.	Murrey		Analysis Turnaround Time Indard (Specify) Ish (Specify)	Canister Vacuum in Field, "Hg (Start)	62.	-28.5	-30	-29.5	28.5		Temperature (Fahrenheit)	Ambient	-		Pressure (inches of Hg)	Ambient			Å	15:45		
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ddlebr 2, TN 85-29	v M		Name:		11-		-3034R-021	3034R-021	8		1 by :							Instru	Γ	s Ship	Relin	10010
TAL Knoxville 5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315	Client Contact Information	Address: 4	Project Name: 4		Ber	55-	8.		36-		Sampled by :							Special Instructions/QC Requirements & Comments:	Righ TO-	Canisters Shipped by:	Samples Relinquished by: Relinquished by:	
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RUI SAMPLES ABLINTUUSHED SPACE UAN THAT TOY. SHALL PANAR STURY SHIPPED QA026R22.doc, 012811 e NG NAN TESTAMERICA KNOXVILLE SAMPLE RECEPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Lot Number: <u>HKASU HIR (S)66</u> **Comments/Actions Taken** NO CLIENT ID IJSTED 1473 (NATCHED PU 11-51-5 010 19 BUMAK 8 # 1 5a Samples received-not on COC □ 5b Samples not received-on COC □ 9a Could not be determined due If no, was pH adjusted to pH 7-9□ 2c Cooling initiated for recently If No, what was the problem? D 15a Incomplete information □ 15a Incomplete information □ 15a Incomplete information □ 15a Incomplete information collected samples, ice present. 1 1a Do not match COC 1 1b Incomplete information Ta Headspace (VOA only) 🗆 3a Sample preservative = 10a Holding time expired Incomplete information 1 Sa Improper container M-14a Not relinquished □ 1c Marking smeared □ 1f COC not received to matrix interference □ 2b Cooler Temp = \Box 2a Temp Blank = with sulfuric acid? Date: 211511 1 4a Not present □ 1d Label torn 1 4b Not intact [] 13a Leaking □ 1e No label 🗆 6a Leaking □/13b Other: □ 6b Broken □ 1g Other: □ 4c Other: 11-54 ¥ \mathbf{r} 7 å Xes 2 PM Instructions: <u>N</u> / 11. For rad samples, was sample activity info. provided? Were all of the samples listed on the COC received? Is the cooler temperature within limits? (> freezing Were custody seals present/intact on cooler and/or Were all of the sample containers received intact? Were samples received in appropriate containers? Did you check for residual chlorine, if necessary? Were VOA samples received without headspace? 14. Was COC relinquished? (Signed/Dated/Timed) Were samples received with correct chemical Were samples received within holding time? Are tests/parameters listed for each sample? 17. Is the date/time of sample collection noted? Is the client and project name/# identified? Do sample container labels match COC? 9. Was the sampler identified on the COC? temp. of water to 6 °C, VOST: 10°C) For 1613B water samples is pH<9? Is the matrix of the samples noted? 13. Are the shipping containers intact? preservative (excluding Encore)? Sample Receiving Associate. Sess (IDs, Dates, Times) containers? **Review Items** Quote #: <u>0</u> 15. <u>و</u>

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	Comments	9019	8989 8	-0	9026	عمالي	ଦୁ୦ାର୍ଝ	9024	8483	上のも	طمالم	9027
	Final Pres. Pf (psig)											
	. Vol (mL)											
	Serial Dilution Can #											
ilutions	Third InCán Final Pres. Pf (psig)										•	
Subsequent Dilutions	Second In-can Final Pres. Pf (psig)											
Subs	First InCan Final Pres. Pf I									:		
	Final Pres. Pf (psig)											
	Initial Pres. Pi (in)											
	Pbarr S (in)											
	 										8	
	Adj. Initial Pres. (- in or + psig)											
	Pres. upon receipt (-in or + psig)	2.8	-3.8	1.4	-3.2	2.2	8.0-	0	Q	+·S-	5.0	-4.3
6	Cản #	1115	12878	12462	1362N	S1491	7473	7496	6381	1125	1403	6592
Initial Can Pressure	Sample ID	MEF04	MEF05	MEF06	MEF07	MEF08	MEF09	MEFLA	MEFIC	MEF1D	MEFLE	MEF1G
	Pbarr (in)	11.95	-									
	Tedlar Bag Time	NA	-			``						->
	Analvst/Date	DDF 2-16-1							æ			

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MS038 Revision 8

Original Chain of Custody Documentation

TAL Knoxville

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

HIB130308 Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Testamerica The leader in environmental testing

