SITE: Carrier Air
BREAK: 7.8
OTHER: V4

COMPLETION REPORT

RECONSTRUCTION OF MAIN PLANT AREA REMEDIAL SYSTEM

Carrier Air Conditioning Superfund Site
Collierville, Tennessee
EPA ID: TND04406222

Prepared For:

UNITED TECHNOLOGIES CORPORATION
United Technologies Building
1 Financial Plaza
Mail Stop 503
Hartford, CT 06101

Prepared By:

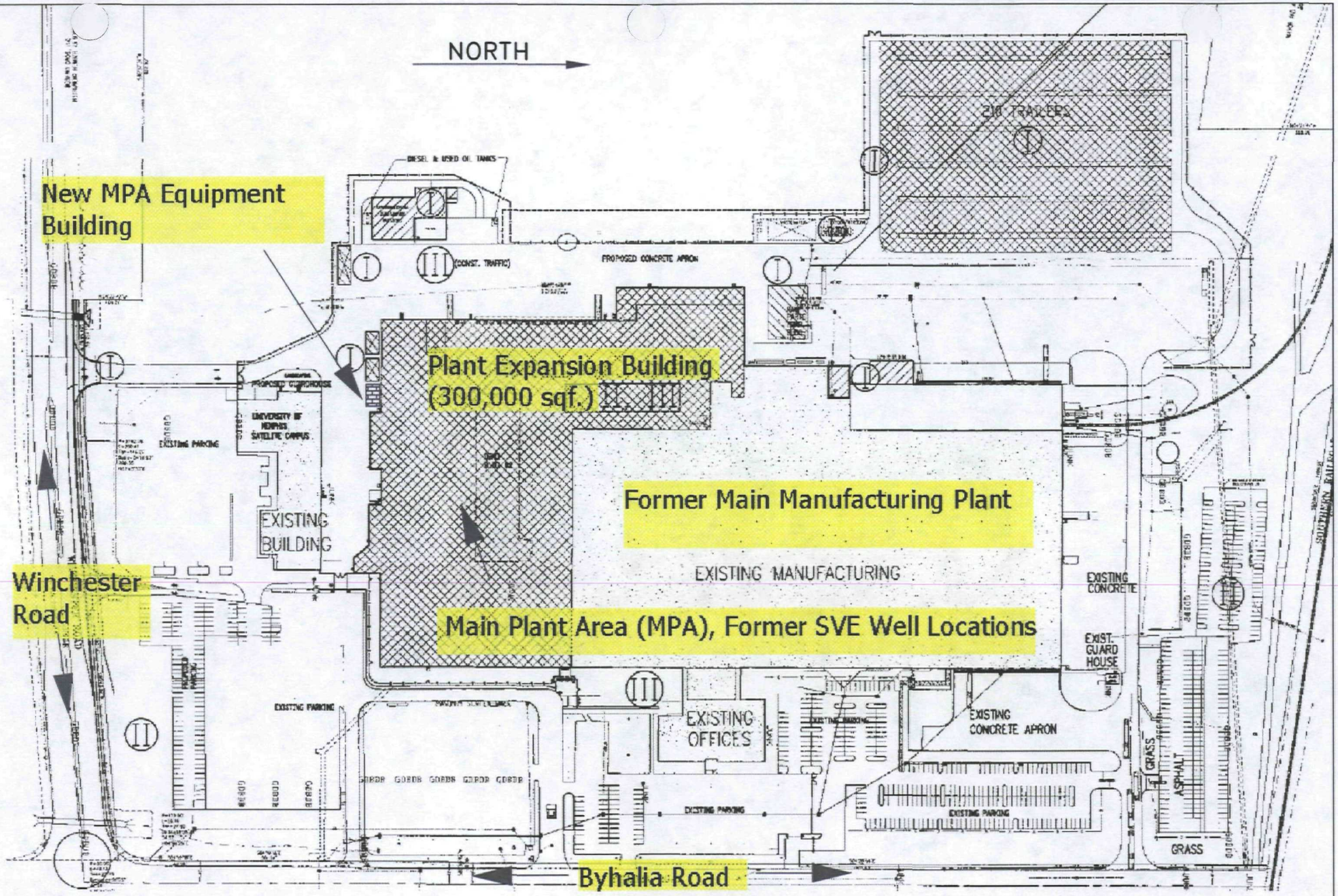
XPERT DESIGN AND DIAGNOSTICS, LLC
22 MARIN WAY
STRATHAM, NH 03885
TEL: (603) 778-1100
FAX: (603) 778-2121

DECEMBER 16, 2005

10663222

FIGURES

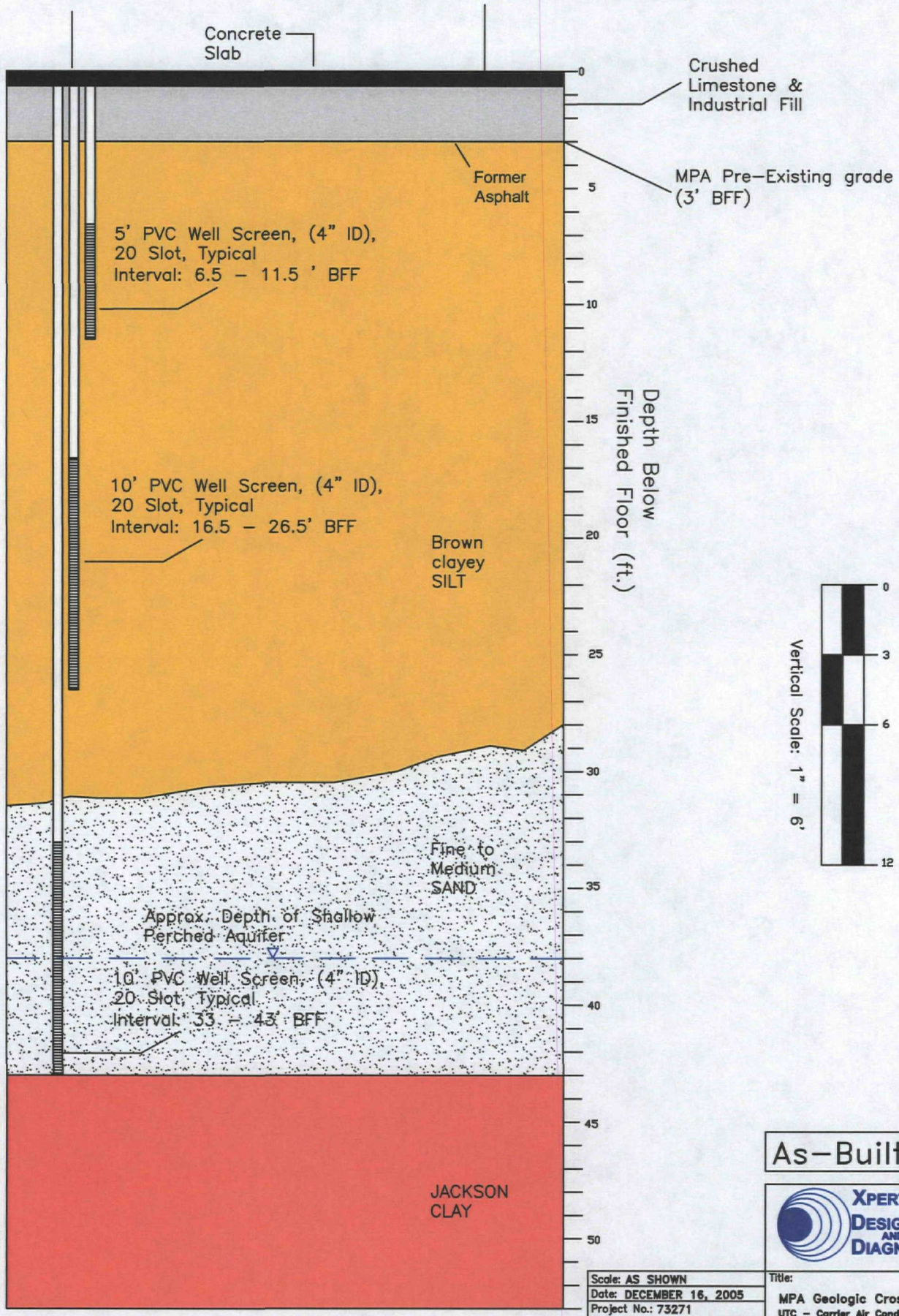
FIGURES



As-Built

Scale: NOT TO SCALE	Title: Site Layout Map
Date: DECEMBER 16, 2005	UTC – Carrier Air Conditioning Collierville, TN
Project No.: 73271	
Client: UTC	
Drawn By: MTT	FIGURE: 1
Checked By: OU	rev. B
Proj. Mgmt. Approval:	

XPERT DESIGN AND DIAGNOSTICS, LLC



As-Built

NOTES:

MSL Feet above mean sea level
BFF Below finished floor

Scale: AS SHOWN	Title: MPA Geologic Cross-Section View UTC – Carrier Air Conditioning Collierville,TN
Date: DECEMBER 16, 2005	
Project No.: 73271	
Client: UTC – COLLIERVILLE	FIGURE: 2
Drawn By: PJC	rev. B
Checked By: OU	
Proj. Mgmt. Approval:	

XPERT DESIGN AND DIAGNOSTICS, LLC

Southwest Corner of
Main Plant Building Expansion

SVE
Equipment
Building

Valve Bank A

3" PVC
TIE INS

6" PVC

3" PVC
TIE INS

6" PVC

3" PVC
TIE INS

Southwest Corner
of Original Main
Plant Building (Former)

Main Plant Area (MPA)
SVE Well Layout

Main Plant Expansion Building
(Finished Floor Elevation = 343' MSL)

As-Built

SVE Wells and Valve Bank Details					
Valve Bank ID	Well I.D.	Shallow Wells	Deep Wells	Deep Sand Wells	Total Wells
A	1, 2, 3, 4	4	4	0	8
B	7, 9, 11, 12	4	4	0	8
C	5, 6, 8, 10, 13	5	5	0	10
D	14 - 18	0	5	0	5
E	19 - 21	3	3	0	6
F	22 - 27	6	6	0	12
G	28 - 30	3	3	0	6
H	31 - 36	6	6	1	13
I	37 - 42	6	6	2	14
J	43 - 47	5	5	0	10

-Shallow Well: Screen Interval = 6.5-11.5' BFF
-Deep Well: Screen Interval = 16.5-26.5' BFF
-Deep Sand Well: Screen Interval = 33-43' BFF

LEGEND

- Single Soil Vapor Extraction (SVE) Well (Deep Sand)
- Dual Level Soil Vapor Extraction Well (Shallow and Deep)
- Single Level Soil Vapor Extraction Well (Deep)
- SVE Main Line (Overhead; 6" ID PVC, SCH 40)
- SVE Branch Line (Below Slab; 2" ID PVC, SCH 80)
- Valve Bank Location

NOTES:
-SVE Borings are spaced approximately 40' on center (ROI=20 feet).
-"MSL" = feet above mean sea level
-"BFF" = below finished floor
- ROI - radius of influence
- SVE well locations are surveyed.

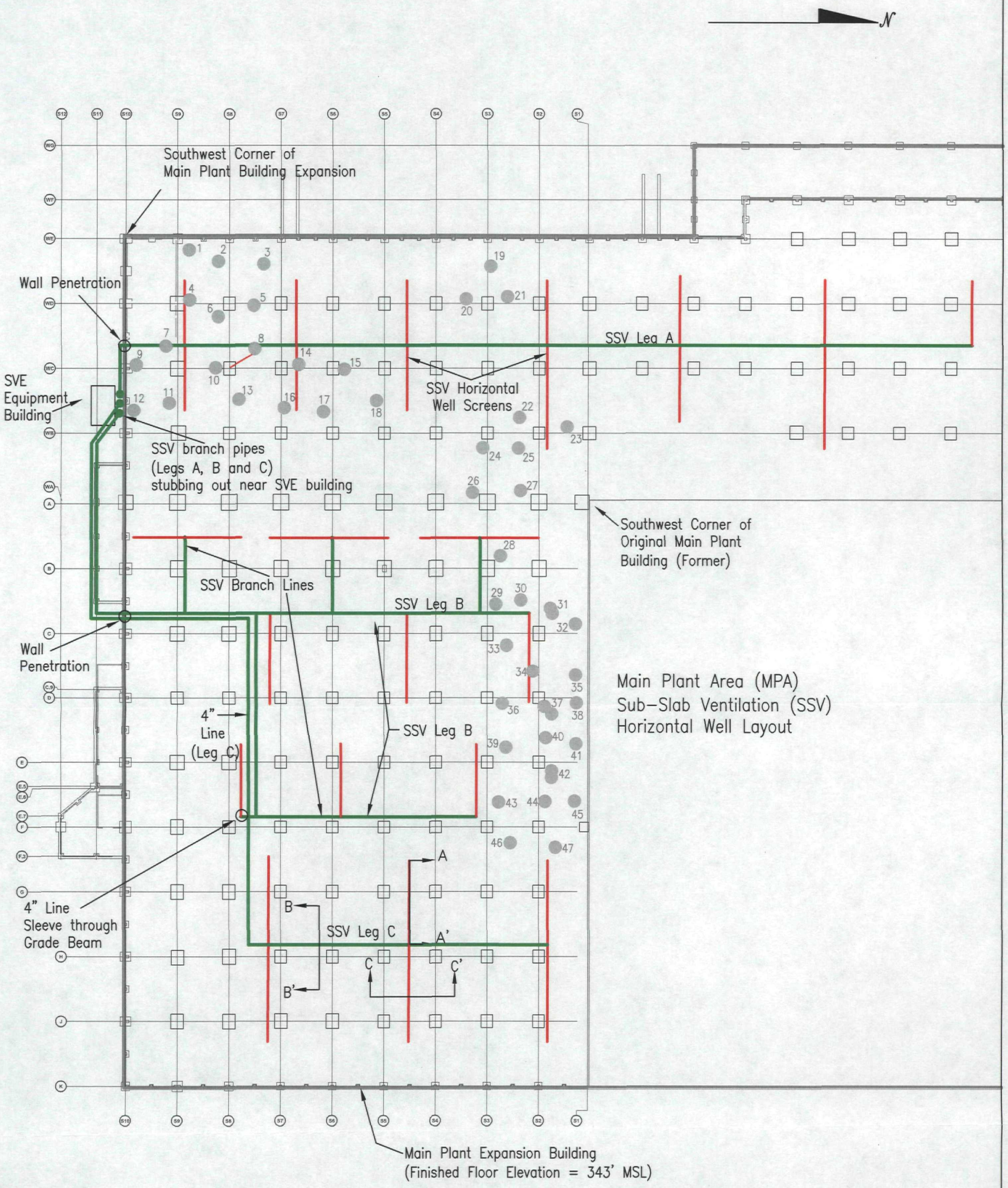
0 30 60 120
Graphic Scale

XPERT DESIGN AND DIAGNOSTICS, LLC

Scale: AS SHOWN
Date: DECEMBER 16, 2005
Project No.: 73271
Client: UTC - COLLIERVILLE
Drawn By: MTT
Checked By: OU
Proj. Mgmt. Approval:

Title:
MPA SVE
Well Layout and Manifold
UTC - Carrier Air Conditioning Collierville, TN

FIGURE: 3
rev. B



Main Plant Area (MPA)
Sub-Slab Ventilation (SSV)
Horizontal Well Layout

LEGEND

- Soil Vapor Extraction (SVE) Wells
- Subslab Ventilation (SSV) Branch Line (Below grade, 4" ID PVC, SCH 80)
- SSV Horizontal Well Screen (2" ID PVC, SCH 40, 100' On-Center, 50' ROI, 50' L, 20-Slot)

NOTES

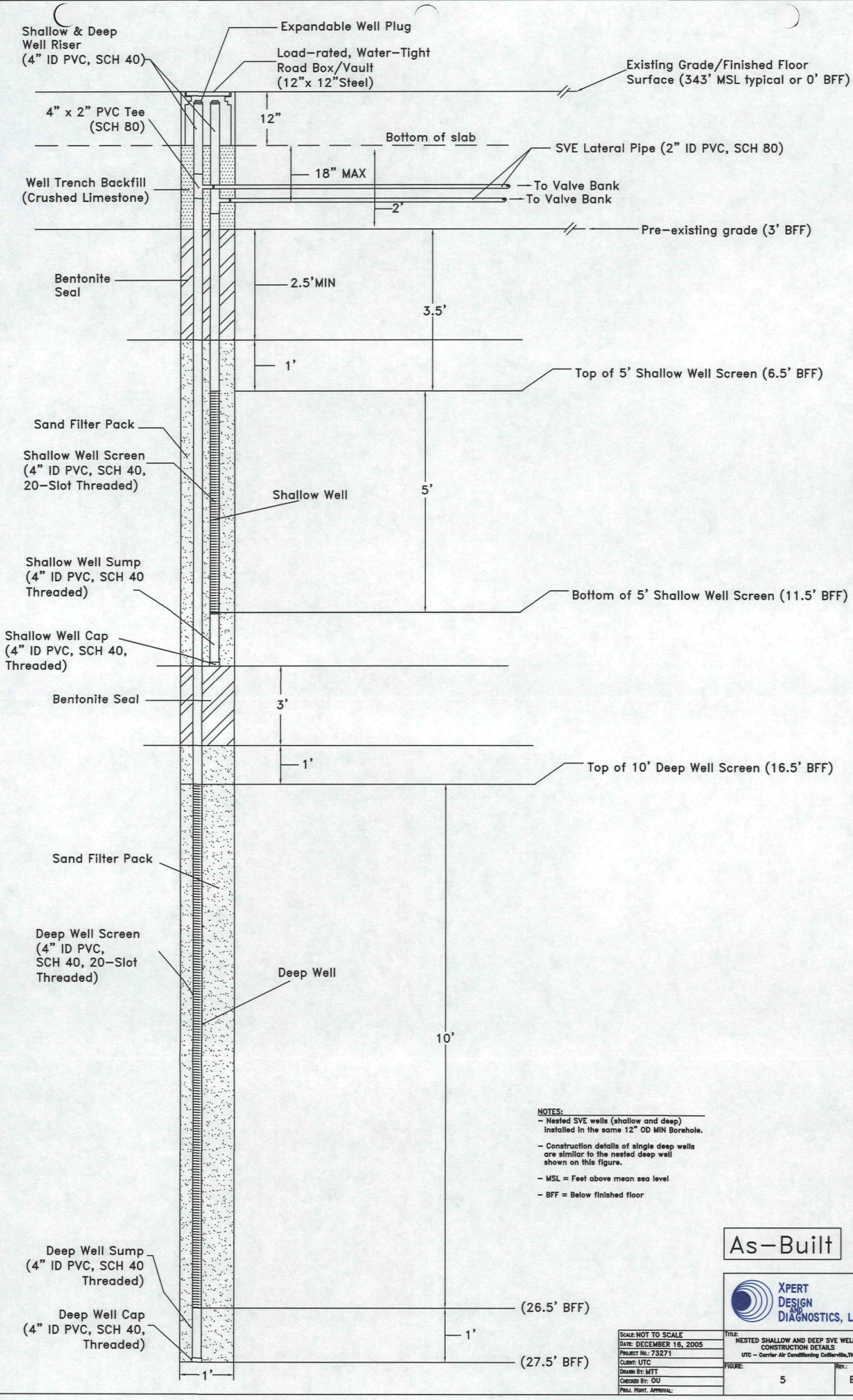
- SVE Borings are spaced approximately 40' on center (20 feet ROI).
- "MSL" = feet above mean sea level
- Refer to SSV Horizontal Well and Branch Manifolding Details (Figure 15) for Cross-sections AA', BB' and CC' details.
- SVE well locations are surveyed.
- ROI - radius of influence

0 60 120
GRAPHIC SCALE

As-Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: AS SHOWN	TITLE: MPA SSV Horizontal Well Layout and Manifold
DATE: DECEMBER 16, 2005	UTC - Carrier Air Conditioning Collierville, TN
PROJECT NO.: 73271	
CLIENT: UTC - COLLIERVILLE	
DRAWN BY: MTT	
CHECKED BY: OU	FIGURE: 4
PROJ. MGMT. APPROVAL:	REV. A

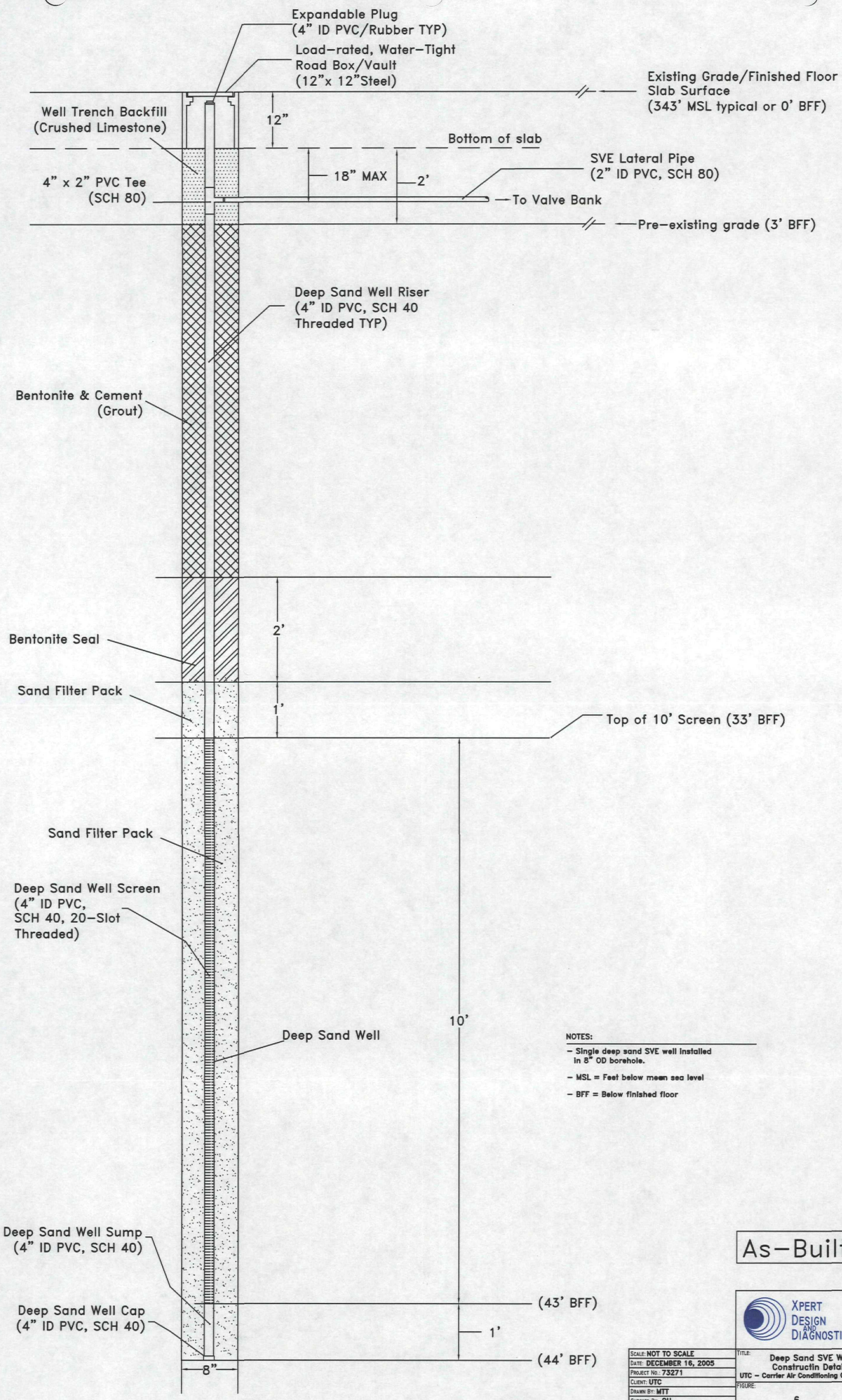


NOTES:
- Nested SVE wells (shallow and deep) installed in the same 12" OD MIN Borehole.
- Construction details of single deep wells are similar to the nested deep well shown on this figure.
- MSL = Feet above mean sea level
- BFF = Below finished floor

As-Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: NOT TO SCALE	TITLE: NESTED SHALLOW AND DEEP SVE WELLS CONSTRUCTION DETAILS UTC – Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC	
DRAWN BY: MTT	FIGURE: 5
CHECKED BY: OU	REV.: B
PROJ. MGMT. APPROVAL:	



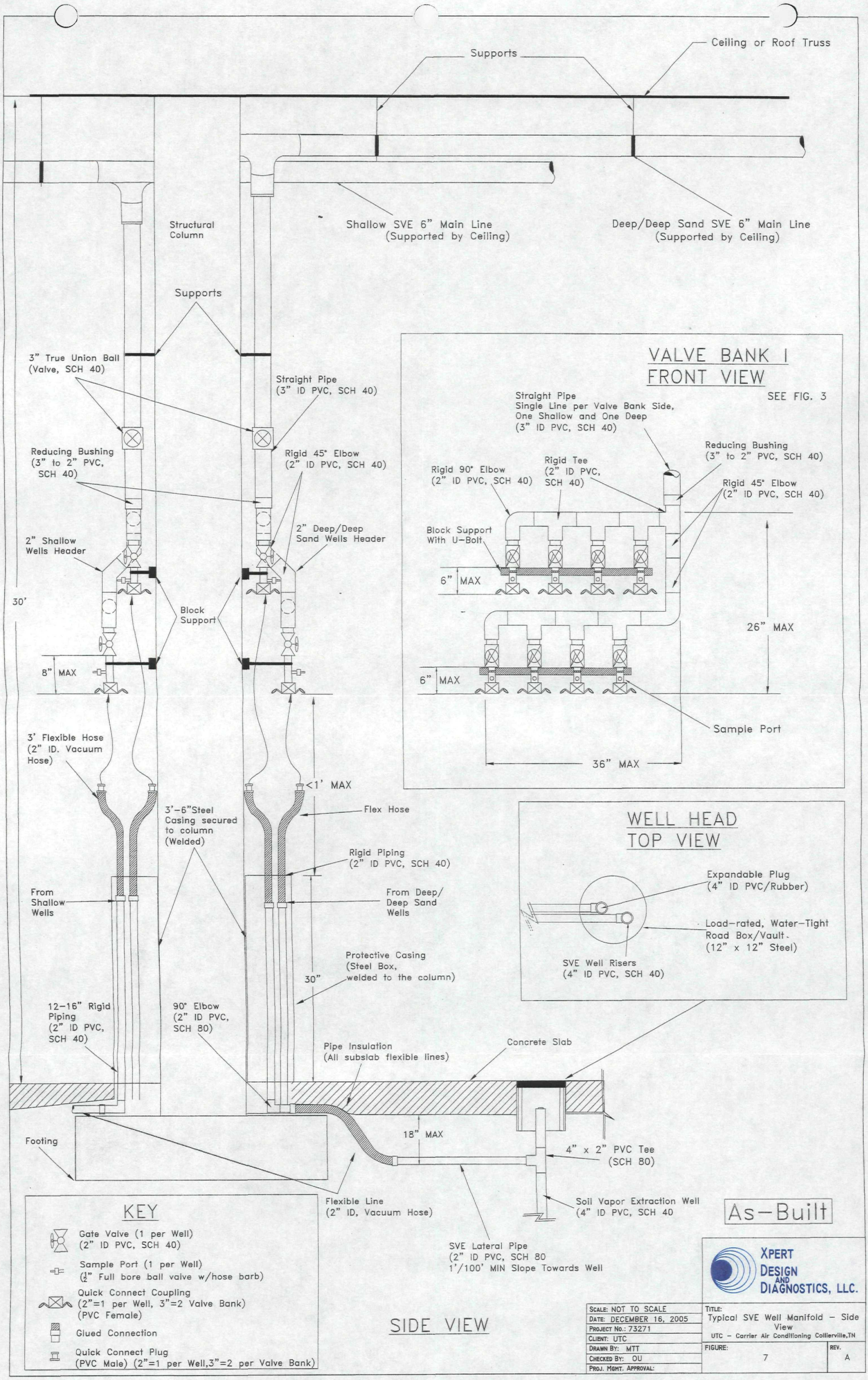
NOTES:

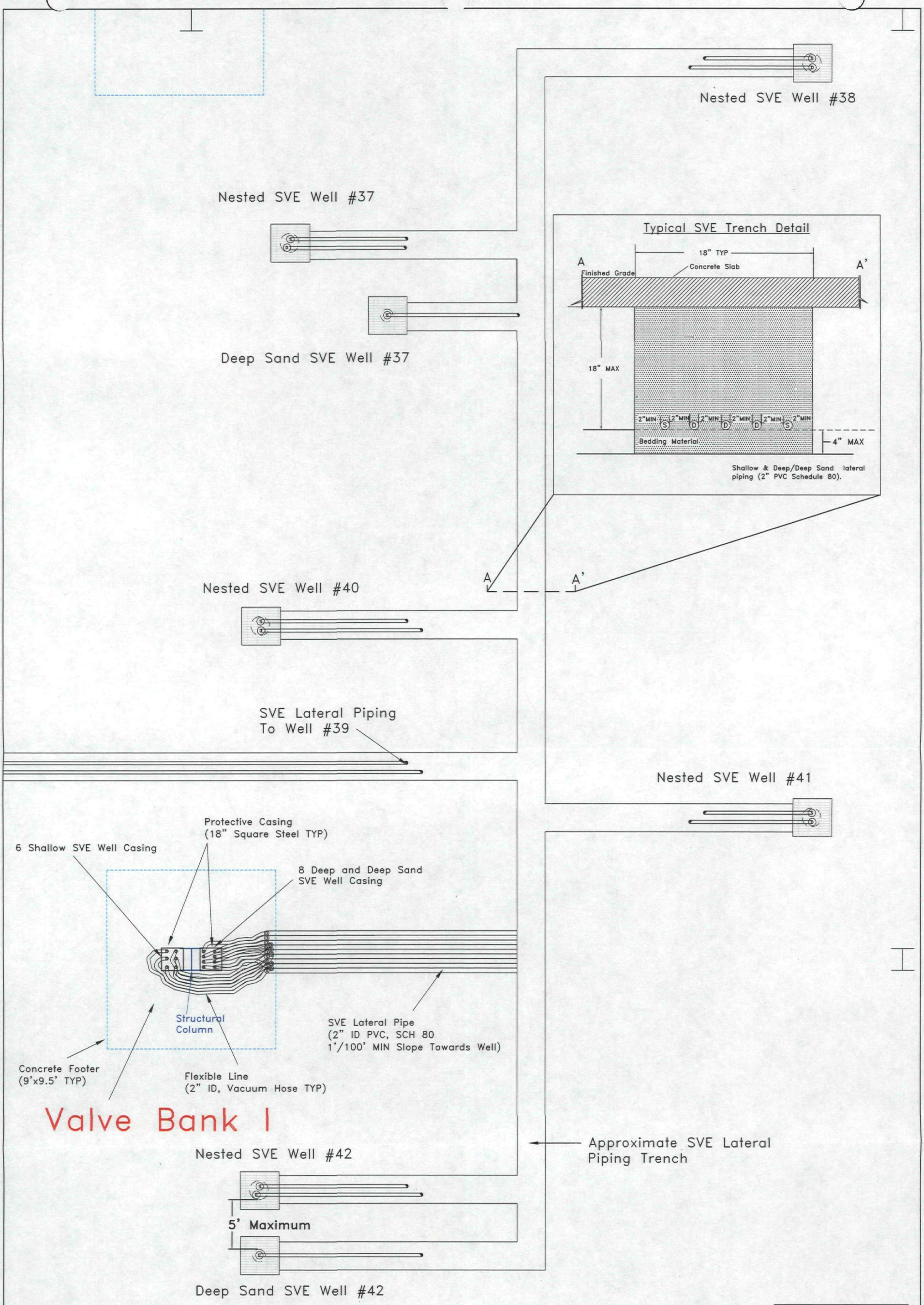
- Single deep sand SVE well installed in 8" OD borehole.
- MSL = Feet below mean sea level
- BFF = Below finished floor

As-Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: NOT TO SCALE	TITLE: Deep Sand SVE Well Constructin Details UTC - Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC	
DRAWN BY: MTT	FIGURE: 6
CHECKED BY: OU	REV: B
PROJ. MGMT. APPROVAL:	


Ceiling or Roof Truss
Supports
Structural Column
Shallow SVE 6" Main Line (Supported by Ceiling)
Deep/Deep Sand SVE 6" Main Line (Supported by Ceiling)
Supports
3" True Union Ball (Valve, SCH 40)
Straight Pipe (3" ID PVC, SCH 40)
Reducing Bushing (3" to 2" PVC, SCH 40)
Rigid 45° Elbow (2" ID PVC, SCH 40)
2" Shallow Wells Header
2" Deep/Deep Sand Wells Header
30'
Block Support
8" MAX
3' Flexible Hose (2" ID. Vacuum Hose)
<1' MAX
Flex Hose
3'-6"Steel Casing secured to column (Welded)
Rigid Piping (2" ID PVC, SCH 40)
From Shallow Wells
From Deep/ Deep Sand Wells
Protective Casing (Steel Box, welded to the column)
30"
12-16" Rigid Piping (2" ID PVC, SCH 40)
90° Elbow (2" ID PVC, SCH 80)
Pipe Insulation (All subslab flexible lines)
Concrete Slab
Footing
18" MAX
4" x 2" PVC Tee (SCH 80)
Flexible Line (2" ID, Vacuum Hose)
Soil Vapor Extraction Well (4" ID PVC, SCH 40
SVE Lateral Pipe (2" ID PVC, SCH 80 1'/100' MIN Slope Towards Well
VALVE BANK I
FRONT VIEW
SEE FIG. 3
Straight Pipe Single Line per Valve Bank Side, One Shallow and One Deep (3" ID PVC, SCH 40)
Reducing Bushing (3" to 2" PVC, SCH 40)
Rigid 90° Elbow (2" ID PVC, SCH 40)
Rigid Tee (2" ID PVC, SCH 40)
Rigid 45° Elbow (2" ID PVC, SCH 40)
Block Support With U-Bolt
6" MAX
26" MAX
6" MAX
Sample Port
36" MAX
WELL HEAD
TOP VIEW
Expandable Plug (4" ID PVC/Rubber)
Load-rated, Water-Tight Road Box/Vault (12" x 12" Steel)
SVE Well Risers (4" ID PVC, SCH 40)
KEY
Gate Valve (1 per Well) (2" ID PVC, SCH 40)
Sample Port (1 per Well) (½" Full bore ball valve w/hose barb)
Quick Connect Coupling (2"=1 per Well, 3"=2 Valve Bank) (PVC Female)
Glued Connection
Quick Connect Plug (PVC Male) (2"=1 per Well,3"=2 per Valve Bank)
SIDE VIEW
As-Built
XPERT DESIGN AND DIAGNOSTICS, LLC.
SCALE: NOT TO SCALE
DATE: DECEMBER 16, 2005
PROJECT No.: 73271
CLIENT: UTC
DRAWN BY: MTT
CHECKED BY: OU
PROJ. MGMT. APPROVAL:
TITLE: Typical SVE Well Manifold - Side View
UTC - Carrier Air Conditioning Collierville,TN
FIGURE: 7
REV. A



As-Built

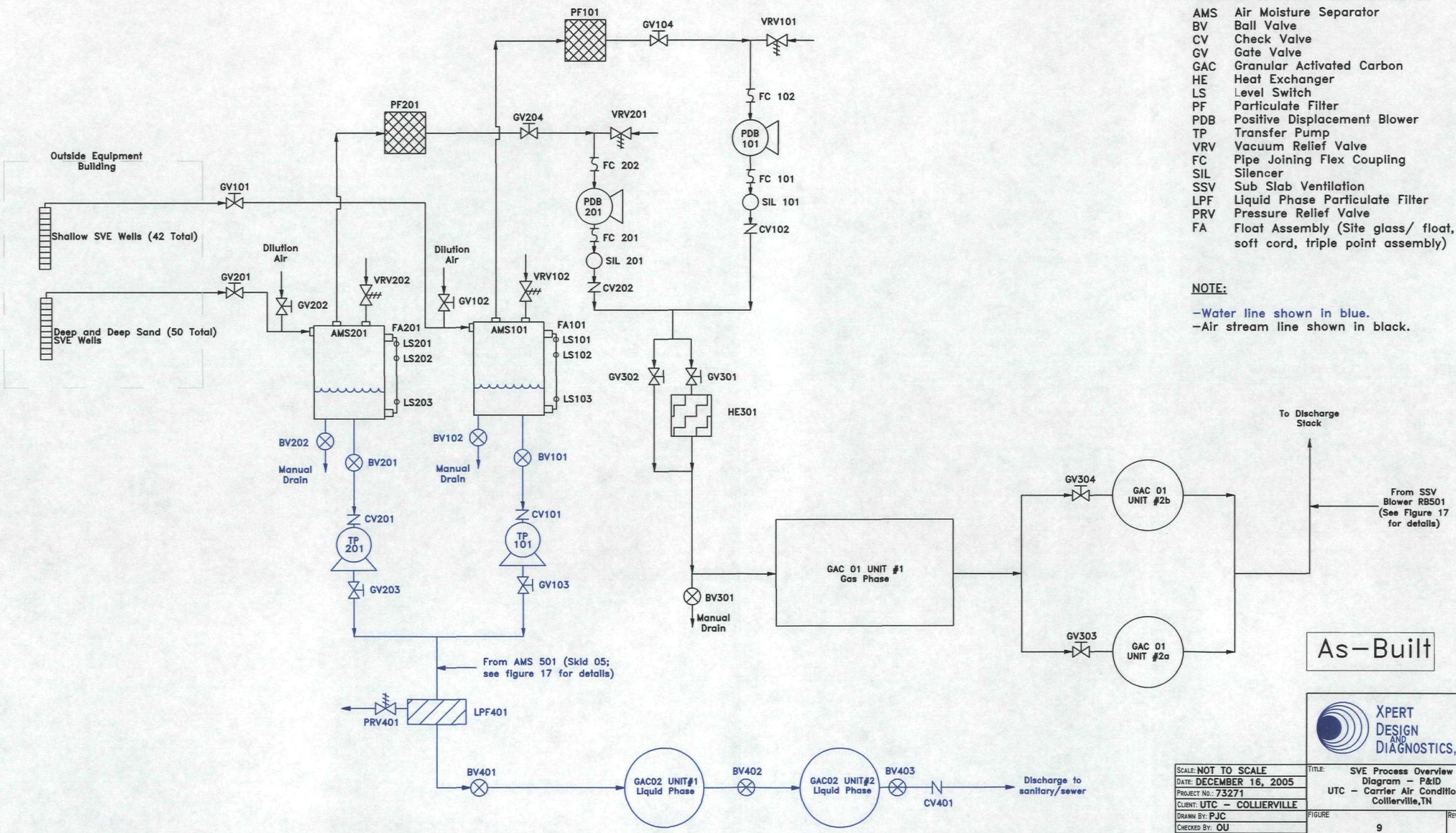
Notes:

1. Lateral trenches 24" MAX in depth.
2. Fill was compacted as necessary.
4. Lateral pipes are embedded in bedding material.

