FPM group Engineering and Environmental Science

FPM Group, Ltd.
FPM Engineering Group, P.C.
formerly Fanning, Phillips and Molnar

CORPORATE HEADQUARTERS
909 Marconi Avenue
Ronkonkoma, NY 11779
631/737-6200
Fax 631/737-2410

May 12, 2010

Mr. Jeffrey L. Dyber, P.E.
Environmental Engineer 2
Bureau of Eastern Remedial Action
New York State Department of
Environmental Conservation
625 Broadway, 11th Floor
Albany, NY 12233-7015

Re: **Soil Vapor and Indoor Air Sampling Report**
Win-Holt Equipment Corp. Site #V00243-1
592 Brook Street, Garden City, New York
FPM File No. 562-08-10

Dear Jeff:

FPM Group (FPM) has performed additional residential sub-slab soil vapor, indoor air, and ambient air sampling in association with the above-referenced site, in accordance with the requirements of the New York State Department of Environmental Conservation (NYSDEC). This report documents the sampling procedures and results.

Background Information

To evaluate soil vapor and indoor air conditions downgradient of the site, sub-slab soil vapor, indoor air, and ambient air were previously sampled at the 55 and 61 Grove Street residential properties in July 2008. The results were documented in our July 27, 2009 Revised Soil Vapor and Indoor Air Sampling Report. The NYSDEC reviewed the report and requested resampling of the sub-slab soil vapor, indoor air, and outdoor air at these residences during the 2009-2010 heating season.

In addition, the New York State Department of Health (NYSDOH) requested sampling of sub-slab soil vapor and indoor air at the residences at 57 and 59 Grove Street. However, despite repeated efforts, the NYSDOH and FPM were unsuccessful in acquiring access at 57, 59, or 61 Grove Street to perform additional sampling. Therefore, resampling was performed at 55 Grove Street on March 4, 2010 following authorization from the NYSDEC. The sampling locations are identified on Figure 1.

Sampling Procedures

Soil Vapor Sampling Procedures

One sub-slab soil vapor implant, designated as 55 Grove-SS, was installed through the basement slab at 55 Grove Street. After coring the concrete slab, the implant was constructed and installed just below the base of the slab in accordance with NYSDOH procedures. The floor penetration was sealed with hydrated bentonite to prevent air infiltration into the subsurface.

Following installation, the implant was purged and sampled in accordance with NYSDOH procedures. Helium was used as a tracer gas during the sampling process to confirm the integrity of the implant seal. No helium was detected in the implant; therefore, the integrity of the implant seal was confirmed. The soil vapor implant was purged of three volumes at less than 0.2 liters per minute and was then connected to a laboratory-supplied one-liter Summa canister with a calibrated flow controller. The Summa canister was allowed to fill at a rate of less than 0.2 liters per minute and was noted to still be under negative pressure upon completion of sampling.

Upon completion of sampling, the canister was sealed and submitted under chain of custody procedures to a NYSDOH-certified laboratory for analysis of volatile organic compounds (VOCs) using Method TO-15. A canister sampling form documenting the purging and sampling procedures is included in Attachment A.

Indoor and Ambient Air Sampling Procedures

One indoor air sample, designated as 55 Grove-IA, was collected at 55 Grove Street. One concurrent ambient (outdoor) air sample was also collected from the rear of the 55 Grove Street residence to evaluate ambient atmospheric conditions in the vicinity of the sampling location. The samples were collected using laboratory-supplied one-liter Summa canisters set at an average height of four feet above grade. The Summa canisters were outfitted with calibrated 8-hour flow controllers and allowed to fill until the negative pressure was nearly, but not completely dissipated.

Upon completion of the indoor air and ambient air sampling, the canisters were sealed and submitted under chain-of-custody procedures to a NYSDOH-certified laboratory for analysis of VOCs via the low-level TO-15 Method. Canister sampling forms documenting the sampling procedures are included in Attachment A.

A building inventory form was also completed to document the potential presence of materials that could affect indoor air quality. A copy of the building inventory form is included in Attachment A.

Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) procedures were utilized during sampling to ensure that the resulting chemical analytical data accurately represent the sampled conditions. QA/QC procedures included the collection and analysis of field and laboratory QA/QC samples and the results are documented in a Data Usability Summary Report (DUSR) included in Attachment B. The DUSR conforms to the guidance in Appendix 2B of DER-10. The DUSR findings indicate that there were no significant QA/QC issues and that the data for the primary samples appear to be adequate for their intended purpose.

Sampling Results

The sample results are summarized on Table 1 and the laboratory analytical report is included in Attachment B. After evaluating the effects of the ambient air on indoor air quality, the results for the paired sub-slab soil vapor sample and the indoor air sample are compared to the values in Matrices 1 and 2 of the NYSDOH soil vapor intrusion guidance document. For the VOCs not included in Matrix 1 or 2, we have also provided a summary of typical indoor air background levels in homes from the NYSDOH 2003 study provided in Appendix C of the NYSDEC soil vapor intrusion guidance document. Highlighted VOCs listed in Table 1 were detected in the Win-Holt groundwater plume between 2005 and 2009, as documented in the historical groundwater monitoring data for the site;

the sub-slab soil vapor and indoor air sample results were also evaluated with respect to their potential for association with the site groundwater plume.

The ambient air sample contained low concentrations of gasoline-related VOCs, including benzene, ethylbenzene, xylenes, and toluene; refrigerants, including Freon 11, Freon 12, and Freon 113; acetone; and some chlorinated VOCs, including carbon tetrachloride, methylene chloride, and chloromethane. The concentrations detected in the ambient sample are well within the ranges of indoor air background levels in residential settings shown in Table 1 and do not present a concern. Comparable concentrations of these VOCs are also found in the indoor air sample and, therefore, are likely related to ambient air conditions and do not present a concern.

Based on the laboratory data for the indoor air and soil vapor samples, the following observations and recommendations are provided:

- 1,1,1-trichloroethane (1,1,1-TCA), which is associated with the site, was detected in the sub-slab soil vapor and at a low concentration in the indoor air. The detected concentrations were compared with Matrix 2, which indicates that the appropriate response is "Monitor";

- 1,1-dichloroethene (1,1-DCE), which is associated with the site, was detected at a very low concentration in the sub-slab soil vapor and was not detected in indoor air. The detected levels were compared Matrix 2, which indicates that "No further action" is the appropriate response. Therefore, there are no concerns for this VOC;

- Tetrachloroethylene (PCE) was detected at a low concentration in the sub-slab soil vapor and was not detected in the indoor air. The detected levels were compared with Matrix 2, which indicates that "No further action" is the appropriate response. Therefore, there are no concerns for this VOC;

- TCE was detected at low levels in the sub-slab soil vapor and in one of the indoor air samples. NYSDOH Matrix 1 indicates that the proper response is "Take reasonable and practical actions to identify sources and reduce exposures." This response is appropriate when the concentrations detected in the indoor air sample are "likely due to indoor and/or outdoor sources rather than soil vapor intrusion, given the low concentration detected in the sub-slab vapor sample."

- For the VOCs for which the NYSDEC does not provide guidance in either Matrix 1 or 2, the results for the indoor air were compared to the background levels for indoor air in residences provided on Table 1. All of the detections were within the range of background levels and, therefore, do not present a concern; and

- Based on the materials that could be observed in the basement, as documented on the building inventory form included in Attachment A, a moderate quantity of stored materials is present in the basement, including paints, detergents, stain removers, household cleaning supplies, and other typical household materials. These stored materials have the potential to affect indoor air quality.

Based on this evaluation, although the indoor air conditions do not present any concern at 55 Grove Street at this time, periodic sub-slab soil vapor and indoor air monitoring should be performed due to the sub-slab concentration of 1,1,1-TCA.

Should you have any questions, please do not hesitate to call us at (631) 737-6200.