Client Contact Information	Steve	Murray-	Sampled By: S	SGB				s		
Company: MACTE C	Phone: 231- 922-9	Poso U			•					
Hughes Drive	Strue P	yze								
City/State/Zip Traverse City, ME 47646	MI 47696 TAL Contact: Mark L	deb				(uoit				(uoit
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	Automotic Trinitan	Time				səte				səto
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PO# 5 133 2.86	Rush (Specify)						9			bəds
		Canister Canister					a pia meningia-			s əsbəic
Sample Identification	Sample Date(s) Time Start Time Stop	Vacuum in V Field, "Hg (Start)	in g Flow Controller ID Canister ID	و ت 10-148 A41-OT	EPA 25	J MT2A Other (F	indoor A	neidmA so lio2	liîbnsJ	Other (F
	12.6	- 30 -	K287	×	╢──	1	0.007.00		╢.	
3018-011	4.24	1	CCH-X	12878 X						
P-3017R-0211	9:26 9:43	-30	K437	12462X						
55-301312-0211	13:02 13:21	1	K482	ZN X						
8-30132-0211	13:04 13:20	S.H- 2.62-0	18416 SI491	<u> Ч(Х</u>						
P-3013R-0211		9-30-1.0	K339	73 X						
Sampled by :		Temperature (Fahrenheit)	eit)	2 box		winh ci	CUSTANN	V SEA	4 V	
	Interior	Ambient		RECEIVED	IЧ		Ambient Jemp	04		
	Start			34	115/11		. •	١.		
	Stop			abx F	Feb Ex	87	38044048140	<u> ३१५ (</u> ल	mSTR	
		Pressure (inches of Hg)	()	IA CANS		S ET		Flows	SM	
	Interior	Ambient		, ,	к ,	Lisli 2	F	-BARS		
•	Start				τ					
	Stop									
Special Instructions/QC Requirements & Comments:										
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Canisters Shipped by:	Date/Time: 2/10/2011	/ディシ Canister	Canisters Received by:							
Samples Relinquisped by:	Date/Time: 2/15/11 IDAM		Received by: Howe may			,				
Relinquished by:			id by:							
						1				
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TAL Knoxville

5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Testameria mental testing

H1B150508 Analytical Report	1
Sample Receipt Documentation	21
Total Number of Pages	24

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TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Honeywell - South Bend

Lot #: H1B240528

Steven Murray

Mactec Engineering & Consultan 41 Hughes Drive Traverse City, MI 49686

TESTAMERICA LABORATORIES, INC.

Jamie A. McKinney Project Manager

March 7, 2011

EXECUTIVE SUMMARY - Detection Highlights

H1B240528

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
SS-3029L-0211 02/19/11 11:37	001				
Isopropylbenzene n-Propylbenzene Tetrachloroethene Trichloroethene Benzene	0.29 0.17 0.19 0.050 0.21	0.16 0.16 0.080 0.040 0.080	ppb (v/v) ppb (v/v) ppb (v/v) ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15	
BG-10-0211 02/18/11 13:07 002					
Benzene	0.14	0.080	ppb(v/v)	EPA-2 TO-15	
B-3029L-0211 02/18/11 11:47 00)3				
Trichloroethene Benzene	0.26 0.37	0.040 0.080	ppb(v/v) ppb(v/v)	EPA-2 TO-15 EPA-2 TO-15	
P-3029L-0211 02/18/11 12:07 00)4				
Benzene	0.90	0.080	ppb(v/v)	EPA-2 TO-15	
B-3019L-0211 02/18/11 08:56 00)5				
Trichloroethene 1,2-Dichloroethane Benzene	0.040 0.085 0.33	0.040 0.080 0.080	ppb (v/v) ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15	
P-3019L-0211 02/18/11 08:58 00)6				
Chloroethane cis-1,2-Dichloroethene n-Propylbenzene Tetrachloroethene Benzene	0.089 0.096 0.16 0.20 0.69	0.080 0.080 0.16 0.080 0.080	ppb (v/v) ppb (v/v) ppb (v/v) ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15	
BG-9-0211 02/18/11 09:04 007					
Benzene	0.15	0.080	ppb(v/v)	EPA-2 TO-15	
SS-3019L-0211 02/18/11 08:56 (008				
Isopropylbenzene n-Propylbenzene Tetrachloroethene 1,1,1-Trichloroethane	0.34 0.25 0.25 0.18	0.16 0.16 0.080 0.080	ppb (v/v) ppb (v/v) ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15 EPA-2 TO-15	

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

H1B240528

		REPORTING		ANALYTICAL
PARAMETER	RESULT	LIMIT	UNITS	METHOD
SS-3019L-0211 02/18/11 08:56 008				
Trichloroethene Benzene	0.050 0.31	0.040 0.080	ppb (v/v) ppb (v/v)	EPA-2 TO-15 EPA-2 TO-15

ANALYTICAL METHODS SUMMARY

H1B240528

PARAMETER		ANALYTICAL METHOD
Volatile (Organics by TO15	EPA-2 TO-15
References	3:	
EPA-2	"Compendium of Methods for the Determinat Organic Compounds in Ambient Air", EPA-63 January 1999.	