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: NOT TO SCALE	TITLE: Typical SVE Lateral Manifold and Trenching Construction Details UTC – Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC – COLLIERVILLE	
DRAWN BY: MTT	FIGURE: 8
CHECKED BY: OU	REV. A
PROJ. MGMT. APPROVAL:	

MAIN PLANT AREA (MPA) SVE SYSTEM



KEY:

AMS	Air Moisture Separator
BV	Ball Valve
CV	Check Valve
GV	Gate Valve
GAC	Granular Activated Carbon
HE	Heat Exchanger
LS	Level Switch
PF	Particulate Filter
PDB	Positive Displacement Blower
TP	Transfer Pump
VRV	Vacuum Relief Valve
FC	Pipe Joining Flex Coupling
SIL	Silencer
SSV	Sub Slab Ventilation
LPF	Liquid Phase Particulate Filter
PRV	Pressure Relief Valve
FA	Float Assembly (Site glass/ float, soft cord, triple point assembly)

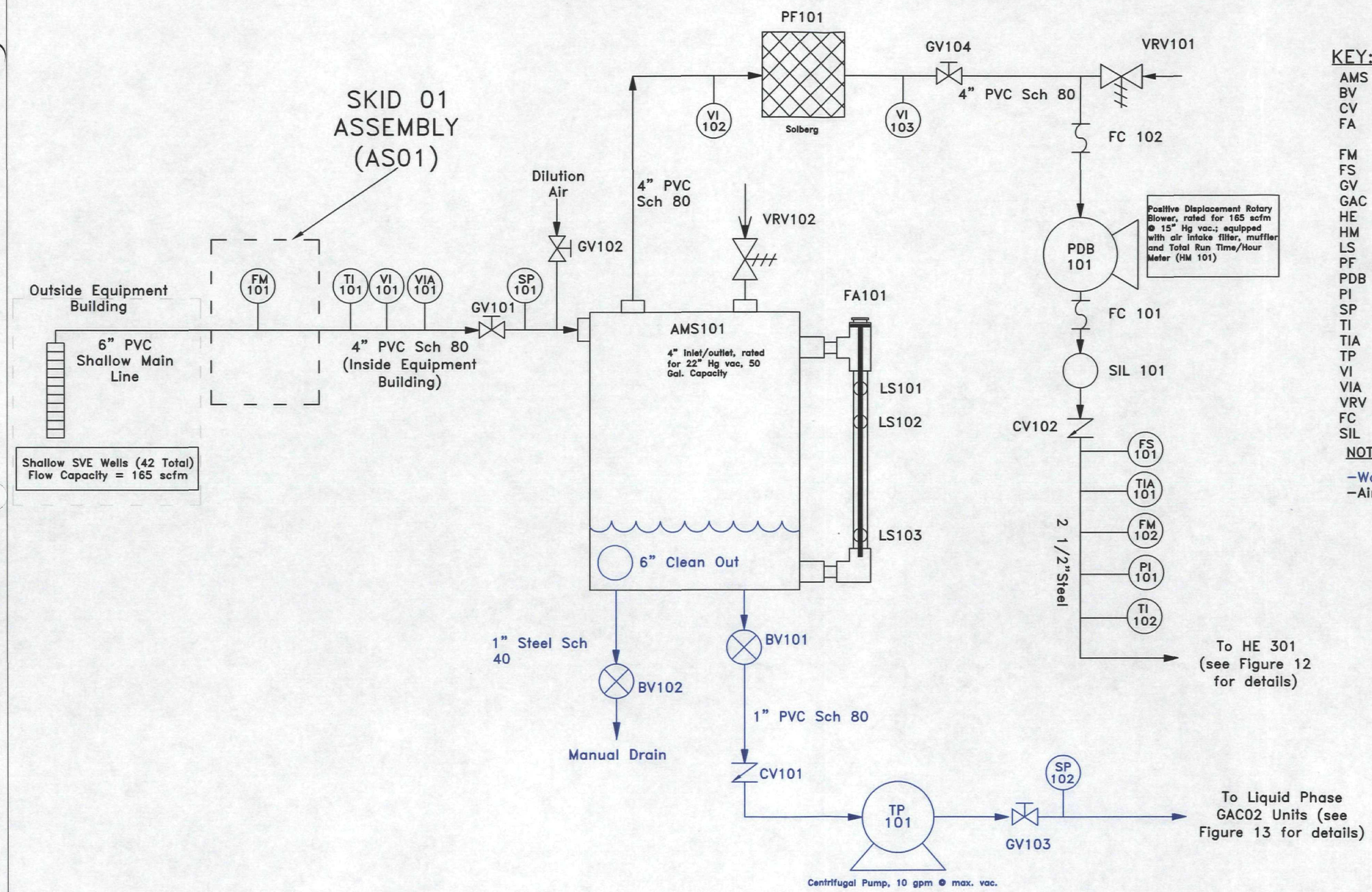
NOTE:

–Water line shown in blue.
–Air stream line shown in black.

As–Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: NOT TO SCALE	TITLE: SVE Process Overview Diagram – P&ID UTC – Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC – COLLIERVILLE	
DRAWN BY: PJC	FIGURE 9
CHECKED BY: OU	REV.: B
PROJ. MGMT. APPROVAL:	



KEY:

AMS	Air Moisture Separator
BV	Ball Valve
CV	Check Valve
FA	Float Assembly(Sight glass/float, soft cord, triple point assembly)
FM	Flow Meter
FS	Flow Sensor
GV	Gate Valve
GAC	Granular Activated Carbon
HE	Heat Exchanger
HM	Hour Meter
LS	Level Switch
PF	Particulate Filter
PDB	Positive Displacement Blower
PI	Pressure Indicator
SP	Sample Port
TI	Temperature Indicator
TIA	Temperature Indicator – Analog
TP	Transfer Pump
VI	Vacuum Indicator
VIA	Vacuum Indicator – Analog
VRV	Vacuum Relief Valve
FC	Pipe Joining Flex Coupling
SIL	Silencer

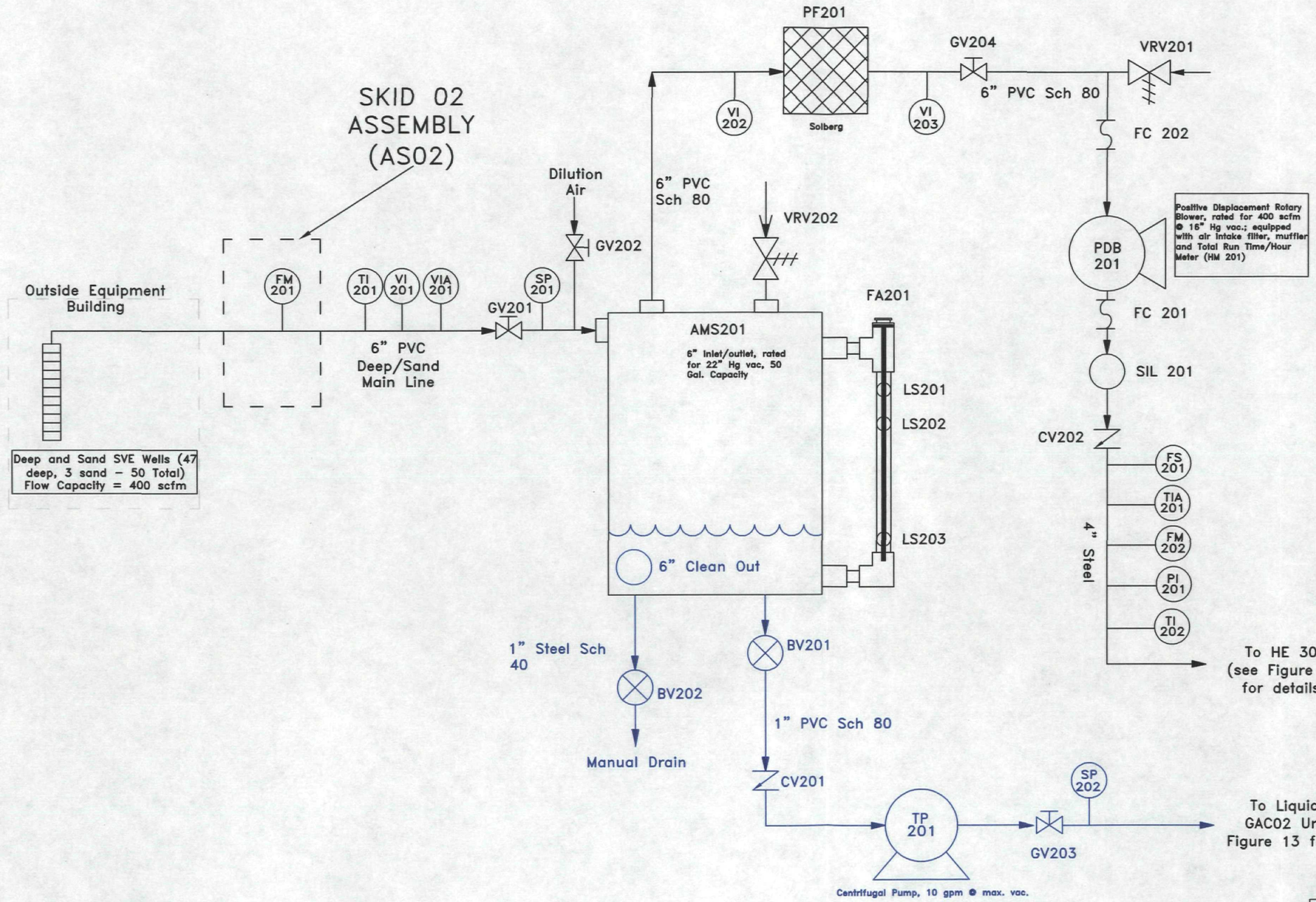
NOTE:

–Water line shown in blue.
–Air stream line shown in black.

As–Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: Not to Scale	TITLE: Shallow SVE System Skid (Skid 01) P&ID UTC – Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC – COLLIERVILLE	
DRAWN BY: PJC	FIGURE 10
CHECKED BY: OU	REV.: B
PROJ. MGMT. APPROVAL:	



KEY:

AMS	Air Moisture Separator
BV	Ball Valve
C/	Check Valve
FA	Float Assembly(Sight glass/float, soft cord, triple point assembly)
FM	Flow Meter
FS	Flow Sensor
GV	Gate Valve
GAC	Granular Activated Carbon
HE	Heat Exchanger
HM	Hour Meter
LS	Level Switch
PF	Particulate Filter
PDB	Positive Displacement Blower
PI	Pressure Indicator
SP	Sample Port
TI	Temperature Indicator
TIA	Temperature Indicator – Analog
TP	Transfer Pump
VI	Vacuum Indicator
VIA	Vacuum Indicator – Analog
VRV	Vacuum Relief Valve
FC	Pipe Joining Flex Coupling
SIL	Silencer

NOTE:

–Water line shown in blue.
–Air stream line shown in black.

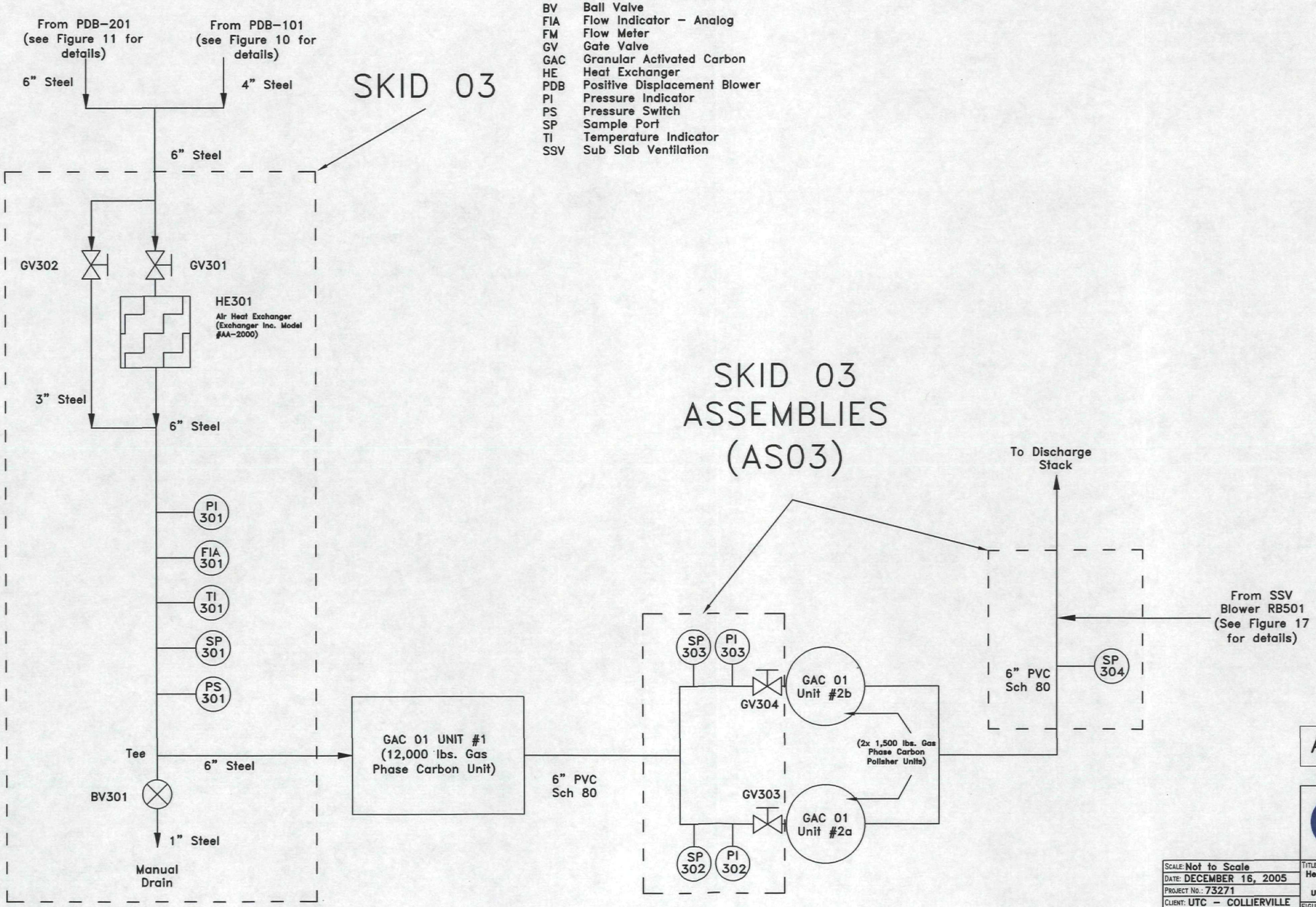
As–Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: Not to Scale	TITLE: Deep SVE System Skid (Skid 02) P&ID UTC – Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT No.: 73271	
CLIENT: UTC – COLLIERVILLE	
DRAWN BY: PJC	FIGURE: 11
CHECKED BY: OU	REV.: B
PROJ. MGMT. APPROVAL:	

KEY:

BV	Ball Valve
FIA	Flow Indicator – Analog
FM	Flow Meter
GV	Gate Valve
GAC	Granular Activated Carbon
HE	Heat Exchanger
PDB	Positive Displacement Blower
PI	Pressure Indicator
PS	Pressure Switch
SP	Sample Port
TI	Temperature Indicator
SSV	Sub Slab Ventilation

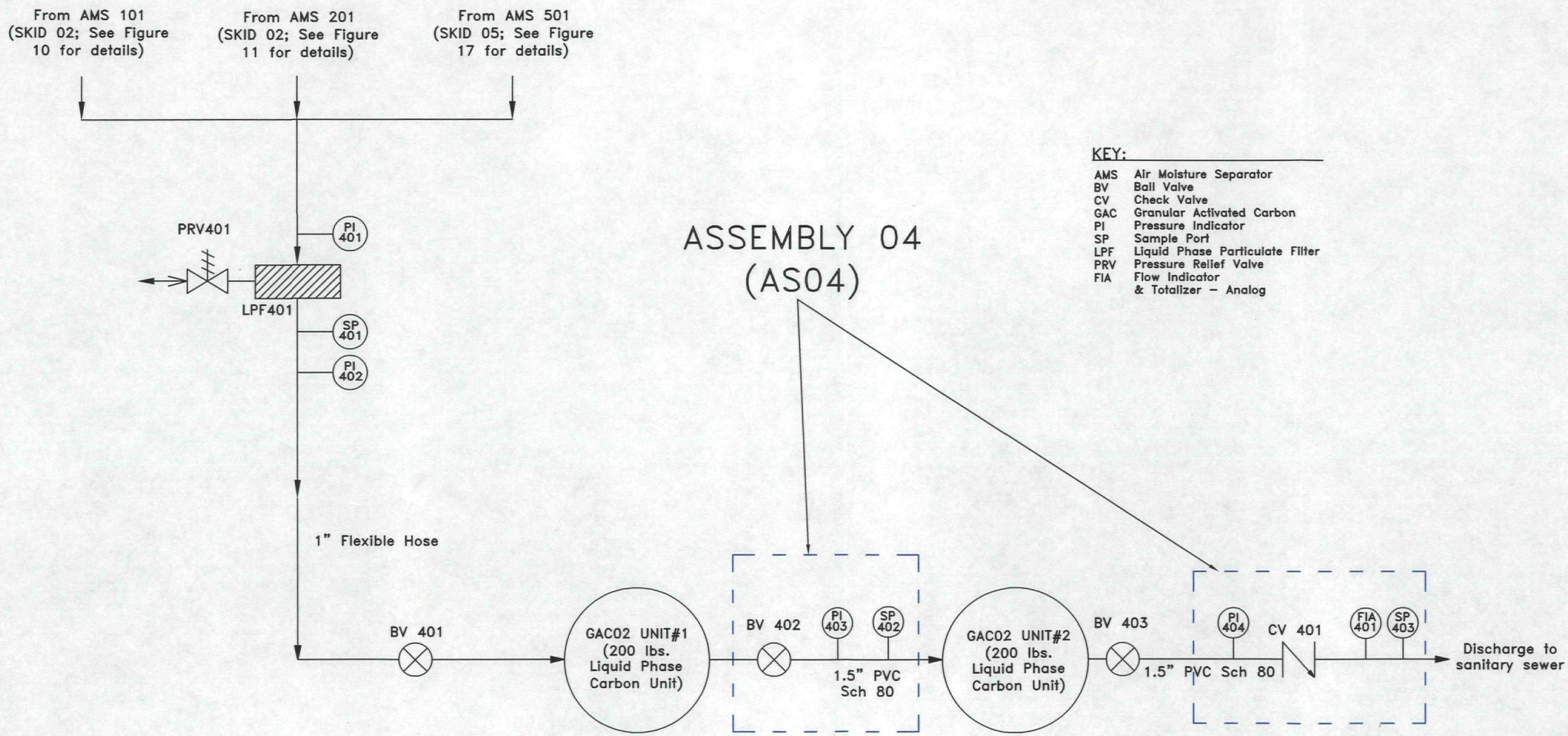


SKID 03 ASSEMBLIES (AS03)

As-Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: Not to Scale	TITLE: Heat Exchanger Skid (Skid 03) and Gas Phase Carbon Units (GAC 01) P&ID UTC – Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC – COLLIERVILLE	FIGURE 12
DRAWN BY: PJC	REV.: B
CHECKED BY:	
PROJ. MGMT. APPROVAL:	



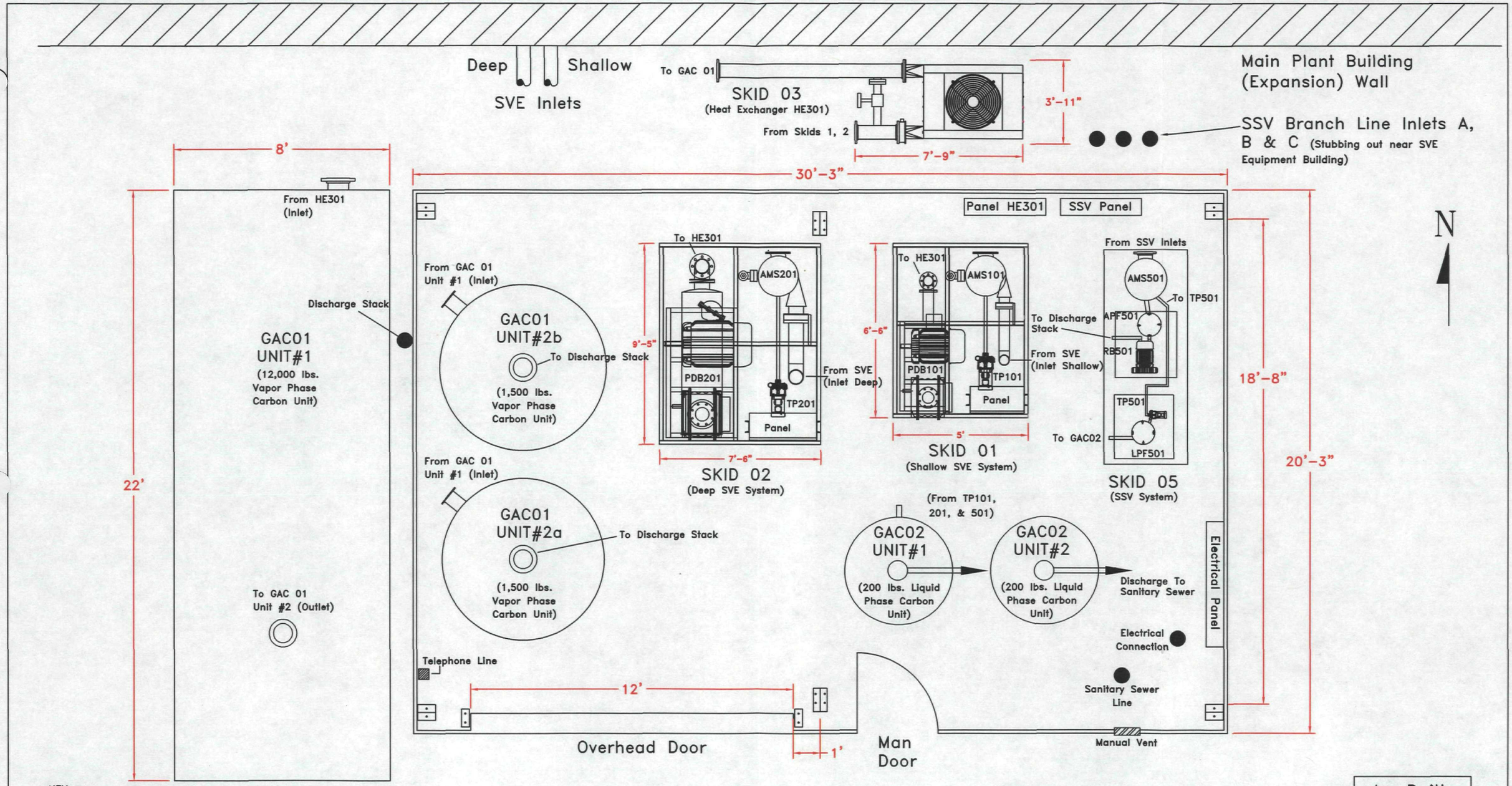
KEY:

AMS	Air Moisture Separator
BV	Ball Valve
CV	Check Valve
GAC	Granular Activated Carbon
PI	Pressure Indicator
SP	Sample Port
LPF	Liquid Phase Particulate Filter
PRV	Pressure Relief Valve
FIA	Flow Indicator & Totalizer – Analog

As–Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: Not to Scale	TITLE: Liquid Phase Carbon Units (GAC02) P&ID UTC – Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC – COLLIERVILLE	
DRAWN BY: PJC	FIGURE: 13
CHECKED BY:	REV.: B
PROJ. MGMT. APPROVAL:	



KEY:

AMS	Air Moisture Separator
GAC	Granular Activated Carbon
HE	Heat Exchanger
SVE	Soil Vapor Extraction
SSV	Sub Slab Ventilation System
PDB	Positive Displacement Blower
HE	Heat Exchanger
RB	Regenerative Blower
APF	Air Particulate Filter
LPF	Liquid Particulate Filter
TP	Transfer Pump

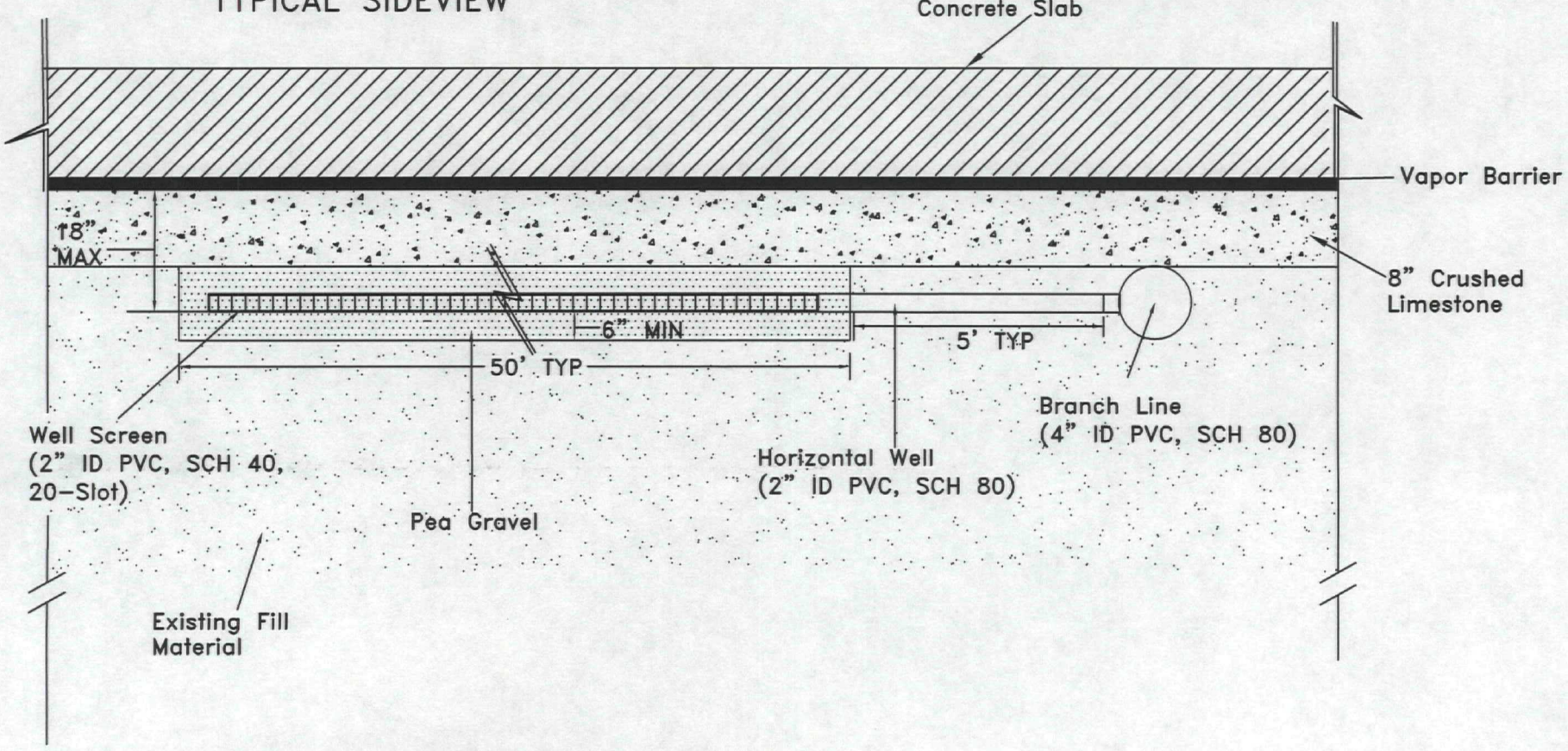
FLOOR PLAN
SVE EQUIPMENT BUILDING (20' x 30')

As-Built

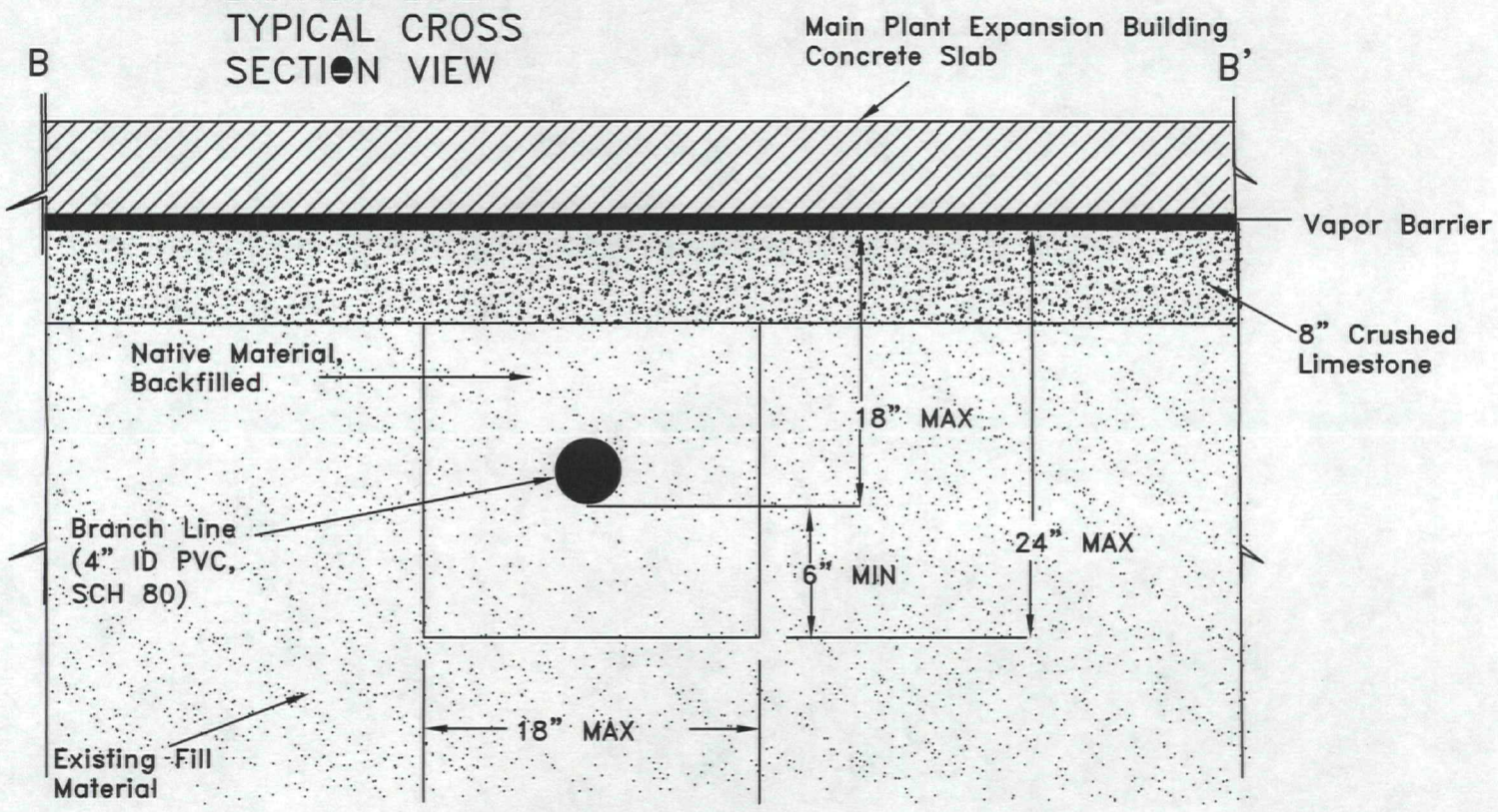
XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: NOT TO SCALE	TITLE: SVE Equipment Building Floor Plan and Equipment Layout
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC	
DRAWN BY: KLK	FIGURE: 14
CHECKED BY: OU	REV: B
PROJ. MGMT. APPROVAL:	

HORIZONTAL WELL TYPICAL SIDEVIEW

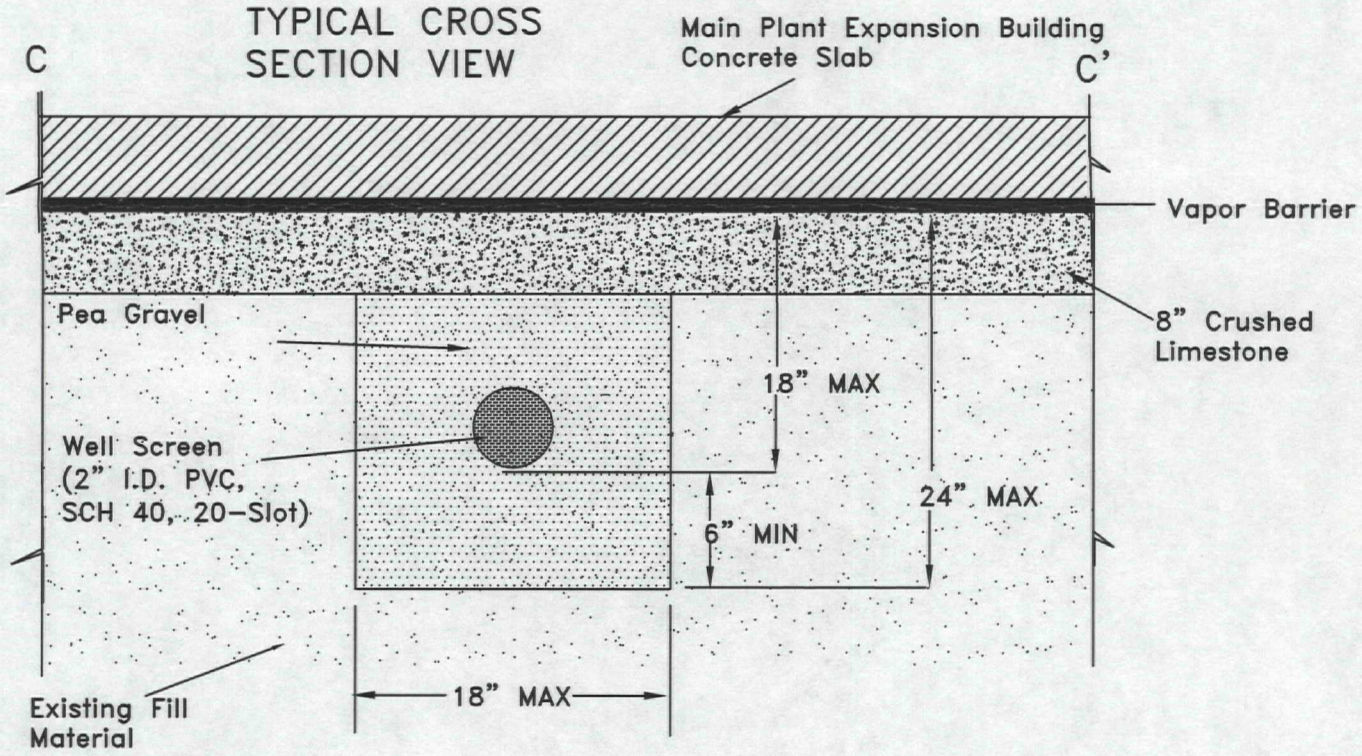


BRANCH LINE TYPICAL CROSS SECTION VIEW



NOTES:
Native material was used as bedding material.

WELL TYPICAL CROSS SECTION VIEW



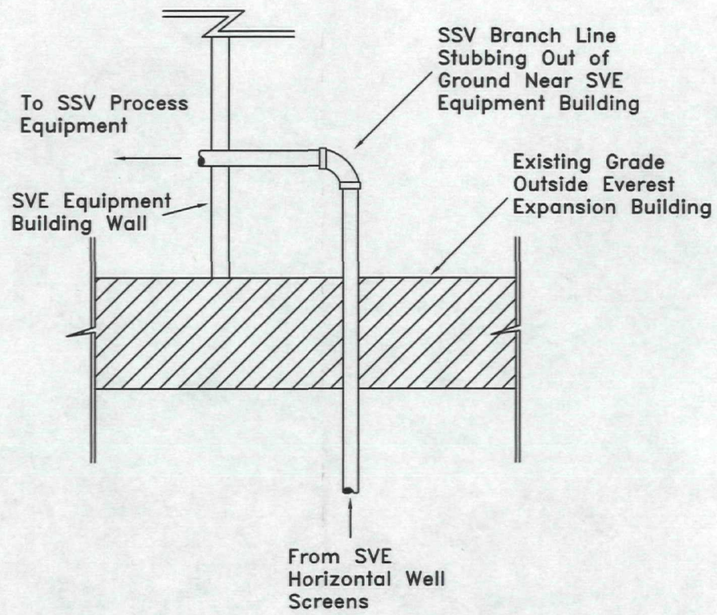
NOTES:
Refer to MPA SSV Horizontal Well Layout (Figure 4) for Cross-Sectional View Locations.