Sincerely,

John S. Bukoski
Hydrogeologist

Stephanie Davis
Senior Hydrogeologist
Department Manager

JSB/SOD:tac
Attachments

cc: Sharon McClelland, NYSDOH
Dominick Scarfogliero, Win-Holt

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TABLE 1
SUB-SLAB SOIL VAPOR/INDOOR AIR ANALYTICAL DATA
55 GROVE STREET, GARDEN CITY, NEW YORK

Sample Location	55 Grove St.			Backyard	Trip Blank	Indoor Air Background Levels, Residential*
Sample ID	55 Grove-SS	55 Grove-IA	55 Grove-IA-DUP	Ambient		
Sample Type	Sub-Slab	Indoor Air	Indoor Air Duplicate	Ambient		
Sample Date		3/4/2010		3/4/2010		
Volatile Organic Compounds in micrograms per cubic meter						
1,1,1-Trichloroethane	**210**	**1.4**	**1.3**	ND	ND	ND - 6.9
1,1-Dichloroethene	0.56 J	ND	ND	ND	ND	ND - 0.7
1,2,4-Trimethylbenzene	2.6	1.4	0.65 J	1.2	ND	0.7 - 18
1,2-Dichloroethane	ND	1.0	1.1	ND	ND	ND
1,3,5-Trimethylbenzene	0.70 J	ND	ND	ND	ND	0.3 - 6.5
4-Ethyltoluene	0.80	ND	ND	ND	ND	-
Acetone	130	37	34	21	ND	9.9 - 140
Benzene	1.3	0.71	0.75	0.55	ND	1.1 - 29
Carbon disulfide	1.0	0.54	0.47	0.57	ND	-
Carbon tetrachloride	ND	ND	0.64	0.58	ND	ND - 1.1
Chloroform	0.60 J	ND	ND	ND	ND	ND - 4.6
Chloromethane	ND	0.88	0.99	1.3	ND	ND - 5.2
Ethyl acetate	ND	2.6	ND	ND	ND	-
Ethylbenzene	9.8	5.4	2.6	3.9	ND	0.4 - 13
Freon 11 (Trichlorofluoromethane)	2.1	1.5	1.5	1.5	ND	1.1 - 30
Feon 113 (1,1,2-Trichlorotrifluoroethane)	0.93 J	0.86 J	0.93 J	0.93 J	ND	ND - 3.4
Freon 12 (Dichlorodifluoromethane)	9.3	3.0	3.2	3.0	ND	ND - 26
Heptane	1.3	1.5	ND	ND	ND	1 - 33
Hexane	ND	3.2	2.3	2.4	ND	0.6 - 35
Isopropyl alcohol	28	ND	ND	ND	ND	-
Xylene (m,p)	15	5.1	2.5	3.4	ND	0.5 - 21
Methyl Ethyl Ketone	4.5	2.9	ND	ND	ND	1.4 - 39
Methylene chloride	ND	1.4	1.1	1.2	ND	0.3 - 45
Xylene (o)	4.0	1.8	0.97	1.3	ND	0.4 - 13
Styrene	ND	0.91	0.74	ND	ND	ND - 2.3
Tetrachloroethylene	2.5	ND	ND	ND	ND	ND - 4.1
Toluene	25	28	19	20	ND	3.5 - 110
Trichloroethene	0.60 J	0.55	ND	ND	ND	ND - 0.8

Notes:

Only compounds detected in one or more samples are reported. See laboratory report for complete data.
ND = Not detected.
J = Analyte detected at or below quantitation limits.
* = Background indoor air levels from a NYSDOH study of homes, 25th to 95th percentiles, (NYSDOH 2003).
Bold values indicate a Monitor response on NYSDOH Matrix 1 or 2.

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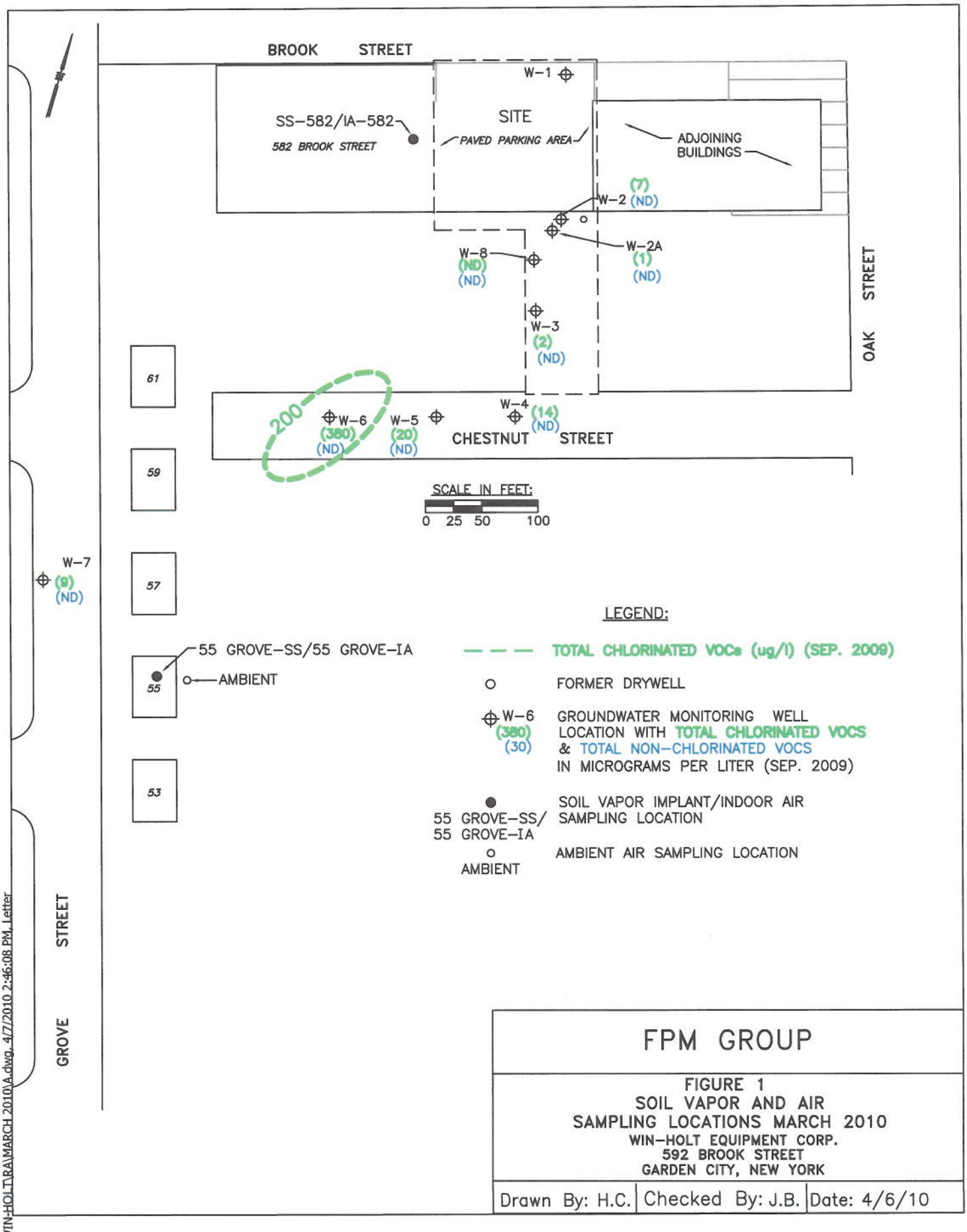

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FIGURE 1
SOIL VAPOR AND AIR
SAMPLING LOCATIONS MARCH 2010
WIN-HOLT EQUIPMENT CORP.
592 BROOK STREET
GARDEN CITY, NEW YORK

Drawn By: H.C.	Checked By: J.B.	Date: 4/6/10

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ATTACHMENT A

FIELD SAMPLING RECORDS

FPM

CANISTER FIELD SAMPLING RECORD

Site Name: Win-Holt

Location: 55 Grove Street, Garden City

Canister Serial No. 235

Sampler JB

Location 55 Grove Street sub-slab (basement)

Sample ID 55 Grove - SS

Sample Type (soil gas, ambient, indoor)

Date Cleaned

Certification (batch/individual) Batch

Flow Controller ID 667

Flow Setting (ml/mi) 16 ml/min

Initials DS

Reading	Time	Vacuum	Date		Initials
Initial Vacuum Check - laboratory	~~0915 958~~	~~-30 958~~	~~3 958~~		
Initial Field Vacuum Check	0915	-30	3/4/10		958
Final Field Reading	1005	-5	3/4/10		
Gauge Reading on Receipt (laboratory)					

Weather Conditions: Clear 38°F

Comments:

CANISTER FIELD SAMPLING RECORD

Site Name: Win-Holt

Location: 55 Grove Street, Garden City

Canister Serial No. 245

Sampler JB

Location 55 Grove basement

Sample ID 55 Grove - IA

Sample Type (soil gas, ambient, indoor) Indoor Air

Date Cleaned

Certification (batch/individual) Batch

Flow Controller ID 399

Flow Setting (ml/mi) ~~0.48 ml/min~~ JSB 2.0 ml/min

Initials

Reading	Time	Vacuum	Date		Initials
Initial Vacuum Check - laboratory	~~0930~~ JSB				
Initial Field Vacuum Check	0920	-28	3/4/10		JSB
Final Field Reading	1510	-7	3/4/10		JSB
Gauge Reading on Receipt (laboratory)					