SAMPLE SUMMARY

H1B240528

			SAMPLED	SAMP
<u>WO #</u>	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
METW9	001	SS-3029L-0211	02/19/11	11:37
METXD	002	BG-10-0211	02/18/11	13:07
METXF	.0.03	B-3029L-0211	02/18/11	11:47
METXH	004	P-3029L-0211	02/18/11	12:07
METXK	005	B-3019L-0211	02/18/11	08:56
METXL	006	P-3019L-0211	02/18/11	08:58
METXM	007	BG-9-0211	02/18/11	09:04
METXN	0 0:8	SS-3019L-0211	02/18/11	08:56

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.

- All calculations are performed before rounding to avoid round-off errors in calculated results.

- Results noted as "ND" were not detected at or above the stated limit.

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

- Results for the following parameters are never reported on a dry weight basis: color, corroslvity, density, flashpoint, ignitability, layers, odor,

paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

PROJECT NARRATIVE H1B240528

The results reported herein are applicable to the samples submitted for analysis only. If you have any questions about this report, please call (865) 291-3000 to speak with the TestAmerica project manager listed on the cover page.

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The original chain of custody documentation is included with this report.

Sample Receipt

Custody seals were not present.

Quality Control and Data Interpretation

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

TestAmerica Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Lab #88-0688, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Lab #PH-0223, Florida DOH Lab #E87177, Georgia DNR Lab #906, Hawaii DOH, Illinois EPA Lab #200012, Indiana DOH Lab #C-TN-02, Iowa DNR Lab #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH, Maryland DOE Cert. #277, Michigan DEQ Lab #9933, Nevada DEP, New Jersey DEP Lab #TN001, New York DOH Lab #10781, North Carolina DPH Lab #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Lab #CL0059, Oklahoma DEQ Lab #9415, Pennsylvania DEP Lab #68-00576, South Carolina DHEC Cert #84001001, Tennessee DOH Lab #02014, Texas CEQ, Utah DOH Lab # QUAN3, Virginia DGS Lab #00165, Washington DOE Lab #C1314, West Virginia DEP Cert. #345, West Virginia DHHR Cert #9955C, Wisconsin DNR Lab #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report,

Client Sample ID: SS-3029L-0211

GC/MS Volatiles

Lot-Sample #: H1B240528-	001 Work Order #: METW9:	1AA Matrix AIR
Date Sampled: 02/19/11 1	1:37 Date Received: 02/24,	/11
Prep Date: 02/28/11	Analysis Date: 02/28	/11
Prep Batch #: 1060109		
Dilution Factor: 1	Method EPA-2	TO-15

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	0.29	0.16	ppb(v/v)
n-Propylbenzene	0.17	0.16	ppb(v/v)
Tetrachloroethene	0.19	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	0.050	0.040	.ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.21	0.080	ppb(v/v)
sec-Butylbenzene	. ND	0.16	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	103	(60 - 140)	

7

Client Sample ID: BG-10-0211

GC/MS Volatiles

Lot-Sample #:	H1B240528-002	Work Order #:	METXD1AA	Matrix AIR
Date Sampled:	02/18/11 13:07	Date Received:	02/24/11	
Prep Date:	02/28/11	Analysis Date:	03/01/11	
Prep Batch #:	1060109			
Dilution Factor:	1	Method:	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.14	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	99	(60 - 140)	

Client Sample ID: B-3029L-0211

GC/MS Volatiles

Lot-Sample #:	H1B240528-003	Work Order #:	METXF1AA	Matrix:
Date Sampled:	02/18/11 11:47	Date Received:	02/24/11	
Prep Date:	02/28/11	Analysis Date:	03/01/11	
Prep Batch #:	1060109			
Dilution Factor:	1	Method:	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	0.26	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND .	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.37	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	100	(60 - 140)	

9

AIR

Client Sample ID: P-3029L-0211

GC/MS Volatiles

Lot-Sample #: H1B240528-0	04 Work Order #: METXH1AA	Matrix AIR
Date Sampled: 02/18/11 12	:07 Date Received: 02/24/11	
Prep Date: 02/28/11	Analysis Date: 03/01/11	
Prep Batch #: 1060109		
Dilution Factor: 1	Method EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND .	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND .	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.90	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	100	(60 - 140))

Client Sample ID: B-3019L-0211

GC/MS Volatiles

Lot-Sample #:	H1B240528-005	Work Order #:	METXK1AA
Date Sampled:	02/18/11 08:56	Date Received:	02/24/11
Prep Date:	02/28/11	Analysis Date:	03/01/11
Prep Batch #:	1060109		
Dilution Factor:	1	Method:	EPA-2 TO-15

Matrix..... AIR

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Chloroethane	ND	0.080	$\overline{\text{ppb}(v/v)}$
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND .	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	0.040	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	0.085	0.080	ppb(v/v)
Benzene	0.33	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	101	(60 - 140)).