As-Built

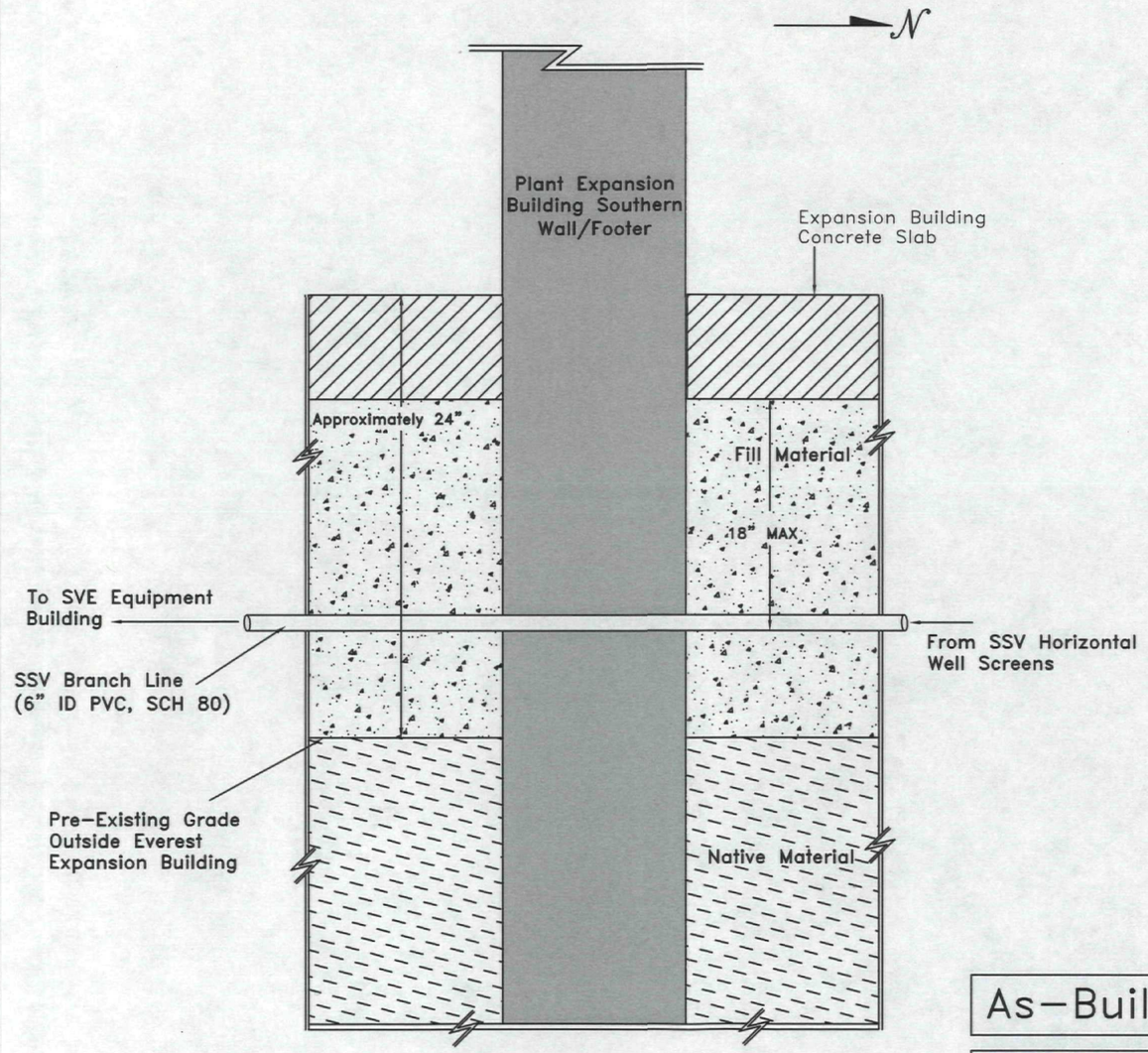
XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: As shown	TITLE: Typical SSV Horizontal Well and Branch Manifold Construction Details UTC - Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT No.: 73271	
CLIENT: UTC - COLLIERVILLE	
DRAWN BY: MTT	
CHECKED BY: OU	FIGURE: 15
PROJ. MGMT. APPROVAL:	REV. A

B. SSV Below Grade Main Piping Transition to Above Grade



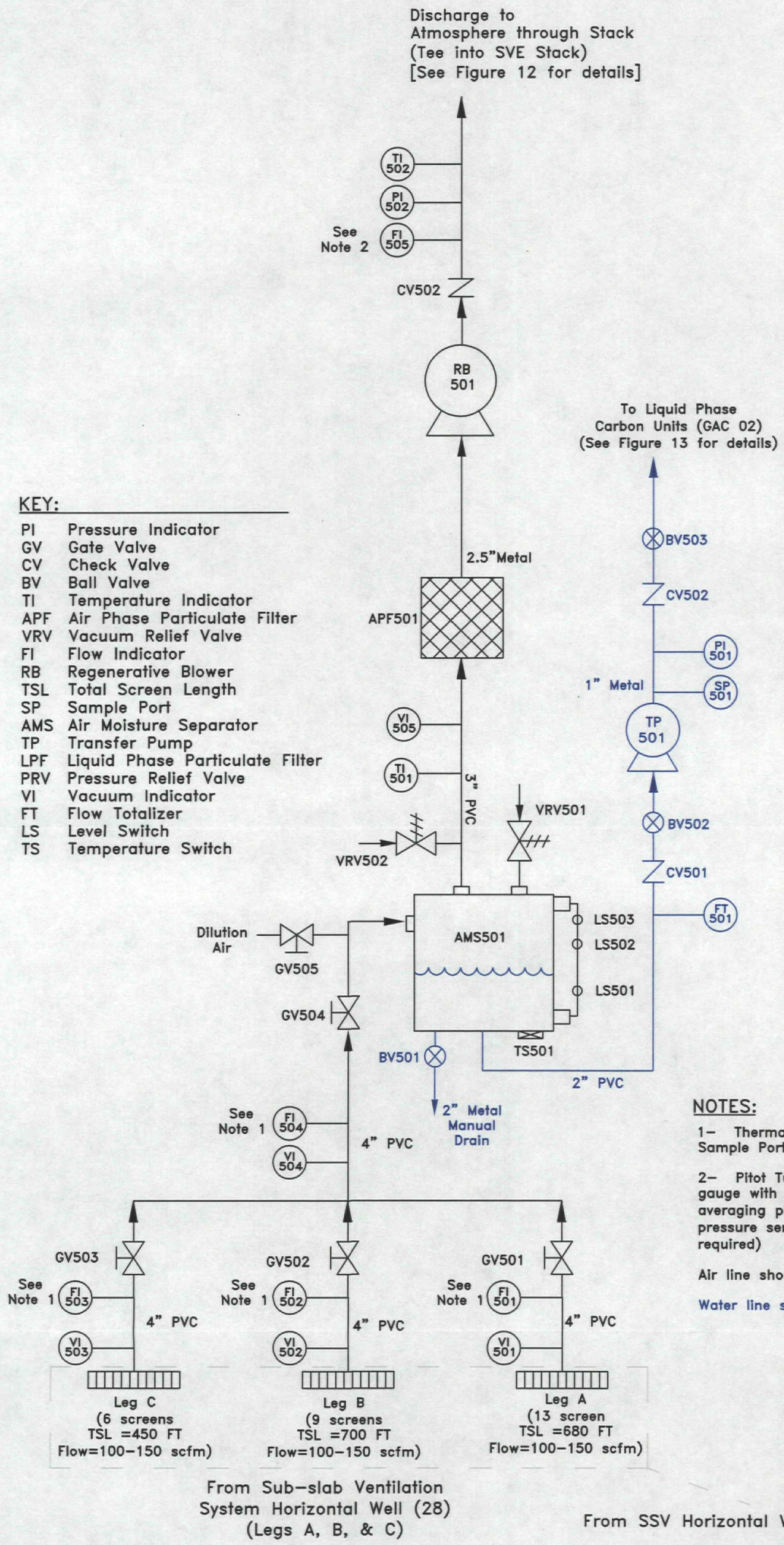
A. SSV Manifold Penetration through Expansion Building Southern Wall/Footer



As-Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: NOT TO SCALE	TITLE: SSV Branch Manifold Wall Penetration Details UTC - Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC - COLLIERVILLE	
DRAWN BY: MTT	DRAWING: 16
CHECKED BY: OU	REV. B
PROJ. MGMT. APPROVAL:	



KEY:

PI	Pressure Indicator
GV	Gate Valve
CV	Check Valve
BV	Ball Valve
TI	Temperature Indicator
APF	Air Phase Particulate Filter
VRV	Vacuum Relief Valve
FI	Flow Indicator
RB	Regenerative Blower
TSL	Total Screen Length
SP	Sample Port
AMS	Air Moisture Separator
TP	Transfer Pump
LPF	Liquid Phase Particulate Filter
PRV	Pressure Relief Valve
VI	Vacuum Indicator
FT	Flow Totalizer
LS	Level Switch
TS	Temperature Switch

NOTES:

1- Thermal Anemometer/Velocity Meter Sample Port

2- Pitot Tube Assembly. Magnehelic gauge with mounting bracket and Inline averaging pitot tube flow/differential pressure sensor (direct flow reading required)

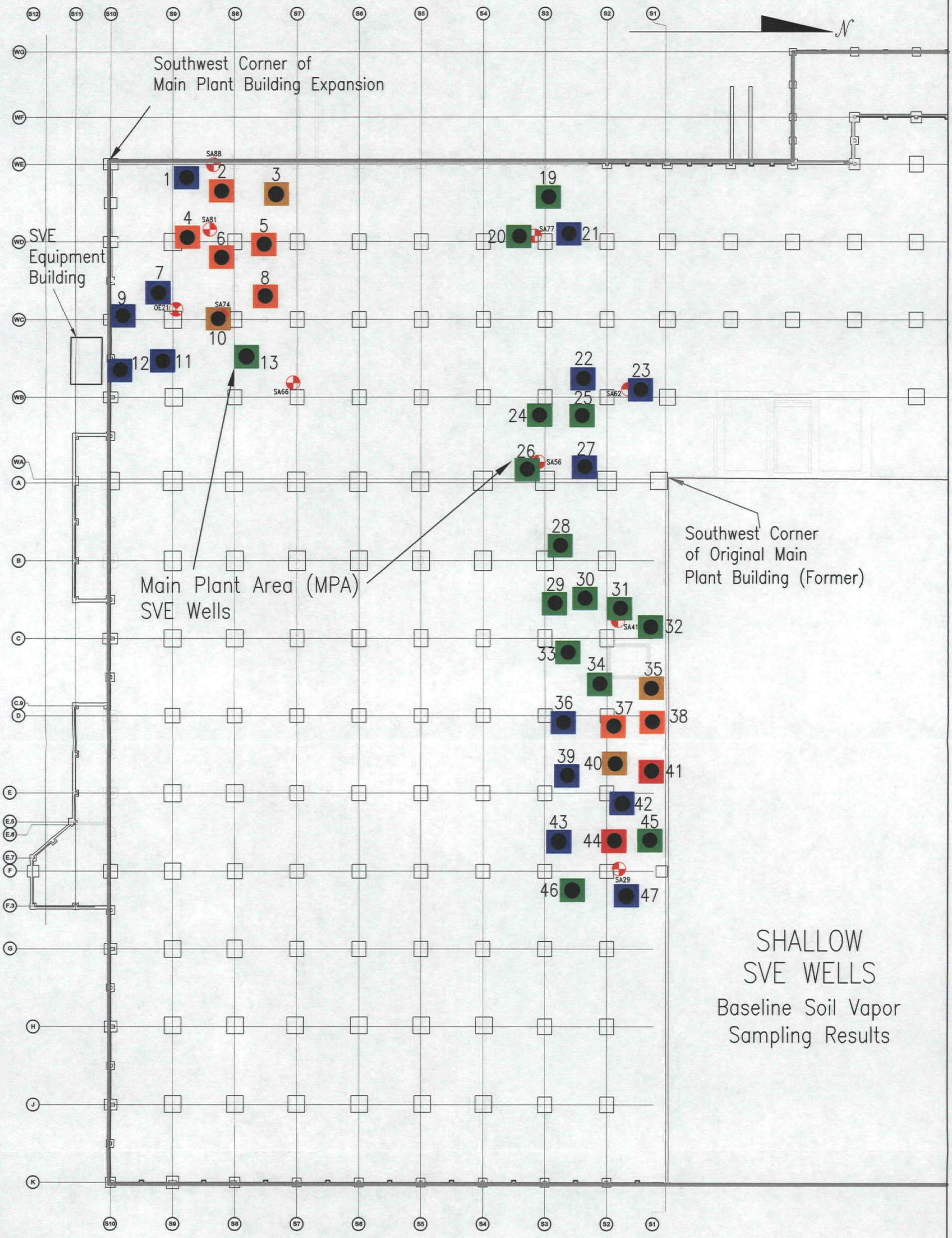
Air line shown in black

Water line shown in blue

As-Built

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: Not to Scale	TITLE: SSV System (Skid 05) Process Equipment – P&ID UTC – Carrier Air Conditioning Collierville,TN
DATE: DECEMBER 16, 2005	
PROJECT NO.: 73271	
CLIENT: UTC – COLLIERVILLE	
DRAWN BY: PJC	FIGURE: 17
CHECKED BY:	REV: B
PROJ. MGMT. APPROVAL:	



SHALLOW SVE WELLS

Baseline Soil Vapor Sampling Results

LEGEND

- Shallow Soil Vapor Extraction Wells
- SA88 Geoprobe Point >533 ugkg TCE (2004)
- Total VOC 0–100 ppmv
- Total VOC 100–500 ppmv
- Total VOC 500–1000 ppmv
- Total VOC 1000–5000 ppmv
- Total VOC >5000 ppmv

NOTES:
- SVE Borings are spaced approximately 40' on center.
- "BFF" = below finished floor
- Well locations are surveyed.
- Shallow Well: Screen Interval = 6.5–11.5 feet BFF

0 30 60 120
Graphic Scale

As-Built

XPERT DESIGN AND DIAGNOSTICS, LLC

Scale: AS SHOWN	Title: SVE Baseline Soil Vapor Sampling (October 2005) Results – Shallow Wells
Date: DECEMBER 16, 2005	
Project No.: 73271	
Client: UTC – COLLIERVILLE	UTC – Carrier Air Conditioning Collierville, TN
Drawn By: MTT	
Checked By: OU	FIGURE: 18
Proj. Mgmt. Approval:	rev. B

Southwest Corner of
Main Plant Building Expansion

SVE
Equipment
Building

Main Plant Area (MPA)
SVE Wells

Southwest Corner
of Original Main
Plant Building (Former)

DEEP SVE WELLS

Baseline Soil Vapor Sampling Results

LEGEND

- Deep Sand Soil Vapor Extraction Wells
- Deep Soil Vapor Extraction Wells
- SA88 Geoprobe Point >533 ugkg TCE (2004)
- Total VOC 0–100 ppmv
- Total VOC 100–500 ppmv
- Total VOC 500–1000 ppmv
- Total VOC 1000–5000 ppmv
- Total VOC >5000 ppmv

NOTES:

- SVE Borings are spaced approximately 40' on center.
- "BFF" = below finished floor
- Well locations are surveyed.
- Deep Well: Screen Interval = 16.5–26.5 feet BFF
- Deep Sand Well: Screen Interval = 33–43 feet BFF
- Locations with Deep Sand Wells reflect the highest final PID reading. [SVE-37DS = 315 ppmv], [SVE-42D = 889 ppmv]

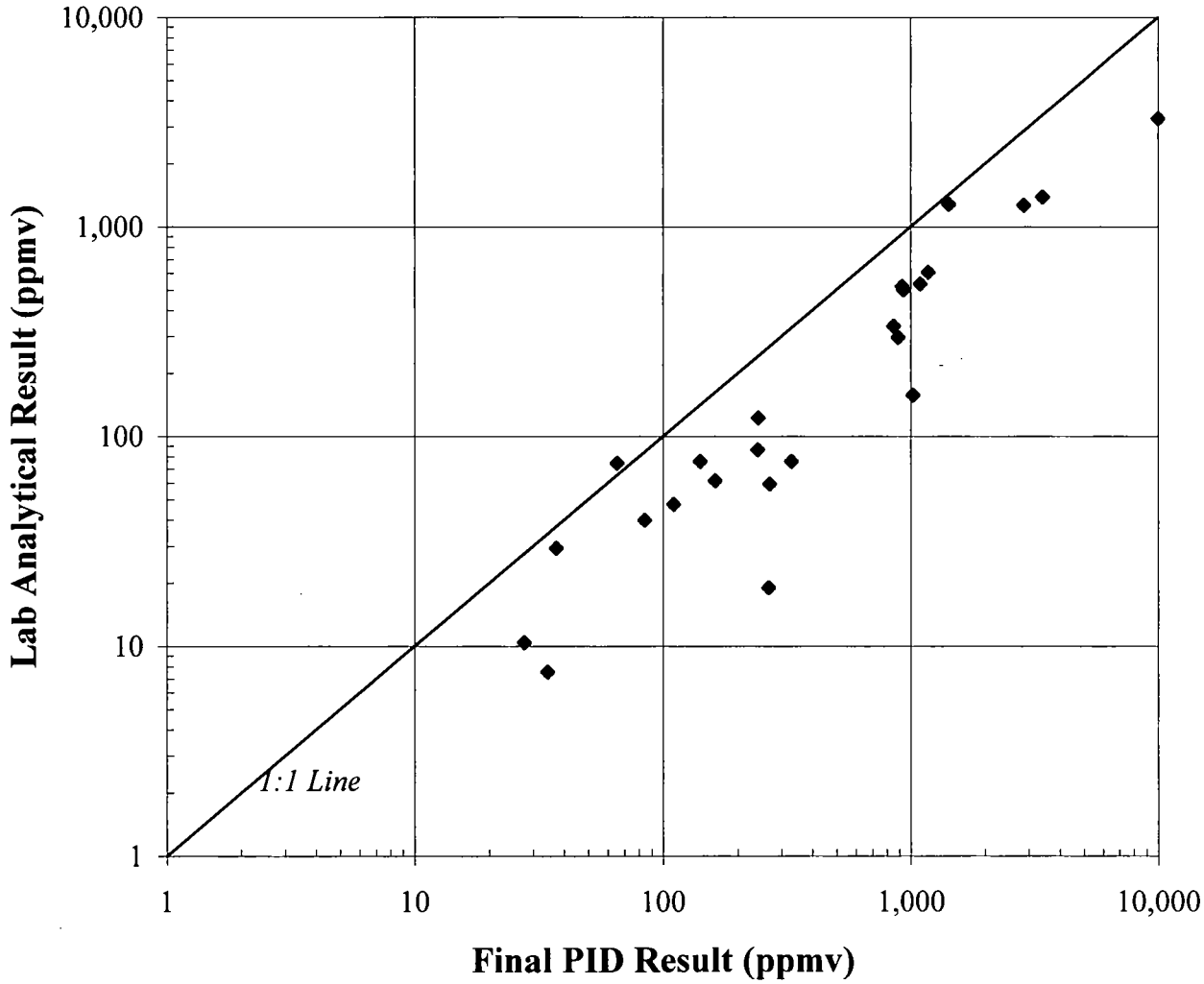
0 30 60 120
Graphic Scale

As-Built

XPERT DESIGN AND DIAGNOSTICS, LLC

Scale: AS SHOWN	Title: SVE Baseline Soil Vapor Sampling (October 2005) Results–Deep and Deep Sand Wells
Date: DECEMBER 16, 2005	UTC – Carrier Air Conditioning Collierville, TN
Project No.: 73271	
Client: UTC – COLLIERVILLE	
Drawn By: MTT	
Checked By: OU	FIGURE: 19
Proj. Mgmt. Approval:	rev. B

Figure 20
Baseline Sampling Laboratory Analytical Results versus PID Measurements
Carrier Air Conditioning Site
Collierville, TN



TABLES

Table 1
Chronology of MPA Remedial System Reconstruction and Start-up Activities
Carrier Air Conditioning Site
Collierville, TN

Event	Activities	Date Completed
Former MPA SVE System Abandonment	Including verticle SVE well, monitoring well, horizontal SVE well, manifolding, SVE equipment building, and equipment removal and abandonment	August, 2004
MPA SVE System Reconstruction	Well installation	March, 2004
	Sub-slab lateral manifold construction	April, 2005
	SVE well testing	April, 2005
	Equipment sizing	June, 2005
	Overhead manifold construction	September, 2005
	Equipment fabrication	October, 2005
	Equipment building construction	October, 2005
	Equipment installation in equipment building	November, 2005
MPA SSV Construction	Horizontal well and branch manifold construction	May, 2005
	SSV testing	July, 2005
	Equipment sizing	August, 2005
	Equipment fabrication and installation	November, 2005
SVE & SSV Start-up	SVE baseline soil vapor sampling	October, 2005
	Equipment shakedown	November, 2005
	System start up (SVE and SSV)	December, 2005
	Flow optimization	December, 2005

Notes:
MPA - Main Plant Area
SVE - Soil Vapor Extraction
SSV - Sub-Slab Ventilation
For chronology of events prior to August 2004, see Table 2-1 of the 2004 EPA Five-Year Review Report, for the Carrier Air Conditioning Site, Collierville, Tennessee

Table 2
SVE Well Construction Details
Carrier Air Conditioning Site
Collierville, TN

SVE System Wells	Well ID	Completion Date	Valve Bank	Surface Elevation (ft MSL)	Top of Riser Elevation (ft MSL)	Top of Screen Elevation (ft MSL)	Bottom of Screen Elevation (ft MSL)	Screen Interval (ft BFF)	Well Depth (ft BFF)	Top of Sand Pack (ft BFF)	Top of Bentonite Seal (ft BFF)	Bentonite Thickness (ft)
Shallow	SVE-1S	3/15/2005	A	342.55	342.05	336.05	331.05	6.5-11.5	12.5	5.5	3	2.5
	SVE-2S	3/15/2005	A	342.58	342.08	336.08	331.08	6.5-11.5	12.5	5.5	3	2.5
	SVE-3S	3/14/2005	A	342.53	342.03	336.03	331.03	6.5-11.5	12.5	5.5	3	2.5
	SVE-4S	3/15/2005	A	342.59	342.09	336.09	331.09	6.5-11.5	12.5	5.5	3	2.5
	SVE-5S	3/14/2005	C	342.59	342.09	336.09	331.09	6.5-11.5	12.5	5.5	3	2.5
	SVE-6S	3/15/2005	C	342.57	342.07	336.07	331.07	6.5-11.5	12.5	5.5	3	2.5
	SVE-7S	3/16/2005	B	342.59	342.09	336.09	331.09	6.5-11.5	12.5	5.5	3	2.5
	SVE-8S	3/14/2005	C	342.59	342.09	336.09	331.09	6.5-11.5	12.5	5.5	3	2.5
	SVE-9S	3/16/2005	B	342.58	342.08	336.08	331.08	6.5-11.5	12.5	5.5	3	2.5
	SVE-10S	3/15/2005	C	342.56	342.06	336.06	331.06	6.5-11.5	12.5	5.5	3	2.5
	SVE-11S	3/15/2005	B	342.54	342.04	336.04	331.04	6.5-11.5	12.5	5.5	3	2.5
	SVE-12S	3/15/2005	B	342.52	342.02	336.02	331.02	6.5-11.5	12.5	5.5	3	2.5
	SVE-13S	3/15/2005	C	342.57	342.07	336.07	331.07	6.5-11.5	12.5	5.5	3	2.5
	SVE-19S	3/15/2005	E	342.59	342.09	336.09	331.09	6.5-11.5	12.5	5.5	3	2.5
	SVE-20S	3/15/2005	E	*343	342.50	336.50	331.50	6.5-11.5	12.5	5.5	3	2.5
	SVE-21S	3/15/2005	E	342.61	342.11	336.11	331.11	6.5-11.5	12.5	5.5	3	2.5
	SVE-22S	3/16/2005	F	342.61	342.11	336.11	331.11	6.5-11.5	12.5	5.5	3	2.5
	SVE-23S	3/16/2005	F	342.63	342.13	336.13	331.13	6.5-11.5	12.5	5.5	3	2.5
	SVE-24S	3/16/2005	F	342.57	342.07	336.07	331.07	6.5-11.5	12.5	5.5	3	2.5
	SVE-25S	3/16/2005	F	342.60	342.10	336.10	331.10	6.5-11.5	12.5	5.5	3	2.5
	SVE-26S	3/16/2005	F	342.64	342.14	336.14	331.14	6.5-11.5	12.5	5.5	3	2.5
	SVE-27S	3/16/2005	F	342.63	342.13	336.13	331.13	6.5-11.5	12.5	5.5	3	2.5
	SVE-28S	2/7/2005	G	342.63	342.13	336.13	331.13	6.5-11.5	12.5	5.5	3	2.5
	SVE-29S	2/7/2005	G	342.64	342.14	336.14	331.14	6.5-11.5	12.5	5.5	3	2.5
	SVE-30S	2/5/2005	G	342.63	342.13	336.13	331.13	6.5-11.5	12.5	5.5	3	2.5
	SVE-31S	2/7/2005	H	342.67	342.17	336.17	331.17	6.5-11.5	12.5	5.5	3	2.5
	SVE-32S	2/2/2005	H	342.72	342.22	336.22	331.22	6.5-11.5	12.5	5.5	3	2.5
	SVE-33S	2/5/2005	H	342.55	342.05	336.05	331.05	6.5-11.5	12.5	5.5	3	2.5
	SVE-34S	2/4/2005	H	342.63	342.13	336.13	331.13	6.5-11.5	12.5	5.5	3	2.5
	SVE-35S	2/1/2005	H	342.64	342.14	336.14	331.14	6.5-11.5	12.5	5.5	3	2.5

Table 2
SVE Well Construction Details
Carrier Air Conditioning Site
Collierville, TN

SVE System Wells	Well ID	Completion Date	Valve Bank	Surface Elevation (ft MSL)	Top of Riser Elevation (ft MSL)	Top of Screen Elevation (ft MSL)	Bottom of Screen Elevation (ft MSL)	Screen Interval (ft BFF)	Well Depth (ft BFF)	Top of Sand Pack (ft BFF)	Top of Bentonite Seal (ft BFF)	Bentonite Thickness (ft)
Shallow	SVE-36S	2/5/2005	H	342.61	342.11	336.11	331.11	6.5-11.5	12.5	5.5	3	2.5
	SVE-37S	2/4/2005	I	342.63	342.13	336.13	331.13	6.5-11.5	12.5	5.5	3	2.5
	SVE-38S	2/1/2005	I	342.63	342.13	336.13	331.13	6.5-11.5	12.5	5.5	3	2.5
	SVE-39S	2/5/2005	I	342.65	342.15	336.15	331.15	6.5-11.5	12.5	5.5	3	2.5
	SVE-40S	2/5/2005	I	342.68	342.18	336.18	331.18	6.5-11.5	12.5	5.5	3	2.5
	SVE-41S	2/1/2005	I	342.68	342.18	336.18	331.18	6.5-11.5	12.5	5.5	3	2.5
	SVE-42S	2/2/2005	I	343.00	342.50	336.50	331.50	6.5-11.5	12.5	5.5	3	2.5
	SVE-43S	2/4/2005	J	342.62	342.12	336.12	331.12	6.5-11.5	12.5	5.5	3	2.5
	SVE-44S	2/3/2005	J	342.65	342.15	336.15	331.15	6.5-11.5	12.5	5.5	3	2.5
	SVE-45S	2/1/2005	J	342.64	342.14	336.14	331.14	6.5-11.5	12.5	5.5	3	2.5
	SVE-46S	2/4/2005	J	342.60	342.10	336.10	331.10	6.5-11.5	12.5	5.5	3	2.5
	SVE-47S	2/2/2005	J	342.62	342.12	336.12	331.12	6.5-11.5	12.5	5.5	3	2.5
Deep	SVE-1D	3/15/2005	A	342.55	342.05	326.05	316.05	16.5-26.5	27.5	15.5	12.5	3
	SVE-2D	3/15/2005	A	342.58	342.08	326.08	316.08	16.5-26.5	27.5	15.5	12.5	3
	SVE-3D	3/14/2005	A	342.53	342.03	326.03	316.03	16.5-26.5	27.5	15.5	12.5	3
	SVE-4D	3/15/2005	A	342.59	342.09	326.09	316.09	16.5-26.5	27.5	15.5	12.5	3
	SVE-5D	3/14/2005	C	342.59	342.09	326.09	316.09	16.5-26.5	27.5	15.5	12.5	3
	SVE-6D	3/15/2005	C	342.57	342.07	326.07	316.07	16.5-26.5	27.5	15.5	12.5	3
	SVE-7D	3/16/2005	B	342.59	342.09	326.09	316.09	16.5-26.5	27.5	15.5	12.5	3
	SVE-8D	3/14/2005	C	342.59	342.09	326.09	316.09	16.5-26.5	27.5	15.5	12.5	3
	SVE-9D	3/16/2005	B	342.58	342.08	326.08	316.08	16.5-26.5	27.5	15.5	12.5	3
	SVE-10D	3/15/2005	C	342.56	342.06	326.06	316.06	16.5-26.5	27.5	15.5	12.5	3
	SVE-11D	3/15/2005	B	342.54	342.04	326.04	316.04	16.5-26.5	27.5	15.5	12.5	3
	SVE-12D	3/15/2005	B	342.52	342.02	326.02	316.02	16.5-26.5	27.5	15.5	12.5	3
	SVE-13D	3/15/2005	C	342.57	342.07	326.07	316.07	16.5-26.5	27.5	15.5	12.5	3
	SVE-14D	3/14/2005	D	342.58	342.08	326.08	316.08	16.5-26.5	27.5	15.5	12.5	3
	SVE-15D	3/14/2005	D	342.52	342.02	326.02	316.02	16.5-26.5	27.5	15.5	12.5	3
	SVE-16D	3/14/2005	D	342.60	342.10	326.10	316.10	16.5-26.5	27.5	15.5	12.5	3
	SVE-17D	3/14/2005	D	342.53	342.03	326.03	316.03	16.5-26.5	27.5	15.5	12.5	3
	SVE-18D	3/15/2005	D	*343	342.50	326.50	316.50	16.5-26.5	27.5	15.5	12.5	3

Table 2
SVE Well Construction Details
Carrier Air Conditioning Site
Collierville, TN

SVE System Wells	Well ID	Completion Date	Valve Bank	Surface Elevation (ft MSL)	Top of Riser Elevation (ft MSL)	Top of Screen Elevation (ft MSL)	Bottom of Screen Elevation (ft MSL)	Screen Interval (ft BFF)	Well Depth (ft BFF)	Top of Sand Pack (ft BFF)	Top of Bentonite Seal (ft BFF)	Bentonite Thickness (ft)
Deep	SVE-19D	3/15/2005	E	342.59	342.09	326.09	316.09	16.5-26.5	27.5	15.5	12.5	3
	SVE-20D	3/15/2005	E	*343	342.50	326.50	316.50	16.5-26.5	27.5	15.5	12.5	3
	SVE-21D	3/15/2005	E	342.61	342.11	326.11	316.11	16.5-26.5	27.5	15.5	12.5	3
	SVE-22D	3/16/2005	F	342.61	342.11	326.11	316.11	16.5-26.5	27.5	15.5	12.5	3
	SVE-23D	3/16/2005	F	342.63	342.13	326.13	316.13	16.5-26.5	27.5	15.5	12.5	3
	SVE-24D	3/16/2005	F	342.57	342.07	326.07	316.07	16.5-26.5	27.5	15.5	12.5	3
	SVE-25D	3/16/2005	F	342.60	342.10	326.10	316.10	16.5-26.5	27.5	15.5	12.5	3
	SVE-26D	3/16/2005	F	342.64	342.14	326.14	316.14	16.5-26.5	27.5	15.5	12.5	3
	SVE-27D	3/16/2005	F	342.63	342.13	326.13	316.13	16.5-26.5	27.5	15.5	12.5	3
	SVE-28D	2/7/2005	G	342.63	342.13	326.13	316.13	16.5-26.5	27.5	15.5	12.5	3
	SVE-29D	2/7/2005	G	342.64	342.14	326.14	316.14	16.5-26.5	27.5	15.5	12.5	3
	SVE-30D	2/5/2005	G	342.63	342.13	326.13	316.13	16.5-26.5	27.5	15.5	12.5	3
	SVE-31D	2/7/2005	H	342.67	342.17	326.17	316.17	16.5-26.5	27.5	15.5	12.5	3
	SVE-32D	2/2/2005	H	342.72	342.22	326.22	316.22	16.5-26.5	27.5	15.5	12.5	3
	SVE-33D	2/5/2005	H	342.55	342.05	326.05	316.05	16.5-26.5	27.5	15.5	12.5	3
	SVE-34D	2/4/2005	H	342.63	342.13	326.13	316.13	16.5-26.5	27.5	15.5	12.5	3
	SVE-35D	2/1/2005	H	342.64	342.14	326.14	316.14	16.5-26.5	27.5	15.5	12.5	3
	SVE-36D	2/5/2005	H	342.61	342.11	326.11	316.11	16.5-26.5	27.5	15.5	12.5	3
	SVE-37D	2/4/2005	I	342.64	342.14	326.14	316.14	16.5-26.5	27.5	15.5	12.5	3
	SVE-38D	2/1/2005	I	342.63	342.13	326.13	316.13	16.5-26.5	27.5	15.5	12.5	3
	SVE-39D	2/5/2005	I	342.65	342.15	326.15	316.15	16.5-26.5	27.5	15.5	12.5	3
	SVE-40D	2/5/2005	I	342.68	342.18	326.18	316.18	16.5-26.5	27.5	15.5	12.5	3
	SVE-41D	2/1/2005	I	342.68	342.18	326.18	316.18	16.5-26.5	27.5	15.5	12.5	3
	SVE-42D	2/2/2005	I	342.61	342.11	326.11	316.11	16.5-26.5	27.5	15.5	12.5	3
	SVE-43D	2/4/2005	J	342.62	342.12	326.12	316.12	16.5-26.5	27.5	15.5	12.5	3
	SVE-44D	2/3/2005	J	342.65	342.15	326.15	316.15	16.5-26.5	27.5	15.5	12.5	3
	SVE-45D	2/1/2005	J	342.64	342.14	326.14	316.14	16.5-26.5	27.5	15.5	12.5	3
	SVE-46D	2/4/2005	J	342.60	342.10	326.10	316.10	16.5-26.5	27.5	15.5	12.5	3
	SVE-47D	2/2/2005	J	342.62	342.12	326.12	316.12	16.5-26.5	27.5	15.5	12.5	3
Deep sand	SVE-31DS	2/7/2005	H	342.67	342.17	309.67	299.67	33-43	44	32	29	2
	SVE-37DS	2/4/2005	I	342.64	342.14	309.64	299.64	33-43	44	32	29	2
	SVE-42DS	2/3/2005	I	342.61	342.11	309.61	299.61	33-43	44	32	29	2

Notes:
SVE - Soil Vapor Extraction
ft MSL - feet above mean sea level
ft BFF - feet below finished floor
* Design finished floor elevation for expansion building. Wells SVE-18D, 20S, and 20D were not surveyed. Surface elevation and top of riser elevation data is approximate for these wells.

Table 3
SVE Well Flow Testing Results
April 2005
Carrier Air Conditioning Site
Collierville, TN

Well Type	Well ID	Testing Flow Condition	Vacuum ("Hg)	Flow (SCFM)
Shallow	SVE-37S	F1	10	7.84
		F2	16	6.03
	SVE-40S	F1	10	5.23
		F2	14	6.21
	SVE-44S	F1	10	2.87
		F2	15	4.26
Deep	SVE-37D	F1	10	10.13
		F2	15	8.37
	SVE-40D	F1	11	9.8
		F2	17.5	8.96
	SVE -44D	F1	10	17.25
		F2	13.5	16.48
Deep Sand	SVE-37DS	F1	5	24.03
		F2	8	26.6

Notes:
SVE - Soil Vapor Extraction
Hg - mercury
SCFM - standard cubic feet per minute
F1 - flow condition 1
F2 - flow condition 2

Table 4
SVE Soil Vapor Sampling and Analyses Results
April 2005
Carrier Air Conditioning Site
Collierville, TN

Selected Site COC's (ppmv)	Shallow			Deep			Deep Sand
	SVE-37S	SVE-40S	SVE-44S	SVE-37D	SVE-40D	SVE-44D	SVE-37DS
Vinyl Chloride	10.5*	0.135*	ND	3.35	0.71	ND	0.08
trans-1,2-Dichloroethene	2.4	.0414*	ND	1.30	0.27	ND	0.15
cis-1,2-Dichloroethene	535	4.7	4.28	237	41.8*	1.83	11.6*
1,1-Dichloroethene	2.25	0.413*	ND	0.80	0.245	ND	0.065
Tetrachloroethene	ND	0.002	ND	ND	ND	ND	ND
Trichloroethene	895	13.4*	3.06	402	106*	8.40	60.5*
Total VOCs (ppmv)[1]	**1,486**	**18**	**9**	**656**	**151**	**10**	**74**

Notes:
COCs - chemicals of concerns
* - estimated value above calibration limit of the equipment
ND - non detect
VOCs - volatile organic compounds
ppmv - parts per million by volume
[1] The total VOC concentrations are calculated based on all the chemicals detected in the laboratory analyses (EPA Method TO-15)

Table 5
Summary of SVE Equipment Design Specifications
Carrier Air Conditioning Site
Collierville, TN

System	Specifications	Notes
Shallow SVE system	• 42 SVE wells • 5' well screens (6.5 - 11.1' BFF screen interval) • 12.5 - 20' ROI • Operation: 10 - 13 "Hg , 4 - 6 SCFM per well, operated in a cyclic manner, with approximately half of the total shallow wells (~21 wells) operating at a time. • Shallow SVE Blower capacity : 165 SCFM @ 15 "Hg • Total design flowrate of 85 - 125 SCFM (assuming 21 wells operating at a time)	Designed to influence the shallow soil zone (target depths approximately 3 to 14 feet BFF, target geology is clayey silt)
Deep SVE system	• 47 SVE wells • 10' well screens (16.5 - 26.5' BFF screen interval) • 20 - 25' ROI • Operation: 10 - 14 "Hg , 10 - 13 SCFM per well, operated in a cyclic manner, with approximately half of the total deep wells (~24 wells) operating at a time. • Deep and Deep Sand SVE blower capacity: 400 SCFM @ 16 "Hg • Total design flowrate of 240 - 315 SCFM (assuming 24 wells operating at a time).	Designed to influence the deep soil zone (target depths approximately 14 to 33 feet BFF, target geology is clayey silt)
Deep Sand SVE system	• 3 SVE wells • 10' well screens (33 - 43' BFF screen interval) • >75' ROI • Operation: 5 - 8 "Hg, > 25 SCFM per well, operated in a cyclic manner with approximately 1 to 2 deep sand wells operating at a time. • Total design flowrate of 25 - 50 SCFM (assuming 2 wells operating at a time)	Designed to influence the deep sand soil zone (target depths approximately 33 to 43 feet BFF, target geology is fine to medium sand)

Notes:
SVE - Soil Vapor Extraction
BFF - below finished floor
ROI - radius of influence
"Hg - inches of mercury
SCFM - standard cubic feet per minute
Estimated total initial mass removal rate = 5 to 30 lbs/day at 550 SCFM (from Shallow, Deep and Deep Sand SVE systems)
The MPA SVE equipment design (i.e., sizing) is based on the results of well testing performed in April 2005.

Table 6
Summary of SVE Alarm Conditions and Sequence of Operation
Carrier Air Conditioning Site
Collierville, TN

ALARM INTERLOCKS		Blower PDB101	Pump TP101	Vac Sol Valve VRV102	Blower PDB201	Pump TP201	Vac Sol Valve VRV202	Heat Exchanger HE301	Autodialer Input 1	Autodialer Input 2	Autodialer Input 3	Autodialer Input 4	ALARM DELAY	AUTO RESET DELAY	ALARM TYPE and LABEL
AMS101 High High level switch	LS 101	X							O				8 sec		alarm shut down, manual reset 'HIGH LEVEL LS101'
PDB101 Low air flow switch	FS101	X							O				30 sec		alarm shut down, manual reset 'LOW AIR FLOW FS101'
PDB101 Low vacuum (analog)	VIA101	X							O				30 sec		alarm shut down, manual reset 'LOW VACUUM VIA101'
AMS201 High High level switch	LS 201				X					O			8 sec		alarm shut down, manual reset 'HIGH LEVEL LS201'
PDB201 Low air flow switch	FS201				X					O			30 sec		alarm shut down, manual reset 'LOW AIR FLOW FS201'
PDB201 Low vacuum (analog)	VIA201				X					O			30 sec		alarm shut down, manual reset 'LOW VACUUM VIA201'
GAC02 High inlet pressure switch	PS301	X			X						O		5 sec		alarm shut down, manual reset 'HIGH PRESSURE PS301'
Power Failure		X	X	X	X	X	X	X				O	0 sec		shutdown, auto restart when power is restored
Motor Faults															
Blower PDB101 overload		X							O				3 sec		alarm shut down, manual reset 'MOTOR FAULT SK01'
Pump TP101 overload			X	X					O				3 sec		alarm shut down, manual reset 'MOTOR FAULT SK01'
Blower PDB201 overload					X					O			3 sec		alarm shut down, manual reset 'MOTOR FAULT SK02'
Pump TP 201 overload						X	X			O			3 sec		alarm shut down, manual reset 'MOTOR FAULT SK02'
Heat Exchanger HE301 overload		X			X			X			O		3 sec		alarm shut down, manual reset 'MOTOR FAULT HE301'

Notes:
X - device shutdown condition
O - device on condition

Table 6
Summary of SVE Alarm Conditions and Sequence of Operation

Carrier Air Conditioning Site
Collierville, TN

Sequence of Operation

Skid 01
On power up with no active alarms and all control switches in 'AUTO':
Blower PDB101 and Heat Exchanger HE301 start.
Vacuum relief solenoid VRV102 turns on when LS102 gets wet.
Pump TP101 turns on 3 seconds after VRV102 turns on.
VRV102 and TP101 turn off when LS103 becomes dry.
Alarm shutdown according to schedule shown above.
When PDB101 or TP101 is in 'HAND' the corresponding motor will run continuously bypassing all alarms except an overload
When PDB101 or TP101 is in 'OFF' the corresponding motor will remain off.
Skid 02
On power up with no active alarms and all control switches in 'AUTO':
Blower PDB201 and Heat Exchanger HE301 start.
Vacuum relief solenoid VRV202 turns on when LS202 gets wet.
Pump TP201 turns on 3 seconds after VRV202 turns on.
VRV202 and TP201 turn off when LS203 becomes dry.
Alarm shutdown according to schedule shown above.
When PDB201 or TP201 is in 'HAND' the corresponding motor will run continuously bypassing all alarms except an overload
When PDB201 or TP201 is in 'OFF' the corresponding motor will remaijn off.
Skid 03 with HOA in 'HAND':
Heat exchanger HE301 will run continuously bypassing all alarms except an overload condition.
When HE301 shuts off PDB101 and PDB201 will shut down If they are in 'AUTO'.
Any HE301 shutdown condition will shutdown PDB101 and PDB201 if they are in 'AUTO'.
Skid 03 with HOA in 'AUTO'
Heat exchanger HE301 will start when either PDB101 or PDB201 start
Heat exchanger HE301 will stop when both PDB101 and PDB201 stop.
Any HE301 shutdown condition will shutdown PDB101 and PDB201 if they are in 'AUTO'.
Skid 03 with HOA in 'OFF'
HE301 remains off.
PDB101 will operate in 'HAND' not in 'AUTO'.
PDB201 will operate in 'HAND' not in 'AUTO'.

Notes:

PDB - Positive Displacement Blower
TP - Transfer Pump
VRV - Vacuum Relief Valve
HE - Heat Exchanger
AMS - Air Moisture Separator
LS - Level Switch
Refer to the SVE System "Equipment Manual" for the SVE equipment/parts details.

FS - Flow Switch
VIA - Vacuum Indicator, Analog
GAC - Granular Activated Carbon
PS - Pressure Switch
SK - Skid
HOA - Hand-Off-Auto

Table 7
Summary of Items Available for Remote Telemetry (Site Link™ Graphical Interface)
Carrier Air Conditioning Site
Collierville, TN

Skid 01	Skid 02	Skid 03
Digital I/O		
Level status of AMS101	Level status of AMS201	PS301 Alarm status
On/off status of PDB101	On/off status of PDB201	HE301 On/Off status
On/off status of TP101	On/off status of TP201	HE301 Motor overload status
On/off status of VRV102	On/off status of VRV202	
FS101 Low air flow alarm status	FS201 Low air flow alarm status	
AMS101 High level alarm status	AMS201 High level alarm status	
PDB101 Motor overload status	PDB201 Motor overload status	
TP101 Motor overload status	TP201 Motor overload status	
Shutdown condition	Shutdown condition	
Analog Inputs		
TIA101 reading	TIA201 reading	FIA301 reading
VIA101 reading & alarm status	VIA201 reading & alarm status	
Statistics		
PDB101 Total run time hrs	PDB201 Total run time hrs	HE301 Total run time hrs
PDB101 Run time hrs since midnight	PDB201 Run time hrs since midnight	HE301 Run time hrs since midnight
PDB101 Total cycle count	PDB201 Total cycle count	HE301 Total cycle count
PDB101 Cycle count since midnight	PDB201 Cycle count since midnight	HE301 Cycle count since midnight
TP101 Total run time hrs	TP201 Total run time hrs	FIA401 Total gallon count
TP101 Run time hrs since midnight	TP201 Run time hrs since midnight	FIA401 Flow rate
TP101 Total cycle count	TP201 Total cycle count	Alarm log
TP101 Cycle count since midnight	TP201 Cycle count since midnight	
Alarm log	Alarm log	
Read/Write		
Low vacuum alarm set point for VIA101	Low vacuum alarm set point for VIA201	Start/Stop time for HE301
Start/Stop time for PDB101	Start/Stop time for PDB201	HE301 Stop/Disable
PDB101 Stop/Disable	PDB201 Stop/Disable	Alarm reset
Alarm reset	Alarm reset	

Notes:
AMS - Air Moisture Separator
PS - Pressure Switch
PDB - Positive Displacement Blower
HE - Heat Exchanger
TP - Transfer Pump
VRV - Vacuum Relief Valve
FS - Flow Switch
TIA - Temperature Indicator, Analog
FIA - Totalizing Liquid Flow Meter
VIA - Vacuum Indicator, Analog
-Refer to the SVE System "Equipment Manual" for the SVE equipment/parts details.