Weather Conditions: Clear 38°F

Comments:

CANISTER FIELD SAMPLING RECORD

Site Name: Wm - Holt

Location: 55 Grove Street, Garden City

Canister Serial No. 418

Sampler JB

Location 55 Grove basement

Sample ID 55 Grove - IA - DUP

Sample Type (soil gas, ambient, indoor) Indoor Air Duplicate

Date Cleaned

Certification (batch/individual) Batch

Flow Controller ID 298

Flow Setting (ml/mi) 2.0 ml/min

Initials

Reading	Time	Vacuum	Date		Initials
Initial Vacuum Check - laboratory	~~0921~~ JSB	~~-26~~ JSB			
Initial Field Vacuum Check	0921	-26	3/4/10		JSB
Final Field Reading	1513	-1	3/4/10		JSB
Gauge Reading on Receipt (laboratory)					

Weather Conditions: Clear 38°F

Comments:

CANISTER FIELD SAMPLING RECORD

Site Name: Wm-Holt

Location: 55 Grove Street, Garden City

Canister Serial No. 228

Sampler JAB

Location 55 Grove Street (backyard)

Sample ID Ambient

Sample Type (soil gas, ambient, indoor) Ambient

Date Cleaned

Certification (batch/individual) Batch

Flow Controller ID 437

Flow Setting (ml/mi) 2.0 ml/min

Initials

Reading	Time	Vacuum	Date		Initials
Initial Vacuum Check - laboratory					
Initial Field Vacuum Check	0930	-26	3/4/10		JSB
Final Field Reading	1520	-9	3/4/10		JSB
Gauge Reading on Receipt (laboratory)					

Weather Conditions: 35°F Clear

Comments:

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name John Bukoski Date/Time Prepared 3/4/10 1530

Preparer's Affiliation FPM Group Phone No. 631-737-6200

Purpose of Investigation Win-Holt Soil vapor intrusion evaluation (Site V00243-1)

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Rosato First Name: Joseph

Address: 55 Grove Street

County: Nassau

Home Phone: 516-650-1903 Office Phone: _____

Number of Occupants/persons at this location 4 Age of Occupants 2 adults (40s) 2 children (8-10)

2. OWNER OR LANDLORD: (Check if same as occupant X)

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

(Residential)	School	Commercial/Multi-use
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
(Cape Cod)	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors 3 Building age ~45

Is the building insulated? (Y) / N How air tight? Tight / (Average) / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Staircases open between floors. Not evaluated due to limited access time allowed in house.

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	unsealed	sealed	sealed with _____	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: 6 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

No cracks. All utility ports properly sealed.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: oil

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other_____
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y (N) None observed in basement

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

Not evaluated due to limited access time allowed. Not anticipated due to hot water baseboard heating.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally (Seldom) Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Storage, utilities, laundry room
1st Floor	Kitchen / LR / DR / FR
2nd Floor	Bedrooms
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? (Y) / N

b. Does the garage have a separate heating unit? Y / (N) / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / (N) / NA Please specify_____

d. Has the building ever had a fire? Y (N) When?_____

e. Is a kerosene or unvented gas space heater present? Y / (N) Where?_____

f. Is there a workshop or hobby/craft area? Y / (N) Where & Type?_____

g. Is there smoking in the building? Y / (N) How frequently?_____

h. Have cleaning products been used recently? Y / N When & Type? Unknown

i. Have cosmetic products been used recently? Y / N When & Type? Unknown

j. **Has painting/staining been done in the last 6 months?** Y / (N) Where & When? _____

k. **Is there new carpet, drapes or other textiles?** Y / (N) Where & When? _____

l. **Have air fresheners been used recently?** Y / (N) When & Type? _____

m. **Is there a kitchen exhaust fan?** Y / N If yes, where vented? Unk

n. **Is there a bathroom exhaust fan?** Y / N If yes, where vented? Unk

o. **Is there a clothes dryer?** (Y) / N If yes, is it vented outside? (Y) / N

p. **Has there been a pesticide application?** Y / N When & Type? Unk

Are there odors in the building? Y / (N)
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / (N)
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
No
(Unknown)

Is there a radon mitigation system for the building/structure? Y / (N) Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. **Provide reasons why relocation is recommended:** _____

b. **Residents choose to:** remain in home relocate to friends/family relocate to hotel/motel

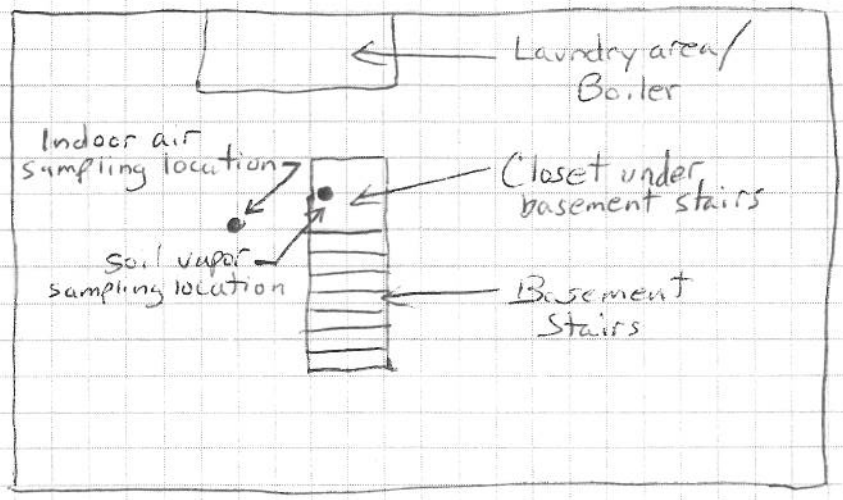
c. **Responsibility for costs associated with reimbursement explained?** Y / N

d. **Relocation package provided and explained to residents?** Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



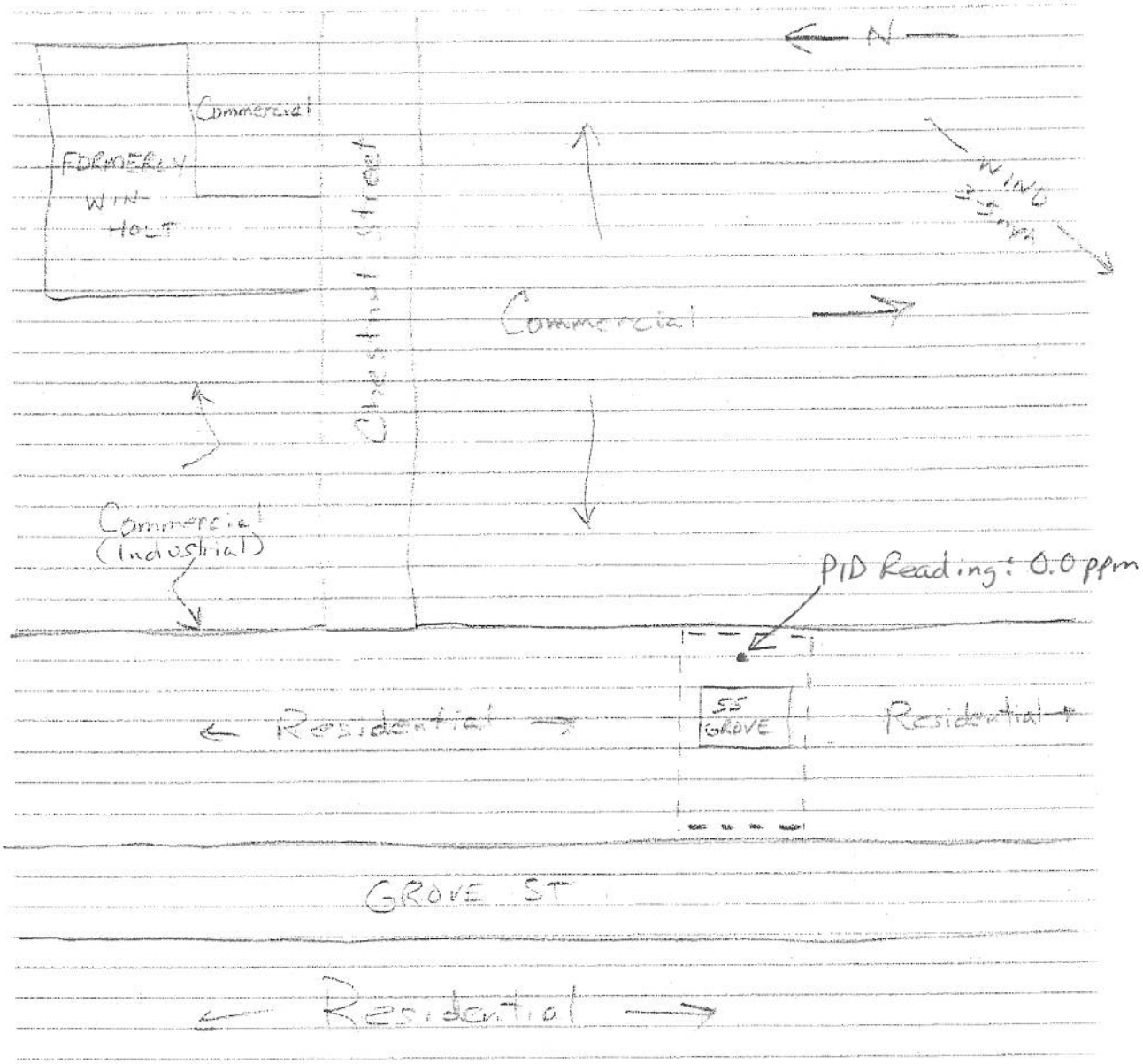
First Floor:

Not sketched due to limited access time.

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Photovac 2020 plus PID

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Specific products not inventoried due to limited access time. General products included common household cleaning agents (windex, mop and glo, pledge, etc), laundry detergents, ~~wood~~, bleach, paint, and stain remover.						

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

ATTACHMENT B

LABORATORY DATA REPORT
DATA USABILITY SUMMARY REPORT (DUSR)
RESUME OF DUSR PREPARER

FPM

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	55 Grove-SS
Lab Order:	C1003017	**Tag Number:**	235,667
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	210	33		ug/m3	40	3/10/2010
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	3/10/2010
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	3/10/2010
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	3/10/2010
1,1-Dichloroethene	0.56	0.60	J	ug/m3	1	3/10/2010
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	3/10/2010
1,2,4-Trimethylbenzene	2.6	0.75		ug/m3	1	3/10/2010
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	3/10/2010
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	3/10/2010
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	3/10/2010
1,3,5-Trimethylbenzene	0.70	0.75	J	ug/m3	1	3/10/2010
1,3-butadiene	< 0.34	0.34		ug/m3	1	3/10/2010
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dioxane	< 1.1	1.1		ug/m3	1	3/10/2010
2,2,4-trimethylpentane	< 0.71	0.71		ug/m3	1	3/10/2010
4-ethyltoluene	0.80	0.75		ug/m3	1	3/10/2010
Acetone	130	29		ug/m3	40	3/10/2010
Allyl chloride	< 0.48	0.48		ug/m3	1	3/10/2010
Benzene	1.3	0.49		ug/m3	1	3/10/2010
Benzyl chloride	< 0.88	0.88		ug/m3	1	3/10/2010
Bromodichloromethane	< 1.0	1.0		ug/m3	1	3/10/2010
Bromoform	< 1.6	1.6		ug/m3	1	3/10/2010
Bromomethane	< 0.59	0.59		ug/m3	1	3/10/2010
Carbon disulfide	1.0	0.47		ug/m3	1	3/10/2010
Carbon tetrachloride	< 0.96	0.96		ug/m3	1	3/10/2010
Chlorobenzene	< 0.70	0.70		ug/m3	1	3/10/2010
Chloroethane	< 0.40	0.40		ug/m3	1	3/10/2010
Chloroform	0.60	0.74	J	ug/m3	1	3/10/2010
Chloromethane	< 0.31	0.31		ug/m3	1	3/10/2010
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Cyclohexane	< 0.52	0.52		ug/m3	1	3/10/2010
Dibromochloromethane	< 1.3	1.3		ug/m3	1	3/10/2010
Ethyl acetate	< 0.92	0.92		ug/m3	1	3/10/2010
Ethylbenzene	9.8	0.66		ug/m3	1	3/10/2010
Freon 11	2.1	0.86		ug/m3	1	3/10/2010
Freon 113	0.93	1.2	J	ug/m3	1	3/10/2010
Freon 114	< 1.1	1.1		ug/m3	1	3/10/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	55 Grove-SS
Lab Order:	C1003017	**Tag Number:**	235,667
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-001A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: **RJP**
Freon 12	9.3	0.75		ug/m3	1	3/10/2010
Heptane	1.3	0.62		ug/m3	1	3/10/2010
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	3/10/2010
Hexane	< 0.54	0.54		ug/m3	1	3/10/2010
Isopropyl alcohol	28	3.7		ug/m3	10	3/10/2010
m&p-Xylene	15	13		ug/m3	10	3/10/2010
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl Ethyl Ketone	4.5	0.90		ug/m3	1	3/10/2010
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	3/10/2010
Methylene chloride	< 0.53	0.53		ug/m3	1	3/10/2010
o-Xylene	4.0	0.66		ug/m3	1	3/10/2010
Propylene	< 0.26	0.26		ug/m3	1	3/10/2010
Styrene	< 0.65	0.65		ug/m3	1	3/10/2010
Tetrachloroethylene	2.5	1.0		ug/m3	1	3/10/2010
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	3/10/2010
Toluene	25	5.7		ug/m3	10	3/10/2010
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Trichloroethene	0.60	0.82	J	ug/m3	1	3/10/2010
Vinyl acetate	< 0.54	0.54		ug/m3	1	3/10/2010
Vinyl Bromide	< 0.67	0.67		ug/m3	1	3/10/2010
Vinyl chloride	< 0.39	0.39		ug/m3	1	3/10/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	55 Grove-1A
Lab Order:	C1003017	**Tag Number:**	245,399
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	1.4	0.83		ug/m3	1	3/10/2010
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	3/10/2010
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	3/10/2010
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	3/10/2010
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	3/10/2010
1,2,4-Trimethylbenzene	1.4	0.75		ug/m3	1	3/10/2010
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	3/10/2010
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,2-Dichloroethane	1.0	0.62		ug/m3	1	3/10/2010
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	3/10/2010
1,3,5-Trimethylbenzene	< 0.75	0.75		ug/m3	1	3/10/2010
1,3-butadiene	< 0.34	0.34		ug/m3	1	3/10/2010
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dioxane	< 1.1	1.1		ug/m3	1	3/10/2010
2,2,4-trimethylpentane	< 0.71	0.71		ug/m3	1	3/10/2010
4-ethyltoluene	< 0.75	0.75		ug/m3	1	3/10/2010
Acetone	37	7.2		ug/m3	10	3/10/2010
Allyl chloride	< 0.48	0.48		ug/m3	1	3/10/2010
Benzene	0.71	0.49		ug/m3	1	3/10/2010
Benzyl chloride	< 0.88	0.88		ug/m3	1	3/10/2010
Bromodichloromethane	< 1.0	1.0		ug/m3	1	3/10/2010
Bromoform	< 1.6	1.6		ug/m3	1	3/10/2010
Bromomethane	< 0.59	0.59		ug/m3	1	3/10/2010
Carbon disulfide	0.54	0.47		ug/m3	1	3/10/2010
Carbon tetrachloride	< 0.26	0.26		ug/m3	1	3/10/2010
Chlorobenzene	< 0.70	0.70		ug/m3	1	3/10/2010
Chloroethane	< 0.40	0.40		ug/m3	1	3/10/2010
Chloroform	< 0.74	0.74		ug/m3	1	3/10/2010
Chloromethane	0.88	0.31		ug/m3	1	3/10/2010
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Cyclohexane	< 0.52	0.52		ug/m3	1	3/10/2010
Dibromochloromethane	< 1.3	1.3		ug/m3	1	3/10/2010
Ethyl acetate	2.6	0.92		ug/m3	1	3/10/2010
Ethylbenzene	5.4	0.66		ug/m3	1	3/10/2010
Freon 11	1.5	0.86		ug/m3	1	3/10/2010
Freon 113	0.86	1.2	J	ug/m3	1	3/10/2010
Freon 114	< 1.1	1.1		ug/m3	1	3/10/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	55 Grove-1A
Lab Order:	C1003017	**Tag Number:**	245,399
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-002A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
Freon 12	3.0	0.75		ug/m3	1	3/10/2010
Heptane	1.5	0.62		ug/m3	1	3/10/2010
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	3/10/2010
Hexane	3.2	0.54		ug/m3	1	3/10/2010
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	3/10/2010
m&p-Xylene	5.1	1.3		ug/m3	1	3/10/2010