Client Sample ID: P-3019L-0211

GC/MS Volatiles

Lot-Sample #:	H1B240528-006	Work Order #:	METXL1AA	Matrix AIR
Date Sampled:	02/18/11 08:58	Date Received:	02/24/11	
Prep Date:	02/28/11	Analysis Date:	03/01/11	
Prep Batch #:	1060109			
Dilution Factor:	1	Method	EPA-2 TO-15	

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Chloroethane	0.089	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	0.096	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	0.16	0.16	ppb(v/v)
Tetrachloroethene	0.20	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040 /	ppb(v/v)
Vinyl chloride	.ND ·	0. 080′	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.69	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	105	(60 - 140)	

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12

Client Sample ID: BG-9-0211

GC/MS Volatiles

Lot-Sample #:	H1B240528-007	Work Order #:	METXM1AA	Matrix AIR
Date Sampled:	02/18/11 09:04	Date Received:	02/24/11	
Prep Date:	02/28/11	Analysis Date:	03/01/11	
Prep Batch #:	1060109			
Dilution Factor:	1	Method:	EPA-2 TO-15	•

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	ND	0.16	ppb(v/v)
n-Propylbenzene	ND	0.16	ppb(v/v)
Tetrachloroethene	ND	0.080	ppb(v/v)
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)
Trichloroethene	ND	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.15	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	_
4-Bromofluorobenzene	101	(60 - 140))

:

Client Sample ID: SS-3019L-0211

GC/MS Volatiles

Lot-Sample #:	H1B240528-008	Work Order #:	METXN1AA	Matrix AIR
Date Sampled:	02/18/11 08:56	Date Received:	02/24/11	
Prep Date:	02/28/11	Analysis Date:	03/01/11	
Prep Batch #:	1060109			
Dilution Factor:	1	Method	EPA-2 TO-15	

Method....:

		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Chloroethane	ND	0.080	ppb(v/v)
1,1-Dichloroethane	ND	0.080	ppb(v/v)
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)
1,1-Dichloroethene	ND	0.080	ppb(v/v)
1,2-Dichloropropane	ND	0.080	ppb(v/v)
Isopropylbenzene	0.34	0.16	ppb(v/v)
n-Propylbenzene	0.25	0.16	ppb(v/v)
Tetrachloroethene	0.25	0080	ppb(v/v)
1,1,1-Trichloroethane	0.18	0.080	ppb(v/v)
Trichloroethene	0.050	0.040	ppb(v/v)
Vinyl chloride	ND	0.080	ppb(v/v)
tert-Butylbenzene	ND	0.20	ppb(v/v)
1,2-Dichloroethane	ND	0.080	ppb(v/v)
Benzene	0.31	0.080	ppb(v/v)
sec-Butylbenzene	ND	0.16	ppb(v/v)
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
4-Bromofluorobenzene	100	(60 - 140)	

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #: H1E	B240528 Work	Order #:	ME1GL1AA	Matrix:	AIR
MB Lot-Sample #: H10	C010000-109				
	Prep	Date:	02/28/11		
Analysis Date: 02/	/28/11 Prep	Batch #:	1060109		
Dilution Factor: 1					

		REPORTING	÷	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
Vinyl chloride	ND	0.080	ppb(v/v)	EPA-2 TO-15
Benzene	ND	0.080	ppb(v/v)	EPA-2 TO-15
sec-Butylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
tert-Butylbenzene	' ND	0.20	ppb(v/v)	EPA-2 TO-15
Chloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1-Dichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,2-Dichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
cis-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
trans-1,2-Dichloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,2-Dichloropropane	ND	0.080	ppb(v/v)	EPA-2 TO-15
Isopropylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
n-Propylbenzene	ND	0.16	ppb(v/v)	EPA-2 TO-15
Tetrachloroethene	ND	0.080	ppb(v/v)	EPA-2 TO-15
1,1,1-Trichloroethane	ND	0.080	ppb(v/v)	EPA-2 TO-15
Trichloroethene	ND	0.040	ppb(v/v)	EPA-2 TO-15
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
4-Bromofluorobenzene	98	(60 - 140))	