Table 8
SSV Well System Testing Results
July 2005
Carrier Air Conditioning Site
Collierville, TN

Testing Flow Condition	Leg A		Leg B		Leg C	
	Vacuum ("H_2O)	Flow (SCFM)	Vacuum ("H_2O)	Flow (SCFM)	Vacuum ("H_2O)	Flow (SCFM)
F1	6	121.5	6	121.6	8	133
F2	10	186.3	15	203.4	16	235.1
F3	1.8	70.1	1.4	57.9	2	69.1

Notes:
SSV - Sub Slab Ventilation
" H_2O- inches of water
SCFM - standard cubic feet per minute
F1 - flow condition 1
F2 - flow condition 2
F3 - flow condition 3

Table 9
Summary of SSV Equipment Design Specifications
Carrier Air Conditioning Site
Collierville, TN

Specifications	Notes
· 28 horizontal well screens · Leg A - 13 Screens (680 total feet) · Leg B - 9 Screens (700 total feet) · Leg C - 6 Screens (450 total feet) · ~50' long well screens per well, ~100' on-center spacing (50' ROI) · Operation: 2 - 4 "Hg, 100 - 150 scfm per SSV leg with all three legs being operated at the same time. · Total Design Flow Rate 300 - 450 scfm	Designed to influence the fill material (Crushed Limestone) beneath the MPA building floor slab.

Notes:
SSV - Sub Slab Ventilation
"Hg - inches of mercury
scfm - standard cubic feet per minute
MPA - Main Plant Area
ROI - radius of influence
The SSV equipment design (i.e., sizing) is based on the results of SSV well system testing performed in July 2005.

T. 10

SVE Baseline Soil Vapor Sampling Results

October 2005

Carrier Air Conditioning Site

Collierville, TN

Well Type	Well ID	Initial PID Reading (ppmv)[1]	Final PID Reading (ppmv)[2]	Total VOC Laboratory Analytical Result (ppmv)	Well ID	Initial PID Reading (ppmv)	Final PID Reading (ppmv)	Total VOC Laboratory Analytical Result (ppmv)
Shallow SVE wells	SVE-1S	75.4	34.3	7.5	SVE-27S	95	61.8	-
	SVE-2S	4,051	3,315	-	SVE-28S	201	125	-
	SVE-3S	610	605	-	SVE-29S	98	268	-
	SVE-4S	3,791	2,867	1,257	SVE-30S	145	293	-
	SVE-5S	1,159	1,190	-	SVE-31S	319	268	59
	SVE-6S	971	1,281	-	SVE-32S	372	256	-
	SVE-7S	100	27.6	10	SVE-33S	200	196	-
	SVE-8S	114	1,093	531	SVE-34S	66	141	76
	SVE-9S	18.1	21.9	-	SVE-35S	748	554	-
	SVE-10S	91.7	921	516	SVE-36S	95.2	35.2	-
	SVE-11S	76.3	38.7	-	SVE-37S	853	4,921	-
	SVE-12S	44.2	26.2	-	SVE-38S	1,187	1,117	-
	SVE-13S	485	331	-	SVE-39S	181	65.6	-
	SVE19S	148	216	-	SVE-40S	711	717	-
	SVE-20S	241	329	75	SVE-41S	9,999	9,999	3,261
	SVE-21S	68.4	51.2	-	SVE-42S	155	84	40
	SVE-22S	15.2	10.7	-	SVE-43S	14	11	-
	SVE-23S	43.3	11.9	-	SVE-44S	9,999	9,999	-
	SVE-24S	300	179	-	SVE-45S	268	240	-
	SVE-25S	466	328	-	SVE-46S	256	229	-
	SVE-26S	227	393	-	SVE-47S	59.3	31	-

Table 10
SVE Baseline Soil Vapor Sampling Results
October 2005
Carrier Air Conditioning Site
Collierville, TN

Well Type	Well ID	Initial PID Reading (ppmv)	Final PID Reading (ppmv)	Total VOC Laboratory Analytical Result (ppmv)	Well ID	Initial PID Reading (ppmv)	Final PID Reading (ppmv)	Total VOC Laboratory Analytical Result (ppmv)
Deep and Deep Sand SVE Wells	SVE-1D	839	65.3	74	SVE-26D	62.1	241	121
	SVE-2D	1,065	3,295	-	SVE-27D	75.6	39.6	-
	SVE-3D	549	517	-	SVE-28D	275	287	-
	SVE-4D	2,839	3,407	1,380	SVE-29D	678	716	-
	SVE-5D	932	1,105	-	SVE-30D	23.2	107	-
	SVE-6D	1,932	2,175	-	SVE-31D	158	266	19
	SVE-7D	12.8	9.5	-	SVE-31DS	210	162	61
	SVE-8D	1,290	852	333	SVE-32D	251	202	-
	SVE-9D	270	37.1	29	SVE-33D	296	298	-
	SVE-10D	263	240	86	SVE-34D	111	110	47
	SVE-11D	84.1	24.6	-	SVE-35D	325	273	-
	SVE-12D	79.2	25.2	-	SVE-36D	25.4	36	-
	SVE-13D	39.2	27.9	-	SVE-37D	274	1,680	-
	SVE-14D	232	541	-	SVE-37DS	341	315	-
	SVE-15D	1,103	640	-	SVE-38D	271	444	-
	SVE-16D	819	936	496	SVE-39D	257	316	-
	SVE-17D	342	515	-	SVE-40D	1,766	1,299	-
	SVE-18D	80.5	78.3	-	SVE-41D	1,046	1,179	604
	SVE-19D	258	229	-	SVE-42D	618	889	294
	SVE-20D	1,677	1,426	1,271	SVE-42DS	849	1,021	156
	SVE-21D	203	61.4	-	SVE-43D	28	30	-
	SVE-22D	33.3	26	-	SVE-44D	53	697	-
	SVE-23D	49.2	38.4	-	SVE-45D	444	565	-
	SVE-24D	237	189	-	SVE-46D	260	406	-
	SVE-25D	17.7	23.4	-	SVE-47D	916	1,103	-

Notes:
[1] Initial reading were taken immediately after well purging began.
[2] Final readings were taken after well was completely purged.
SVE - Soil Vapor Extraction
PID - Photoionization detector
ppmv - Parts per million by volume
% - Percentage
VOC - Volatile organic compounds
All samples measured using a MiniRae PID with 10.6 eV Ultraviolet Lamp.
All PID readings are reported as ppmv TVOCs (total volatile organic compounds).
Upper detection limit of PID is 9,999 ppmv.
Duplicates were not included. Samples SVE-48D and SVE-51 were from SVE-31D and SVE-41DS, respectively.
See Appendix D for complete Laboratory Analytical results (EPA Modified TO-15).
Wells operational as of December 6, 2005

Table 11
Summary of SVE Start-up Performance
Carrier Air Conditioning Site
Collierville, TN

System	Performance Parameter	Design Performance	Actual Performance[1]
Shallow SVE System	Total No. of Wells Operating	~ 21 wells	25 wells
	F	~ 85 - 125 SCFM	~ 200 SCFM
	V	~ 10 - 13 "Hg	~ 13 "Hg
	C_i	NS	912 ppmv (12-01-05)
Deep and Deep Sand SVE System	Total No. of Wells Operating	~ 26 wells (~ 24 Deep wells and 2 Deep Sand wells)	29 wells (27 Deep wells and 2 Deep Sand wells)
	F	~ 265 - 365 SCFM	~ 450 SCFM
	V	~ 10 - 14 "Hg	~ 14 "Hg
	C_i	NS	1,150 ppmv (12-01-05) 630 ppmv (12-02-05)
Combined (Total)	Total No. of Wells Operating	~ 47 wells	54 wells
	F	~ 350 - 490 SCFM	~ 650 SCFM
	C_i	~ 20 - 120 ppmv	827 ppmv (12-01-05) 486 ppmv (12-02-05)
	M_i	~ 5 to 30 lbs/day[2]	~ 150 - 260 lbs/day[3]

Notes:
F - Total Air Flow Rate
V - Total Vacuum (at Blower Inlet)
C_i - Influent VOC Vapor Concentration
M_i - Total Initial VOC Mass Removal Rate
SVE - Soil Vapor Extraction
"Hg - inches of mercury
SCFM - standard cubic feet per minute
NS - Not specified
[1]Actual performance is based on the data collected during the start-up and flow optimization of MPA SVE system.
[2]The estimated VOC mass removal rates are based on the SVE well flow testing performed in April 2005.
[3]Total initial VOC mass removal rates of 150 and 260 lbs/day are calculated based on the influent VOC vapor concentrations of 486 and 827 ppmv, respectively, and a total system air flow rate of 650 SCFM.
VOC vapor concentrations were measured in the field by a Photoionization Detector (PID).

Table 12
SVE Start-up Performace and Discharge Sampling Results
December 2005
Carrier Air Conditioning Site
Collierville, TN

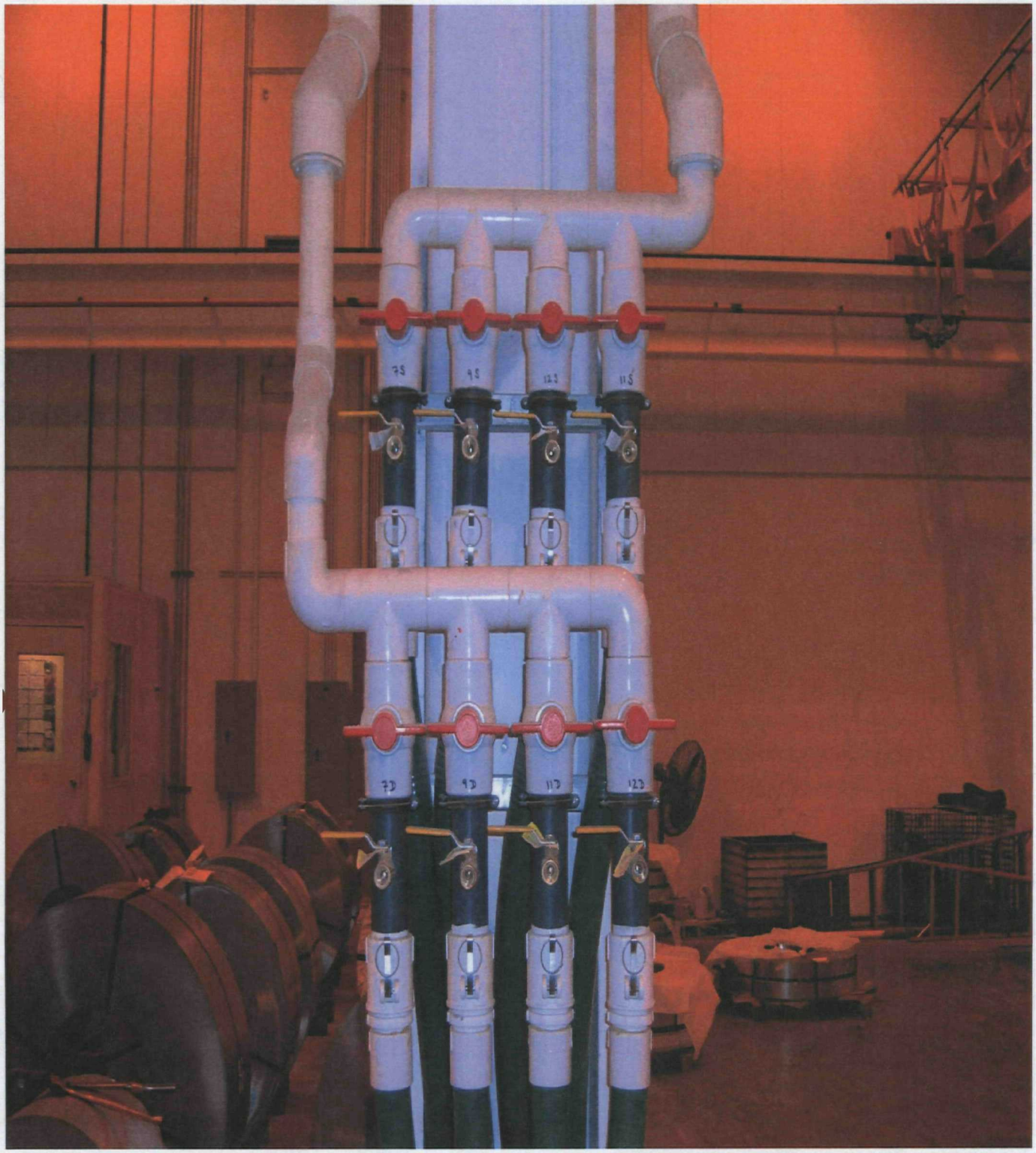
Selected Site COC's (ppmv)	Influent Vapor Samples [1]			Discharge Vapor Samples [2]	
	Shallow SVE (SP101)	Deep SVE (SP201)	Combined SVE (SP301)	Intermediate Carbon (between GAC 01 Units #1 and #2) (SP302)	Post-Carbon (at Discharge Stack) (SP304)
Vinyl Chloride	0.14	0.52	0.43	ND	ND
trans-1,2-Dichloroethene	0.47	ND	ND	ND	ND
cis-1,2-Dichloroethene	29	14	12	ND	0.0018
1,1-Dichloroethene	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
Trichloroethene	53	130	75	0.0011	0.016
Total VOCs (ppmv)[3]	**92**	**153**	**94**	**0.064**	**0.124**

Notes:
COCs - chemicals of concerns
ND - non detect
VOCs - volatile organic compounds
GAC - granular activated carbon
ppmv - parts per million by volume
[1] Refer to Figures 10 and 11, and 12 for sampling port locations for the Shallow, Deep, and combined SVE influent samples, respectively.
[2] Refer to Figure 12 for the sampling port locations for the intermediate carbon and post-carbon discharge samples.
[3] The total VOC concentrations are calculated based on all the chemicals detected in the laboratory analyses (EPA Method TO-15)
All samples were collected during start-up on December 6, 2005

APPENDIX A

MPA REMEDIAL SYSTEM RECONSTRUCTION PHOTOGRAPHS

Picture 1 of 6: This photograph shows one of the horizontal well screens constructed of 2-inch SCH 40 PVC piping, installed in the fill material approximately 2 feet below the bottom of the floor slab with 6 inches of sand pack.



Picture 2 of 6: The photograph shows an SVE Valve Bank location inside the Plant Expansion Building. The sub-slab piping runs vertically up the structural upright through a series of valves and sampling ports (Valve Banks) prior to connecting with the overhead main lines.

Picture 3 of 6: The photograph shows the Shallow (right) and the Deep (left) SVE System Skids inside the SVE Equipment Building.

Picture 4 of 6: The photograph shows the Heat Exchanger Unit (HE 301), located between the SVE Equipment Building (right) and the Plant Expansion Building Southern Wall (left).

Picture 5 of 6: The photograph shows the 12,000 gallon vapor-phase granular activated carbon (GAC) unit placed adjacent to the SVE Equipment building.

Picture 6 of 6: The photograph shows the two liquid-phase granular activated carbon (GAC) units (200 lbs each) inside the SVE Equipment Building.

APPENDIX B

SVE WELL RECORDS AND WELL INSTALLATION PERMIT

TRI STATE
TESTING SERVICES, INC.

April 26, 2005

Mr. Greg Parker
Memphis & Shelby County Health Department
Pollution Control
Water Quality Room 438-L
814 Jefferson Avenue
Memphis, Tennessee 38105

Reference: **Permit Closure - Permit # 04-254**
Carrier Corporation
97 S. Byhalia Road
Memphis, Tennessee
TSTS Job File # E-7-256

Dear Mr. Parker:

Enclosed is a copy of the Soil Vapor Extraction Permit, boring log, as built well diagram and the site map for the above referenced project.

If you require any additional information, please do not hesitate to contact me.

Sincerely,

TRI-STATE TESTING SERVICES, INC.

David D. McCray, CWD
President

TN. License #769

6756 Buckles Cove Memphis, TN 38133 901-385-1199 FAX 901-386-6614

MEMPHIS AND SHELBY COUNTY
HEALTH DEPARTMENT

YVONNE S. MADLOCK
DIRECTOR

HELEN G. MORROW, M.D., MPA
ACTING HEALTH OFFICER

DR. WILLIE W. HERENTON
CITY OF MEMPHIS
MAYOR

A C WHARTON, JR.
SHELBY COUNTY
MAYOR

November 22, 2004

Tri-State Testing Services
Attn: David McCray
6756 Buckles Cove
Memphis, TN 38133

RE: EMERGENCY CONSTRUCTION OF SOIL VENT (S) AT: 97 South Byhalia Road Permit #04-254 Soil Vapor Extractions/SV-1 through SV-49

Dear Mr. McCray:

This letter acknowledges the oral approval given by this office for emergency construction of a soil vent(s) at the above referenced location. The **"CONSTRUCTION PERMIT"** documenting the procedure is enclosed. You are expected to comply with all conditions indicated on the permit as well as the specifications outlined on the application. The permit must be maintained at the job site for the duration of the construction process.

Your prompt attention and cooperation in this matter will be appreciated. In the meantime, if you have any questions, please contact Mr. Greg Parker at 544-7741.

Sincerely,

Greg Parker, Supervisor
Water Quality Branch

BD: GP: ll

Enclosure

RECEIVED
NOV 29 2004

Mission
To promote, protect and improve the health and environment of all Shelby County residents.

814 JEFFERSON AVENUE • MEMPHIS, TENNESSEE 38105
PHONE 901-544-7600

WATER QUALITY BRANCH
MEMPHIS AND SHELBY COUNTY HEALTH DEPARTMENT

SOIL VENT CONSTRUCTION PERMIT

WELL DRILLING COMPANY Tri-State Testing Services

ADDRESS 6756 Buckles Cove, Memphis, Tennessee 38133

DATE ISSUED 11/03/04 **EXPIRATION DATE** 02/03/05 **PERMIT #** 04-254

DESCRIPTION OF WORK: Soil Vapor Extraction at: 97 South Byhalia Road

Emergency Permit Owner: Carrier Corporation SVE-1 thru SVE-49

This permit is issued based on signed commitment by the driller and the owner of the wells to fully comply with the requirements set forth in the approved application or as directed by the Memphis and Shelby County Health Department. Any deviation from the approved application or any conditions outlined in this permit by the drilling company will *void* this permit immediately.

CONDITIONS:

1. Any water used in drilling these soil vents shall be obtained from a potable source and a chlorine residual maintained throughout the drilling process.
2. All applicable fees must be paid to the Memphis and Shelby County Health Department.
3. The Health Department shall be notified before construction of the soil vents is to begin.
4. A copy of the boring logs shall be submitted to the Health Department within thirty days of work completion of the soil vents. A copy of the original is acceptable.
5. The driller shall comply with all requirements outlined in the Shelby County Well Construction Code.
6. Any changes in the number of vents needed, or in their location of construction such as conversion to a recovery well shall be brought to the attention of the Health Department
7. Any additional borings that may be needed at a later date will require a separate application be filed with this office along with the twenty-five ($25.00) processing fee and the one hundred ($100.00) dollars inspection fee.
8. Abandoned wells shall be properly sealed as required by Chapter 29, Article III, Water Quality Control of the Code of Shelby County, Tennessee.

Robert Rogers

Robert Rogers, P.E., Acting Manger
POLLUTION CONTROL

No authority is granted by this permit to construct, operate, or maintain any well in violation of any law, statute, code, ordinance, rule or regulation of Memphis and Shelby County, Tennessee.

NON -TRANSFERABLE **POST OR FILE AT INSTALLATION ADDRESS**

GD 11/22/04

MEMPHIS AND SHELBY COUNTY HEALTH DEPARTMENT

WATER QUALITY BRANCH AND SEPTIC SYSTEM PROGRAM

Receipt #
2005304

Date Paid
11/9/2004

Applicant
Tri-State Testing

Location
97 South Byhalia Road

Amount Paid
$125.00

Account Number
010-400403-4220

Check or Money Order #
15928

List of Fee
Other W-17

Notes
Soil Vapor Extraction Well

THANK YOU!

CLIENT: GRAYCOR		PAGE 1 OF 27
JOB # E-7-256	DATE 3-14-05	BORING # 1 A&B
DRILLER: R.G. BAKER		WATER LEVEL
DRILLING METHOD Hollow Stem Auger		SAMPLE METHOD Auger Cuttings
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 0.020"	DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	A B
	SAND & FILL MATERIAL	BENTONITE
5'		TOP OF SCREEN
	SILTY CLAY & CLAYEY SILTS.	FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE SEAL
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
27'		
30'		

CLIENT: GRAYCOR		PAGE 2 OF 27
JOB # E-7-256	DATE 3.14.05	BORING # 2 A & B

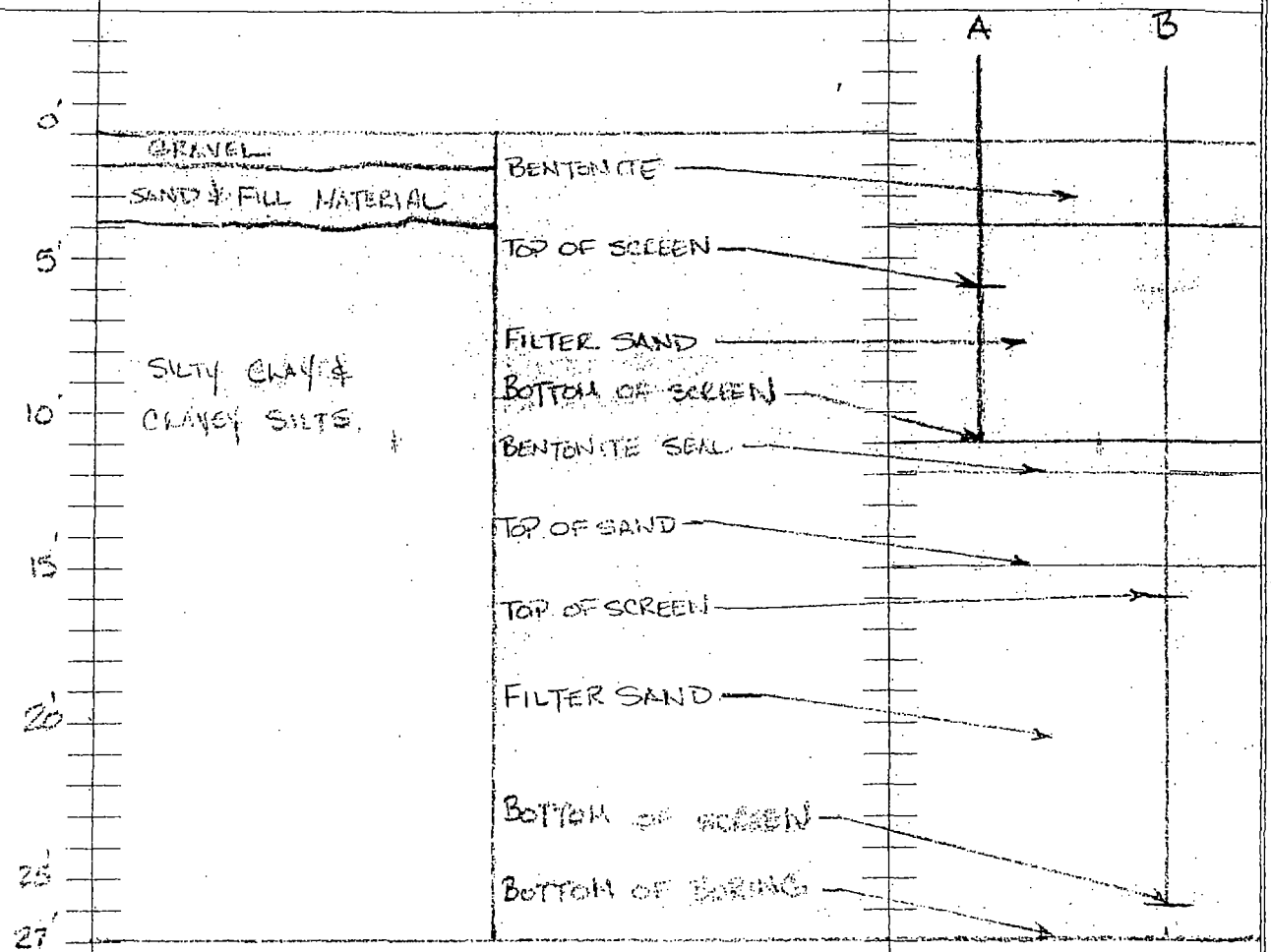
DRILLER: RG BAKER	WATER LEVEL
DRILLING METHOD Hollow Stem Auger	SAMPLE METHOD Auger Cuttings
SAND PACK 10/40 SILCA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	A B
	SAND & FILL MATERIAL	BENTONITE
5'		TOP OF SCREEN
	SILTY CLAY & CLAYEY SILTS.	FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE SEAL
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
27'		
30'		

CLIENT: GRANCOR		PAGE 3 OF 27
JOB # E-7-256	DATE 3-14-05	BORING # 3 A & B

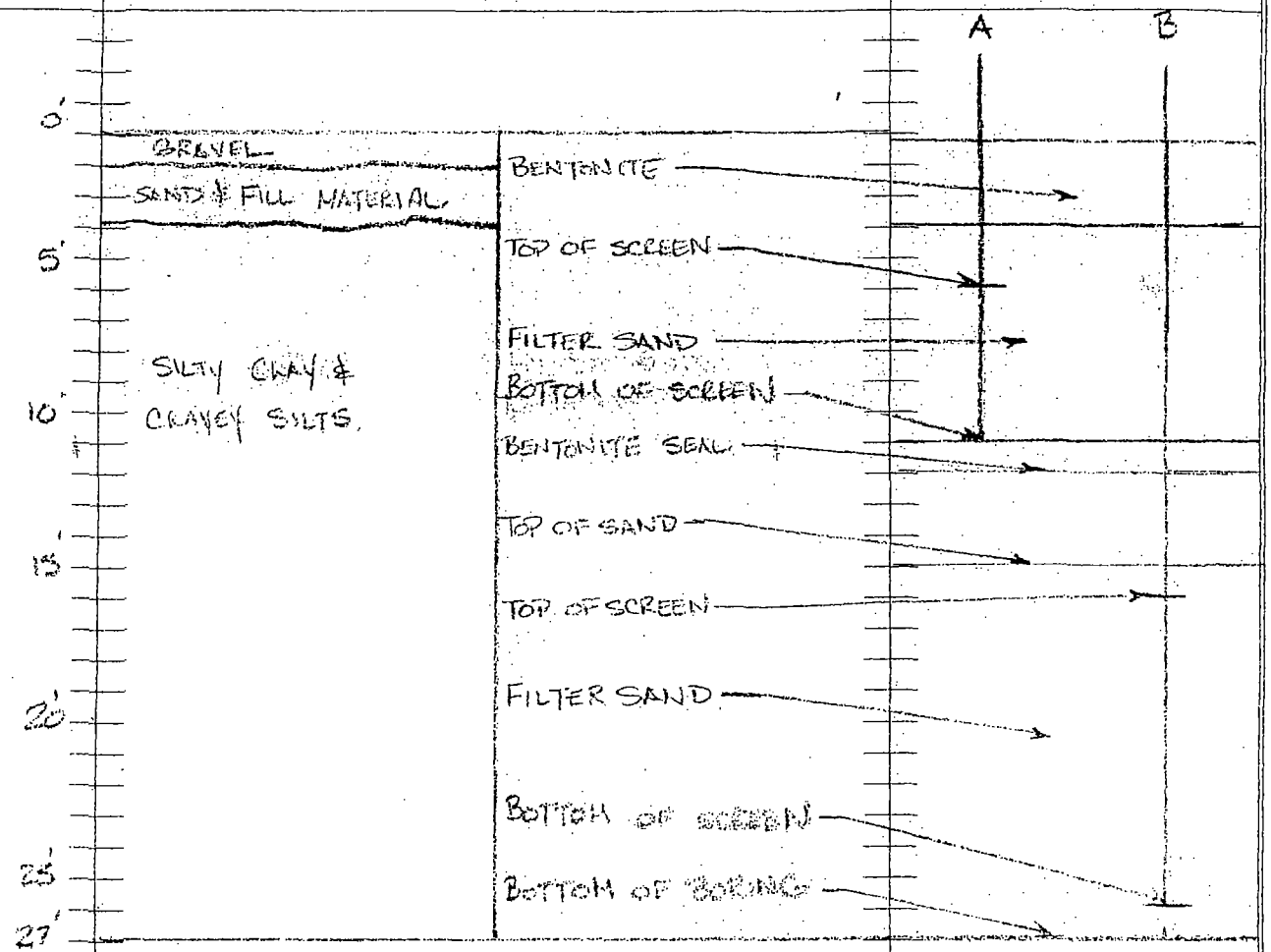
DRILLER: R G BAKER	WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.



CLIENT: GRANCOR		PAGE 4 OF 27
JOB # E-7-256	DATE 3.14.05	BORING # 4 A & B
DRILLER: R.G. BAKER		WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40	SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.



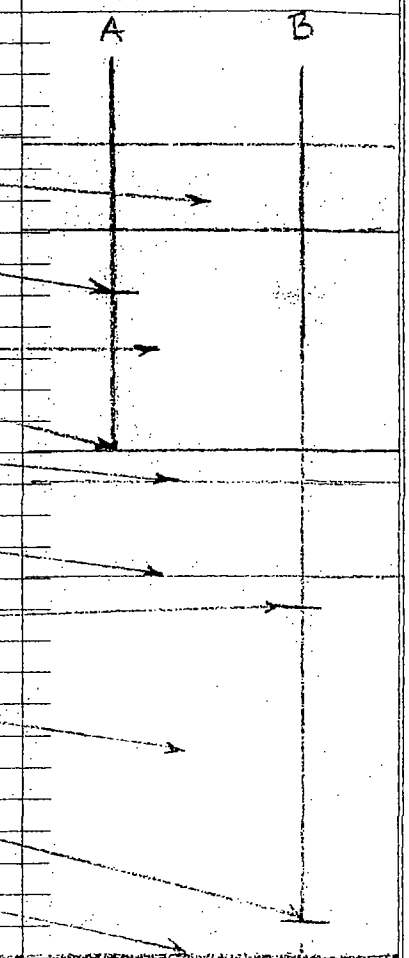
CLIENT: GRANCOR		PAGE 5 OF 27
JOB # E-7-256	DATE 3.14.05	BORING # 5 A & B
DRILLER: R. G. BAKER		WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 0.020"	DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	BENTONITE
	SAND & FILL MATERIAL	
5'		TOP OF SCREEN
		FILTER SAND
10'	SILTY CLAY & CLAYEY SILTS.	BOTTOM OF SCREEN
		BENTONITE SEAL
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
25'		BOTTOM OF SCREEN
27'		BOTTOM OF BORING
30'		

A B

CLIENT: GRAYCOR		PAGE 6 OF 27
JOB # E-7-256	DATE 3.14.05	BORING # 6A & B
DRILLER: R.G. BAKER		WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 0.020"	DIAMETER 4"	LENGTH A= 5' B= 10'

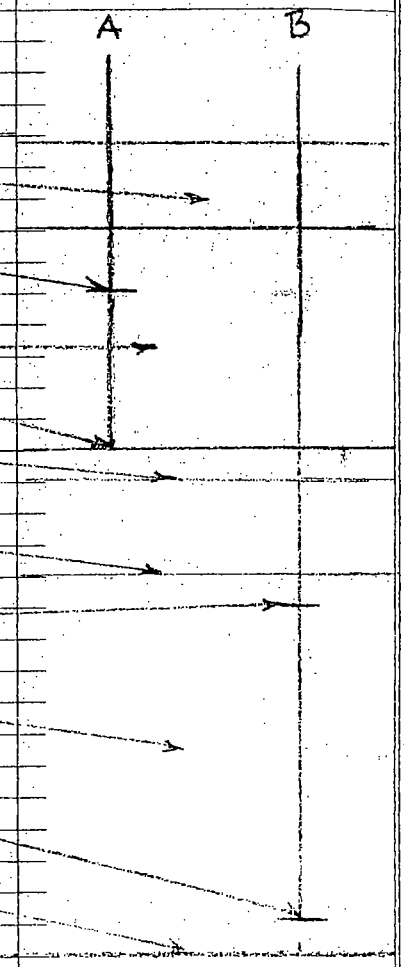
DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	BENTONITE	
	SAND & FILL MATERIAL		
5'		TOP OF SCREEN	
		FILTER SAND	
	SILTY CLAY & CLAYEY SILTS	BOTTOM OF SCREEN	
10'		BENTONITE SEAL	
		TOP OF SAND	
15'		TOP OF SCREEN	
		FILTER SAND	
20'			
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
27'			
30'			



CLIENT: GRAYCOR		PAGE 7 OF 27
JOB # E-7-256	DATE 3.14.05	BORING # 7 A & B

DRILLER: R.G. BAKER	WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	BENTONITE
	SAND & FILL MATERIAL	
5'		TOP OF SCREEN
		FILTER SAND
	SILTY CLAY & CLAYEY SILTS	BOTTOM OF SCREEN
10'		BENTONITE SEAL
		TOP OF SAND
15'		TOP OF SCREEN
		FILTER SAND
20'		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
27'		
30'		



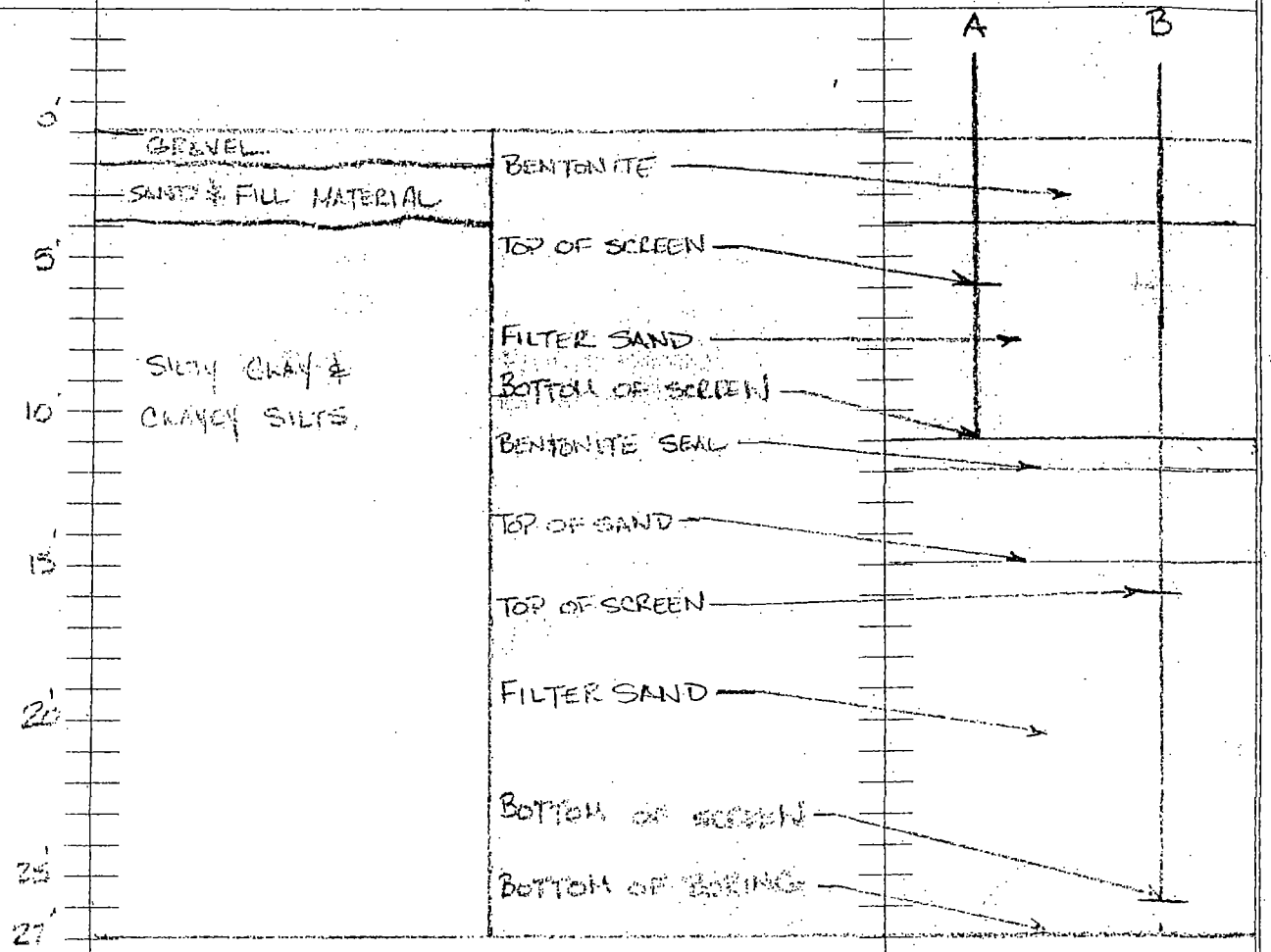
CLIENT: GRAYCOR		PAGE 8 OF 27
JOB # E-7-256	DATE 3.14.05	BORING # 8 A & B
DRILLER: R. G. BAKER	WATER LEVEL	
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS	
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE	
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT .020"	DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	BENTONITE
	SAND & FILL MATERIAL	
5'		TOP OF SCREEN
		FILTER SAND
	SILTY CLAY & CLAYEY SILTS.	BOTTOM OF SCREEN
10'		BENTONITE SEAL
		TOP OF SAND
15'		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
27'		
30'		

A B

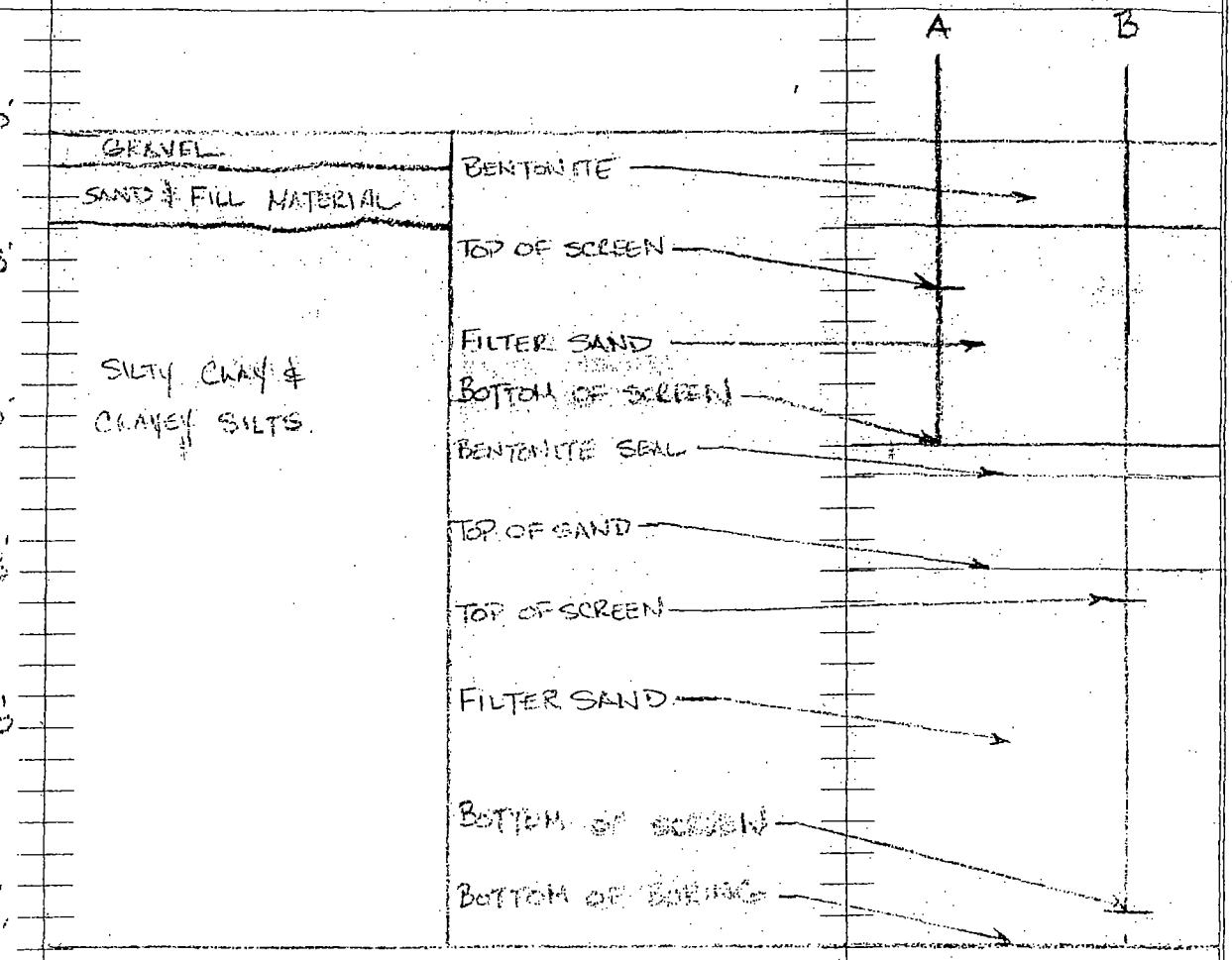
CLIENT: GRAYCOR		PAGE 9 OF 27
JOB # E-7-256	DATE 3-14-05	BORING # 9 A&B
DRILLER: R.C. BAKER	WATER LEVEL	
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS	
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE	
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'	
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'	

DEPTH FT.	LITHOLOGY	WELL COMP.