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl Ethyl Ketone	2.9	0.90		ug/m3	1	3/10/2010
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	3/10/2010
Methylene chloride	1.4	0.53		ug/m3	1	3/10/2010
o-Xylene	1.8	0.66		ug/m3	1	3/10/2010
Propylene	< 0.26	0.26		ug/m3	1	3/10/2010
Styrene	0.91	0.65		ug/m3	1	3/10/2010
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/10/2010
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	3/10/2010
Toluene	28	5.7		ug/m3	10	3/10/2010
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Trichloroethene	0.55	0.22		ug/m3	1	3/10/2010
Vinyl acetate	< 0.54	0.54		ug/m3	1	3/10/2010
Vinyl Bromide	< 0.67	0.67		ug/m3	1	3/10/2010
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/10/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	Ambient
Lab Order:	C1003017	**Tag Number:**	228,437
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	3/10/2010
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	3/10/2010
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	3/10/2010
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	3/10/2010
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	3/10/2010
1,2,4-Trimethylbenzene	1.2	0.75		ug/m3	1	3/10/2010
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	3/10/2010
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	3/10/2010
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	3/10/2010
1,3,5-Trimethylbenzene	< 0.75	0.75		ug/m3	1	3/10/2010
1,3-butadiene	< 0.34	0.34		ug/m3	1	3/10/2010
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dioxane	< 1.1	1.1		ug/m3	1	3/10/2010
2,2,4-trimethylpentane	< 0.71	0.71		ug/m3	1	3/10/2010
4-ethyltoluene	< 0.75	0.75		ug/m3	1	3/10/2010
Acetone	21	7.2		ug/m3	10	3/10/2010
Allyl chloride	< 0.48	0.48		ug/m3	1	3/10/2010
Benzene	0.55	0.49		ug/m3	1	3/10/2010
Benzyl chloride	< 0.88	0.88		ug/m3	1	3/10/2010
Bromodichloromethane	< 1.0	1.0		ug/m3	1	3/10/2010
Bromoform	< 1.6	1.6		ug/m3	1	3/10/2010
Bromomethane	< 0.59	0.59		ug/m3	1	3/10/2010
Carbon disulfide	0.57	0.47		ug/m3	1	3/10/2010
Carbon tetrachloride	0.58	0.26		ug/m3	1	3/10/2010
Chlorobenzene	< 0.70	0.70		ug/m3	1	3/10/2010
Chloroethane	< 0.40	0.40		ug/m3	1	3/10/2010
Chloroform	< 0.74	0.74		ug/m3	1	3/10/2010
Chloromethane	1.3	0.31		ug/m3	1	3/10/2010
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Cyclohexane	< 0.52	0.52		ug/m3	1	3/10/2010
Dibromochloromethane	< 1.3	1.3		ug/m3	1	3/10/2010
Ethyl acetate	< 0.92	0.92		ug/m3	1	3/10/2010
Ethylbenzene	3.9	0.66		ug/m3	1	3/10/2010
Freon 11	1.5	0.86		ug/m3	1	3/10/2010
Freon 113	0.93	1.2	J	ug/m3	1	3/10/2010
Freon 114	< 1.1	1.1		ug/m3	1	3/10/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	Ambient
Lab Order:	C1003017	**Tag Number:**	228,437
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-003A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
Freon 12	3.0	0.75		ug/m3	1	3/10/2010
Heptane	< 0.62	0.62		ug/m3	1	3/10/2010
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	3/10/2010
Hexane	2.4	0.54		ug/m3	1	3/10/2010
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	3/10/2010
m&p-Xylene	3.4	1.3		ug/m3	1	3/10/2010
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl Ethyl Ketone	< 0.90	0.90		ug/m3	1	3/10/2010
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	3/10/2010
Methylene chloride	1.2	0.53		ug/m3	1	3/10/2010
o-Xylene	1.3	0.66		ug/m3	1	3/10/2010
Propylene	< 0.26	0.26		ug/m3	1	3/10/2010
Styrene	< 0.65	0.65		ug/m3	1	3/10/2010
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/10/2010
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	3/10/2010
Toluene	20	5.7		ug/m3	10	3/10/2010
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Trichloroethene	< 0.22	0.22		ug/m3	1	3/10/2010
Vinyl acetate	< 0.54	0.54		ug/m3	1	3/10/2010
Vinyl Bromide	< 0.67	0.67		ug/m3	1	3/10/2010
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/10/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	55 Grove-1A-DUP
Lab Order:	C1003017	**Tag Number:**	418,298
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	1.3	0.83		ug/m3	1	3/10/2010
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	3/10/2010
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	3/10/2010
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	3/10/2010
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	3/10/2010
1,2,4-Trimethylbenzene	0.65	0.75	J	ug/m3	1	3/10/2010
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	3/10/2010
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,2-Dichloroethane	1.1	0.62		ug/m3	1	3/10/2010
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	3/10/2010
1,3,5-Trimethylbenzene	< 0.75	0.75		ug/m3	1	3/10/2010
1,3-butadiene	< 0.34	0.34		ug/m3	1	3/10/2010
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dioxane	< 1.1	1.1		ug/m3	1	3/10/2010
2,2,4-trimethylpentane	< 0.71	0.71		ug/m3	1	3/10/2010
4-ethyltoluene	< 0.75	0.75		ug/m3	1	3/10/2010
Acetone	34	7.2		ug/m3	10	3/10/2010
Allyl chloride	< 0.48	0.48		ug/m3	1	3/10/2010
Benzene	0.75	0.49		ug/m3	1	3/10/2010
Benzyl chloride	< 0.88	0.88		ug/m3	1	3/10/2010
Bromodichloromethane	< 1.0	1.0		ug/m3	1	3/10/2010
Bromoform	< 1.6	1.6		ug/m3	1	3/10/2010
Bromomethane	< 0.59	0.59		ug/m3	1	3/10/2010
Carbon disulfide	0.47	0.47		ug/m3	1	3/10/2010
Carbon tetrachloride	0.64	0.26		ug/m3	1	3/10/2010
Chlorobenzene	< 0.70	0.70		ug/m3	1	3/10/2010
Chloroethane	< 0.40	0.40		ug/m3	1	3/10/2010
Chloroform	< 0.74	0.74		ug/m3	1	3/10/2010
Chloromethane	0.99	0.31		ug/m3	1	3/10/2010
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Cyclohexane	< 0.52	0.52		ug/m3	1	3/10/2010
Dibromochloromethane	< 1.3	1.3		ug/m3	1	3/10/2010
Ethyl acetate	< 0.92	0.92		ug/m3	1	3/10/2010
Ethylbenzene	2.6	0.66		ug/m3	1	3/10/2010
Freon 11	1.5	0.86		ug/m3	1	3/10/2010
Freon 113	0.93	1.2	J	ug/m3	1	3/10/2010
Freon 114	< 1.1	1.1		ug/m3	1	3/10/2010

Qualifiers:

- ** Reporting Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- JN Non-routine analyte. Quantitation estimated.
- S Spike Recovery outside accepted recovery limits
- . Results reported are not blank corrected
- E Value above quantitation range
- J Analyte detected at or below quantitation limits
- ND Not Detected at the Reporting Limit