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NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #:	H1B240528	Work Order #:	ME1GL1AC	Matrix	AIR
LCS Lot-Sample#:	H1C010000-109				
Prep Date:	02/28/11	Analysis Date:	02/28/11	·	
Prep Batch #:	10601Ò9				
Dilution Factor:	1				

	PERCENT	RECOVERY	
PARAMETER	RECOVERY	LIMITS	METHOD
Vinyl chloride	93	(70 - 130)	EPA-2 TO-15
Chloroethane	102	(70 - 130)	EPA-2 TO-15
1,1-Dichloroethene	93	(70 - 130)	EPA-2 TO-15
trans-1,2-Dichloroethene	108	(70 - 130 <u>)</u>	EPA-2 TO-15
1,1-Dichloroethane	100	(70 - 130)	EPA-2 TO-15
cis-1,2-Dichloroethene	96	(70 - 130)	EPA-2 TO-15
1,1,1-Trichloroethane	114	(70 - 130)	EPA-2 TO-15
1,2-Dichloroethane	101	(70 - 130)	EPA-2 TO-15
Benzene	86	(70 - 130)	EPA-2 TO-15
1,2-Dichloropropane	79	(70 - 130)	EPA-2 TO-15
Trichloroethene	99	(70 - 130)	EPA~2 TO-15
Tetrachloroethene	97	(70 - 130)	EPA-2 TO-15
Isopropylbenzene	86	(70 - 130)	EPA-2 TO-15
n-Propylbenzene	83	(70 - 130)	EPA-2 TO-15
tert-Butylbenzene	85	(70 - 130)	BPA-2 TO-15
sec-Butylbenzene	87	(70 - 130)	EPA-2 TO-15
		PERCENT	RECOVERY
SURROGATE		RECOVERY	LIMITS
4-Bromofluorobenzene		105	(60 - 140)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results. Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #:	H1B240528	Work Order #: ME1GL1AC Matrix	: AIR
LCS Lot-Sample#:	H1C010000-109		
Prep Date:	02/28/11	Analysis Date: 02/28/11	
Prep Batch #:	1060109		
Dilution Factor:	1		
			•

	SPIKE	MEASURED		PERCENT	
PARAMETER	AMOUNT	AMOUNT	UNITS	RECOVERY	METHOD
Vinyl chloride	5.0	4.6	ppb(v/v)	93	EPA-2 TO-15
Chloroethane	5.0	5.1	ppb(v/v)	102	EPA-2 TO-15
1,1-Dichloroethene	5.0	4.6	ppb(v/v)	93	EPA-2 TO-15
trans-1,2-Dichloroethene	5.0	5.4	ppb(v/v)	108	EPA-2 TO-15
1,1-Dichloroethane	5.0	5.0	ppb(v/v)	100	EPA-2 TO-15
cis-1,2-Dichloroethene	5.0	4.8	_ppb (v/v)	96	EPA-2 TO-15
1,1,1-Trichloroethane	5.0	5.7	ppb (v/v)	114	EPA-2 TO-15
1,2-Dichloroethane	5.0	5.0	ppb(v/v)	101	EPA-2 TO-15
Benzene	5.0	4.3	ppb(v/v)	86	EPA-2 TO-15
1,2-Dichloropropane	5.0	4.0	ppb(v/v)	79	EPA-2 TO-15
Trichloroethene	5.0	5.0	ppb(v/v)	99	EPA-2 TO-15
Tetrachloroethene	5.0	4.9	ppb(v/v)	97	EPA-2 TO-15
Isopropylbenzene	5.0	4.3	ppb(v/v)	86	EPA-2 TO-15
n-Propylbenzene	5.0	4.1	ppb(v/v)	83	EPA-2 TO-15
tert-Butylbenzene	5.0	4.3	ppb (v/v)	85	EPA-2 TO-15
sec-Butylbenzene	5.0	4.4	ppb (v/v)	87	EPA-2 TO-15
		:			
		PERCENT	RECOVERY		
SURROGATE		RECOVERY	LIMITS		
4-Bromofluorobenzene		105	(60 - 140)		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results. Bold print denotes control parameters