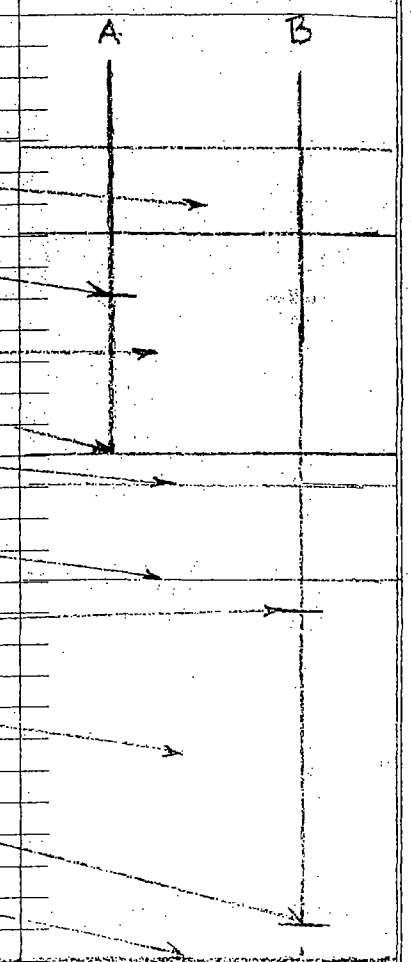
CLIENT: GRAYCOR		PAGE 10 OF 27
JOB # E-7-256	DATE 3-14-05	BORING # 10 A&B
DRILLER: R.G. BAUER		WATER LEVEL
DRILLING METHOD Hollow Stem Auger		SAMPLE METHOD Auger Cuttings
SAND PACK 10/40 SILCA SAND		SEAL Bentonite
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40	SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	
	SAND & FILL MATERIAL	
5'		
	SILTY CLAY & CLAYEY SILTS	
10'		
15'		
20'		
25'		
27'		
30'		



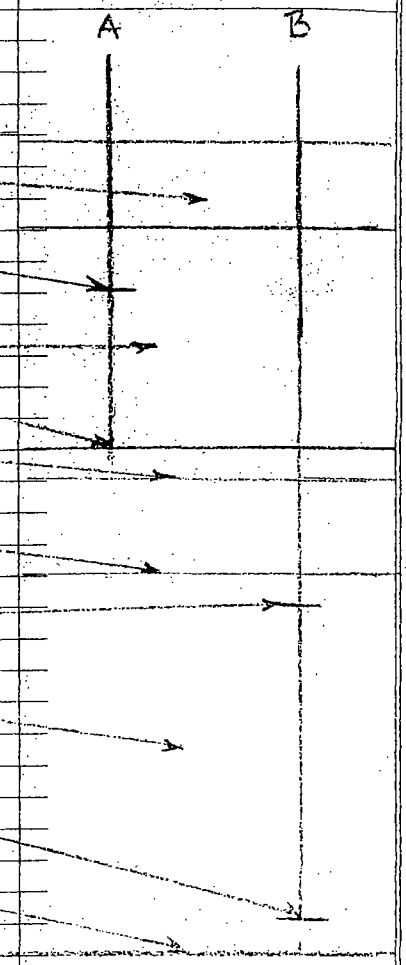
CLIENT: GRAYCOR		PAGE 11 OF 27
JOB # E-7-256	DATE 3.14.05	BORING # 11 A&B
DRILLER: R.G. BAKER		WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 0.020"	DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	BENTONITE	
	SAND & FILL MATERIAL		
5'		TOP OF SCREEN	
	SILTY CLAY & CLAYEY SILTS.	FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE SEAL	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
27'			
30'			



CLIENT: GRAYCOR		PAGE 12 OF 27
JOB # E-7-256	DATE 3·14·05	BORING # 12A & B
DRILLER: R. G. BAKER	WATER LEVEL	
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS	
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE	
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'	
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'	

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	BENTONITE
	SAND & FILL MATERIAL	
5'		TOP OF SCREEN
		FILTER SAND
	SILTY CLAY & CLAYEY SILTS	BOTTOM OF SCREEN
10'		BENTONITE SEAL
		TOP OF SAND
15'		TOP OF SCREEN
		FILTER SAND
20'		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
27'		
30'		



CLIENT: GRAYCOR		PAGE 13 OF 27
JOB # E-7-256	DATE 3-14-05	BORING # 13 A & B
DRILLER: R.G. BAKER	WATER LEVEL	
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS	
SAND PACK 10/40 SILCA SAND	SEAL BENTONITE	
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'	
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'	

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	A B
	SAND & FILL MATERIAL	BENTONITE
5'		TOP OF SCREEN
	SILTY CLAY & CLAYEY SILTS.	FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE SEAL
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
27'		
30'		

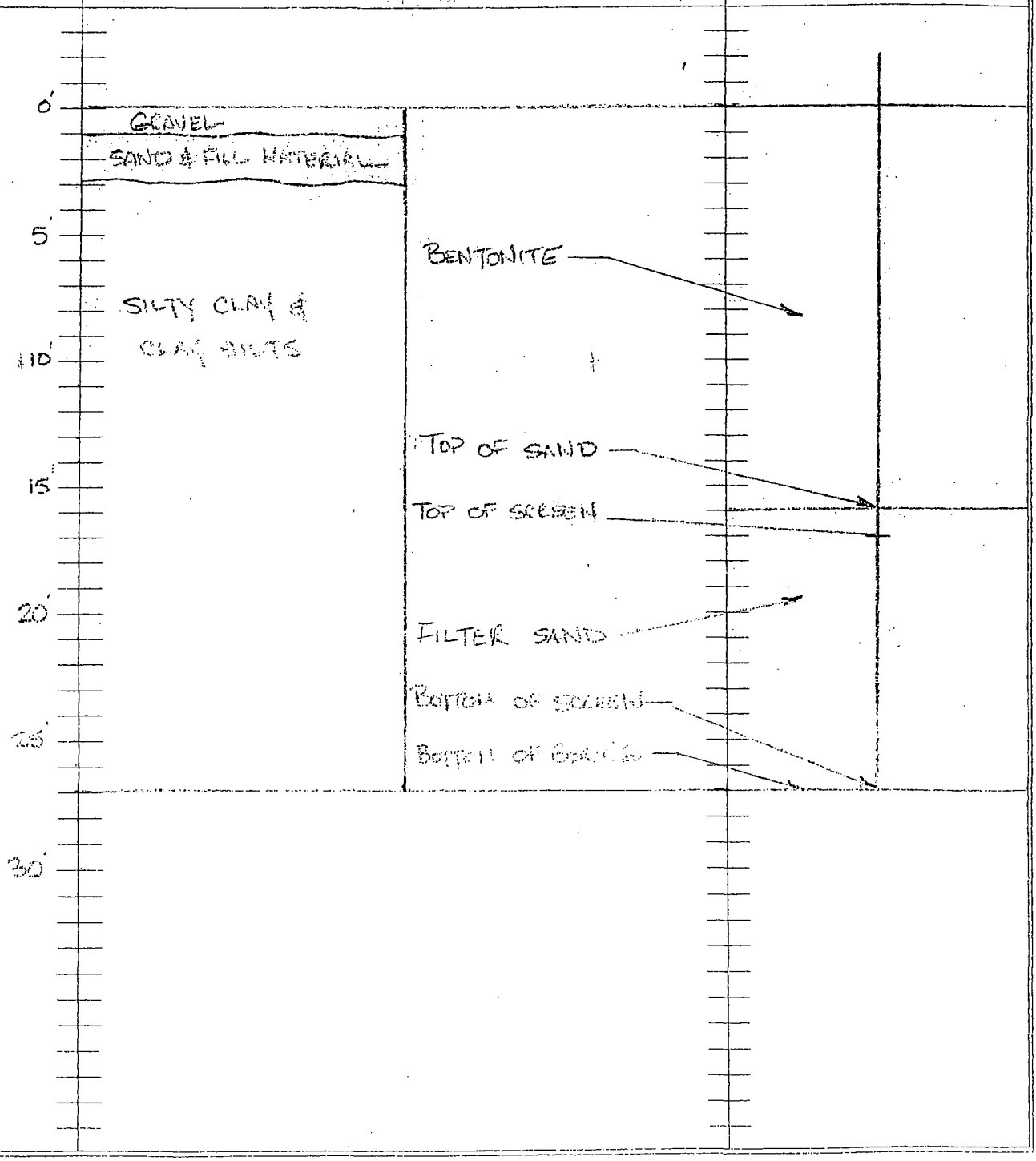
CLIENT: GRAYCOR		PAGE 14 OF 27
JOB # E-7-256	DATE 3-14-05	BORING # 14
DRILLER: R.G. BAKER		WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH
SCREEN TYPE PVC SCH. 40	SLOT 0.020" DIAMETER 4"	LENGTH

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	
	SAND & FILL MATERIAL	
5'		BENTONITE
	SILTY CLAY & CLAY SILTS	
10'		
		TOP OF SAND
15'		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		

CLIENT: GRANCOR		PAGE 15 OF 27
JOB # E-7-2560	DATE 3.14.05	BORING # 15

DRILLER: R.G. BAKER	WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH

DEPTH FT.	LITHOLOGY	WELL COMP.



CLIENT: GENCOR		PAGE 16 OF 27
JOB # E-7-2516	DATE 3.14.05	BORING # 16
DRILLER: R.G. BAKER		WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH
SCREEN TYPE PVC SCH. 40 SLOT 0.020"	DIAMETER 4"	LENGTH

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	
	SAND & FILL MATERIAL	
5'		BENTONITE
	SILTY CLAY & CLAY SILTS	
10'		
		TOP OF SAND
15'		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		

CLIENT: GRANCOR		PAGE 17 OF 27
JOB # E-7-256	DATE 3-14-05	BORING # 17

DRILLER: R.G. BAKER	WATER LEVEL
DRILLING METHOD Hollow Stem Auger	SAMPLE METHOD Auger Cuttings
SAND PACK 10/40 Silica Sand	SEAL Bentonite
CASING TYPE PVC Sch. 40 DIAMETER 4"	LENGTH
SCREEN TYPE PVC Sch. 40 SLOT 0.020" DIAMETER 4"	LENGTH

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	
	SAND & FILL MATERIAL	
5'		BENTONITE
	SILTY CLAY & CLAY SILTS	
10'		
		TOP OF SAND
15'		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		

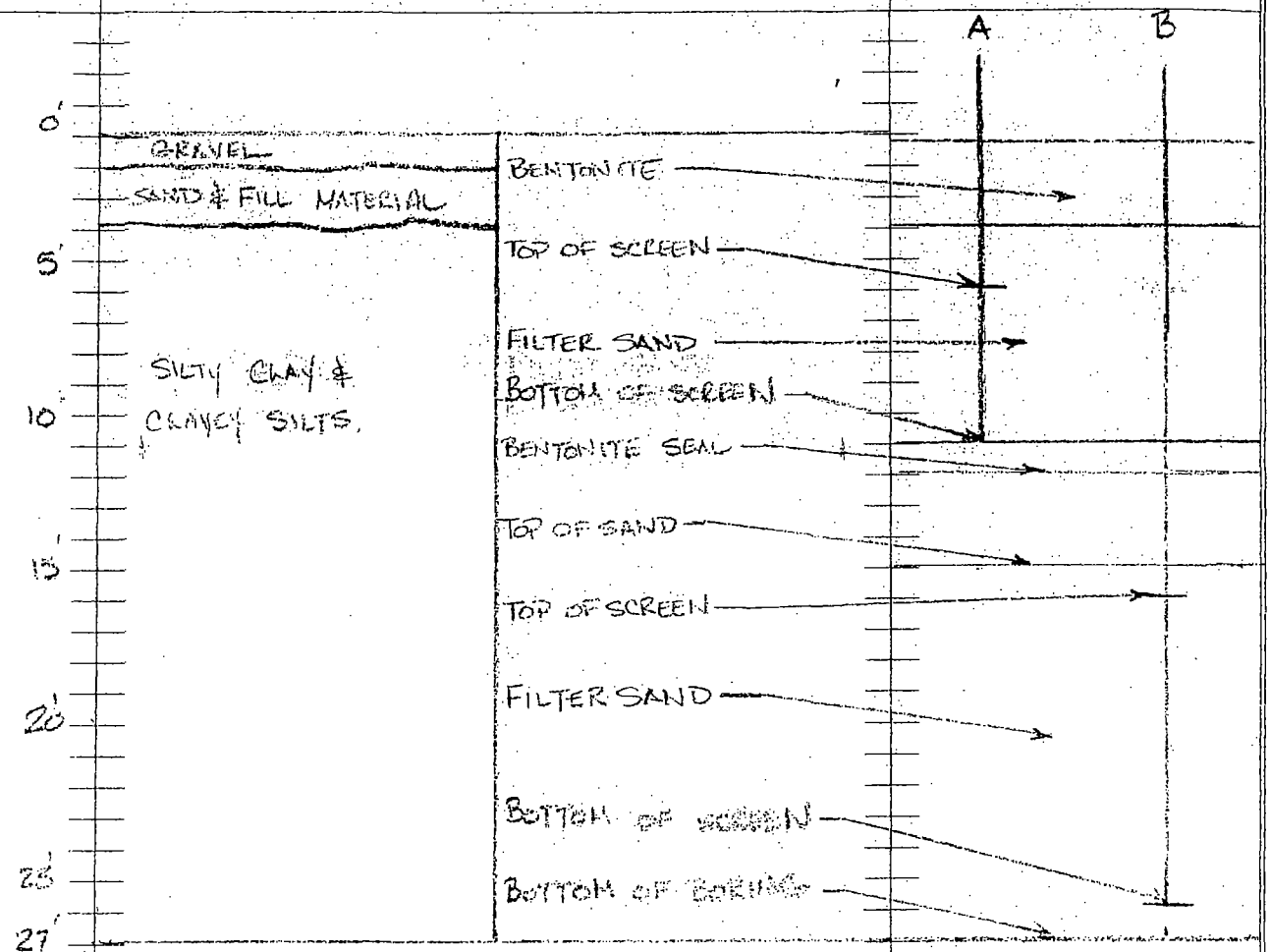
CLIENT: GRANCOR		PAGE 18 OF 27
JOB # E-7-2560	DATE 3-14-05	BORING # 18

DRILLER: R.G. BAKER	WATER LEVEL
DRILLING METHOD Hollow Stem Auger	SAMPLE METHOD Auger Cuttings
SAND PACK 10/20 SILICA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	
	SAND & FILL MATERIAL	
5'		BENTONITE
	SILTY CLAY & CLAY SILTS	
10'		
		TOP OF SAND
15'		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		

CLIENT: GRAYCOR		PAGE 19 OF 27
JOB # E-7-256	DATE 3.14.05	BORING # 19 A & B
DRILLER: R.C. BAKER		WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 020"	DIAMETER 4"	LENGTH A= 5' B= 10'

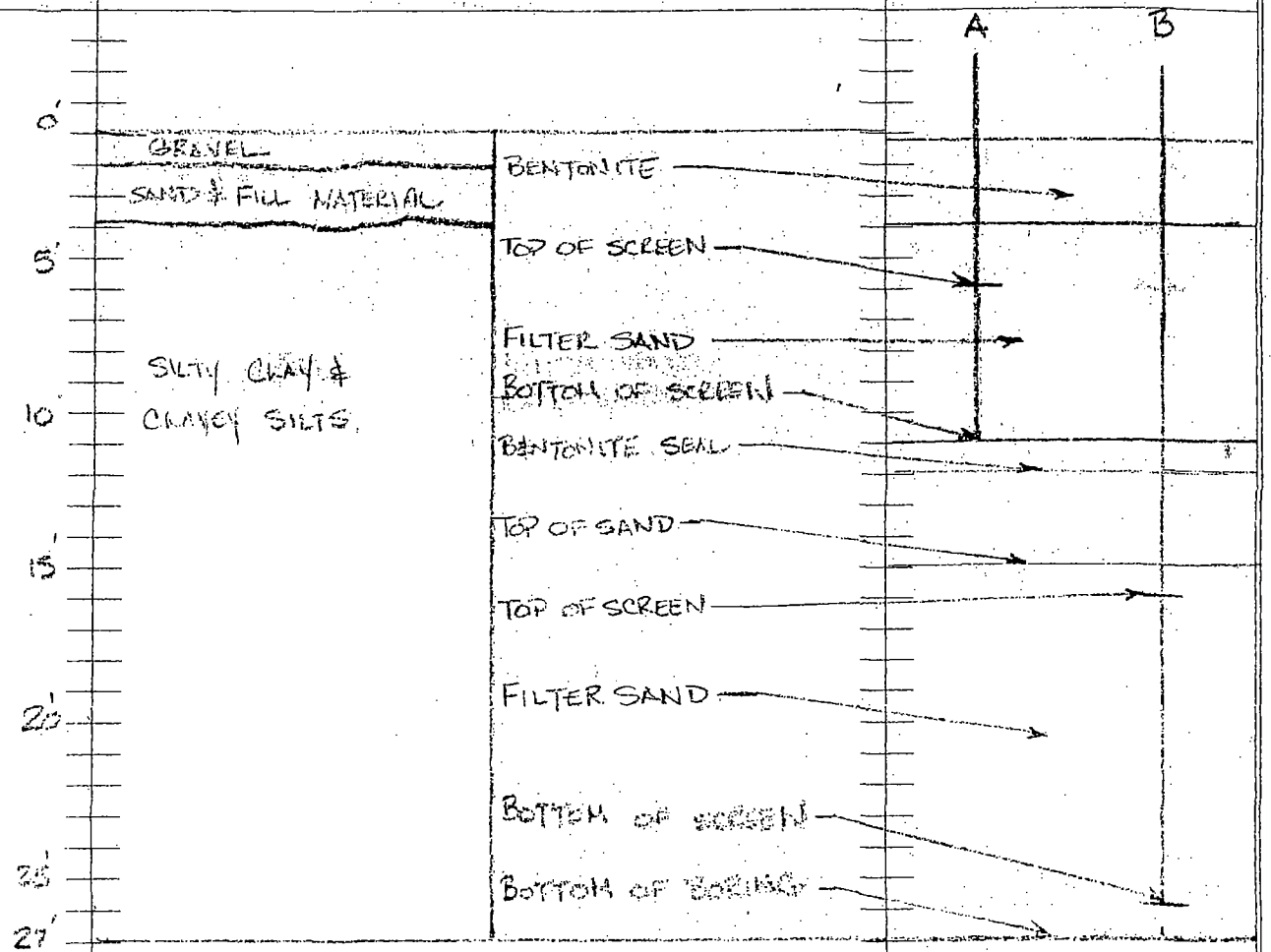
DEPTH FT.	LITHOLOGY	WELL COMP.



CLIENT: GRAYCOR		PAGE 20 OF 27
JOB # E-7-256	DATE 3.15.05	BORING # 20A&B

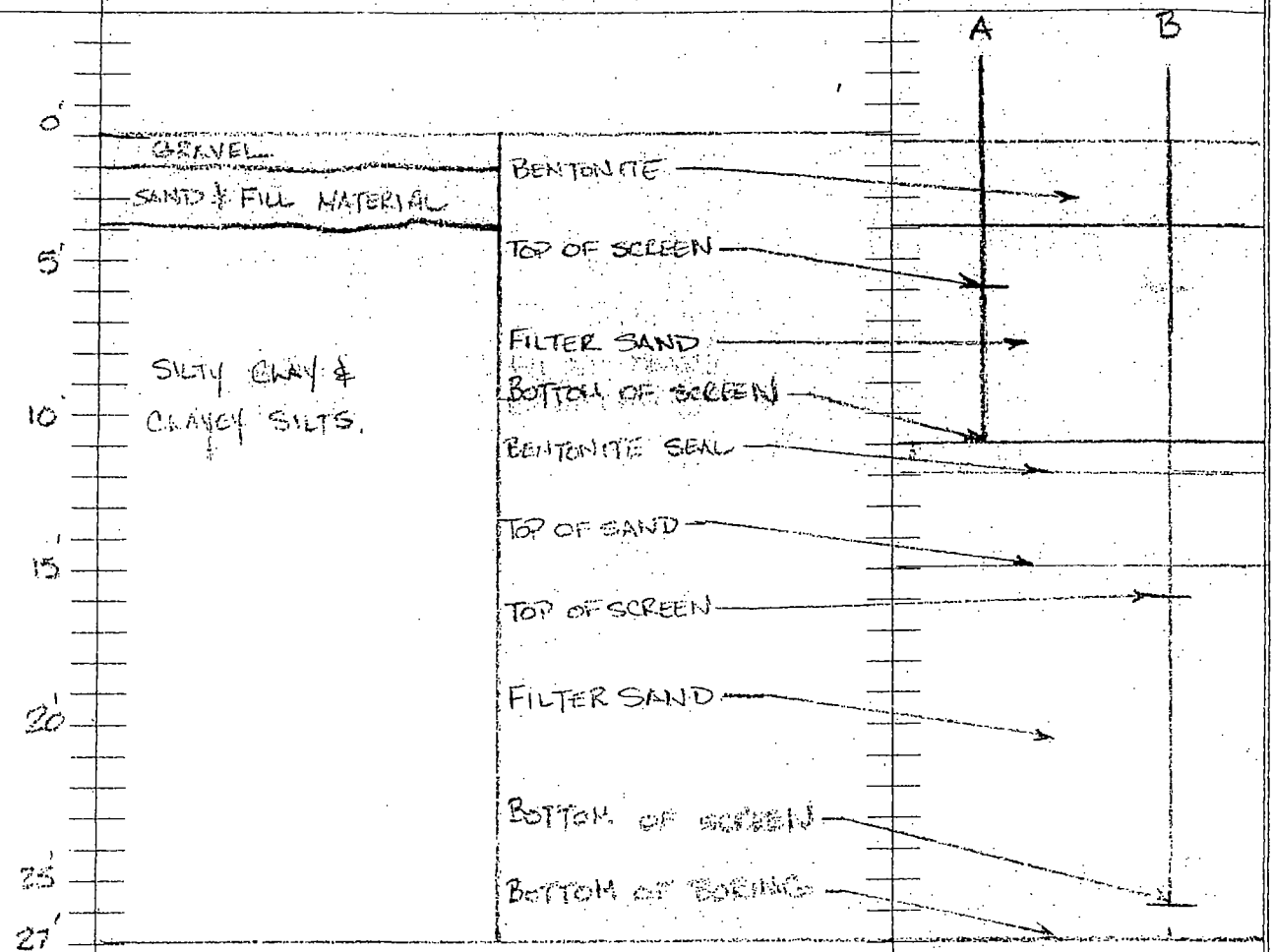
DRILLER: MIKE WOOLFOLK	WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.



CLIENT: GRAYCOR		PAGE 21 OF 27
JOB # E-7-256	DATE 3.15.05	BORING # 21 A & B
DRILLER: MIKE WOOLFOLK		WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40	SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.



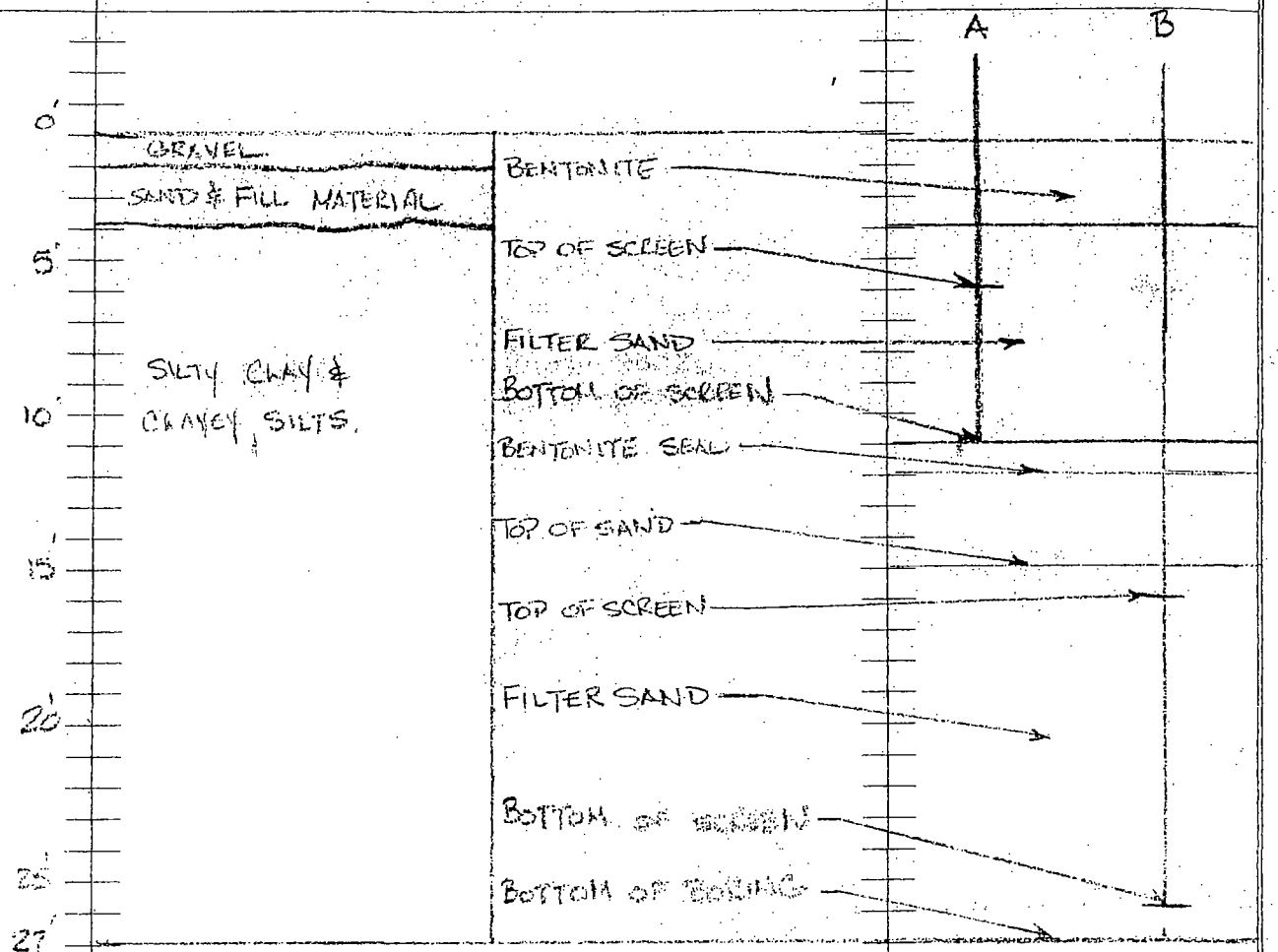
CLIENT: GRAYCOR		PAGE 22 OF 27
JOB # E-7-256	DATE 3.15.05	BORING # 22A & B
DRILLER: MIKE WOODFOLK		WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH. 40	DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 0.020"	DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	A B
	SAND & FILL MATERIAL	BENTONITE
5'		TOP OF SCREEN
	SILTY CLAY & CLAYEY SILTS	FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE SEAL
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
27'		
30'		

CLIENT: GRAYCOR		PAGE 23 OF 27
JOB # E-7-256	DATE 3.15.05	BORING # 23A & B

DRILLER: MIKE WOOLFOLK	WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.



CLIENT: GRAYCOR		PAGE 24 OF 27
JOB # E-7-256	DATE 3.15.05	BORING # 24 A & B

DRILLER: MIKE WOOLFOLK	WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT .020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY		WELL COMP. A	WELL COMP. B
0'	GRAVEL	BENTONITE		
	SAND & FILL MATERIAL			
5'		TOP OF SCREEN		
		FILTER SAND		
	SILTY CLAY & CLAYEY SILTS	BOTTOM OF SCREEN		
10'		BENTONITE SEAL		
		TOP OF SAND		
15'				
		TOP OF SCREEN		
20'		FILTER SAND		
		BOTTOM OF SCREEN		
25'		BOTTOM OF BORING		
27'				
30'				

CLIENT: GRAYCOR		PAGE 25 OF 27
JOB # E-7-256	DATE 3.15.05	BORING # 25 A&B

DRILLER: MIKE WOOLFOLK	WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 19'
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	A B
	SAND & FILL MATERIAL	BENTONITE
5'		TOP OF SCREEN
		FILTER SAND
	SILTY CLAY & CLAYEY SILTS	BOTTOM OF SCREEN
10'		BENTONITE SEAL
		TOP OF SAND
15'		TOP OF SCREEN
		FILTER SAND
20'		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
27'		
30'		

CLIENT: GRAYCOR		PAGE 26 OF 27
JOB # E-7-256	DATE 3.15.05	BORING # 26 A & B

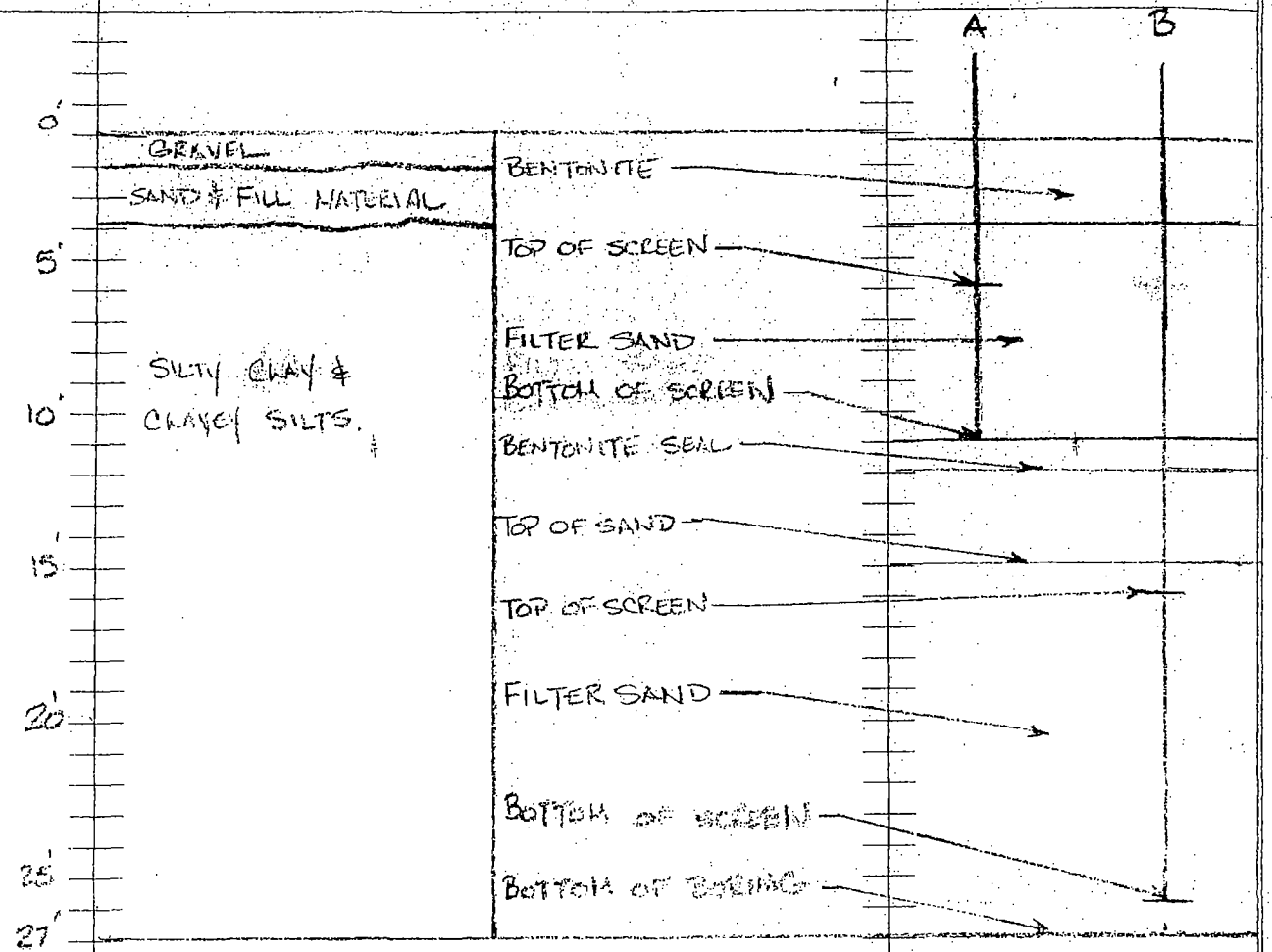
DRILLER: MIKE WOOLFOLK	WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT .020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	A B
	SAND & FILL MATERIAL	BENTONITE
5'		TOP OF SCREEN
	SILTY CLAY & CLAYEY SILTS	FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE SEAL
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
27'		
30'		

CLIENT: GRAYCOR		PAGE 27 OF 27
JOB # E-7-256	DATE 3.15.05	BORING # 27 A&B

DRILLER: MIKE WOOLFOLK	WATER LEVEL
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILCA SAND	SEAL BENTONITE
CASING TYPE PVC SCH. 40 DIAMETER 4"	LENGTH A= 7' B= 17'
SCREEN TYPE PVC SCH. 40 SLOT 0.020" DIAMETER 4"	LENGTH A= 5' B= 10'

DEPTH FT.	LITHOLOGY	WELL COMP.



CLIENT: GRAYCOR | PAGE 1 OF 23

JOB # E-7-256 | DATE 2.8.05 | BORING # 28A&B

DRILLER: MICHAEL WOOLFOLK | WATER LEVEL NA

DRILLING METHOD HOLLOW STEM AUGER | SAMPLE METHOD AUGER CUTTINGS

SAND PACK 10/40 SILICA SAND | SEAL BENTONITE

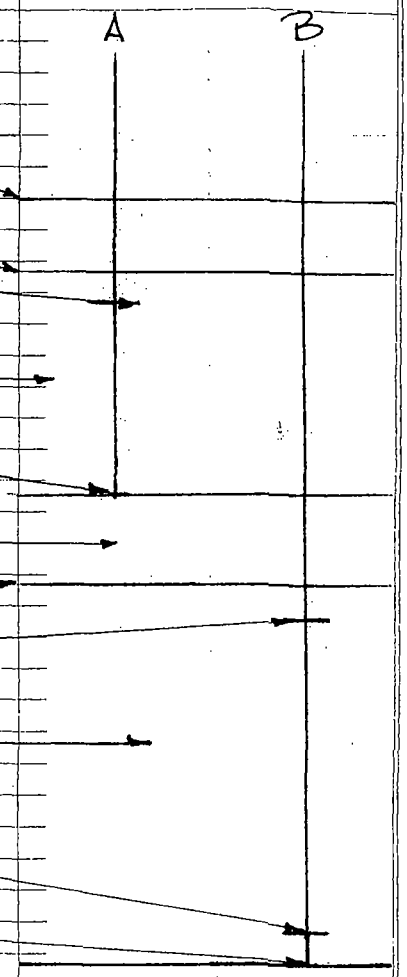
CASING TYPE PVC SCH 40 DIAMETER 4" LENGTH A = 7', B = 17'

SCREEN TYPE PVC SCH 40 SLOT 0.020 DIAMETER 4" LENGTH A = 5', B = 10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL		
		TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILTS	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

CLIENT: GRAYCOR		PAGE 2 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 29 A&B
DRILLER: MICHAEL WOOLFOLK	WATER LEVEL NA	
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS	
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE	
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A = 7', B = 17'
SCREEN TYPE PVC SCH 40	SLOT 0.020	DIAMETER 4" LENGTH A = 5', B = 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	TOP OF BENTONITE
	SAND & FILL MATERIAL	
		TOP OF SAND
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN
		FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		



CLIENT: GRAYCOR		PAGE 3 OF 23
JOB # E-7-256	DATE 2-8-05	BORING # 30 A&B
DRILLER: MICHAEL WOOLFOLK	WATER LEVEL NA !	
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS	
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE	
CASING TYPE PVC SCH 40 DIAMETER 4"	LENGTH A = 7', B = 17'	
SCREEN TYPE PVC SCH 40 SLOT 0.020 DIAMETER 4"	LENGTH A = 5', B = 10'	

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL		
		TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

CLIENT: GRAYCOR		PAGE 4 OF 23
JOB # E-7-256	DATE 2·8·05	BORING # 31 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL	TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

CLIENT: GRAYCOR		PAGE 5 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 31C
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOWSTEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH40	DIAMETER 4"	LENGTH 35'
SCREEN TYPE PVC SCH40	SLOT 0.020 DIAMETER 4"	LENGTH 10'

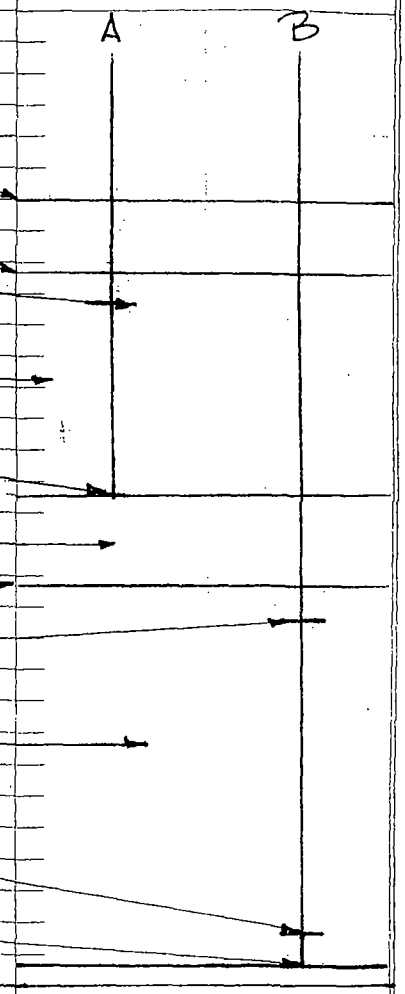
DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	
	SAND & FILL MATERIAL	
5'		
10'		
15'	SILTY CLAY & CLAYEY SILTS	BENTONITE CEMENT GROUT
20'		
25'		BENTONITE SEAL
30'		TOP OF SCREEN
35'		FILTER SAND
40'		BOTTOM OF SCREEN BOTTOM OF BORING

CLIENT: GRAYCOR		PAGE 6 OF 23
JOB # E-7-256	DATE 2-8-05	BORING # 32 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL		
		TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

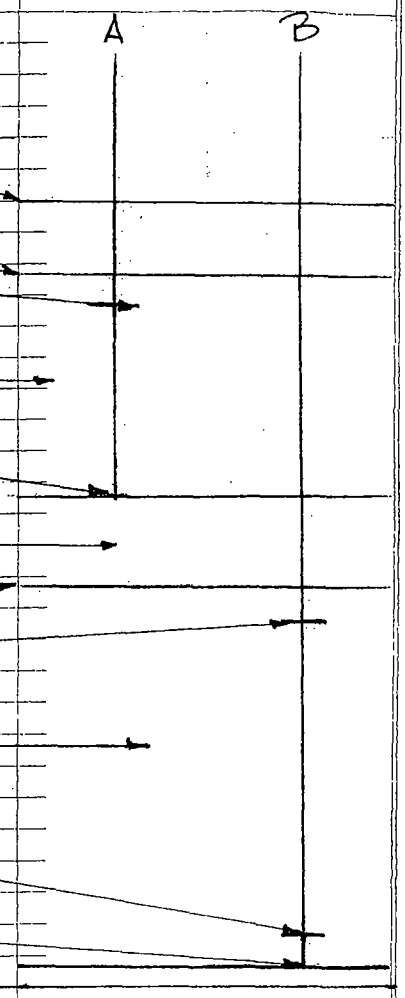
CLIENT: GRAYCOR		PAGE 7 OF 23
JOB # E-7-256	DATE 2-8-05	BORING # 33A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL N.A.
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	TOP OF BENTONITE
	SAND & FILL MATERIAL	
		TOP OF SAND
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN
		FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		



CLIENT: GRAYCOR		PAGE 8 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 34 A&B
DRILLER: MICHAEL WOOLFOLK	WATER LEVEL NA	
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS	
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE	
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A = 7', B = 17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A = 5', B = 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	TOP OF BENTONITE
	SAND & FILL MATERIAL	
		TOP OF SAND
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN
		FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		

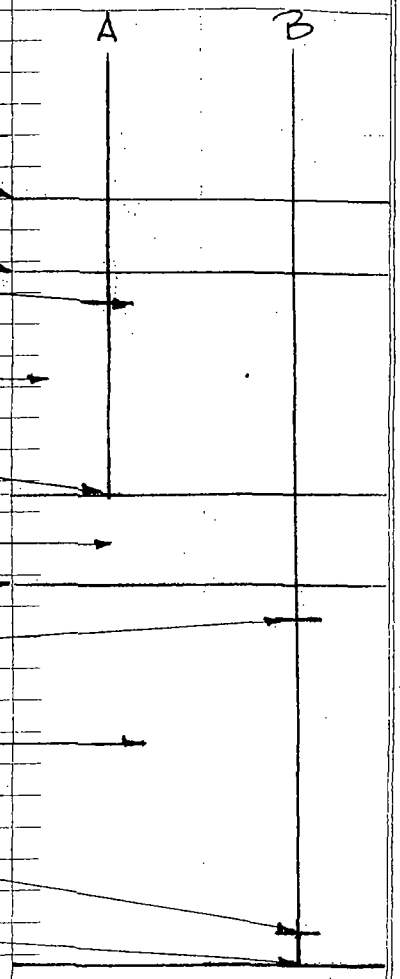


CLIENT: GRAYCOR		PAGE 9 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 35 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL N.A.
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL	TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