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	55 Grove-1A-DUP
Lab Order:	C1003017	**Tag Number:**	418,298
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-004A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
Freon 12	3.2	0.75		ug/m3	1	3/10/2010
Heptane	< 0.62	0.62		ug/m3	1	3/10/2010
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	3/10/2010
Hexane	2.3	0.54		ug/m3	1	3/10/2010
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	3/10/2010
m&p-Xylene	2.5	1.3		ug/m3	1	3/10/2010
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl Ethyl Ketone	< 0.90	0.90		ug/m3	1	3/10/2010
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	3/10/2010
Methylene chloride	1.1	0.53		ug/m3	1	3/10/2010
o-Xylene	0.97	0.66		ug/m3	1	3/10/2010
Propylene	< 0.26	0.26		ug/m3	1	3/10/2010
Styrene	0.74	0.65		ug/m3	1	3/10/2010
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/10/2010
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	3/10/2010
Toluene	19	5.7		ug/m3	10	3/10/2010
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Trichloroethene	< 0.22	0.22		ug/m3	1	3/10/2010
Vinyl acetate	< 0.54	0.54		ug/m3	1	3/10/2010
Vinyl Bromide	< 0.67	0.67		ug/m3	1	3/10/2010
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/10/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	Trip Blank
Lab Order:	C1003017	**Tag Number:**	484
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	< 0.83	0.83		ug/m3	1	3/10/2010
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	3/10/2010
1,1,2-Trichloroethane	< 0.83	0.83		ug/m3	1	3/10/2010
1,1-Dichloroethane	< 0.62	0.62		ug/m3	1	3/10/2010
1,1-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	3/10/2010
1,2,4-Trimethylbenzene	< 0.75	0.75		ug/m3	1	3/10/2010
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	3/10/2010
1,2-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,2-Dichloroethane	< 0.62	0.62		ug/m3	1	3/10/2010
1,2-Dichloropropane	< 0.70	0.70		ug/m3	1	3/10/2010
1,3,5-Trimethylbenzene	< 0.75	0.75		ug/m3	1	3/10/2010
1,3-butadiene	< 0.34	0.34		ug/m3	1	3/10/2010
1,3-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dichlorobenzene	< 0.92	0.92		ug/m3	1	3/10/2010
1,4-Dioxane	< 1.1	1.1		ug/m3	1	3/10/2010
2,2,4-trimethylpentane	< 0.71	0.71		ug/m3	1	3/10/2010
4-ethyltoluene	< 0.75	0.75		ug/m3	1	3/10/2010
Acetone	< 0.72	0.72		ug/m3	1	3/10/2010
Allyl chloride	< 0.48	0.48		ug/m3	1	3/10/2010
Benzene	< 0.49	0.49		ug/m3	1	3/10/2010
Benzyl chloride	< 0.88	0.88		ug/m3	1	3/10/2010
Bromodichloromethane	< 1.0	1.0		ug/m3	1	3/10/2010
Bromoform	< 1.6	1.6		ug/m3	1	3/10/2010
Bromomethane	< 0.59	0.59		ug/m3	1	3/10/2010
Carbon disulfide	< 0.47	0.47		ug/m3	1	3/10/2010
Carbon tetrachloride	< 0.26	0.26		ug/m3	1	3/10/2010
Chlorobenzene	< 0.70	0.70		ug/m3	1	3/10/2010
Chloroethane	< 0.40	0.40		ug/m3	1	3/10/2010
Chloroform	< 0.74	0.74		ug/m3	1	3/10/2010
Chloromethane	< 0.31	0.31		ug/m3	1	3/10/2010
cis-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
cis-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Cyclohexane	< 0.52	0.52		ug/m3	1	3/10/2010
Dibromochloromethane	< 1.3	1.3		ug/m3	1	3/10/2010
Ethyl acetate	< 0.92	0.92		ug/m3	1	3/10/2010
Ethylbenzene	< 0.66	0.66		ug/m3	1	3/10/2010
Freon 11	< 0.86	0.86		ug/m3	1	3/10/2010
Freon 113	< 1.2	1.2		ug/m3	1	3/10/2010
Freon 114	< 1.1	1.1		ug/m3	1	3/10/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected at or below quantitation limits
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: *16-Mar-10*

CLIENT:	FPM Group	**Client Sample ID:**	Trip Blank
Lab Order:	C1003017	**Tag Number:**	484
Project:	Win-Holt	**Collection Date:**	3/4/2010
Lab ID:	C1003017-005A	**Matrix:**	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 W/ 0.25UG/M3 CT-TCE-VC		**TO-15**				Analyst: **RJP**
Freon 12	< 0.75	0.75		ug/m3	1	3/10/2010
Heptane	< 0.62	0.62		ug/m3	1	3/10/2010
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	3/10/2010
Hexane	< 0.54	0.54		ug/m3	1	3/10/2010
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	3/10/2010
m&p-Xylene	< 1.3	1.3		ug/m3	1	3/10/2010
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl Ethyl Ketone	< 0.90	0.90		ug/m3	1	3/10/2010
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	3/10/2010
Methyl tert-butyl ether	< 0.55	0.55		ug/m3	1	3/10/2010
Methylene chloride	< 0.53	0.53		ug/m3	1	3/10/2010
o-Xylene	< 0.66	0.66		ug/m3	1	3/10/2010
Propylene	< 0.26	0.26		ug/m3	1	3/10/2010
Styrene	< 0.65	0.65		ug/m3	1	3/10/2010
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	3/10/2010
Tetrahydrofuran	< 0.45	0.45		ug/m3	1	3/10/2010
Toluene	< 0.57	0.57		ug/m3	1	3/10/2010
trans-1,2-Dichloroethene	< 0.60	0.60		ug/m3	1	3/10/2010
trans-1,3-Dichloropropene	< 0.69	0.69		ug/m3	1	3/10/2010
Trichloroethene	< 0.22	0.22		ug/m3	1	3/10/2010
Vinyl acetate	< 0.54	0.54		ug/m3	1	3/10/2010
Vinyl Bromide	< 0.67	0.67		ug/m3	1	3/10/2010
Vinyl chloride	< 0.10	0.10		ug/m3	1	3/10/2010

Qualifiers:

**	Reporting Limit	.	Results reported are not blank corrected
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JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

143 Midler Park Drive
Syracuse, NY 13206
Phone: 315-431-9730 Fax: 315-431-9731 Emergency: 315-416-2752

Chain of Custody

Site Name: Win-Holt
Project: Win-Holt
PO#: 562-08-10
Other:

Detection Limit	Report Level
☐ 5ppbv	☐ Level I
☐ 1ug/M3	☐ Level II
☒ 1ug/M3 +TCE .25	☒ Cat "B" Like

Turnaround Time:	Check One	Rush TAT Surcharge %	Due Date:
5 Business Days	☒	0%	
4 Business Days	☐	35%	
3 Business Days	☐	50%	
2 Business Days	☐	75%	
Next Day by 5pm	☐	100%	
Next Day by Noon	☐	150%	
Same Day	☐	200%	

Company: FPM Group
Report: John Bukoski
Phone: 631-737-6200 ext 218
Fax: 631-737-2410
Email: j.bukoski@hotmail.com

Company: Same
Invoice:
Phone:
Fax:
Email:

Sample ID	Date Sampled	Canister Number	Regulator Number	Analysis Request	Comments	Vacuum Start/Stop
55 Grove - SS	3/4/10 0915/1005	235	~~235~~ 661	TO-15		-30 / -5
55 Grove - IA	3/4/10 0920/1510	245	399	TO-15 Low Level		-28 / -7
Ambient	3/4/10 0930/1520	228	437	TO-15 Low Level		-26 / -9
55 - Grove - IA - Dup	3/4/10 0921/1513	418	298	TO-15 Low Level		-26 / -1
Trip Blank						

C100317

Chain of Custody	Print Name	Signature	Date/Time	Courier:
Sampled by:	John Bukoski	John S Bukoski	3/4/10	Fed Ex
Relinquished by:	John Bukoski	John S Bukoski	3/5/10	
Received at Lab by:	Dan Scala	Dan Scala	3/9/10	

www.CentekLabs.com

DATA USABILITY SUMMARY REPORT
FOR MARCH 2010 SOIL VAPOR AND INDOOR AIR SAMPLING EVENT
LAB REPORT C1003017
WIN-HOLT EQUIPMENT SITE
GARDEN CITY, NEW YORK

This DUSR was prepared using the entire original laboratory report. In addition, canister collection forms and field notes were reviewed to evaluate sample collection procedures. The sampling event included one sub-slab soil vapor sample collected from an implant located in the floor of one building, one indoor air sample collected from the vicinity of the implant location, one duplicate indoor air sample, one ambient air sample, and one trip blank.

Sample Collection Procedures

The samples were collected in laboratory-provided batch-certified one-liter Summa canisters. The indoor air and ambient air canisters were equipped with flow controllers and placed on available furniture such that samples were collected at a height approximating the breathing zone. Sample collection duration is documented on canister collection forms, which show that each sample was collected at a rate of 0.002 liters per minute, which is below the New York State Department of Health (NYSDOH)-recommended maximum of 0.2 liters per minute.