TAL Knoxville 5815 Middlebrook Pike Knoxville, TN 37921 phone 865-291-3000 fax 865-584-4315	けんえん Canister Samples Chain of Custody Record TestAmerica assumes no liability with respect to the collection and shipment of these samples.	s Chain c	ら f Custody lection and shipment c	HILZHDSAR Iy Record	• •	Ŭ H	THE LEADER IN ENVIRONMENTAL TESTING		Ser 1		
ion	Project Manager: STEVE M	MUSTAY	Sampled By:	-	Stever Punge		l of l	cocs			. _
HUGLES DRIVE 99696	Site Contact: 575 UE BVYZE TAL Contact: 10/1/2 K LOCK	776					(uoli			(ioi)	
FAX: 231-922 -9055				A			Des si		<u></u>	oes si	
Project Name: HowEYWELL SB VAPARIT RUSION	- 1	und Time					ejon r				
Site/location: Sourt H. C. Vis, I.V.	Standard (Specify)						il Vilos			il Vilo	
0875616 #01							ads a				
Sample Identification	Sample Date(s) Time Start Time Stop	Canișter Vacuum în Field, "Hg (Start)	Canister Vacuum in Field, 'Hg Flow Controller (Stop) ID	r Canister ID	то-15 то-14 С	EPA 26C	et-d MTSA Other (Pleas Mitely (I)	lndoot Air IA fneidmA	Soli Gas Landfill Gas	Cther (Pleas	
	2-18-11 1133 11:37 + 2-18-11	1	6 2118	62273	X	 					
10-0211	7-17-11 1137 1307	- 62-	6 K200	6370	Ň						1
	7-17-11 1133 1147	-28.5 -	515 K124	2966	×						
1-021	2-17-11 1132 1207	- 62-	5-5 K284	93245	X						
											T
										_	<u></u>
Sampled by :		Temperature (Fahrenheit)	irenheit)		5 boxes	No	CUSTODY	Y SEALS	Sti		
	Interior	Ambient			RECENCE	B.	Ambient f				
	Start				X.N 3/2	5		•			
	Stop		-		5 boxes	ups	125403W50345896789	3W50.	3458	70/6	لي م
		Pressure (inches of Hg)	of Hg)		125403W50347866507	W503	4786650	77			
	Interior	Ambient			175403	W50	Z.5403W50345033337	34			
	Start	•			1.2.5403w50346050943	W50:	34605091	43			
	Stop			40	12.540	3W50	3W50346541118	18			
Special Instructions/QC Requirements & Comments: Ru.N. 70-15 Low Level L	LIST B CONST	Cunstituents	ATTACHED	-	24 CANS		ay Flows				
- Chr	Date/Time: 2-21-11 1130		Canisters Received by:								7
Samples Relinquished by:	Date/Time:	B.C.	Received by:	ulyala .	09:45	5					
Relinquished by:	Date/Time:	Ker	ceived by:	1							
]					18

TAL Knoxville 5815 Middlebrook Pike	Caniste	r San	nples	Chaii	n of C	تکوراہدگارہ۔ا Canister Samples Chain of Custody Record	1-11 Secord	d S			TestAmeric	A	ŭ	5	<u>.0</u>	Ø	
Knoxville, IN 3.921 phone 865-291-3000 fax 865-584-4315	TestAmerica assumes no liability with respect to the collection and shipment of these samples.	umes no li	ability with	respect to th	le collectión	and shipment o	these sampl	es.		THE	THE LEADER IN ENVIRONMENTAL TESTING	IN ENV	IRONM	IENTA	LL TES	TING	
Client Contact Information	Project Manager:	1 .	STEVE A	MURRAY		Sampled By:	Eleven .		Bunge		و ر ا	-	cocs				r—
Company MACTEC	Phone: 231-92-9050	-226-	03											:			Ĺ.
Address: 4/ HUG HES DRIVE City/State/Zip TRAUCESE CITY MI 49696	Site Contact: STEVE TAL Contact: MARK	STEUE MAR		BUYZE							(noi					(uo	
FAX: 731-922-9055	·										- sect					loes	
Project Name: How EY WELL SR WAPOR INTRUSION		Analysis Turnaround Time	urnaroun	d Time												səlor	
ocation: South BEND IN		Standard (Specify)	cify)								i ui <i>K</i> il					ty in t	
PO# 5133286	Rus	Rush (Specify)	()								_					ipaqa	
Sample Identification	Sample Date(s) T	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	70-18	EPA 3C	EPA 25C	8461-0 MT2A 925999 (Planse	dvT əlqms2	iA traidra	Ambient Alr Soll Gas	269 liitbus.	Sther (Please s	
B-30192 -0211			0356	-29	17	K462	6350	X		╢	#	BESS T	#	╫	-	1	
1 1	2-17-11	0849 6	0858	-29	9-	1216	6520	X									
1120	2-17-11 2-18-11	0858	Pafa	-30	-5,5	12314	72417	×									
1120-				-27.5	-4	K483	1147	1.	-								
															ļ.,		
Sampled by :				Temperature	Temperature (Fahrenheit)												
		Interior		Ambient													
	Start																
	dme			Pressure (inches of Hg)	thes of Hg)												
	Int	Interior		Ambient												_	
	Start																
	Stop														:		
Special Instructions/QC Requirements & Comments: RUN TO-IS LIST B Con	nents: ConsTITUENTS	175	(A)	(ATTACITED)	t€∆)												
Canisters Shipped by: Prung K	Date/Time:	2011	=	46	Canisters F	Canisters Received by:										7	-
	Date/Time: /				Received	Received by Annard	a lad 11		09:4	5							
Relinquished by:	Date/Time:		•		Received by	by:											
]													19