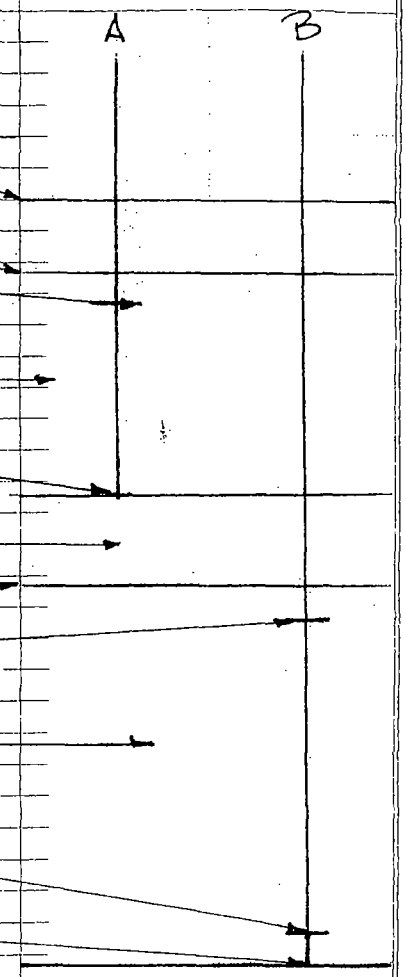
CLIENT: GRAYCOR		PAGE 10 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 36 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A = 7', B = 17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A = 5', B = 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	TOP OF BENTONITE
	SAND & FILL MATERIAL	
		TOP OF SAND
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN
		FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		



CLIENT: GRAYCOR		PAGE 11 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 37A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	TOP OF BENTONITE
	SAND & FILL MATERIAL	
		TOP OF SAND
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN
		FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		



CLIENT: GRAYCOR		PAGE 12 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 37C
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOWSTEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH40	DIAMETER 4"	LENGTH 35'
SCREEN TYPE PVC SCH40	SLOT 0.020 DIAMETER 4"	LENGTH 10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	
	SAND & FILL MATERIAL	
5'		
10'		
15'	SILTY CLAY & CLAYEY SILTS	BENTONITE CEMENT GROUT
20'		
25'		BENTONITE SEAL
30'		TOP OF SCREEN
35'		FILTER SAND
40'		BOTTOM OF SCREEN BOTTOM OF BORING

CLIENT: GRAYCOR		PAGE 13 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 38 A&B
DRILLER: MICHAEL WOOLFORK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

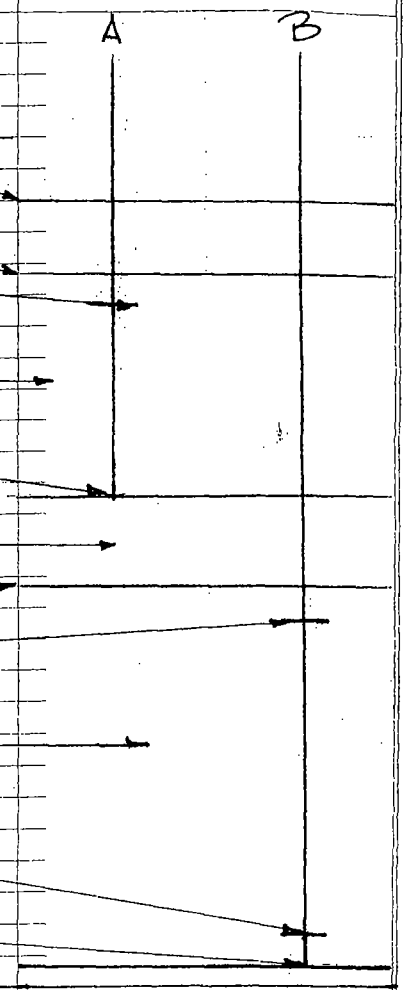
DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL		
		TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

CLIENT: GRAYCOR		PAGE 14 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 39 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE	
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL		
		TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

CLIENT: GRAYCOR		PAGE 15 OF 23
JOB # E-7-256	DATE 2·8·05	BORING # 40 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	TOP OF BENTONITE
	SAND & FILL MATERIAL	
		TOP OF SAND
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN
		FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		



CLIENT: GRAYCOR		PAGE 16 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 41 A&B
DRILLER: MICHAEL WOOLFOLK	WATER LEVEL NA	
DRILLING METHOD HOLLOW STEM AUGER	SAMPLE METHOD AUGER CUTTINGS	
SAND PACK 10/40 SILICA SAND	SEAL BENTONITE	
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL	TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

CLIENT: GRAYCOR		PAGE 17 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 42 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL		
		TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

CLIENT: GRAYCOR		PAGE 18 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 42C
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOWSTEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH40	DIAMETER 4"	LENGTH 35'
SCREEN TYPE PVC SCH40	SLOT 0.020 DIAMETER 4"	LENGTH 10'

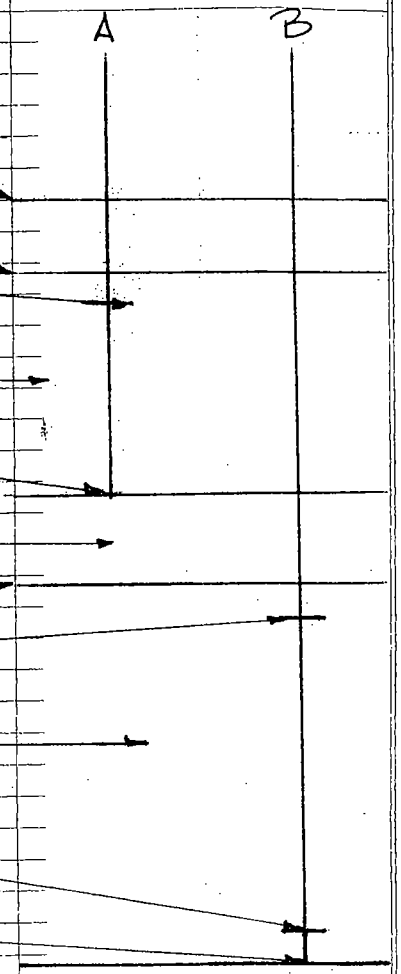
DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	
	SAND & FILL MATERIAL	
5'		
10'		
15'	SILTY CLAY & CLAYEY SILTS	BENTONITE CEMENT GROUT
20'		
25'		BENTONITE SEAL
30'		TOP OF SCREEN
35'		FILTER SAND
40'		BOTTOM OF SCREEN BOTTOM OF BORING

CLIENT: GRAYCOR		PAGE 19 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 43 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL		
		TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

CLIENT: GRAYCOR		PAGE 20 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 44 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	TOP OF BENTONITE
	SAND & FILL MATERIAL	
		TOP OF SAND
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN
		FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		

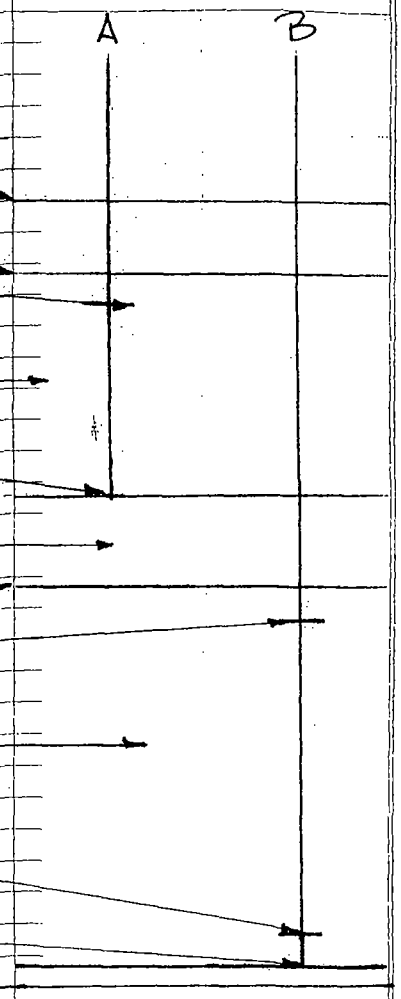


CLIENT: GRAYCOR		PAGE 21 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 45 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL		
		TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			

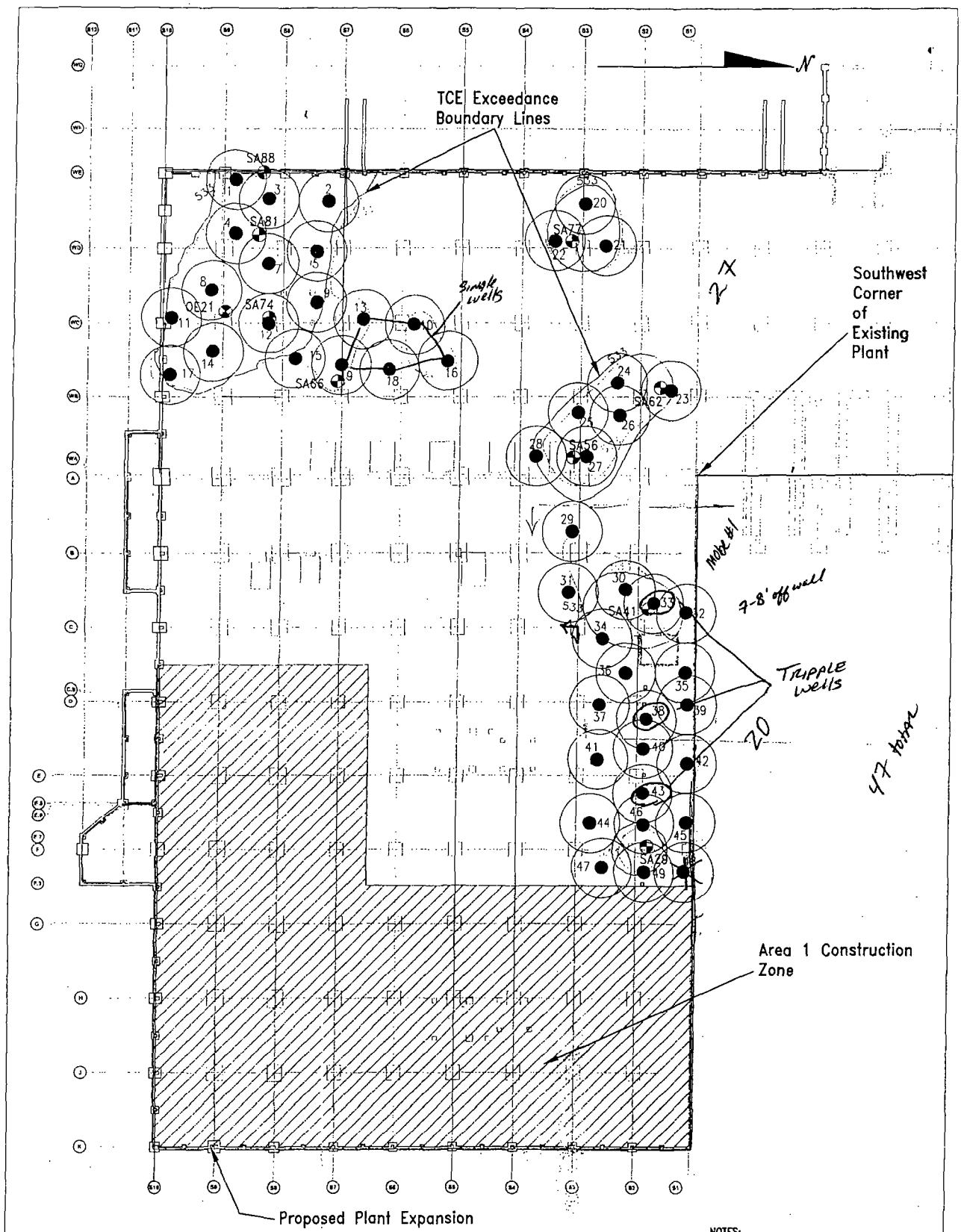
CLIENT: GRAYCOR		PAGE 22 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 46 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY	WELL COMP.
0'	GRAVEL	TOP OF BENTONITE
	SAND & FILL MATERIAL	
		TOP OF SAND
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN
		FILTER SAND
10'		BOTTOM OF SCREEN
		BENTONITE
15'		TOP OF SAND
		TOP OF SCREEN
20'		FILTER SAND
		BOTTOM OF SCREEN
25'		BOTTOM OF BORING
30'		



CLIENT: GRAYCOR		PAGE 23 OF 23
JOB # E-7-256	DATE 2.8.05	BORING # 47 A&B
DRILLER: MICHAEL WOOLFOLK		WATER LEVEL NA
DRILLING METHOD HOLLOW STEM AUGER		SAMPLE METHOD AUGER CUTTINGS
SAND PACK 10/40 SILICA SAND		SEAL BENTONITE
CASING TYPE PVC SCH 40	DIAMETER 4"	LENGTH A=7', B=17'
SCREEN TYPE PVC SCH 40	SLOT 0.020 DIAMETER 4"	LENGTH A=5', B=10'

DEPTH FT.	LITHOLOGY		WELL COMP.
0'	GRAVEL	TOP OF BENTONITE	A B
	SAND & FILL MATERIAL		
		TOP OF SAND	
5'	SILTY CLAY & CLAYEY SILT	TOP OF SCREEN	
		FILTER SAND	
10'		BOTTOM OF SCREEN	
		BENTONITE	
15'		TOP OF SAND	
		TOP OF SCREEN	
20'		FILTER SAND	
		BOTTOM OF SCREEN	
25'		BOTTOM OF BORING	
30'			



NOTES:
The drawing is Design-Build and is based upon the most recent structural design drawings from Burr & Cole- received by XDD 12-01-04.

LEGEND

- Geoprobe Point > 533 ug/Kg TCE (2004)
- TCE 533 ug/Kg Contour Line 0 - 6 FT BGS (2004)
- TCE 533 ug/Kg Contour Line 6 - 20 FT BGS (2004)
- 143 Proposed Multilevel Soil Vapor Extraction Wells (Shallow, Deep, and Deep Sand-See Figs. S-2,3 for Design Details)
- Proposed Dual Level Soil Vapor Extraction Wells (Shallow and Deep-See Figs. S-2,3 for Design Details)
- 3,14,18 Proposed Single Level Soil Vapor Extraction Well (Deep-See Figure S-3 for Design Details)
- Area of Influence of proposed MPA SVE wells
- Area 1 Construction Zone

NOTES

SVE Wells are spaced approximately 40' on center
SVE Well #6 has been removed from the design

0 30 60 120
GRAPHIC SCALE

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: AS SHOWN	TITLE: MPA SVE WELL LAYOUT UTC - Carrier Air Conditioning Collierville, TN
DATE: DECEMBER 2, 2004	
PROJECT NO.: 72371	
CLIENT: UTC - COLLIERVILLE	
DRAWN BY: MTT	FIGURE: S-1B
CHECKED BY: OU	REV. L
PRES. MGMT. APPROVAL:	

U.S. EPA REGION IV

SDMS

Unscannable Material Target Sheet

DocID: 10663222 Site ID: TND044062222

Site Name: Carrier Air Conditioning Co.

Nature of Material:

Map:	☐	Computer Disks:	☐
Photos:	☐	CD-ROM:	☑
Blueprints:	☐	Oversized Report:	☐
Slides:	☐	Log Book:	☐

Other (describe): Completion Report Carrier Air Conditioning Site - Collierville, TN (Appendix C)

Amount of material:

* Please contact the appropriate Records Center to view the material *

APPENDIX C

WORK PLAN FOR THE START-UP AND OPTIMIZATION OF MPA RECONSTRUCTED SVE AND SSV SYSTEMS

(APPENDIX IS INCLUDED ON ATTACHED CD)

APPENDIX D

SOIL VAPOR SAMPLING – LABORATORY ANALYTICAL RESULTS

- SVE WELL TESTING (APRIL 2005)
- BASELINE SOIL VAPOR SAMPLING (OCTOBER 2005)
- SVE STARTUP PERFORMANCE AND DISCHARGE SAMPLING (DECEMBER 2005)

SVE WELL TESTING
(APRIL 2005)

LABORATORY ANALYTICAL RESULTS

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55321
Sample ID: 031091SVE37D
Sample Type: Air bag
Site ID:

Date Collected: 4/19/05
Time Collected: 6:45
Date Received: 4/20/05
Time Received: 8:00

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Time	Analyst	Method
Bromodichloromethane	< 250.	< 1690	500.	4/26/05	6:26	C. Wani	TO-15
Bromoform	< 250.	< 2600	500.	4/26/05	6:26	C. Wani	TO-15
Dibromochloromethane	< 250.	< 2150	500.	4/26/05	6:26	C. Wani	TO-15
Dichlorodifluoromethane	< 250.	< 1250	500.	4/26/05	6:26	C. Wani	TO-15
Trichlorofluoromethane	< 250.	< 1420	500.	4/26/05	6:26	C. Wani	TO-15
Cyclohexane	< 250.	< 875.	500.	4/26/05	6:26	C. Wani	TO-15
Carbon Disulfide	< 250.	< 792.	500.	4/26/05	6:26	C. Wani	TO-15
Vinyl Chloride	3350	8650	500.	4/26/05	6:26	C. Wani	TO-15
1,4-Dioxane	< 500.	< 1830	500.	4/26/05	6:26	C. Wani	TO-15
Chloromethane	< 250.	< 521.	500.	4/26/05	6:26	C. Wani	TO-15
Propylene	< 250.	< 438.	500.	4/26/05	6:26	C. Wani	TO-15
Bromomethane	< 250.	< 979.	500.	4/26/05	6:26	C. Wani	TO-15
Dichlorotetrafluoroethane	< 500.	< 3540	500.	4/26/05	6:26	C. Wani	TO-15
Chloroethane	< 250.	< 667.	500.	4/26/05	6:26	C. Wani	TO-15
1,3-Butadiene	< 250.	< 562.	500.	4/26/05	6:26	C. Wani	TO-15
1,1-Dichloroethane	< 250.	< 1020	500.	4/26/05	6:26	C. Wani	TO-15
Trichlorotrifluoroethane	< 250.	< 1940	500.	4/26/05	6:26	C. Wani	TO-15
t-1,2-Dichloroethene	1300	5200	500.	4/26/05	6:26	C. Wani	TO-15
2-Hexanone	< 500.	< 2080	500.	4/26/05	6:26	C. Wani	TO-15
1,2-Dichloropropane	< 250.	< 1170	500.	4/26/05	6:26	C. Wani	TO-15
m,p-Xylene	< 250.	< 1100	500.	4/26/05	6:26	C. Wani	TO-15
1,1,2-Trichloroethane	< 250.	< 1380	500.	4/26/05	6:26	C. Wani	TO-15
o-Xylene	< 250.	< 1100	500.	4/26/05	6:26	C. Wani	TO-15
1,2-Dibromoethane	< 250.	< 1940	500.	4/26/05	6:26	C. Wani	TO-15
Chlorobenzene	< 250.	< 1170	500.	4/26/05	6:26	C. Wani	TO-15
Hexachloro-1,3-butadiene	< 250.	< 2690	500.	4/26/05	6:26	C. Wani	TO-15
c-1,3-Dichloropropene	< 250.	< 1150	500.	4/26/05	6:26	C. Wani	TO-15
t-1,3-Dichloropropene	< 250.	< 1150	500.	4/26/05	6:26	C. Wani	TO-15
Styrene	< 250.	< 1080	500.	4/26/05	6:26	C. Wani	TO-15
1,1,2,2-Tetrachloroethane	< 250.	< 1730	500.	4/26/05	6:26	C. Wani	TO-15
1,3,5-Trimethylbenzene	< 250.	< 1250	500.	4/26/05	6:26	C. Wani	TO-15
1,2,4-Trimethylbenzene	< 250.	< 1250	500.	4/26/05	6:26	C. Wani	TO-15
1,2-Dichlorobenzene	< 250.	< 1520	500.	4/26/05	6:26	C. Wani	TO-15
1,3-Dichlorobenzene	< 250.	< 1520	500.	4/26/05	6:26	C. Wani	TO-15
1,4-Dichlorobenzene	< 250.	< 1520	500.	4/26/05	6:26	C. Wani	TO-15

Sample report continued . . .

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55321
Sample ID: 031091SVE37D
Sample Type: Air bag
Site ID:

Date Collected: 4/19/05
Time Collected: 6:45
Date Received: 4/20/05
Time Received: 8:00

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Time	Analyst	Method
1,2,4-Trichlorobenzene	< 250.	< 1880	500.	4/26/05	6:26	C. Wani	TO-15
Methylisobutyl ketone	< 500.	< 2080	500.	4/26/05	6:26	C. Wani	TO-15
Heptane	< 250.	< 1040	500.	4/26/05	6:26	C. Wani	TO-15
Hexane	300.	1080	500.	4/26/05	6:26	C. Wani	TO-15
Methylene Chloride	< 250.	< 875.	500.	4/26/05	6:26	C. Wani	TO-15
Tetrahydrofuran	7400	22200	500.	4/26/05	6:26	C. Wani	TO-15
Toluene	< 250.	< 958.	500.	4/26/05	6:26	C. Wani	TO-15
Benzene	< 250.	< 812.	500.	4/26/05	6:26	C. Wani	TO-15
Chloroform	250.	1230	500.	4/26/05	6:26	C. Wani	TO-15
Carbon tetrachloride	< 250.	< 1580	500.	4/26/05	6:26	C. Wani	TO-15
Tetrachloroethene	< 250.	< 1710	500.	4/26/05	6:26	C. Wani	TO-15
Trichloroethene	402000	2180000	5000	4/26/05	7:10	C. Wani	TO-15
Vinyl Acetate	< 500.	< 1790	500.	4/26/05	6:26	C. Wani	TO-15
Ethylbenzene	< 250.	< 1100	500.	4/26/05	6:26	C. Wani	TO-15
Methyl-t-butyl ether	< 250.	< 917.	500.	4/26/05	6:26	C. Wani	TO-15
Ethyl acetate	< 250.	< 917.	500.	4/26/05	6:26	C. Wani	TO-15
1,1,1-Trichloroethane	< 250.	< 1380	500.	4/26/05	6:26	C. Wani	TO-15
Isopropyl Alcohol	3300	8250	500.	4/26/05	6:26	C. Wani	TO-15
1,2-Dichloroethane	< 250.	< 1020	500.	4/26/05	6:26	C. Wani	TO-15
c-1,2-Dichloroethene	237000	948000	5000	4/26/05	7:10	C. Wani	TO-15
Acetone	< 500.	< 1210	500.	4/26/05	6:26	C. Wani	TO-15
1,1-Dichloroethene	800.	3200	500.	4/26/05	6:26	C. Wani	TO-15
2-Butanone	< 250.	< 750.	500.	4/26/05	6:26	C. Wani	TO-15
4-Ethyltoluene	< 250.	< 1250	500.	4/26/05	6:26	C. Wani	TO-15

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55322
Sample ID: 031091SVE37S
Sample Type: Air bag
Site ID:

Date Collected: 4/19/05
Time Collected: 14:49
Date Received: 4/20/05
Time Received: 8:00

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Time	Analyst	Method
Bromodichloromethane	< 250.	< 1690	500.	4/26/05	7:56	C. Wani	TO-15
Bromoform	< 250.	< 2600	500.	4/26/05	7:56	C. Wani	TO-15
Dibromochloromethane	< 250.	< 2150	500.	4/26/05	7:56	C. Wani	TO-15
Dichlorodifluoromethane	< 250.	< 1250	500.	4/26/05	7:56	C. Wani	TO-15
Trichlorofluoromethane	< 250.	< 1420	500.	4/26/05	7:56	C. Wani	TO-15
Cyclohexane	< 250.	< 875.	500.	4/26/05	7:56	C. Wani	TO-15
Carbon Disulfide	< 250.	< 792.	500.	4/26/05	7:56	C. Wani	TO-15
Vinyl Chloride	10500 E	27100 E	500.	4/26/05	7:56	C. Wani	TO-15
1,4-Dioxane	< 500.	< 1830	500.	4/26/05	7:56	C. Wani	TO-15
Chloromethane	< 250.	< 521.	500.	4/26/05	7:56	C. Wani	TO-15
Propylene	< 250.	< 438.	500.	4/26/05	7:56	C. Wani	TO-15
Bromomethane	< 250.	< 979.	500.	4/26/05	7:56	C. Wani	TO-15
Dichlorotetrafluoroethane	< 500.	< 3540	500.	4/26/05	7:56	C. Wani	TO-15
Chloroethane	< 250.	< 667.	500.	4/26/05	7:56	C. Wani	TO-15
1,3-Butadiene	< 250.	< 562.	500.	4/26/05	7:56	C. Wani	TO-15
1,1-Dichloroethane	< 250.	< 1020	500.	4/26/05	7:56	C. Wani	TO-15
Trichlorotrifluoroethane	< 250.	< 1940	500.	4/26/05	7:56	C. Wani	TO-15
t-1,2-Dichloroethene	2400	9600	500.	4/26/05	7:56	C. Wani	TO-15
2-Hexanone	< 500.	< 2080	500.	4/26/05	7:56	C. Wani	TO-15
1,2-Dichloropropane	< 250.	< 1170	500.	4/26/05	7:56	C. Wani	TO-15
m,p-Xylene	< 250.	< 1100	500.	4/26/05	7:56	C. Wani	TO-15
1,1,2-Trichloroethane	< 250.	< 1380	500.	4/26/05	7:56	C. Wani	TO-15
o-Xylene	< 250.	< 1100	500.	4/26/05	7:56	C. Wani	TO-15
1,2-Dibromoethane	< 250.	< 1940	500.	4/26/05	7:56	C. Wani	TO-15
Chlorobenzene	< 250.	< 1170	500.	4/26/05	7:56	C. Wani	TO-15
Hexachloro-1,3-butadiene	< 250.	< 2690	500.	4/26/05	7:56	C. Wani	TO-15
c-1,3-Dichloropropene	< 250.	< 1150	500.	4/26/05	7:56	C. Wani	TO-15
t-1,3-Dichloropropene	< 250.	< 1150	500.	4/26/05	7:56	C. Wani	TO-15
Styrene	< 250.	< 1080	500.	4/26/05	7:56	C. Wani	TO-15
1,1,2,2-Tetrachloroethane	< 250.	< 1730	500.	4/26/05	7:56	C. Wani	TO-15
1,3,5-Trimethylbenzene	< 250.	< 1250	500.	4/26/05	7:56	C. Wani	TO-15
1,2,4-Trimethylbenzene	< 250.	< 1250	500.	4/26/05	7:56	C. Wani	TO-15
1,2-Dichlorobenzene	< 250.	< 1520	500.	4/26/05	7:56	C. Wani	TO-15
1,3-Dichlorobenzene	< 250.	< 1520	500.	4/26/05	7:56	C. Wani	TO-15
1,4-Dichlorobenzene	< 250.	< 1520	500.	4/26/05	7:56	C. Wani	TO-15

Sample report continued . . .

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55322
Sample ID: 031091SVE37S
Sample Type: Air bag
Site ID:

Date Collected: 4/19/05
Time Collected: 14:49
Date Received: 4/20/05
Time Received: 8:00

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Time	Analyst	Method
1,2,4-Trichlorobenzene	< 250.	< 1880	500.	4/26/05	7:56	C. Wani	TO-15
Methylisobutyl ketone	< 500.	< 2080	500.	4/26/05	7:56	C. Wani	TO-15
Heptane	< 250.	< 1040	500.	4/26/05	7:56	C. Wani	TO-15
Hexane	< 250.	< 896.	500.	4/26/05	7:56	C. Wani	TO-15
Methylene Chloride	< 250.	< 875.	500.	4/26/05	7:56	C. Wani	TO-15
Tetrahydrofuran	35100	105000	500.	4/26/05	7:56	C. Wani	TO-15
Toluene	< 250.	< 958.	500.	4/26/05	7:56	C. Wani	TO-15
Benzene	< 250.	< 812.	500.	4/26/05	7:56	C. Wani	TO-15
Chloroform	< 250.	< 1230	500.	4/26/05	7:56	C. Wani	TO-15
Carbon tetrachloride	< 250.	< 1580	500.	4/26/05	7:56	C. Wani	TO-15
Tetrachloroethene	< 250.	< 1710	500.	4/26/05	7:56	C. Wani	TO-15
Trichloroethene	895000	4850000	5000	4/26/05	8:42	C. Wani	TO-15
Vinyl Acetate	< 500.	< 1790	500.	4/26/05	7:56	C. Wani	TO-15
Ethylbenzene	< 250.	< 1100	500.	4/26/05	7:56	C. Wani	TO-15
Methyl-t-butyl ether	< 250.	< 917.	500.	4/26/05	7:56	C. Wani	TO-15
Ethyl acetate	< 250.	< 917.	500.	4/26/05	7:56	C. Wani	TO-15
1,1,1-Trichloroethane	< 250.	< 1380	500.	4/26/05	7:56	C. Wani	TO-15
Isopropyl Alcohol	2100	5250	500.	4/26/05	7:56	C. Wani	TO-15
1,2-Dichloroethane	< 250.	< 1020	500.	4/26/05	7:56	C. Wani	TO-15
c-1,2-Dichloroethene	535000	2140000	5000	4/26/05	8:42	C. Wani	TO-15
Acetone	< 500.	< 1210	500.	4/26/05	7:56	C. Wani	TO-15
1,1-Dichloroethene	2250	9000	500.	4/26/05	7:56	C. Wani	TO-15
2-Butanone	3950	11800	500.	4/26/05	7:56	C. Wani	TO-15
4-Ethyltoluene	< 250.	< 1250	500.	4/26/05	7:56	C. Wani	TO-15

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler: OMAR UPPAL

Lab Number: 05-A56392
Sample ID: 031091 SVE 44S
Sample Type: AIR
Site ID:

Date Collected: 4/21/05
Time Collected: 15:00
Date Received: 4/22/05
Time Received: 8:10

Analyte	Result	Units	PQL	Date	Time	Analyst	Method	Batch
Bromodichloromethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Bromoform	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Dibromochloromethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Dichlorodifluoromethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Trichlorofluoromethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Cyclohexane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Carbon Disulfide	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Vinyl Chloride	ND	ppbv	50.0	4/29/05	17:25	C. Wani	TO-15	8311
1,4-Dioxane	ND	ppbv	50.0	4/29/05	17:25	C. Wani	TO-15	8311
Chloromethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Propylene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Bromomethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Dichlorotetrafluoroethane	ND	ppbv	50.0	4/29/05	17:25	C. Wani	TO-15	8311
Chloroethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,3-Butadiene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,1-Dichloroethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Trichlorotrifluoroethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
t-1,2-Dichloroethene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
2-Hexanone	ND	ppbv	50.0	4/29/05	17:25	C. Wani	TO-15	8311
1,2-Dichloropropane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
m,p-Xylene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,1,2-Trichloroethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
o-Xylene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,2-Dibromoethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Chlorobenzene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Hexachloro-1,3-butadiene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
c-1,3-Dichloropropene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
t-1,3-Dichloropropene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Styrene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,1,2,2-Tetrachloroethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,3,5-Trimethylbenzene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,2,4-Trimethylbenzene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,2-Dichlorobenzene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,3-Dichlorobenzene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,4-Dichlorobenzene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311

Sample report continued . . .

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler: OMAR UPPAL

Lab Number: 05-A56392
Sample ID: 031091 SVE 44S
Sample Type: AIR
Site ID:

Date Collected: 4/21/05
Time Collected: 15:00
Date Received: 4/22/05
Time Received: 8:10

Analyte	Result	Units	PQL	Date	Time	Analyst	Method	Batch
1,2,4-Trichlorobenzene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Methylisobutyl ketone	ND	ppbv	50.0	4/29/05	17:25	C. Wani	TO-15	8311
Heptane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Hexane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Methylene Chloride	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Tetrahydrofuran	365.	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Toluene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Benzene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Chloroform	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Carbon tetrachloride	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Tetrachloroethene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Trichloroethene	3060	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Vinyl Acetate	ND	ppbv	50.0	4/29/05	17:25	C. Wani	TO-15	8311
Ethylbenzene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Methyl-t-butyl ether	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Ethyl acetate	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
1,1,1-Trichloroethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Isopropyl Alcohol	ND	ppbv	50.0	4/29/05	17:25	C. Wani	TO-15	8311
1,2-Dichloroethane	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
c-1,2-Dichloroethene	4280	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
Acetone	ND	ppbv	50.0	4/29/05	17:25	C. Wani	TO-15	8311
1,1-Dichloroethene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
2-Butanone	1080	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311
4-Ethyltoluene	ND	ppbv	25.0	4/29/05	17:25	C. Wani	TO-15	8311

LABORATORY COMMENTS:
ND = Not detected at the limit of detection
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler: OMAR UPPAL

Lab Number: 05-A56393
Sample ID: 031091 SVE 44D
Sample Type: AIR
Site ID:

Date Collected: 4/21/05
Time Collected: 12:10
Date Received: 4/22/05
Time Received: 8:10

Analyte	Result	Units	PQL	Date	Time	Analyst	Method	Batch
Bromodichloromethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Bromoform	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Dibromochloromethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Dichlorodifluoromethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Trichlorofluoromethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Cyclohexane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Carbon Disulfide	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Vinyl Chloride	ND	ppbv	50.0	4/29/05	18:49	C. Wani	TO-15	8311
1,4-Dioxane	ND	ppbv	50.0	4/29/05	18:49	C. Wani	TO-15	8311
Chloromethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Propylene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Bromomethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Dichlorotetrafluoroethane	ND	ppbv	50.0	4/29/05	18:49	C. Wani	TO-15	8311
Chloroethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,3-Butadiene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,1-Dichloroethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Trichlorotrifluoroethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
t-1,2-Dichloroethene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
2-Hexanone	ND	ppbv	50.0	4/29/05	18:49	C. Wani	TO-15	8311
1,2-Dichloropropane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
m,p-Xylene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,1,2-Trichloroethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
o-Xylene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,2-Dibromoethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Chlorobenzene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Hexachloro-1,3-butadiene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
c-1,3-Dichloropropene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
t-1,3-Dichloropropene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Styrene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,1,2,2-Tetrachloroethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,3,5-Trimethylbenzene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,2,4-Trimethylbenzene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,2-Dichlorobenzene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,3-Dichlorobenzene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,4-Dichlorobenzene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311

Sample report continued . . .

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler: OMAR UPPAL

Lab Number: 05-A56393
Sample ID: 031091 SVE 44D
Sample Type: AIR
Site ID:

Date Collected: 4/21/05
Time Collected: 12:10
Date Received: 4/22/05
Time Received: 8:10

Analyte	Result	Units	PQL	Date	Time	Analyst	Method	Batch
1,2,4-Trichlorobenzene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Methylisobutyl ketone	ND	ppbv	50.0	4/29/05	18:49	C. Wani	TO-15	8311
Heptane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Hexane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Methylene Chloride	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Tetrahydrofuran	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Toluene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Benzene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Chloroform	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Carbon tetrachloride	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Tetrachloroethene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Trichloroethene	8400	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Vinyl Acetate	ND	ppbv	50.0	4/29/05	18:49	C. Wani	TO-15	8311
Ethylbenzene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Methyl-t-butyl ether	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Ethyl acetate	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
1,1,1-Trichloroethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Isopropyl Alcohol	ND	ppbv	50.0	4/29/05	18:49	C. Wani	TO-15	8311
1,2-Dichloroethane	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
c-1,2-Dichloroethene	1830	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
Acetone	ND	ppbv	50.0	4/29/05	18:49	C. Wani	TO-15	8311
1,1-Dichloroethene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
2-Butanone	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311
4-Ethyltoluene	ND	ppbv	25.0	4/29/05	18:49	C. Wani	TO-15	8311

LABORATORY COMMENTS:
ND = Not detected at the limit of detection
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55836
Sample ID: 031091 SVE 40S
Sample Type: Air bag
Site ID:

Date Collected: 4/20/05
Time Collected: 4:12
Date Received: 4/21/05
Time Received: 7:45

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Time	Analyst	Method
Bromodichloromethane	< 0.50	< 3.38	1.	4/26/05	1:35	C. Wani	TO-15
Bromoform	< 0.50	< 5.21	1.	4/26/05	1:35	C. Wani	TO-15
Dibromochloromethane	< 0.50	< 4.29	1.	4/26/05	1:35	C. Wani	TO-15
Dichlorodifluoromethane	0.50	2.50	1.	4/26/05	1:35	C. Wani	TO-15
Trichlorofluoromethane	< 0.50	< 2.83	1.	4/26/05	1:35	C. Wani	TO-15
Cyclohexane	< 0.50	< 1.75	1.	4/26/05	1:35	C. Wani	TO-15
Carbon Disulfide	3.00	9.50	1.	4/26/05	1:35	C. Wani	TO-15
Vinyl Chloride	135. E	349. E	1.	4/26/05	1:35	C. Wani	TO-15
1,4-Dioxane	< 1.00	< 3.67	1.	4/26/05	1:35	C. Wani	TO-15
Chloromethane	0.60	1.25	1.	4/26/05	1:35	C. Wani	TO-15
Propylene	< 0.50	< 0.875	1.	4/26/05	1:35	C. Wani	TO-15
Bromomethane	< 0.50	< 1.96	1.	4/26/05	1:35	C. Wani	TO-15
Dichlorotetrafluoroethane	< 1.00	< 7.08	1.	4/26/05	1:35	C. Wani	TO-15
Chloroethane	< 0.50	< 1.33	1.	4/26/05	1:35	C. Wani	TO-15
1,3-Butadiene	< 0.50	< 1.12	1.	4/26/05	1:35	C. Wani	TO-15
1,1-Dichloroethane	< 0.50	< 2.04	1.	4/26/05	1:35	C. Wani	TO-15
Trichlorotrifluoroethane	< 0.50	< 3.88	1.	4/26/05	1:35	C. Wani	TO-15
t-1,2-Dichloroethene	41.4 E	166. E	1.	4/26/05	1:35	C. Wani	TO-15
2-Hexanone	< 1.00	< 4.17	1.	4/26/05	1:35	C. Wani	TO-15
1,2-Dichloropropane	< 0.50	< 2.33	1.	4/26/05	1:35	C. Wani	TO-15
m,p-Xylene	< 0.50	< 2.21	1.	4/26/05	1:35	C. Wani	TO-15
1,1,2-Trichloroethane	< 0.50	< 2.75	1.	4/26/05	1:35	C. Wani	TO-15
o-Xylene	< 0.50	< 2.21	1.	4/26/05	1:35	C. Wani	TO-15
1,2-Dibromoethane	< 0.50	< 3.88	1.	4/26/05	1:35	C. Wani	TO-15
Chlorobenzene	< 0.50	< 2.33	1.	4/26/05	1:35	C. Wani	TO-15
Hexachloro-1,3-butadiene	< 0.50	< 5.38	1.	4/26/05	1:35	C. Wani	TO-15
c-1,3-Dichloropropene	< 0.50	< 2.29	1.	4/26/05	1:35	C. Wani	TO-15
t-1,3-Dichloropropene	< 0.50	< 2.29	1.	4/26/05	1:35	C. Wani	TO-15
Styrene	< 0.50	< 2.17	1.	4/26/05	1:35	C. Wani	TO-15
1,1,2,2-Tetrachloroethane	< 0.50	< 3.46	1.	4/26/05	1:35	C. Wani	TO-15
1,3,5-Trimethylbenzene	< 0.50	< 2.50	1.	4/26/05	1:35	C. Wani	TO-15
1,2,4-Trimethylbenzene	< 0.50	< 2.50	1.	4/26/05	1:35	C. Wani	TO-15
1,2-Dichlorobenzene	< 0.50	< 3.04	1.	4/26/05	1:35	C. Wani	TO-15
1,3-Dichlorobenzene	< 0.50	< 3.04	1.	4/26/05	1:35	C. Wani	TO-15
1,4-Dichlorobenzene	< 0.50	< 3.04	1.	4/26/05	1:35	C. Wani	TO-15

Sample report continued . . .