During sample collection, the implant was isolated from the atmosphere using an enclosure. Helium was introduced into the enclosure as a tracer gas to confirm that atmospheric air was not cross-contaminating the sample zone. A helium meter was used to confirm that the enclosure contained sufficient helium. The helium meter was also used to confirm that the soil vapor from the implant did not contain helium. The results of the tracer gas tests showed that the sample was not affected by cross-contamination from the atmosphere. The soil vapor canister was equipped with a flow controller. Sample collection duration is documented on the canister collection form, which shows that the sample was collected at a rate of 0.016 liters per minute, which is below the New York State Department of Health (NYSDOH)-recommended maximum of 0.2 liters per minute.

The canisters were noted to have full vacuums when the sampling commenced and retained some vacuum when closed, in accordance with NYSDOH guidance.

Sample Analyses

The samples were transmitted via overnight courier and analyzed by Centek Laboratories, LLC at their Syracuse, NY facility, which is NYSDOH-certified for the analyses performed. The samples were analyzed for volatile organic compounds (VOCs) using Method TO-15 (sub-slab sample) or Method TO-15 low-level (indoor air and ambient samples). The analytical methods and analytes are appropriate for the intended use of the data. The sample holding times were met and no problems with sample receipt or handling were reported by the laboratory. The sample results were noted as not Method Blank (MB)-corrected for contamination; as discussed below, this does not present a concern as no VOCs were noted in any of the MB samples.

Several samples required dilutions for select analytes to provide quantification within the calibration range of the instrument. This resulted in elevated reporting limits for select analytes.

A trip blank sample was used to verify that cross-contamination of samples did not occur between samples in the field or laboratory. The trip blank sample showed no detections of VOCs, indicating

that cross-contamination between samples does not present a concern.

A duplicate sample was collected and utilized to evaluate the precision of the laboratory analysis. The results from the duplicate sample (55 Grove-IA-Dup) and associated parent sample (55 Grove-IA) are very similar and, therefore, the laboratory results are likely to be precise.

MB samples were analyzed by the laboratory to evaluate the potential for cross-contamination associated with the sample preparation and analysis. The MB results did not show detectable concentrations of VOCs and, therefore, cross-contamination associated with sample preparation or analysis does not appear to affect the sample data.

A laboratory control sample (LCS) was used by the laboratory to verify the accuracy and precision of the analyses. The LCS percent recoveries (%Rs) were all within established guidelines. Therefore, the analytical results should be precise and accurate.

Questions and Responses

1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables?

   The data package is complete. The external and internal chain of custody forms are present and complete. The case narrative and sample analysis summaries are present and complete. The analytical QA/QC summary forms, including surrogate recovery forms, LCS forms, IDL forms, initial and continuing calibration summary forms, standards raw data, tuning criteria report, and MB data are all present and complete. The data report forms, including sample prep logs, injection logs, canister cleaning logs, and examples of the calculations used to determine the sample concentrations are all present and complete. The raw data used to identify and quantify the contract-specified analytes are present and complete.

   Data completeness for the field program was also verified. The numbers and types of samples collected are in agreement with the work plan.

2. Have all holding times been met?

   All samples were received and analyzed within the EPA-recommended holding times for the analyses performed.

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data, fall within the protocol-required limits and specifications?

   Yes – all of the QC data were reviewed and found to fall within the protocol-required limits and specifications.

4. Have all of the data been generated using established and agreed-upon analytical protocols?

   Yes - all of the data were generated using the Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

Yes – a representative number of raw data results were compared with the reported data results to confirm that the reported analytical results (identification and quantification) are substantiated by the raw data.

6. Have the correct data qualifiers been used?

   Yes – results below the quantitation limit and above the method detection limit have been J-qualified. No other qualifiers were indicated or applied.

Conclusions

The soil vapor, indoor air, and ambient air samples were collected in accordance with NYSDOH guidance. No field or laboratory conditions occurred that would result in non-valid analytical data. Select analytes for several samples had elevated reporting limits due to dilutions necessary for the results to be within the analytical range of the instrument. These data were used to evaluate indoor air and sub-slab soil vapor conditions at the subject site. The data appear to be adequate for their intended purpose.

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Stephanie O. Davis, P.G., C.P.G.

FPM group — Engineering and Environmental Science

Ms. Davis has diversified experience in geology and hydrogeology. Her professional experience includes groundwater and soil investigations, design and management of soil remediation projects, design and installation of groundwater containment and remediation systems, groundwater flow modeling, aquifer testing and interpretation, evaluation of site compliance with environmental regulations, environmental permitting, and personnel training.

Functional Role	Title	Years of Experience
Senior Hydrogeologist	Department Manager - Hydrogeology	24

Personal Data

Education

M.S./1984/Geology
B.S./1981/Geology

Registration and Certifications

Certified Professional Geologist #9487, (AIPG) 1995
California Registered Geologist #5192, 1991
Pennsylvania Registered Geologist #PG-000529-G, 1994
OSHA – Approved 40 hour Health and Safety Training
Course (1990)
OSHA - Approved 8 hour Health and Safety Training Refresher Courses (1991-Present)
OSHA-Approved 8-hour Site Safety Supervisor Training Course (2008)
National Ground Water Association
Long Island Association of Professional Geologists

Employment History

1993-Present	FPM Group
1992-1993	Chevron Research and Technology Co.
1990-1992	Chevron Manufacturing Co.
1984-1990	Chevron Exploration, Land, and Production Company

Continuing Education

- Treatment of Contaminated Soil and Rock
- Groundwater Pollution and Hydrology
- Environmental Law and Regulation
- Remedial Engineering
- Soil and Foundation Engineering
- Environmental Geochemistry

Detailed Experience

Site Investigations

- Provides oversight and coordination for ongoing investigation and remedial projects at several New York State Inactive Hazardous Waste Disposal Sites, Voluntary Cleanup Program Sites, and Brownfield Cleanup Program Sites. Investigations have included site characterization, Remedial Investigation/ Feasibility studies, and RCRA Facility Investigations. Remedial Services have included contaminated soil removals; ORC and ARC injections; design, installation and operation of all sparge/soil vapor extraction systems; sub-slab depress investigation, capping, and other remedial services.
- Provides program coordination and oversight for all Phase I ESA, Phase II investigations, and remediation projects for a major commercial developer on Long Island, New York. Projects have included environmental services associated for the purchase and redevelopment of office buildings, aerospace facilities, former research and development facilities, and large manufacturing plants. Remedial Services have provided RCRA closures, UIC closures, tank removals, and Brownfield Cleanup Program projects.
- Planned and managed a Resource Conservation and Recovery Act (RCRA) Facilities Investigation (RFI) at Barksdale AFB, Louisiana for AFCEE. Responsible for all aspects of field program planning, solicitation and selection of subcontractors, mobilization and establishment of a field office, supervising multiple field crews, installation and sampling of monitoring wells, collection and soil samples, data tracking and management and preparation of an RFI report. The scope of work included characterization of the nature and extent of groundwater and soil contamination at thirteen Solid Waste Management Units (SWMUs), performing a base-wide evaluation of background contaminant concentrations, and developing a long-term groundwater monitoring program for the base.
- Managed field sampling crews for major underground storage tank (UST) investigation at Plattsburgh AFB, NY, for AFCEE. Responsible for field crew training, coordination of sampling crews at separate sites, sample labeling, handling, tracking, and shipping, field data management and remote field office management. The scope of work included collection of over 450 groundwater samples to characterize groundwater conditions in the vicinity of 150 USTs using a Geoprobe sampling rig, wellpoints, and rapid turnaround-time analysis.

- Managed site investigation activities, including soil vapor sampling, soil sampling and analysis, groundwater sampling and analysis, and geotechnical evaluation for numerous sites in Suffolk County, New York. The resulting data were utilized by a major supermarket company in the negotiations for the purchase of the properties and in the property remediation prior to development.
- Performed site investigation activities including soil vapor analysis, soil sample analysis, and groundwater sampling and analysis at an active commercial bus terminal in the Bronx, NY. Made recommendations for site remediation including UST removal, soil excavation and disposal, and free-phase product extraction.
- Prepared various work plans and reports, including a RCRA Facilities Investigation Work plan, incorporating existing geologic, chemical and historical data, evaluating newly-acquired site data, and developing recommendations for further investigation and remedial action at a City of Richmond former municipal landfill
- Managed on-site and off-site soil and ground-water sampling program at a manufacturing facility in Bay Shore, NY. Compiled resulting data and prepared a comprehensive report of the investigation results for the Suffolk County Department of Health Services (SCDHS) and NYS Department of Environmental Conservation (NYSDEC). Proposed remediation technologies for on-site soil contamination and on-site and off-site groundwater contamination.
- Managed and conducted a soil and groundwater sampling program using a Geoprobe sampler adjacent to Newark Airport Runway 29 for the Federal Aviation Administration. Analyzed resulting chemical analytical data and presented results to client.
- Supervised and conducted drilling, soil sampling, cone penetrometer testing, and well installation at a refinery process water effluent treatment system and former municipal landfill.
- Supervised drilling, installation, development, and sampling of monitoring wells at numerous sites in the greater New York metropolitan area. Utilized resulting stratigraphic, hydrologic, and chemical analytical data to evaluate site conditions.