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Lot Number: 1/123/1153/

	-		-		
Review Items	Yes No	Ŵ		If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC?				□ 1a Do not match COC	ЧА
(IDs, Dates, Times)				□ 1b Incomplete information	
				1 1c Marking smeared	
>				LI Label torn	
			J [_]	1 1f COC not received	
				D 1g Other:	
2. Is the cooler temperature within limits? (> freezing				🗆 2a Temp Blank =	
temp. of water to 6°C, VOST: 10°C)			7	□ 2b Cooler Temp =	
)	$\frac{\Box}{\Box}$	□ 2c Cooling initiated for recently	
3. Were samples received with correct chemical	-		\mathbb{K}	□ 3a Sample preservative =	
preservative (excluding Encore)?		4			
4. Were custody seals present/intact on cooler and/or			<u>.</u>	I 4a Not present	
containers?	`			□ 4b Not intact	
			-	1 4c Other:	
5. Were all of the samples listed on the COC received? $\int_{-\infty}^{\infty}$			<u> </u>	□ 5a Samples received-not on COC	
	\leq			1 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	$\overline{}$		<u> </u>	🗆 6a Leaking	
		_	4	🗆 Gb Broken	
7. Were VOA samples received without headspace?	\geq	<u>\</u>		Ta Headspace (VOA only)	
8. Were samples received in appropriate containers?			Y	1 8a Improper container	
9. Did you check for residual chlorine, if necessary?		<u> </u>	$\frac{1}{2}$	□ 9a Could not be determined due	
	$\left \right $	\	4	to matrix interference	
10. Were samples received within holding time?			4	□ 10a Holding time expired	
11. For rad samples, was sample activity info. provided?		_	X	d Incomplete information	
12. For 1613B water samples is pH<9?				If no, was pH adjusted to pH 7 - 9 with sulfuric acid?	
13. Are the shipping containers intact?				🗆 13a Leaking	
	_			🗆 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	\langle			I 14a Nöt relinquished	
15. Are tests/parameters listed for each sample?	1			□ 15a Incomplete information	
16. Is the matrix of the samples noted?	1			□ 15a Incomplete information	
17. Is the date/time of sample collection noted?	1			□ 15a Incomplete information	
18. Is the client and project name/# identified?				□ 15a Incomplete information	
19. Was the sampler identified on the COC?	_	_	-		
Quote #: 75535 PM Instructions: MA					-
Sample Receiving Associate: Www. Oww.			<u>а</u>	Date: 2-24/1	QA026R22.doc, 012811

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Test America - Knoxville ---- Air Canister Dilution Log Lot Number: <u>H1B240528</u>

_									
	Comments	6989	9000	9440	9019	૬ નહ ⁴	8990	وحطراه	QTOD
	Final Prés. Pf (psig)								
	Voi (mL)								
	Serial Dilution Can #								
ilutions	Third InCan Final Pres. Pf (psig)								
Subsequent Dilutions	Second In-can Final Pres. Pf (psig)								
Subs	First InCan Final Pres. Pf (psig)				:				
	Final Pres. Pf (psig)								
	Initial Pres. Pi (in)								
	Рbаrr (in)								
	- ′s								
	Analyst/Date								
	Adj. Initial Pres. (- in or + psig)	:							
	Pres. upon receipt (-in or + psig)	4.4-	-4,3	-49	-4:4	-le.le	-5.8	-3,6	-49
e	Can #	62273	6370	2966	93245	6350	6520	L4426	1147
Initial Can Pressure	Sample ID	METW9	METXD	METXF	METXH	METXK	METXL	METXM	METXN
	Pbarr (in)	19:36	-						<u> </u>
	Tedlar Bag Time	NA Kib	{						
	Analyst/Datë	205-11							

MS038 Revision 8

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Original Chain of Custody Documentation