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55836
Sample ID: 031091 SVE 40S
Sample Type: Air bag
Site ID:

Date Collected: 4/20/05
Time Collected: 4:12
Date Received: 4/21/05
Time Received: 7:45

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Analysis Time	Analyst	Method
1,2,4-Trichlorobenzene	< 0.50	< 3.75	1.	4/26/05	1:35	C. Wani	TO-15
Methylisobutyl ketone	< 1.00	< 4.17	1.	4/26/05	1:35	C. Wani	TO-15
Heptane	< 0.500	< 2.08	1.	4/26/05	1:35	C. Wani	TO-15
Hexane	1.40	5.02	1.	4/26/05	1:35	C. Wani	TO-15
Methylene Chloride	12.1	42.4	1.	4/26/05	1:35	C. Wani	TO-15
Tetrahydrofuran	105.	315.	50.	4/26/05	10:13	C. Wani	TO-15
Toluene	4.50	17.2	1.	4/26/05	1:35	C. Wani	TO-15
Benzene	< 0.50	< 1.62	1.	4/26/05	1:35	C. Wani	TO-15
Chloroform	3.90	19.2	1.	4/26/05	1:35	C. Wani	TO-15
Carbon tetrachloride	< 0.50	< 3.17	1.	4/26/05	1:35	C. Wani	TO-15
Tetrachloroethene	2.40	16.4	1.	4/26/05	1:35	C. Wani	TO-15
Trichloroethene	13400 E	72600 E	500.	4/26/05	10:59	C. Wani	TO-15
Vinyl Acetate	< 1.00	< 3.58	1.	4/26/05	1:35	C. Wani	TO-15
Ethylbenzene	< 0.50	< 2.21	1.	4/26/05	1:35	C. Wani	TO-15
Methyl-t-butyl ether	< 0.500	< 1.83	1.	4/26/05	1:35	C. Wani	TO-15
Ethyl acetate	< 0.500	< 1.83	1.	4/26/05	1:35	C. Wani	TO-15
1,1,1-Trichloroethane	< 0.50	< 2.75	1.	4/26/05	1:35	C. Wani	TO-15
Isopropyl Alcohol	< 1.00	< 2.50	1.	4/26/05	1:35	C. Wani	TO-15
1,2-Dichloroethane	< 0.50	< 2.04	1.	4/26/05	1:35	C. Wani	TO-15
c-1,2-Dichloroethene	4700	18800	500.	4/26/05	10:59	C. Wani	TO-15
Acetone	44.0 E	106. E	1.	4/26/05	1:35	C. Wani	TO-15
1,1-Dichloroethene	41.3 E	165. E	1.	4/26/05	1:35	C. Wani	TO-15
2-Butanone	< 0.50	< 1.50	1.	4/26/05	1:35	C. Wani	TO-15
4-Ethyltoluene	< 0.50	< 2.50	1.	4/26/05	1:35	C. Wani	TO-15

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55837
Sample ID: 031091 SVE 40D
Sample Type: Air bag
Site ID:

Date Collected: 4/20/05
Time Collected: 6:20
Date Received: 4/21/05
Time Received: 7:45

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Time	Analyst	Method
Bromodichloromethane	< 25.0	< 169.	50.	4/26/05	11:45	C. Wani	TO-15
Bromoform	< 25.0	< 260.	50.	4/26/05	11:45	C. Wani	TO-15
Dibromochloromethane	< 25.0	< 215.	50.	4/26/05	11:45	C. Wani	TO-15
Dichlorodifluoromethane	< 25.0	< 125.	50.	4/26/05	11:45	C. Wani	TO-15
Trichlorofluoromethane	< 25.0	< 142.	50.	4/26/05	11:45	C. Wani	TO-15
Cyclohexane	< 25.0	< 87.5	50.	4/26/05	11:45	C. Wani	TO-15
Carbon Disulfide	< 25.0	< 79.2	50.	4/26/05	11:45	C. Wani	TO-15
Vinyl Chloride	705.	1820	50.	4/26/05	11:45	C. Wani	TO-15
1,4-Dioxane	< 50.0	< 183.	50.	4/26/05	11:45	C. Wani	TO-15
Chloromethane	< 25.0	< 52.1	50.	4/26/05	11:45	C. Wani	TO-15
Propylene	< 25.0	< 43.8	50.	4/26/05	11:45	C. Wani	TO-15
Bromomethane	< 25.0	< 97.9	50.	4/26/05	11:45	C. Wani	TO-15
Dichlorotetrafluoroethane	< 50.0	< 354.	50.	4/26/05	11:45	C. Wani	TO-15
Chloroethane	< 25.0	< 66.7	50.	4/26/05	11:45	C. Wani	TO-15
1,3-Butadiene	< 25.0	< 56.2	50.	4/26/05	11:45	C. Wani	TO-15
1,1-Dichloroethane	< 25.0	< 102.	50.	4/26/05	11:45	C. Wani	TO-15
Trichlorotrifluoroethane	< 25.0	< 194.	50.	4/26/05	11:45	C. Wani	TO-15
t-1,2-Dichloroethene	270.	1080	50.	4/26/05	11:45	C. Wani	TO-15
2-Hexanone	< 50.0	< 208.	50.	4/26/05	11:45	C. Wani	TO-15
1,2-Dichloropropane	< 25.0	< 117.	50.	4/26/05	11:45	C. Wani	TO-15
m,p-Xylene	< 25.0	< 110.	50.	4/26/05	11:45	C. Wani	TO-15
1,1,2-Trichloroethane	< 25.0	< 138.	50.	4/26/05	11:45	C. Wani	TO-15
o-Xylene	< 25.0	< 110.	50.	4/26/05	11:45	C. Wani	TO-15
1,2-Dibromoethane	< 25.0	< 194.	50.	4/26/05	11:45	C. Wani	TO-15
Chlorobenzene	< 25.0	< 117.	50.	4/26/05	11:45	C. Wani	TO-15
Hexachloro-1,3-butadiene	< 25.0	< 269.	50.	4/26/05	11:45	C. Wani	TO-15
c-1,3-Dichloropropene	< 25.0	< 115.	50.	4/26/05	11:45	C. Wani	TO-15
t-1,3-Dichloropropene	< 25.0	< 115.	50.	4/26/05	11:45	C. Wani	TO-15
Styrene	< 25.0	< 108.	50.	4/26/05	11:45	C. Wani	TO-15
1,1,2,2-Tetrachloroethane	< 25.0	< 173.	50.	4/26/05	11:45	C. Wani	TO-15
1,3,5-Trimethylbenzene	< 25.0	< 125.	50.	4/26/05	11:45	C. Wani	TO-15
1,2,4-Trimethylbenzene	< 25.0	< 125.	50.	4/26/05	11:45	C. Wani	TO-15
1,2-Dichlorobenzene	< 25.0	< 152.	50.	4/26/05	11:45	C. Wani	TO-15
1,3-Dichlorobenzene	< 25.0	< 152.	50.	4/26/05	11:45	C. Wani	TO-15
1,4-Dichlorobenzene	< 25.0	< 152.	50.	4/26/05	11:45	C. Wani	TO-15

Sample report continued . . .

TestAmerica
ANALYTICAL TESTING CORPORATION

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55837
Sample ID: 031091 SVE 40D
Sample Type: Air bag
Site ID:

Date Collected: 4/20/05
Time Collected: 6:20
Date Received: 4/21/05
Time Received: 7:45

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Time	Analyst	Method
1,2,4-Trichlorobenzene	< 25.0	< 188.	50.	4/26/05	11:45	C. Wani	TO-15
Methylisobutyl ketone	< 50.0	< 208.	50.	4/26/05	11:45	C. Wani	TO-15
Heptane	< 25.0	< 104.	50.	4/26/05	11:45	C. Wani	TO-15
Hexane	< 25.0	< 89.6	50.	4/26/05	11:45	C. Wani	TO-15
Methylene Chloride	< 25.0	< 87.5	50.	4/26/05	11:45	C. Wani	TO-15
Tetrahydrofuran	1350	4050	500.	4/26/05	12:30	C. Wani	TO-15
Toluene	< 25.0	< 95.8	50.	4/26/05	11:45	C. Wani	TO-15
Benzene	< 25.0	< 81.2	50.	4/26/05	11:45	C. Wani	TO-15
Chloroform	50.0	246.	50.	4/26/05	11:45	C. Wani	TO-15
Carbon tetrachloride	< 25.0	< 158.	50.	4/26/05	11:45	C. Wani	TO-15
Tetrachloroethene	< 25.0	< 171.	50.	4/26/05	11:45	C. Wani	TO-15
Trichloroethene	106000 E	574000 E	500.	4/26/05	12:30	C. Wani	TO-15
Vinyl Acetate	< 50.0	< 179.	50.	4/26/05	11:45	C. Wani	TO-15
Ethylbenzene	< 25.0	< 110.	50.	4/26/05	11:45	C. Wani	TO-15
Methyl-t-butyl ether	< 25.0	< 91.7	50.	4/26/05	11:45	C. Wani	TO-15
Ethyl acetate	< 25.0	< 91.7	50.	4/26/05	11:45	C. Wani	TO-15
1,1,1-Trichloroethane	< 25.0	< 138.	50.	4/26/05	11:45	C. Wani	TO-15
Isopropyl Alcohol	< 50.0	< 125.	50.	4/26/05	11:45	C. Wani	TO-15
1,2-Dichloroethane	< 25.0	< 102.	50.	4/26/05	11:45	C. Wani	TO-15
c-1,2-Dichloroethene	41800 E	167000 E	500.	4/26/05	12:30	C. Wani	TO-15
Acetone	55.0	133.	50.	4/26/05	11:45	C. Wani	TO-15
1,1-Dichloroethene	245.	980.	50.	4/26/05	11:45	C. Wani	TO-15
2-Butanone	175.	525.	50.	4/26/05	11:45	C. Wani	TO-15
4-Ethyltoluene	< 25.0	< 125.	50.	4/26/05	11:45	C. Wani	TO-15

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55838
Sample ID: 031091 SVE 37DS
Sample Type: Air bag
Site ID:

Date Collected: 4/20/05
Time Collected: 10:50
Date Received: 4/21/05
Time Received: 7:45

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Time	Analyst	Method
Bromodichloromethane	< 25.0	< 169.	50.	4/26/05	13:16	C. Wani	TO-15
Bromoform	< 25.0	< 260.	50.	4/26/05	13:16	C. Wani	TO-15
Dibromochloromethane	< 25.0	< 215.	50.	4/26/05	13:16	C. Wani	TO-15
Dichlorodifluoromethane	< 25.0	< 125.	50.	4/26/05	13:16	C. Wani	TO-15
Trichlorofluoromethane	< 25.0	< 142.	50.	4/26/05	13:16	C. Wani	TO-15
Cyclohexane	< 25.0	< 87.5	50.	4/26/05	13:16	C. Wani	TO-15
Carbon Disulfide	< 25.0	< 79.2	50.	4/26/05	13:16	C. Wani	TO-15
Vinyl Chloride	80.0	207.	50.	4/26/05	13:16	C. Wani	TO-15
1,4-Dioxane	< 50.0	< 183.	50.	4/26/05	13:16	C. Wani	TO-15
Chloromethane	< 25.0	< 52.1	50.	4/26/05	13:16	C. Wani	TO-15
Propylene	< 25.0	< 43.8	50.	4/26/05	13:16	C. Wani	TO-15
Bromomethane	< 25.0	< 97.9	50.	4/26/05	13:16	C. Wani	TO-15
Dichlorotetrafluoroethane	< 50.0	< 354.	50.	4/26/05	13:16	C. Wani	TO-15
Chloroethane	< 25.0	< 66.7	50.	4/26/05	13:16	C. Wani	TO-15
1,3-Butadiene	< 25.0	< 56.2	50.	4/26/05	13:16	C. Wani	TO-15
1,1-Dichloroethane	< 25.0	< 102.	50.	4/26/05	13:16	C. Wani	TO-15
Trichlorotrifluoroethane	< 25.0	< 194.	50.	4/26/05	13:16	C. Wani	TO-15
t-1,2-Dichloroethene	150.	600.	50.	4/26/05	13:16	C. Wani	TO-15
2-Hexanone	< 50.0	< 208.	50.	4/26/05	13:16	C. Wani	TO-15
1,2-Dichloropropane	< 25.0	< 117.	50.	4/26/05	13:16	C. Wani	TO-15
m,p-Xylene	< 25.0	< 110.	50.	4/26/05	13:16	C. Wani	TO-15
1,1,2-Trichloroethane	< 25.0	< 138.	50.	4/26/05	13:16	C. Wani	TO-15
o-Xylene	< 25.0	< 110.	50.	4/26/05	13:16	C. Wani	TO-15
1,2-Dibromoethane	< 25.0	< 194.	50.	4/26/05	13:16	C. Wani	TO-15
Chlorobenzene	< 25.0	< 117.	50.	4/26/05	13:16	C. Wani	TO-15
Hexachloro-1,3-butadiene	< 25.0	< 269.	50.	4/26/05	13:16	C. Wani	TO-15
c-1,3-Dichloropropene	< 25.0	< 115.	50.	4/26/05	13:16	C. Wani	TO-15
t-1,3-Dichloropropene	< 25.0	< 115.	50.	4/26/05	13:16	C. Wani	TO-15
Styrene	< 25.0	< 108.	50.	4/26/05	13:16	C. Wani	TO-15
1,1,2,2-Tetrachloroethane	< 25.0	< 173.	50.	4/26/05	13:16	C. Wani	TO-15
1,3,5-Trimethylbenzene	< 25.0	< 125.	50.	4/26/05	13:16	C. Wani	TO-15
1,2,4-Trimethylbenzene	< 25.0	< 125.	50.	4/26/05	13:16	C. Wani	TO-15
1,2-Dichlorobenzene	< 25.0	< 152.	50.	4/26/05	13:16	C. Wani	TO-15
1,3-Dichlorobenzene	< 25.0	< 152.	50.	4/26/05	13:16	C. Wani	TO-15
1,4-Dichlorobenzene	< 25.0	< 152.	50.	4/26/05	13:16	C. Wani	TO-15

Sample report continued . . .

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ANALYTICAL REPORT

SAS ENVIRONMENTAL INC. 3403

1270 S.CLEVELAND-MASSILLON A
AKRON, OH 44321

Project: 031091
Project Name: UT COLLIERVILLE
Sampler:

Lab Number: 05-A55838
Sample ID: 031091 SVE 37DS
Sample Type: Air bag
Site ID:

Date Collected: 4/20/05
Time Collected: 10:50
Date Received: 4/21/05
Time Received: 7:45

Analyte	Result ppbV	Result ug/m3	Dilution Factor	Analysis Date	Time	Analyst	Method
1,2,4-Trichlorobenzene	< 25.0	< 188.	50.	4/26/05	13:16	C. Wani	TO-15
Methylisobutyl ketone	< 50.0	< 208.	50.	4/26/05	13:16	C. Wani	TO-15
Heptane	< 25.0	< 104.	50.	4/26/05	13:16	C. Wani	TO-15
Hexane	< 25.0	< 89.6	50.	4/26/05	13:16	C. Wani	TO-15
Methylene Chloride	< 25.0	< 87.5	50.	4/26/05	13:16	C. Wani	TO-15
Tetrahydrofuran	1400	4200	500.	4/26/05	14:01	C. Wani	TO-15
Toluene	< 25.0	< 95.8	50.	4/26/05	13:16	C. Wani	TO-15
Benzene	< 25.0	< 81.2	50.	4/26/05	13:16	C. Wani	TO-15
Chloroform	100.	492.	50.	4/26/05	13:16	C. Wani	TO-15
Carbon tetrachloride	< 25.0	< 158.	50.	4/26/05	13:16	C. Wani	TO-15
Tetrachloroethene	< 25.0	< 171.	50.	4/26/05	13:16	C. Wani	TO-15
Trichloroethene	60500 E	328000 E	500.	4/26/05	14:01	C. Wani	TO-15
Vinyl Acetate	< 50.0	< 179.	50.	4/26/05	13:16	C. Wani	TO-15
Ethylbenzene	< 25.0	< 110.	50.	4/26/05	13:16	C. Wani	TO-15
Methyl-t-butyl ether	< 25.0	< 91.7	50.	4/26/05	13:16	C. Wani	TO-15
Ethyl acetate	< 25.0	< 91.7	50.	4/26/05	13:16	C. Wani	TO-15
1,1,1-Trichloroethane	< 25.0	< 138.	50.	4/26/05	13:16	C. Wani	TO-15
Isopropyl Alcohol	< 50.0	< 125.	50.	4/26/05	13:16	C. Wani	TO-15
1,2-Dichloroethane	< 25.0	< 102.	50.	4/26/05	13:16	C. Wani	TO-15
c-1,2-Dichloroethene	11600 E	46400 E	500.	4/26/05	14:01	C. Wani	TO-15
Acetone	130.	314.	50.	4/26/05	13:16	C. Wani	TO-15
1,1-Dichloroethene	65.0	260.	50.	4/26/05	13:16	C. Wani	TO-15
2-Butanone	100.	300.	50.	4/26/05	13:16	C. Wani	TO-15
4-Ethyltoluene	< 25.0	< 125.	50.	4/26/05	13:16	C. Wani	TO-15

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

BASELINE SOIL VAPOR SAMPLING (OCTOBER 2005)

LABORATORY ANALYTICAL RESULTS

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

November 23, 2005

Client: SAS Environmental Inc. (3403)
1270 S.Clevleand-Massillon Building A
Akron, OH 44321
Attn: Mark V. Allen

Work Order: NOJ2720
Project Name: UT Collierville
Project Nbr: 031091
Date Received: 10/26/05

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
SVE-9D	NOJ2720-01	10/24/05 18:30

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

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Tennessee Certification Number: 02008

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Jessica Vickers
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2720
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/26/05 07:45

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch

Sample ID: NOJ2720-01 (SVE-9D - Air) Sampled: 10/24/05 18:30

Subcontracted Analysis

See Attached Report

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2720
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/26/05 07:45

CERTIFICATION SUMMARY

TestAmerica Analytical - Nashville

Method	Matrix	AIHA	Nelac	Tennessee
subcontract	Air			

TestAmerica
ANALYTICAL TESTING CORPORATION
Nashville Division

COOLER RECEIPT FORM **BC#** NOJ2720

Client Name : SAS Environmental, INC.

Cooler Received/Opened On: 10/26/05 **Accessioned By:** James D. Jacobs

Log-in Personnel Signature

1. Temperature of Cooler when triaged: N/A **Degrees Celsius**
2. Were custody seals on outside of cooler?..... YES...NO...NA
   a. If yes, how many and where:_____
3. Were custody seals on containers?..... NO...YES...NA
4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA
5. Were custody papers inside cooler?..... YES...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?..... YES...NO...NA
7. Did you sign the custody papers in the appropriate place?..... YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Foam Insert Ziplock baggies Paper Other None
9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None
10. Did all containers arrive in good condition (unbroken)?..... YES...NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)?..... YES...NO...NA
12. Did all container labels and tags agree with custody papers?..... YES...NO...NA
13. Were correct containers used for the analysis requested?..... YES...NO...NA
14. a. Were VOA vials received?..... YES...NO...NA
    b. Was there any observable head space present in any VOA vial?..... NO...YES...NA
15. Was sufficient amount of sample sent in each container?..... YES...NO...NA
16. Were correct preservatives used?..... YES...NO...NA
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?..... NO...YES...NA
18. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below:

    2825

    Fed-Ex UPS Velocity DHL Route Off-street Misc.
19. If a Non-Conformance exists, see attached or comments below:

BIS = Broken in shipment
Cooler Receipt Form

LF-1
End of Form

Revised 4/5/05

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring

NOJ2720
11/04/05 17:00

Client Name: SASENVIRONMENTAL INC Client #: 3403
Address: 1270 S. CLEVE-MASS RD
City/State/Zip Code: AKRON OH 44321
Project Manager: MARK V. ALLEN
Telephone Number: 330 666 1546 Fax: 330 666 7443
Sampler Name: (Print Name) Omer Uppal Matt White
Sampler Signature:

Project Name: UT COLLIERVILLE
Project #: 031091
Site/Location ID: COLLIERVILLE State: TN
Report To: MARK V. ALLEN
Invoice To: SASENVIRONMENTAL INC
Quote #: 098204 PLK99 PO#: 7608

TAT
X Standard
___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: (Y) N

QC Deliverables
___ None
___ Level 2 (Batch QC)
___ Level 3
___ Level 4
Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	EPA MODIFIED TO15										REMARKS
SVE - 9D	10-24-05	6:30 pm	G		VAPOR						2		X										NOJ2720-01

Special Instructions:
STANDARD TAT EMAIL JFD121@AOL.COM

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Omer Uppal	10-24-05	6:30 pm	FedEx	10-25-05	8:42am
				10/26/05	745

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: N/A
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

FedEx Tracking #: 8532-2392-2825

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0511230

Work Order Summary

CLIENT:	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204	**BILL TO:**	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204
PHONE:	800-765-0980	**P.O. #**	
FAX:	615-726-3404	**PROJECT #**	NOJ2720
DATE RECEIVED:	11/11/2005	**CONTACT:**	Susan Alaniz
DATE COMPLETED:	11/21/2005		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	NOJ2720-01	Modified TO-15	Tedlar Bag
02A	Lab Blank	Modified TO-15	NA
03A	CCV	Modified TO-15	NA
04A	LCS	Modified TO-15	NA

CERTIFIED BY: Linda L. Freeman

Laboratory Director

DATE: 11/21/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Test America
Workorder# 0511230

One 1 Liter Tedlar Bag sample was received on November 11, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	+- 30 %RSD (TO-14A)	</= 30 % RSD with 2 compounds allowed out to </= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases. A list of these compounds is available.

Receiving Notes

Sample was received past the recommended hold time of 24 hours. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the analysis proceeded.

Analytical Notes

The reported LCS for each daily batch has been derived from more than one analytical file.

Samples NOJ2720-01 were analyzed past a 16 day hold time. The client was notified and permission given to proceed with analysis and reporting.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: NOJ2720-01

Lab ID#: 0511230-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Acetone	160	1500	380	3600
2-Butanone (Methyl Ethyl Ketone)	40	8300	120	24000
cis-1,2-Dichloroethene	40	77	160	300
Tetrahydrofuran	40	14000	120	40000
Trichloroethene	40	5200	210	28000

AIR TOXICS LTD.

Client Sample ID: NOJ2720-01

Lab ID#: 0511230-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1111206**	**Date of Collection:**	**10/24/05**
Dil. Factor:	**80.0**	**Date of Analysis:**	**11/12/05 05:30 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	40	Not Detected	200	Not Detected
Freon 114	40	Not Detected	280	Not Detected
Chloromethane	160	Not Detected	330	Not Detected
Vinyl Chloride	40	Not Detected	100	Not Detected
1,3-Butadiene	40	Not Detected	88	Not Detected
Bromomethane	40	Not Detected	160	Not Detected
Chloroethane	40	Not Detected	100	Not Detected
Freon 11	40	Not Detected	220	Not Detected
Ethanol	160	Not Detected	300	Not Detected
Freon 113	40	Not Detected	310	Not Detected
1,1-Dichloroethene	40	Not Detected	160	Not Detected
Acetone	160	1500	380	3600
2-Propanol	160	Not Detected	390	Not Detected
Carbon Disulfide	40	Not Detected	120	Not Detected
3-Chloropropene	160	Not Detected	500	Not Detected
Methylene Chloride	40	Not Detected	140	Not Detected
Methyl tert-butyl ether	40	Not Detected	140	Not Detected
trans-1,2-Dichloroethene	40	Not Detected	160	Not Detected
Hexane	40	Not Detected	140	Not Detected
1,1-Dichloroethane	40	Not Detected	160	Not Detected
2-Butanone (Methyl Ethyl Ketone)	40	8300	120	24000
cis-1,2-Dichloroethene	40	77	160	300
Tetrahydrofuran	40	14000	120	40000
Chloroform	40	Not Detected	200	Not Detected
1,1,1-Trichloroethane	40	Not Detected	220	Not Detected
Cyclohexane	40	Not Detected	140	Not Detected
Carbon Tetrachloride	40	Not Detected	250	Not Detected
2,2,4-Trimethylpentane	40	Not Detected	190	Not Detected
Benzene	40	Not Detected	130	Not Detected
1,2-Dichloroethane	40	Not Detected	160	Not Detected
Heptane	40	Not Detected	160	Not Detected
Trichloroethene	40	5200	210	28000
1,2-Dichloropropane	40	Not Detected	180	Not Detected
1,4-Dioxane	160	Not Detected	580	Not Detected
Bromodichloromethane	40	Not Detected	270	Not Detected
cis-1,3-Dichloropropene	40	Not Detected	180	Not Detected
4-Methyl-2-pentanone	40	Not Detected	160	Not Detected
Toluene	40	Not Detected	150	Not Detected
trans-1,3-Dichloropropene	40	Not Detected	180	Not Detected
1,1,2-Trichloroethane	40	Not Detected	220	Not Detected
Tetrachloroethene	40	Not Detected	270	Not Detected
2-Hexanone	160	Not Detected	660	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2720-01

Lab ID#: 0511230-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1111206**	**Date of Collection:**	**10/24/05**
Dil. Factor:	**80.0**	**Date of Analysis:**	**11/12/05 05:30 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	40	Not Detected	340	Not Detected
1,2-Dibromoethane (EDB)	40	Not Detected	310	Not Detected
Chlorobenzene	40	Not Detected	180	Not Detected
Ethyl Benzene	40	Not Detected	170	Not Detected
m,p-Xylene	40	Not Detected	170	Not Detected
o-Xylene	40	Not Detected	170	Not Detected
Styrene	40	Not Detected	170	Not Detected
Bromoform	40	Not Detected	410	Not Detected
Cumene	40	Not Detected	200	Not Detected
1,1,2,2-Tetrachloroethane	40	Not Detected	270	Not Detected
Propylbenzene	40	Not Detected	200	Not Detected
4-Ethyltoluene	40	Not Detected	200	Not Detected
1,3,5-Trimethylbenzene	40	Not Detected	200	Not Detected
1,2,4-Trimethylbenzene	40	Not Detected	200	Not Detected
1,3-Dichlorobenzene	40	Not Detected	240	Not Detected
1,4-Dichlorobenzene	40	Not Detected	240	Not Detected
alpha-Chlorotoluene	40	Not Detected	210	Not Detected
1,2-Dichlorobenzene	40	Not Detected	240	Not Detected
1,2,4-Trichlorobenzene	160	Not Detected	1200	Not Detected
Hexachlorobutadiene	160	Not Detected	1700	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511230-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1111205**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 04:34 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511230-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1111205**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 04:34 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511230-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1111202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 01:49 AM**	

Compound	%Recovery
Freon 12	98
Freon 114	97
Chloromethane	102
Vinyl Chloride	97
1,3-Butadiene	100
Bromomethane	98
Chloroethane	113
Freon 11	97
Ethanol	102
Freon 113	98
1,1-Dichloroethene	97
Acetone	94
2-Propanol	104
Carbon Disulfide	99
3-Chloropropene	96
Methylene Chloride	98
Methyl tert-butyl ether	121
trans-1,2-Dichloroethene	94
Hexane	104
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	110
cis-1,2-Dichloroethene	101
Tetrahydrofuran	97
Chloroform	99
1,1,1-Trichloroethane	102
Cyclohexane	102
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	106
Benzene	94
1,2-Dichloroethane	102
Heptane	105
Trichloroethene	102
1,2-Dichloropropane	102
1,4-Dioxane	99
Bromodichloromethane	107
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	110
Toluene	96
trans-1,3-Dichloropropene	100
1,1,2-Trichloroethane	100
Tetrachloroethene	100
2-Hexanone	104

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511230-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1111202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 01:49 AM**	

Compound	**%Recovery**
Dibromochloromethane	109
1,2-Dibromoethane (EDB)	102
Chlorobenzene	97
Ethyl Benzene	96
m,p-Xylene	96
o-Xylene	96
Styrene	97
Bromoform	112
Cumene	91
1,1,2,2-Tetrachloroethane	88
Propylbenzene	90
4-Ethyltoluene	91
1,3,5-Trimethylbenzene	86
1,2,4-Trimethylbenzene	84
1,3-Dichlorobenzene	83
1,4-Dichlorobenzene	84
alpha-Chlorotoluene	80
1,2-Dichlorobenzene	77
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	79

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511230-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1111203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 02:55 AM**	

Compound	%Recovery
Freon 12	102
Freon 114	100
Chloromethane	108
Vinyl Chloride	98
1,3-Butadiene	109
Bromomethane	106
Chloroethane	121
Freon 11	99
Ethanol	102
Freon 113	100
1,1-Dichloroethene	97
Acetone	105
2-Propanol	110
Carbon Disulfide	111
3-Chloropropene	102
Methylene Chloride	102
Methyl tert-butyl ether	129
trans-1,2-Dichloroethene	107
Hexane	112
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	121
cis-1,2-Dichloroethene	130
Tetrahydrofuran	102
Chloroform	99
1,1,1-Trichloroethane	96
Cyclohexane	110
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	121
Benzene	92
1,2-Dichloroethane	98
Heptane	110
Trichloroethene	99
1,2-Dichloropropane	98
1,4-Dioxane	96
Bromodichloromethane	110
cis-1,3-Dichloropropene	99
4-Methyl-2-pentanone	107
Toluene	101
trans-1,3-Dichloropropene	110
1,1,2-Trichloroethane	98
Tetrachloroethene	102
2-Hexanone	88

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511230-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1111203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 02:55 AM**	

Compound	**%Recovery**
Dibromochloromethane	110
1,2-Dibromoethane (EDB)	104
Chlorobenzene	97
Ethyl Benzene	99
m,p-Xylene	101
o-Xylene	93
Styrene	123
Bromoform	105
Cumene	79
1,1,2,2-Tetrachloroethane	83
Propylbenzene	86
4-Ethyltoluene	84
1,3,5-Trimethylbenzene	78
1,2,4-Trimethylbenzene	80
1,3-Dichlorobenzene	76
1,4-Dichlorobenzene	74
alpha-Chlorotoluene	78
1,2-Dichlorobenzene	69 Q
1,2,4-Trichlorobenzene	65 Q
Hexachlorobutadiene	70

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	99	70-130

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

November 23, 2005

Client: SAS Environmental Inc. (3403)
1270 S.Clevleand-Massillon Building A
Akron, OH 44321
Attn: Mark V. Allen

Work Order: NOJ2726
Project Name: UT Collierville
Project Nbr: 031091
Date Received: 10/26/05

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
SVE-8D	NOJ2726-01	10/25/05 11:26
SVE-10D	NOJ2726-02	10/25/05 11:31
SVE-8S	NOJ2726-03	10/25/05 12:30
SVE-10S	NOJ2726-04	10/25/05 12:31
SVE-16D	NOJ2726-05	10/25/05 17:00

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

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Tennessee Certification Number: 02008

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Jessica Vickers
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2726
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/26/05 07:45

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch

Sample ID: NOJ2726-01 (SVE-8D - Air) Sampled: 10/25/05 11:26
Subcontracted Analysis
See Attached Report

Sample ID: NOJ2726-02 (SVE-10D - Air) Sampled: 10/25/05 11:31
Subcontracted Analysis
See Attached Report

Sample ID: NOJ2726-03 (SVE-8S - Air) Sampled: 10/25/05 12:30
Subcontracted Analysis
See Attached Report

Sample ID: NOJ2726-04 (SVE-10S - Air) Sampled: 10/25/05 12:31
Subcontracted Analysis
See Attached Report

mple ID: NOJ2726-05 (SVE-16D - Air) Sampled: 10/25/05 17:00
ubcontracted Analysis
See Attached Report

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2726
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/26/05 07:45

CERTIFICATION SUMMARY

TestAmerica Analytical - Nashville

Method	Matrix	AIHA	Nelac	Tennessee
subcontract	Air			

TestAmerica
ANALYTICAL TESTING CORPORATION
Nashville Division

COOLER RECEIPT FORM **BC#** NOJ2726

Client Name : SAS Environmental, INC.

Cooler Received/Opened On: 10/26/05 Accessioned By: James D. Jacobs

Log-in Personnel Signature

1. Temperature of Cooler when triaged: N/A Degrees Celsius
2. Were custody seals on outside of cooler?..... YES...NO...NA
   a. If yes, how many and where:_____
3. Were custody seals on containers?..... NO...YES...NA
4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA
5. Were custody papers inside cooler?..... YES...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?..... YES...NO...NA
7. Did you sign the custody papers in the appropriate place?..... YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Foam Insert Ziplock baggies Paper Other None
9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None
10. Did all containers arrive in good condition (unbroken)?..... YES...NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)?..... YES...NO...NA
12. Did all container labels and tags agree with custody papers?..... YES...NO...NA
13. Were correct containers used for the analysis requested?..... YES...NO...NA
14. a. Were VOA vials received?..... YES...NO...NA
    b. Was there any observable head space present in any VOA vial?..... NO...YES...NA
15. Was sufficient amount of sample sent in each container?..... YES...NO...NA
16. Were correct preservatives used?..... YES...NO...NA
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?..... NO...YES...NA
18. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below:

    2869

    Fed-Ex UPS Velocity DHL Route Off-street Misc.
19. If a Non-Conformance exists, see attached or comments below:

BIS = Broken in shipment
Cooler Receipt Form

LF-1
End of Form

Revised 4/5/05

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

NOJ2726

11/04/05 17:00

Client Name: SAS ENVIRONMENTAL INC Client #: 3403

Address: 1270 S CLEVE MASS RD

City/State/Zip Code: AKRON OH 44321

Project Manager: MARK V. ALLEN

Telephone Number: 330-666-1546 Fax: 330-666-7443

Sampler Name: (Print Name) Omer Uppal, Matt White

Sampler Signature:

Project Name: UT COLLIERVILLE

Project #: 031091

Site/Location ID: COLLIERVILLE State: TN

Report To: MARK V. ALLEN

Invoice To: SAS ENVIRONMENTAL INC.

Quote #: 090204PLK99 PO#: 7608

TAT: X Standard; ___ Rush (surcharges may apply)

Date Needed: _____

Fax Results: (Y) N

QC Deliverables: ___ None; ___ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	EPA MODIFIED TO15										REMARKS
SVE-8D	10-25-05	11:26 am	G		VAPOR						2		X										NOJ2726-01
SVE-10D		11:31 am									2		X										-02
SVE-8S		12:30 pm									2		X										-03
SVE-10S		12:31 pm									2		X										-04
SVE-16D		5:00 pm									2		X										-05

Special Instructions:

STANDARD TAT EMAIL: JPO1210@aol.com

Relinquished By	Date	Time	Received By	Date	Time
Omer Uppal	10-25-05	8:00 pm	FedEx	10-25-05	8:30
				10/26/05	9:45

LABORATORY COMMENTS:

Init Lab Temp:

Rec Lab Temp: N/A

Custody Seals: Y N N/A

Bottles Supplied by Test America: Y N

Method of Shipment:

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

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Hours 8:00 A.M to 6:00 P.M. Pacific

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0511229

Work Order Summary

CLIENT:	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204	**BILL TO:**	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204
PHONE:	800-765-0980	**P.O. #**	
FAX:	615-726-3404	**PROJECT #**	NOJ2726
DATE RECEIVED:	11/11/2005	**CONTACT:**	Susan Alaniz
DATE COMPLETED:	11/21/2005		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	NOJ2726-01	Modified TO-15	Tedlar Bag
02A	NOJ2726-02	Modified TO-15	Tedlar Bag
02AA	NOJ2726-02 Duplicate	Modified TO-15	Tedlar Bag
03A	NOJ2726-03	Modified TO-15	Tedlar Bag
04A	NOJ2726-04	Modified TO-15	Tedlar Bag
05A	NOJ2726-05	Modified TO-15	Tedlar Bag
06A	Lab Blank	Modified TO-15	NA
07A	CCV	Modified TO-15	NA
08A	LCS	Modified TO-15	NA

CERTIFIED BY: Linda J. Freeman

Laboratory Director

DATE: 11/22/05

Certfication numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
Test America
Workorder# 0511229

Five 1 Liter Tedlar Bag samples were received on November 11, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	***TO-15***	***ATL Modifications***
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	+- 30 %RSD (TO-14A)	</= 30 % RSD with 2 compounds allowed out to </= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases. A list of these compounds is available.

Receiving Notes

Samples were received past the recommended hold time of three days. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the analysis proceeded.