Remediation

- Designed soil remediation plan and managed contractor support for a metal parts plating and manufacturing facility in Suffolk County, New York. Soil remediation was overseen and approved by the SCDHS.
- Designed and performed indoor underground storage tank abandonment program, leaching pool remediation plan, and managed contractor support for a tape measure manufacturing facility in Suffolk County, New York. SCDHS provided oversight and approval.
- Participated in the design process for a groundwater containment and remediation system for a former municipal landfill, including subsurface groundwater barrier walls and extraction wells.
- Designed soil remediation plan and supervised contractor performance of soil remediation activities at an active construction site in Carle Place, NY. Project involved excavation and disposal of approximately 5,000 tons of PCB-, metal-, and petroleum-contaminated soil. NYSDEC provided oversight and approval of the completed remediation.
- Coordinated technical aspects of subsurface groundwater barrier wall construction, including routing, permitting, design, material selection, and field activities.

Hydrogeologic Evaluations

- Prepared Engineer's Report for Long Island Well Permit for a 230-gpm irrigation supply well. Responsible for evaluation of well interference, salt water upcoming, impacts from contaminants, and other factors affecting the proposed well.
- Performed well design (gravel pack size, screen size, etc.) for numerous groundwater wells on Long Island. Familiar with sieve analyses, well construction and development methods.
- Utilized Visual Modflow groundwater modeling program to evaluate the impact of a contaminant plume on a proposed SCWA wellfield. Model development included evaluation of recharge, aquifer properties, subsurface stratigraphy, boundary conditions, plume source and concentration, and various wellfield locations and pumping rates.
- Participated in a multi-day, multi-well aquifer pumping test for New York City Transit (NYCT) Lennox Avenue site. Responsible for operating and maintaining data logging equipment, coordinating manual water level measurements, and analyzing resulting drawdown data.
- Evaluated subsurface geologic conditions for NYCT Avenue T site utilizing existing boring logs, topographic, and historic map data.
- Supervised drilling, installation and development of groundwater extraction, injection, and monitoring wells at a USEPA Superfund site in Deer Park, New York. Interpreted aquifer and well

performance from development data and made recommendations for modification of drilling and development procedures.

- Performed slug tests on monitoring wells at a New York City Transit Authority site, and evaluated hydrologic properties using the HYDROLOGIC ISOAQX computer program.
- Performed aquifer pumping and slug tests and evaluated hydrologic properties using the computer program AQTESOLV.
- Performed water level and water quality monitoring at an industrial site in Mattituck, NY. Constructed groundwater elevation contour maps and utilized chemical analytical data to predict contaminant plume migration.

Landfills

- Prepared work plans for Closure Investigations of two Town of East Hampton landfills. Each work plan included a Hydrogeologic investigation, methane investigation, surface leachate investigation, and vector investigation. Prepared final Closure Investigation Reports, which were accepted by the NYSDEC.
- Supervised the installation of groundwater and methane monitoring wells to complete the monitoring networks at the Town of East Hampton landfills. Services provided included hollow-stern auger and mud-rotary well installations, split-spoon soil sampling and boring log preparation, oversight and interpretation of wireline electric logging, and completion of initial baseline monitoring events.
- Supervises ongoing groundwater and methane monitoring programs for Town of East Hampton landfills. Responsibilities include field team coordination, communications with the Town, report scheduling, data package review, and report review prior to distribution to the client and NYSDEC.
- Performed groundwater sampling at a radio tower facility constructed on a landfill in NJ. Analyzed results and made recommendations to client.
- Conducted methane monitoring at Springs-Fireplace Road and Montauk Landfills for the Town of East Hampton.
- Used the PC-based modeling program FLOW PATH to predict groundwater flow directions and evaluate extraction well locations and pumping rates for a groundwater containment and remediation system at a former municipal landfill.
- Negotiated successfully with NYSDEC for reduced monitoring frequencies at Town of East Hampton based on historic monitoring results. Maintained quarterly monitoring frequency only for specific containments at key locations.
- Manages monthly methane monitoring for all Town of Islip landfills. Monitoring program includes onsite and offsite methane wells, methane collection systems, and flare systems. Data is recorded electronically and downloaded to computer for formatting prior to delivery to Town. Data is reported in final form within two days of collection.
- Supervises and reviews production of quarterly and annual monitoring reports for all monitoring programs at Town of Smithtown landfill. Project includes tabulation and reporting of groundwater and methane monitoring data, solid waste and recycling collection data, yard waste composting operations, and landfill leachate collection and disposal data. Multiple copies of each report are prepared for Town delivery to the NYSDEC.

Environmental Data Analysis

- Received multiple sessions of environmental geochemistry training provided by environmental geochemists, including physical chemistry, thermodynamics, ionic interactions, complexation, biologic effects, and other basic principles. Training also included field sampling procedures and effects on chemical data, chemical analytical methods and equipment, and QA/QC procedures and interpretation.
- Reviewed and evaluated numerous soil, groundwater, product, indoor/ambient air and soil vapor chemical analytical datasets, including evaluation of batch and site-specific QA/QC samples, laboratory narratives, comparison to regulatory agency criteria, historic data, and background data.
- Developed and implemented numerous Quality Assurance Project Plans (QAPP), including QAPP design, sample delivery group (SDG) evaluations, sampling procedures and sequences, and QA/QC sample preparation/collection.
- Attended periodic environmental chemistry training sessions hosted by environmental laboratories and participated in hands-on training in data and QA/QC evaluation.
- Prepared Data Usability Summary Reports (DUSRs) for numerous chemical analytical datasets for projects overseen by the USEPA, NYSDEC and other regulatory agencies. Datasets evaluated have included soil, groundwater, soil vapor, indoor air, and ambient air.
- Performed forensic assessments of historic environmental chemical analytical data to resolve

apparent discrepancies with modern data and other dataset inconsistencies.

- Assessed various leachate test protocols and results to determine the most applicable methods to evaluate and develop soil cleanup objectives for non-regulated compounds.
- Interpreted numerous organic parameter datasets to evaluate breakdown sequences, likely original parameters, and rates of degradation.
- Formulated numerous chemical treatment plans for insitu remediation of environment contaminants, including assessment of contaminant concentrations and distribution, chemical processes and indicators, natural attenuation indicators, additional stociometric demands, and hydrogeologic factors.

Health and Safety

- Performed health and safety monitoring at investigation and remediation sites during intrusive activities. Monitoring included calibration and operation of photoionization detector (PID) and flame-ionization detector (FID) for organic vapors and combustible gas indicator (CGI) for methane. Compared results to applicable action levels and took preventative/protective measures as necessary.
- Performed community monitoring, including monitoring for noise, particulates (dust), and organic vapors. Recorded observations and compared to applicable action levels. Familiar with calibration and operation of noise meters, particulate monitors, and PID/FID.
- Performed screening for radiation at select sites. Familiar with operation of Geiger counter in different radiation modes and with background readings.

Miscellaneous Projects

- Performed numerous Phase I Site Assessments for residential and industrial sites on Long Island, New York.
- Conducted aquifer pumping and soil vapor extraction test training. Instructed classes for site investigation methods, aquifer pumping test analysis, and risk assessment.
- Performed various project management functions, including development and management of project budgets and schedules, coordination of field and office staffing, document preparation, review, editing, and interaction with clients, regulatory, legal, real estate, consultant, and compliance personnel.
- Organized, supervised, and conducted remote field mapping studies in Alaska.
- Directed well site geophysical logging operations and interpreted geophysical well logs.
- Conducted methane monitoring at Springs-Fireplace Road and Montauk Landfills for the Town of East Hampton.
- Processed and interpreted seismic reflection data and constructed seismic velocity models.
- Evaluated site compliance with environmental regulations. Assisted and reviewed regulator's revision of proposed risk assessment-based UST cleanup guidelines. Reviewed proposed USEPA NPDES permits for remediation system effluent.
- Constructed and interpreted structural and stratigraphic cross sections, and structure contour, fault surface, isochore, and isopach maps.