5815 Middlebrook Pike Knoxville, TN 37921 **TAL Knoxville**

ા પ્રિગ્નિટિઝ Canister Samples Chain of Custody Record

TestAmerica

phone 865-291-3000 fax 865-584-4315	TestAmerica assumes no liability with respect to the collection and shipment of these samples.	assumes no l	fundamente de la companya				lilese sairihie	ó							
Client Contact Information	Project Manager:		STEVE N	MUSTAY		Sampled By:	Steven	Bunze	20		of	Cocs	Cs Cs		
	Phone: 23/-9 ZZ-	1-922	des												
HUGLES DRIVE	Site Contact: 5750 E	TCUE	00	יאי עו	-										
ate/210 7 KAUEKSE CMY ME 77676 : 231-922-9050	IAL CONTACT: PULLE K	T PUTK K	51207	2							(uoito				(noito:
FAX: 231-922 -9055				•							əs se				əs s∈
Project Name: HONEY WELL SB VAPARTAN RUSION	Rusie	Analysis Tu	Turnaround Time	d Time	:			- -			note	1.54			aton
Site/location: SOUTH REND, IN	S	Standard (Specify)	ecify)								ui (ł	E.	-		ui Vii
PO# 51332.86	£	Rush (Specify)	ĘV)								ioeq				ipeq:
				Canister Vacuum in	Canister Vacuum in				C	1 D-1946	s əssəlq)	ole\Type r Air	riA fne		Piease s (Piease s
Sample Identification	Sample Date(s)	Time Start	Time Stop	Field, "Hg (Start)	Field, 'Hg (Stop)	Flow Controller ID	Canister ID	31-0T 31-0T	: A93	(A93	ıəqtO	oopul	idmA	o lios	
	11-61-2 ~	5211	11:37	-29	- 6	K168	62273	X							
1120	11-21-2	1137	1307	62-	9 -	K200	6750	Ŷ				and the second			
1	2-17-11	1133	147	28.5	-5,5	K124	29962	×							
-021)	2-17-11	1132	1207	-29	<u>۲</u> ۰۶-	K284	93245	X							
	•														
Sampled by :				Temperature	Temperature (Fahrenheit)			500	(es	20	CUSTODY	<u> </u>	SEA	15	
· · ·		Interior		Ambient				RECEN	100		Ambient	Temp	dи		
	Start							Rift 2/21	2/24/	11					
	Stop					-		5boxes UPS	SS	S T	125	125403W503458967	150	3458	-967
				Pressure (inches of Hg)	ches of Hg) ·			<u>1 Z 5403W50347866507</u>	103W	5031	+786 b		4		
		Interior		Ambient				1754	1034	1503	5403W5034503333	333	6		
	Start						12) 40	1254	1034	503	5403W50346050943	24H3	~		
	Stop							125	40.31	U503	540 3W503 4654 1118	1118	~		
Special Instructions/QC Requirements & Comments: Run 70-15 Low Level L	:: L15T	Ŭ D	Censtituen	やらい	i ∼γ	ATTACHED	(¢D	24 C	CANS	5	ay Flows	511			
Canister Stipped by:	Date/Time:				Canisters F	Canisters Received by:				-					
- Sellar	17-7	-	120		Doctored	-				Т					
samples Kelinquished by:	Date/ I Ime:				R. B. M.	Yan ork	alayhu	0	09:45	- 1					
Relinquished by:	Date/Time:				Received	b ⁱ y:	-								

 TAL Knoxville
 5815 Middlebrook Pike

 5815 Middlebrook Pike
 Knoxville, TN 37921

 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

SKSOME9141

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Testamerica The leader in environmental testing

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	Sampled By: ,				·					Flow Controller ID	K462	1216	12314	14483					•							Canisters Received by:	Winn mr	
			•		ŀ					Canister Vacuum in Field, 'Hg (Stop)	2	-6	-5,5	-4		Temperature (Fahrenheit)				iches of Hg)				(ATTAcited)		Canisters F	Received by	A DESCRIPTION OF THE PARTY OF T
•	NURRAY		ふってん	LUCB		Time				Canister Vacuum in Field, "Hg (Start)	-29	-29	-30	-27.5		Temperatur	Ambient			Pressure (inches of Hg)	Ambient			774C		46		
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	Project Manager:	Phone: 231-92-905-0	Site Contact: STEUE	TAL Contac		-0.61.26		IJ.	Ľ	Sample Date(s)	1 7	2-17-1	11-21-2	2-17-11 0846				Start	Stop			Start	Stop	L.		Date/Time:	Date/fime:	
	Client Contact Information		ES DRIVE	96174 IM	FAX		1		PO# 5133286	Sample Identification	B-30192-0211			021]		Sampled by :								Special Instructions/QC Requirements & Comments: RUN TO-IS LIST B Cov		Canisters Shipped Director	Samples Relinquished by:	

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