Analytical Notes

The reported LCS for each daily batch has been derived from more than one analytical file.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: NOJ2726-01

Lab ID#: 0511229-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Butanone (Methyl Ethyl Ketone)	1300	2300	3900	6700
cis-1,2-Dichloroethene	1300	6300	5300	25000
Tetrahydrofuran	1300	4800	3900	14000
Trichloroethene	1300	320000	7200	1700000

Client Sample ID: NOJ2726-02

Lab ID#: 0511229-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Butanone (Methyl Ethyl Ketone)	330	930	980	2700
cis-1,2-Dichloroethene	330	1500	1300	6100
Tetrahydrofuran	330	6200	980	18000
Trichloroethene	330	77000	1800	410000

Client Sample ID: NOJ2726-02 Duplicate

Lab ID#: 0511229-02AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Butanone (Methyl Ethyl Ketone)	500	880	1500	2600
cis-1,2-Dichloroethene	500	1500	2000	6000
Tetrahydrofuran	500	6100	1500	18000
Trichloroethene	500	77000	2700	410000

Client Sample ID: NOJ2726-03

Lab ID#: 0511229-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Butanone (Methyl Ethyl Ketone)	2000	8700	5900	26000
cis-1,2-Dichloroethene	2000	8400	7900	34000
Tetrahydrofuran	2000	34000	5900	100000
Trichloroethene	2000	480000	11000	2600000

Client Sample ID: NOJ2726-04

Lab ID#: 0511229-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Butanone (Methyl Ethyl Ketone)	2000	2200	5900	6400
cis-1,2-Dichloroethene	2000	8300	7900	33000

Client Sample ID: NOJ2726-04

Lab ID#: 0511229-04A

Tetrahydrofuran	2000	25000	5900	73000
Trichloroethene	2000	480000	11000	2600000

Client Sample ID: NOJ2726-05

Lab ID#: 0511229-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	2000	5300	7900	21000
Tetrahydrofuran	2000	21000	5900	62000
Trichloroethene	2000	470000	11000	2500000

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Client Sample ID: NOJ2726-01

Lab ID#: 0511229-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111214	Date of Collection:	10/25/05
Dil. Factor:	2670	Date of Analysis:	11/12/05 12:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1300	Not Detected	6600	Not Detected
Freon 114	1300	Not Detected	9300	Not Detected
Chloromethane	5300	Not Detected	11000	Not Detected
Vinyl Chloride	1300	Not Detected	3400	Not Detected
1,3-Butadiene	1300	Not Detected	3000	Not Detected
Bromomethane	1300	Not Detected	5200	Not Detected
Chloroethane	1300	Not Detected	3500	Not Detected
Freon 11	1300	Not Detected	7500	Not Detected
Ethanol	5300	Not Detected	10000	Not Detected
Freon 113	1300	Not Detected	10000	Not Detected
1,1-Dichloroethene	1300	Not Detected	5300	Not Detected
Acetone	5300	Not Detected	13000	Not Detected
2-Propanol	5300	Not Detected	13000	Not Detected
Carbon Disulfide	1300	Not Detected	4200	Not Detected
3-Chloropropene	5300	Not Detected	17000	Not Detected
Methylene Chloride	1300	Not Detected	4600	Not Detected
Methyl tert-butyl ether	1300	Not Detected	4800	Not Detected
trans-1,2-Dichloroethene	1300	Not Detected	5300	Not Detected
Hexane	1300	Not Detected	4700	Not Detected
1,1-Dichloroethane	1300	Not Detected	5400	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1300	2300	3900	6700
cis-1,2-Dichloroethene	1300	6300	5300	25000
Tetrahydrofuran	1300	4800	3900	14000
Chloroform	1300	Not Detected	6500	Not Detected
1,1,1-Trichloroethane	1300	Not Detected	7300	Not Detected
Cyclohexane	1300	Not Detected	4600	Not Detected
Carbon Tetrachloride	1300	Not Detected	8400	Not Detected
2,2,4-Trimethylpentane	1300	Not Detected	6200	Not Detected
Benzene	1300	Not Detected	4300	Not Detected
1,2-Dichloroethane	1300	Not Detected	5400	Not Detected
Heptane	1300	Not Detected	5500	Not Detected
Trichloroethene	1300	320000	7200	1700000
1,2-Dichloropropane	1300	Not Detected	6200	Not Detected
1,4-Dioxane	5300	Not Detected	19000	Not Detected
Bromodichloromethane	1300	Not Detected	8900	Not Detected
cis-1,3-Dichloropropene	1300	Not Detected	6000	Not Detected
4-Methyl-2-pentanone	1300	Not Detected	5500	Not Detected
Toluene	1300	Not Detected	5000	Not Detected
trans-1,3-Dichloropropene	1300	Not Detected	6000	Not Detected
1,1,2-Trichloroethane	1300	Not Detected	7300	Not Detected
Tetrachloroethene	1300	Not Detected	9000	Not Detected
2-Hexanone	5300	Not Detected	22000	Not Detected

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Client Sample ID: NOJ2726-01

Lab ID#: 0511229-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111214	Date of Collection:	10/25/05
Dil. Factor:	2670	Date of Analysis:	11/12/05 12:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	1300	Not Detected	11000	Not Detected
1,2-Dibromoethane (EDB)	1300	Not Detected	10000	Not Detected
Chlorobenzene	1300	Not Detected	6100	Not Detected
Ethyl Benzene	1300	Not Detected	5800	Not Detected
m,p-Xylene	1300	Not Detected	5800	Not Detected
o-Xylene	1300	Not Detected	5800	Not Detected
Styrene	1300	Not Detected	5700	Not Detected
Bromoform	1300	Not Detected	14000	Not Detected
Cumene	1300	Not Detected	6600	Not Detected
1,1,2,2-Tetrachloroethane	1300	Not Detected	9200	Not Detected
Propylbenzene	1300	Not Detected	6600	Not Detected
4-Ethyltoluene	1300	Not Detected	6600	Not Detected
1,3,5-Trimethylbenzene	1300	Not Detected	6600	Not Detected
1,2,4-Trimethylbenzene	1300	Not Detected	6600	Not Detected
1,3-Dichlorobenzene	1300	Not Detected	8000	Not Detected
1,4-Dichlorobenzene	1300	Not Detected	8000	Not Detected
alpha-Chlorotoluene	1300	Not Detected	6900	Not Detected
1,2-Dichlorobenzene	1300	Not Detected	8000	Not Detected
1,2,4-Trichlorobenzene	5300	Not Detected	40000	Not Detected
Hexachlorobutadiene	5300	Not Detected	57000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: NOJ2726-02

Lab ID#: 0511229-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111216	Date of Collection:	10/25/05
Dil. Factor:	667	Date of Analysis:	11/12/05 02:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	330	Not Detected	1600	Not Detected
Freon 114	330	Not Detected	2300	Not Detected
Chloromethane	1300	Not Detected	2800	Not Detected
Vinyl Chloride	330	Not Detected	850	Not Detected
1,3-Butadiene	330	Not Detected	740	Not Detected
Bromomethane	330	Not Detected	1300	Not Detected
Chloroethane	330	Not Detected	880	Not Detected
Freon 11	330	Not Detected	1900	Not Detected
Ethanol	1300	Not Detected	2500	Not Detected
Freon 113	330	Not Detected	2600	Not Detected
1,1-Dichloroethene	330	Not Detected	1300	Not Detected
Acetone	1300	Not Detected	3200	Not Detected
2-Propanol	1300	Not Detected	3300	Not Detected
Carbon Disulfide	330	Not Detected	1000	Not Detected
3-Chloropropene	1300	Not Detected	4200	Not Detected
Methylene Chloride	330	Not Detected	1200	Not Detected
Methyl tert-butyl ether	330	Not Detected	1200	Not Detected
trans-1,2-Dichloroethene	330	Not Detected	1300	Not Detected
Hexane	330	Not Detected	1200	Not Detected
1,1-Dichloroethane	330	Not Detected	1300	Not Detected
2-Butanone (Methyl Ethyl Ketone)	330	930	980	2700
cis-1,2-Dichloroethene	330	1500	1300	6100
Tetrahydrofuran	330	6200	980	18000
Chloroform	330	Not Detected	1600	Not Detected
1,1,1-Trichloroethane	330	Not Detected	1800	Not Detected
Cyclohexane	330	Not Detected	1100	Not Detected
Carbon Tetrachloride	330	Not Detected	2100	Not Detected
2,2,4-Trimethylpentane	330	Not Detected	1600	Not Detected
Benzene	330	Not Detected	1100	Not Detected
1,2-Dichloroethane	330	Not Detected	1300	Not Detected
Heptane	330	Not Detected	1400	Not Detected
Trichloroethene	330	77000	1800	410000
1,2-Dichloropropane	330	Not Detected	1500	Not Detected
1,4-Dioxane	1300	Not Detected	4800	Not Detected
Bromodichloromethane	330	Not Detected	2200	Not Detected
cis-1,3-Dichloropropene	330	Not Detected	1500	Not Detected
4-Methyl-2-pentanone	330	Not Detected	1400	Not Detected
Toluene	330	Not Detected	1200	Not Detected
trans-1,3-Dichloropropene	330	Not Detected	1500	Not Detected
1,1,2-Trichloroethane	330	Not Detected	1800	Not Detected
Tetrachloroethene	330	Not Detected	2300	Not Detected
2-Hexanone	1300	Not Detected	5500	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2726-02

Lab ID#: 0511229-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111216	Date of Collection:	10/25/05
Dil. Factor:	667	Date of Analysis:	11/12/05 02:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	330	Not Detected	2800	Not Detected
1,2-Dibromoethane (EDB)	330	Not Detected	2600	Not Detected
Chlorobenzene	330	Not Detected	1500	Not Detected
Ethyl Benzene	330	Not Detected	1400	Not Detected
m,p-Xylene	330	Not Detected	1400	Not Detected
o-Xylene	330	Not Detected	1400	Not Detected
Styrene	330	Not Detected	1400	Not Detected
Bromoform	330	Not Detected	3400	Not Detected
Cumene	330	Not Detected	1600	Not Detected
1,1,2,2-Tetrachloroethane	330	Not Detected	2300	Not Detected
Propylbenzene	330	Not Detected	1600	Not Detected
4-Ethyltoluene	330	Not Detected	1600	Not Detected
1,3,5-Trimethylbenzene	330	Not Detected	1600	Not Detected
1,2,4-Trimethylbenzene	330	Not Detected	1600	Not Detected
1,3-Dichlorobenzene	330	Not Detected	2000	Not Detected
1,4-Dichlorobenzene	330	Not Detected	2000	Not Detected
alpha-Chlorotoluene	330	Not Detected	1700	Not Detected
1,2-Dichlorobenzene	330	Not Detected	2000	Not Detected
1,2,4-Trichlorobenzene	1300	Not Detected	9900	Not Detected
Hexachlorobutadiene	1300	Not Detected	14000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: NOJ2726-02 Duplicate

Lab ID#: 0511229-02AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111215	Date of Collection:	10/25/05
Dil. Factor:	1000	Date of Analysis:	11/12/05 01:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	500	Not Detected	2500	Not Detected
Freon 114	500	Not Detected	3500	Not Detected
Chloromethane	2000	Not Detected	4100	Not Detected
Vinyl Chloride	500	Not Detected	1300	Not Detected
1,3-Butadiene	500	Not Detected	1100	Not Detected
Bromomethane	500	Not Detected	1900	Not Detected
Chloroethane	500	Not Detected	1300	Not Detected
Freon 11	500	Not Detected	2800	Not Detected
Ethanol	2000	Not Detected	3800	Not Detected
Freon 113	500	Not Detected	3800	Not Detected
1,1-Dichloroethene	500	Not Detected	2000	Not Detected
Acetone	2000	Not Detected	4800	Not Detected
2-Propanol	2000	Not Detected	4900	Not Detected
Carbon Disulfide	500	Not Detected	1600	Not Detected
3-Chloropropene	2000	Not Detected	6300	Not Detected
Methylene Chloride	500	Not Detected	1700	Not Detected
Methyl tert-butyl ether	500	Not Detected	1800	Not Detected
trans-1,2-Dichloroethene	500	Not Detected	2000	Not Detected
Hexane	500	Not Detected	1800	Not Detected
1,1-Dichloroethane	500	Not Detected	2000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	500	880	1500	2600
cis-1,2-Dichloroethene	500	1500	2000	6000
Tetrahydrofuran	500	6100	1500	18000
Chloroform	500	Not Detected	2400	Not Detected
1,1,1-Trichloroethane	500	Not Detected	2700	Not Detected
Cyclohexane	500	Not Detected	1700	Not Detected
Carbon Tetrachloride	500	Not Detected	3100	Not Detected
2,2,4-Trimethylpentane	500	Not Detected	2300	Not Detected
Benzene	500	Not Detected	1600	Not Detected
1,2-Dichloroethane	500	Not Detected	2000	Not Detected
Heptane	500	Not Detected	2000	Not Detected
Trichloroethene	500	77000	2700	410000
1,2-Dichloropropane	500	Not Detected	2300	Not Detected
1,4-Dioxane	2000	Not Detected	7200	Not Detected
Bromodichloromethane	500	Not Detected	3400	Not Detected
cis-1,3-Dichloropropene	500	Not Detected	2300	Not Detected
4-Methyl-2-pentanone	500	Not Detected	2000	Not Detected
Toluene	500	Not Detected	1900	Not Detected
trans-1,3-Dichloropropene	500	Not Detected	2300	Not Detected
1,1,2-Trichloroethane	500	Not Detected	2700	Not Detected
Tetrachloroethene	500	Not Detected	3400	Not Detected
2-Hexanone	2000	Not Detected	8200	Not Detected

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Client Sample ID: NOJ2726-02 Duplicate

Lab ID#: 0511229-02AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111215	Date of Collection:	10/25/05
Dil. Factor:	1000	Date of Analysis:	11/12/05 01:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	500	Not Detected	4200	Not Detected
1,2-Dibromoethane (EDB)	500	Not Detected	3800	Not Detected
Chlorobenzene	500	Not Detected	2300	Not Detected
Ethyl Benzene	500	Not Detected	2200	Not Detected
m,p-Xylene	500	Not Detected	2200	Not Detected
o-Xylene	500	Not Detected	2200	Not Detected
Styrene	500	Not Detected	2100	Not Detected
Bromoform	500	Not Detected	5200	Not Detected
Cumene	500	Not Detected	2400	Not Detected
1,1,2,2-Tetrachloroethane	500	Not Detected	3400	Not Detected
Propylbenzene	500	Not Detected	2400	Not Detected
4-Ethyltoluene	500	Not Detected	2400	Not Detected
1,3,5-Trimethylbenzene	500	Not Detected	2400	Not Detected
1,2,4-Trimethylbenzene	500	Not Detected	2400	Not Detected
1,3-Dichlorobenzene	500	Not Detected	3000	Not Detected
1,4-Dichlorobenzene	500	Not Detected	3000	Not Detected
alpha-Chlorotoluene	500	Not Detected	2600	Not Detected
1,2-Dichlorobenzene	500	Not Detected	3000	Not Detected
1,2,4-Trichlorobenzene	2000	Not Detected	15000	Not Detected
Hexachlorobutadiene	2000	Not Detected	21000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: NOJ2726-03

Lab ID#: 0511229-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111217	Date of Collection:	10/25/05
Dil. Factor:	4000	Date of Analysis:	11/12/05 03:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2000	Not Detected	9900	Not Detected
Freon 114	2000	Not Detected	14000	Not Detected
Chloromethane	8000	Not Detected	16000	Not Detected
Vinyl Chloride	2000	Not Detected	5100	Not Detected
1,3-Butadiene	2000	Not Detected	4400	Not Detected
Bromomethane	2000	Not Detected	7800	Not Detected
Chloroethane	2000	Not Detected	5300	Not Detected
Freon 11	2000	Not Detected	11000	Not Detected
Ethanol	8000	Not Detected	15000	Not Detected
Freon 113	2000	Not Detected	15000	Not Detected
1,1-Dichloroethene	2000	Not Detected	7900	Not Detected
Acetone	8000	Not Detected	19000	Not Detected
2-Propanol	8000	Not Detected	20000	Not Detected
Carbon Disulfide	2000	Not Detected	6200	Not Detected
3-Chloropropene	8000	Not Detected	25000	Not Detected
Methylene Chloride	2000	Not Detected	6900	Not Detected
Methyl tert-butyl ether	2000	Not Detected	7200	Not Detected
trans-1,2-Dichloroethene	2000	Not Detected	7900	Not Detected
Hexane	2000	Not Detected	7000	Not Detected
1,1-Dichloroethane	2000	Not Detected	8100	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2000	8700	5900	26000
cis-1,2-Dichloroethene	2000	8400	7900	34000
Tetrahydrofuran	2000	34000	5900	100000
Chloroform	2000	Not Detected	9800	Not Detected
1,1,1-Trichloroethane	2000	Not Detected	11000	Not Detected
Cyclohexane	2000	Not Detected	6900	Not Detected
Carbon Tetrachloride	2000	Not Detected	12000	Not Detected
2,2,4-Trimethylpentane	2000	Not Detected	9300	Not Detected
Benzene	2000	Not Detected	6400	Not Detected
1,2-Dichloroethane	2000	Not Detected	8100	Not Detected
Heptane	2000	Not Detected	8200	Not Detected
Trichloroethene	2000	480000	11000	2600000
1,2-Dichloropropane	2000	Not Detected	9200	Not Detected
1,4-Dioxane	8000	Not Detected	29000	Not Detected
Bromodichloromethane	2000	Not Detected	13000	Not Detected
cis-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
4-Methyl-2-pentanone	2000	Not Detected	8200	Not Detected
Toluene	2000	Not Detected	7500	Not Detected
trans-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
1,1,2-Trichloroethane	2000	Not Detected	11000	Not Detected
Tetrachloroethene	2000	Not Detected	14000	Not Detected
2-Hexanone	8000	Not Detected	33000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2726-03

Lab ID#: 0511229-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111217	Date of Collection:	10/25/05
Dil. Factor:	4000	Date of Analysis:	11/12/05 03:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	2000	Not Detected	17000	Not Detected
1,2-Dibromoethane (EDB)	2000	Not Detected	15000	Not Detected
Chlorobenzene	2000	Not Detected	9200	Not Detected
Ethyl Benzene	2000	Not Detected	8700	Not Detected
m,p-Xylene	2000	Not Detected	8700	Not Detected
o-Xylene	2000	Not Detected	8700	Not Detected
Styrene	2000	Not Detected	8500	Not Detected
Bromoform	2000	Not Detected	21000	Not Detected
Cumene	2000	Not Detected	9800	Not Detected
1,1,2,2-Tetrachloroethane	2000	Not Detected	14000	Not Detected
Propylbenzene	2000	Not Detected	9800	Not Detected
4-Ethyltoluene	2000	Not Detected	9800	Not Detected
1,3,5-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,2,4-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,3-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,4-Dichlorobenzene	2000	Not Detected	12000	Not Detected
alpha-Chlorotoluene	2000	Not Detected	10000	Not Detected
1,2-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,2,4-Trichlorobenzene	8000	Not Detected	59000	Not Detected
Hexachlorobutadiene	8000	Not Detected	85000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2726-04

Lab ID#: 0511229-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111218	Date of Collection:	10/25/05
Dil. Factor:	4000	Date of Analysis:	11/12/05 03:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2000	Not Detected	9900	Not Detected
Freon 114	2000	Not Detected	14000	Not Detected
Chloromethane	8000	Not Detected	16000	Not Detected
Vinyl Chloride	2000	Not Detected	5100	Not Detected
1,3-Butadiene	2000	Not Detected	4400	Not Detected
Bromomethane	2000	Not Detected	7800	Not Detected
Chloroethane	2000	Not Detected	5300	Not Detected
Freon 11	2000	Not Detected	11000	Not Detected
Ethanol	8000	Not Detected	15000	Not Detected
Freon 113	2000	Not Detected	15000	Not Detected
1,1-Dichloroethene	2000	Not Detected	7900	Not Detected
Acetone	8000	Not Detected	19000	Not Detected
2-Propanol	8000	Not Detected	20000	Not Detected
Carbon Disulfide	2000	Not Detected	6200	Not Detected
3-Chloropropene	8000	Not Detected	25000	Not Detected
Methylene Chloride	2000	Not Detected	6900	Not Detected
Methyl tert-butyl ether	2000	Not Detected	7200	Not Detected
trans-1,2-Dichloroethene	2000	Not Detected	7900	Not Detected
Hexane	2000	Not Detected	7000	Not Detected
1,1-Dichloroethane	2000	Not Detected	8100	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2000	2200	5900	6400
cis-1,2-Dichloroethene	2000	8300	7900	33000
Tetrahydrofuran	2000	25000	5900	73000
Chloroform	2000	Not Detected	9800	Not Detected
1,1,1-Trichloroethane	2000	Not Detected	11000	Not Detected
Cyclohexane	2000	Not Detected	6900	Not Detected
Carbon Tetrachloride	2000	Not Detected	12000	Not Detected
2,2,4-Trimethylpentane	2000	Not Detected	9300	Not Detected
Benzene	2000	Not Detected	6400	Not Detected
1,2-Dichloroethane	2000	Not Detected	8100	Not Detected
Heptane	2000	Not Detected	8200	Not Detected
Trichloroethene	2000	480000	11000	2600000
1,2-Dichloropropane	2000	Not Detected	9200	Not Detected
1,4-Dioxane	8000	Not Detected	29000	Not Detected
Bromodichloromethane	2000	Not Detected	13000	Not Detected
cis-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
4-Methyl-2-pentanone	2000	Not Detected	8200	Not Detected
Toluene	2000	Not Detected	7500	Not Detected
trans-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
1,1,2-Trichloroethane	2000	Not Detected	11000	Not Detected
Tetrachloroethene	2000	Not Detected	14000	Not Detected
2-Hexanone	8000	Not Detected	33000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2726-04

Lab ID#: 0511229-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111218	Date of Collection:	10/25/05
Dil. Factor:	4000	Date of Analysis:	11/12/05 03:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	2000	Not Detected	17000	Not Detected
1,2-Dibromoethane (EDB)	2000	Not Detected	15000	Not Detected
Chlorobenzene	2000	Not Detected	9200	Not Detected
Ethyl Benzene	2000	Not Detected	8700	Not Detected
m,p-Xylene	2000	Not Detected	8700	Not Detected
o-Xylene	2000	Not Detected	8700	Not Detected
Styrene	2000	Not Detected	8500	Not Detected
Bromoform	2000	Not Detected	21000	Not Detected
Cumene	2000	Not Detected	9800	Not Detected
1,1,2,2-Tetrachloroethane	2000	Not Detected	14000	Not Detected
Propylbenzene	2000	Not Detected	9800	Not Detected
4-Ethyltoluene	2000	Not Detected	9800	Not Detected
1,3,5-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,2,4-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,3-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,4-Dichlorobenzene	2000	Not Detected	12000	Not Detected
alpha-Chlorotoluene	2000	Not Detected	10000	Not Detected
1,2-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,2,4-Trichlorobenzene	8000	Not Detected	59000	Not Detected
Hexachlorobutadiene	8000	Not Detected	85000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2726-05

Lab ID#: 0511229-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111219	Date of Collection:	10/25/05
Dil. Factor:	4000	Date of Analysis:	11/12/05 04:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2000	Not Detected	9900	Not Detected
Freon 114	2000	Not Detected	14000	Not Detected
Chloromethane	8000	Not Detected	16000	Not Detected
Vinyl Chloride	2000	Not Detected	5100	Not Detected
1,3-Butadiene	2000	Not Detected	4400	Not Detected
Bromomethane	2000	Not Detected	7800	Not Detected
Chloroethane	2000	Not Detected	5300	Not Detected
Freon 11	2000	Not Detected	11000	Not Detected
Ethanol	8000	Not Detected	15000	Not Detected
Freon 113	2000	Not Detected	15000	Not Detected
1,1-Dichloroethene	2000	Not Detected	7900	Not Detected
Acetone	8000	Not Detected	19000	Not Detected
2-Propanol	8000	Not Detected	20000	Not Detected
Carbon Disulfide	2000	Not Detected	6200	Not Detected
3-Chloropropene	8000	Not Detected	25000	Not Detected
Methylene Chloride	2000	Not Detected	6900	Not Detected
Methyl tert-butyl ether	2000	Not Detected	7200	Not Detected
trans-1,2-Dichloroethene	2000	Not Detected	7900	Not Detected
Hexane	2000	Not Detected	7000	Not Detected
1,1-Dichloroethane	2000	Not Detected	8100	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2000	Not Detected	5900	Not Detected
cis-1,2-Dichloroethene	2000	5300	7900	21000
Tetrahydrofuran	2000	21000	5900	62000
Chloroform	2000	Not Detected	9800	Not Detected
1,1,1-Trichloroethane	2000	Not Detected	11000	Not Detected
Cyclohexane	2000	Not Detected	6900	Not Detected
Carbon Tetrachloride	2000	Not Detected	12000	Not Detected
2,2,4-Trimethylpentane	2000	Not Detected	9300	Not Detected
Benzene	2000	Not Detected	6400	Not Detected
1,2-Dichloroethane	2000	Not Detected	8100	Not Detected
Heptane	2000	Not Detected	8200	Not Detected
Trichloroethene	2000	470000	11000	2500000
1,2-Dichloropropane	2000	Not Detected	9200	Not Detected
1,4-Dioxane	8000	Not Detected	29000	Not Detected
Bromodichloromethane	2000	Not Detected	13000	Not Detected
cis-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
4-Methyl-2-pentanone	2000	Not Detected	8200	Not Detected
Toluene	2000	Not Detected	7500	Not Detected
trans-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
1,1,2-Trichloroethane	2000	Not Detected	11000	Not Detected
Tetrachloroethene	2000	Not Detected	14000	Not Detected
2-Hexanone	8000	Not Detected	33000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2726-05

Lab ID#: 0511229-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111219	Date of Collection:	10/25/05
Dil. Factor:	4000	Date of Analysis:	11/12/05 04:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	2000	Not Detected	17000	Not Detected
1,2-Dibromoethane (EDB)	2000	Not Detected	15000	Not Detected
Chlorobenzene	2000	Not Detected	9200	Not Detected
Ethyl Benzene	2000	Not Detected	8700	Not Detected
m,p-Xylene	2000	Not Detected	8700	Not Detected
o-Xylene	2000	Not Detected	8700	Not Detected
Styrene	2000	Not Detected	8500	Not Detected
Bromoform	2000	Not Detected	21000	Not Detected
Cumene	2000	Not Detected	9800	Not Detected
1,1,2,2-Tetrachloroethane	2000	Not Detected	14000	Not Detected
Propylbenzene	2000	Not Detected	9800	Not Detected
4-Ethyltoluene	2000	Not Detected	9800	Not Detected
1,3,5-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,2,4-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,3-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,4-Dichlorobenzene	2000	Not Detected	12000	Not Detected
alpha-Chlorotoluene	2000	Not Detected	10000	Not Detected
1,2-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,2,4-Trichlorobenzene	8000	Not Detected	59000	Not Detected
Hexachlorobutadiene	8000	Not Detected	85000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511229-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	11111205	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 04:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511229-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111205	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 04:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511229-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111202	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 01:49 AM

Compound	%Recovery
Freon 12	98
Freon 114	97
Chloromethane	102
Vinyl Chloride	97
1,3-Butadiene	100
Bromomethane	98
Chloroethane	113
Freon 11	97
Ethanol	102
Freon 113	98
1,1-Dichloroethene	97
Acetone	94
2-Propanol	104
Carbon Disulfide	99
3-Chloropropene	96
Methylene Chloride	98
Methyl tert-butyl ether	121
trans-1,2-Dichloroethene	94
Hexane	104
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	110
cis-1,2-Dichloroethene	101
Tetrahydrofuran	97
Chloroform	99
1,1,1-Trichloroethane	102
Cyclohexane	102
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	106
Benzene	94
1,2-Dichloroethane	102
Heptane	105
Trichloroethene	102
1,2-Dichloropropane	102
1,4-Dioxane	99
Bromodichloromethane	107
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	110
Toluene	96
trans-1,3-Dichloropropene	100
1,1,2-Trichloroethane	100
Tetrachloroethene	100
2-Hexanone	104

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511229-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111202	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 01:49 AM

Compound	%Recovery
Dibromochloromethane	109
1,2-Dibromoethane (EDB)	102
Chlorobenzene	97
Ethyl Benzene	96
m,p-Xylene	96
o-Xylene	96
Styrene	97
Bromoform	112
Cumene	91
1,1,2,2-Tetrachloroethane	88
Propylbenzene	90
4-Ethyltoluene	91
1,3,5-Trimethylbenzene	86
1,2,4-Trimethylbenzene	84
1,3-Dichlorobenzene	83
1,4-Dichlorobenzene	84
alpha-Chlorotoluene	80
1,2-Dichlorobenzene	77
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	79

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511229-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111203	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 02:55 AM

Compound	%Recovery
Freon 12	102
Freon 114	100
Chloromethane	108
Vinyl Chloride	98
1,3-Butadiene	109
Bromomethane	106
Chloroethane	121
Freon 11	99
Ethanol	102
Freon 113	100
1,1-Dichloroethene	97
Acetone	105
2-Propanol	110
Carbon Disulfide	111
3-Chloropropene	102
Methylene Chloride	102
Methyl tert-butyl ether	129
trans-1,2-Dichloroethene	107
Hexane	112
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	121
cis-1,2-Dichloroethene	130
Tetrahydrofuran	102
Chloroform	99
1,1,1-Trichloroethane	96
Cyclohexane	110
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	121
Benzene	92
1,2-Dichloroethane	98
Heptane	110
Trichloroethene	99
1,2-Dichloropropane	98
1,4-Dioxane	96
Bromodichloromethane	110
cis-1,3-Dichloropropene	99
4-Methyl-2-pentanone	107
Toluene	101
trans-1,3-Dichloropropene	110
1,1,2-Trichloroethane	98
Tetrachloroethene	102
2-Hexanone	88

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511229-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111203	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 02:55 AM

Compound	%Recovery
Dibromochloromethane	110
1,2-Dibromoethane (EDB)	104
Chlorobenzene	97
Ethyl Benzene	99
m,p-Xylene	101
o-Xylene	93
Styrene	123
Bromoform	105
Cumene	79
1,1,2,2-Tetrachloroethane	83
Propylbenzene	86
4-Ethyltoluene	84
1,3,5-Trimethylbenzene	78
1,2,4-Trimethylbenzene	80
1,3-Dichlorobenzene	76
1,4-Dichlorobenzene	74
alpha-Chlorotoluene	78
1,2-Dichlorobenzene	69 Q
1,2,4-Trichlorobenzene	65 Q
Hexachlorobutadiene	70

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	99	70-130

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

November 23, 2005

Client: SAS Environmental Inc. (3403)
1270 S.Clevleand-Massillon Building A
Akron, OH 44321
Attn: Mark V. Allen

Work Order: NOJ2729
Project Name: UT Collierville
Project Nbr: 031091
Date Received: 10/26/05

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
SVE-1D	NOJ2729-01	10/25/05 11:46
SVE-1S	NOJ2729-02	10/25/05 15:34
SVE-4D	NOJ2729-03	10/25/05 11:47
SVE-4S	NOJ2729-04	10/25/05 15:35
SVE-7S	NOJ2729-05	10/25/05 17:50
SVE-20D	NOJ2729-06	10/25/05 19:00

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

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Tennessee Certification Number: 02008

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Jessica Vickers
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2729
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/26/05 07:45

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch

Sample ID: NOJ2729-01 (SVE-1D - Air) Sampled: 10/25/05 11:46
Subcontracted Analysis
See Attached Report

Sample ID: NOJ2729-02 (SVE-1S - Air) Sampled: 10/25/05 15:34
Subcontracted Analysis
See Attached Report

Sample ID: NOJ2729-03 (SVE-4D - Air) Sampled: 10/25/05 11:47
Subcontracted Analysis
See Attached Report

Sample ID: NOJ2729-04 (SVE-4S - Air) Sampled: 10/25/05 15:35
Subcontracted Analysis
See Attached Report

ımple ID: NOJ2729-05 (SVE-7S - Air) Sampled: 10/25/05 17:50
ubcontracted Analysis
See Attached Report

Sample ID: NOJ2729-06 (SVE-20D - Air) Sampled: 10/25/05 19:00
Subcontracted Analysis
See Attached Report

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2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2729
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/26/05 07:45

CERTIFICATION SUMMARY

TestAmerica Analytical - Nashville

Method	Matrix	AIHA	Nelac	Tennessee
subcontract	Air			

TestAmerica
ANALYTICAL TESTING CORPORATION
Nashville Division

COOLER RECEIPT FORM **BC#** NOJ2729

Client Name : SAS Environmental, INC.

Cooler Received/Opened On: 10/26/05 **Accessioned By:** James D. Jacobs

Log-in Personnel Signature

1. Temperature of Cooler when triaged: N/A Degrees Celsius
2. Were custody seals on outside of cooler?..... YES...NO...NA
   a. If yes, how many and where:_____
3. Were custody seals on containers?..... NO...YES...NA
4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA
5. Were custody papers inside cooler?..... YES...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?..... YES...NO...NA
7. Did you sign the custody papers in the appropriate place?..... YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Foam Insert Ziplock baggies Paper Other None
9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None
10. Did all containers arrive in good condition (unbroken)?..... YES...NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)?..... YES...NO...NA
12. Did all container labels and tags agree with custody papers?..... YES...NO...NA
13. Were correct containers used for the analysis requested?..... YES...NO...NA
14. a. Were VOA vials received?..... YES...NO...NA
    b. Was there any observable head space present in any VOA vial?..... NO...YES...NA
15. Was sufficient amount of sample sent in each container?..... YES...NO...NA
16. Were correct preservatives used?..... YES...NO...NA
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?..... NO...YES...NA
18. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below:

    2869

    Fed-Ex UPS Velocity DHL Route Off-street Misc.
19. If a Non-Conformance exists, see attached or comments below:

BIS = Broken in shipment
Cooler Receipt Form

LF-1
End of Form

Revised 4/5/05

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

NOJ2729
11/04/05 17:00

Client Name: SAS ENVIRONMENTAL INC Client #: 3403
Address: 1270 S. CLEVE. MASS RD
City/State/Zip Code: AKRON OH 44321
Project Manager: MARK V. ALLEN
Telephone Number: 330-666-1546 Fax: 330-666-7443
Sampler Name: (Print Name) Omer Uppal, Matt White
Sampler Signature:

Project Name: UT COLLIERVILLE
Project #: 031091
Site/Location ID: COLLIERVILLE State: TN
Report To: SAS ENVIRONMENTAL INC (MARK V. ALLEN)
Invoice To: SAS ENVIRONMENTAL INC.
Quote #: 090204 BLK99 PO#: 7608

TAT
X Standard
___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: (Y) N

QC Deliverables
___ None
___ Level 2 (Batch QC)
___ Level 3
___ Level 4
Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other)	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: EPA MODIFIED TO15										REMARKS
SVE - 1D	10-25-05	11:46 am	G		VAPOR						2		X										NOJ2729-01
SVE - 1S		3:34 pm									2		X										-02
SVE - 4D		11:47 am									2		X										-03
SVE - 4S		3:35 pm									2		X										-04
SVE - 7S		5:50 pm									2		X										-05
SVE - 20D		7:00 pm									2		X										-06

Special Instructions:
STANDARD TAT EMAIL: JFO12@aol.com

Relinquished By: Omer Uppal	Date: 10-25-05	Time: 8:00 pm	Received By: FedEx	Date: 10-25-05	Time: 8:30 pm
Relinquished By:	Date:	Time:	Received By:	Date: 10/26/05	Time: 9:45
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: N/A
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0511228

Work Order Summary

CLIENT:	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204	**BILL TO:**	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204
PHONE:	800-765-0980	**P.O. #**	
FAX:	615-726-3404	**PROJECT #**	NOJ2729
DATE RECEIVED:	11/11/2005	**CONTACT:**	Susan Alaniz
DATE COMPLETED:	11/21/2005		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	NOJ2729-01	Modified TO-15	Tedlar Bag
02A	NOJ2729-02	Modified TO-15	Tedlar Bag
03A	NOJ2729-03	Modified TO-15	Tedlar Bag
04A	NOJ2729-04	Modified TO-15	Tedlar Bag
05A	NOJ2729-05	Modified TO-15	Tedlar Bag
06A	NOJ2729-06	Modified TO-15	Tedlar Bag
07A	Lab Blank	Modified TO-15	NA
08A	CCV	Modified TO-15	NA
09A	LCS	Modified TO-15	NA

CERTIFIED BY: Linda J. Truman

Laboratory Director

DATE: 11/22/05

Certfication numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Test America
Workorder# 0511228

Six 1 Liter Tedlar Bag samples were received on November 11, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	+- 30 %RSD (TO-14A)	</= 30 % RSD with 2 compounds allowed out to </= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases. A list of these compounds is available.

Receiving Notes

Samples were received past the recommended hold time of 3 days. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the analysis proceeded.

Analytical Notes

The reported LCS for each daily batch has been derived from more than one analytical file.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: NOJ2729-01

Lab ID#: 0511228-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Acetone	800	840	1900	2000
2-Propanol	800	4300	2000	10000
Carbon Disulfide	200	230	620	720
2-Butanone (Methyl Ethyl Ketone)	200	2400	590	7000
cis-1,2-Dichloroethene	200	1800	790	7100
Tetrahydrofuran	200	34000	590	100000
Cyclohexane	200	210	690	730
Trichloroethene	200	30000	1100	160000

Client Sample ID: NOJ2729-02

Lab ID#: 0511228-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Acetone	40	160	95	380
Carbon Disulfide	10	14	31	44
Hexane	10	20	35	72
2-Butanone (Methyl Ethyl Ketone)	10	1500	29	4400
cis-1,2-Dichloroethene	10	120	40	490
Tetrahydrofuran	10	4200 E	29	12000 E
2,2,4-Trimethylpentane	10	56	47	260
Trichloroethene	10	1400	54	7400
m,p-Xylene	10	15	43	66

Client Sample ID: NOJ2729-03

Lab ID#: 0511228-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Butanone (Methyl Ethyl Ketone)	5000	21000	15000	63000
cis-1,2-Dichloroethene	5000	19000	20000	75000
Tetrahydrofuran	5000	40000	15000	120000
Trichloroethene	5000	1300000	27000	7000000

Client Sample ID: NOJ2729-04

Lab ID#: 0511228-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Butanone (Methyl Ethyl Ketone)	5000	7200	15000	21000
cis-1,2-Dichloroethene	5000	20000	20000	80000
Tetrahydrofuran	5000	30000	15000	87000

Client Sample ID: NOJ2729-04

Lab ID#: 0511228-04A

Trichloroethene	5000	1200000	27000	6400000

Client Sample ID: NOJ2729-05

Lab ID#: 0511228-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Acetone	40	370	95	870
2-Propanol	40	39 J	98	97 J
2-Butanone (Methyl Ethyl Ketone)	10	2600	29	7600
cis-1,2-Dichloroethene	10	290	40	1200
Tetrahydrofuran	10	4700 E	29	14000 E
Chloroform	10	28	49	140
Trichloroethene	10	2300	54	12000
1,1,2-Trichloroethane	10	11	54	62

Client Sample ID: NOJ2729-06

Lab ID#: 0511228-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	2000	40000	5100	100000
Methylene Chloride	2000	3600	6900	12000
trans-1,2-Dichloroethene	2000	14000	7900	54000
cis-1,2-Dichloroethene	2000	580000	7900	2300000
Tetrahydrofuran	2000	31000	5900	92000
Trichloroethene	2000	600000	11000	3200000
m,p-Xylene	2000	2700	8700	12000

AIR TOXICS LTD.

Client Sample ID: NOJ2729-01

Lab ID#: 0511228-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111213	Date of Collection:	10/25/05
Dil. Factor:	400	Date of Analysis:	11/12/05 12:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	200	Not Detected	990	Not Detected
Freon 114	200	Not Detected	1400	Not Detected
Chloromethane	800	Not Detected	1600	Not Detected
Vinyl Chloride	200	Not Detected	510	Not Detected
1,3-Butadiene	200	Not Detected	440	Not Detected
Bromomethane	200	Not Detected	780	Not Detected
Chloroethane	200	Not Detected	530	Not Detected
Freon 11	200	Not Detected	1100	Not Detected
Ethanol	800	Not Detected	1500	Not Detected
Freon 113	200	Not Detected	1500	Not Detected
1,1-Dichloroethene	200	Not Detected	790	Not Detected
Acetone	800	840	1900	2000
2-Propanol	800	4300	2000	10000
Carbon Disulfide	200	230	620	720
3-Chloropropene	800	Not Detected	2500	Not Detected
Methylene Chloride	200	Not Detected	690	Not Detected
Methyl tert-butyl ether	200	Not Detected	720	Not Detected
trans-1,2-Dichloroethene	200	Not Detected	790	Not Detected
Hexane	200	Not Detected	700	Not Detected
1,1-Dichloroethane	200	Not Detected	810	Not Detected
2-Butanone (Methyl Ethyl Ketone)	200	2400	590	7000
cis-1,2-Dichloroethene	200	1800	790	7100
Tetrahydrofuran	200	34000	590	100000
Chloroform	200	Not Detected	980	Not Detected
1,1,1-Trichloroethane	200	Not Detected	1100	Not Detected
Cyclohexane	200	210	690	730
Carbon Tetrachloride	200	Not Detected	1200	Not Detected
2,2,4-Trimethylpentane	200	Not Detected	930	Not Detected
Benzene	200	Not Detected	640	Not Detected
1,2-Dichloroethane	200	Not Detected	810	Not Detected
Heptane	200	Not Detected	820	Not Detected
Trichloroethene	200	30000	1100	160000
1,2-Dichloropropane	200	Not Detected	920	Not Detected
1,4-Dioxane	800	Not Detected	2900	Not Detected
Bromodichloromethane	200	Not Detected	1300	Not Detected
cis-1,3-Dichloropropene	200	Not Detected	910	Not Detected
4-Methyl-2-pentanone	200	Not Detected	820	Not Detected
Toluene	200	Not Detected	750	Not Detected
trans-1,3-Dichloropropene	200	Not Detected	910	Not Detected
1,1,2-Trichloroethane	200	Not Detected	1100	Not Detected
Tetrachloroethene	200	Not Detected	1400	Not Detected
2-Hexanone	800	Not Detected	3300	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2729-01

Lab ID#: 0511228-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	111213	Date of Collection:	10/25/05
Dil. Factor:	400	Date of Analysis:	11/12/05 12:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	200	Not Detected	1700	Not Detected
1,2-Dibromoethane (EDB)	200	Not Detected	1500	Not Detected
Chlorobenzene	200	Not Detected	920	Not Detected
Ethyl Benzene	200	Not Detected	870	Not Detected
m,p-Xylene	200	Not Detected	870	Not Detected
o-Xylene	200	Not Detected	870	Not Detected
Styrene	200	Not Detected	850	Not Detected
Bromoform	200	Not Detected	2100	Not Detected
Cumene	200	Not Detected	980	Not Detected
1,1,2,2-Tetrachloroethane	200	Not Detected	1400	Not Detected
Propylbenzene	200	Not Detected	980	Not Detected
4-Ethyltoluene	200	Not Detected	980	Not Detected
1,3,5-Trimethylbenzene	200	Not Detected	980	Not Detected
1,2,4-Trimethylbenzene	200	Not Detected	980	Not Detected
1,3-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,4-Dichlorobenzene	200	Not Detected	1200	Not Detected
alpha-Chlorotoluene	200	Not Detected	1000	Not Detected
1,2-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,2,4-Trichlorobenzene	800	Not Detected	5900	Not Detected
Hexachlorobutadiene	800	Not Detected	8500	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2729-02

Lab ID#: 0511228-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111209	Date of Collection:	10/25/05
Dil. Factor:	20.0	Date of Analysis:	11/12/05 09:03 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	10	Not Detected	49	Not Detected
Freon 114	10	Not Detected	70	Not Detected
Chloromethane	40	Not Detected	83	Not Detected
Vinyl Chloride	10	Not Detected	26	Not Detected
1,3-Butadiene	10	Not Detected	22	Not Detected
Bromomethane	10	Not Detected	39	Not Detected
Chloroethane	10	Not Detected	26	Not Detected
Freon 11	10	Not Detected	56	Not Detected
Ethanol	40	Not Detected	75	Not Detected
Freon 113	10	Not Detected	77	Not Detected
1,1-Dichloroethene	10	Not Detected	40	Not Detected
Acetone	40	160	95	380
2-Propanol	40	Not Detected	98	Not Detected
Carbon Disulfide	10	14	31	44
3-Chloropropene	40	Not Detected	120	Not Detected
Methylene Chloride	10	Not Detected	35	Not Detected
Methyl tert-butyl ether	10	Not Detected	36	Not Detected
trans-1,2-Dichloroethene	10	Not Detected	40	Not Detected
Hexane	10	20	35	72
1,1-Dichloroethane	10	Not Detected	40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	10	1500	29	4400
cis-1,2-Dichloroethene	10	120	40	490
Tetrahydrofuran	10	4200 E	29	12000 E
Chloroform	10	Not Detected	49	Not Detected
1,1,1-Trichloroethane	10	Not Detected	54	Not Detected
Cyclohexane	10	Not Detected	34	Not Detected
Carbon Tetrachloride	10	Not Detected	63	Not Detected
2,2,4-Trimethylpentane	10	56	47	260
Benzene	10	Not Detected	32	Not Detected
1,2-Dichloroethane	10	Not Detected	40	Not Detected
Heptane	10	Not Detected	41	Not Detected
Trichloroethene	10	1400	54	7400
1,2-Dichloropropane	10	Not Detected	46	Not Detected
1,4-Dioxane	40	Not Detected	140	Not Detected
Bromodichloromethane	10	Not Detected	67	Not Detected
cis-1,3-Dichloropropene	10	Not Detected	45	Not Detected
4-Methyl-2-pentanone	10	Not Detected	41	Not Detected
Toluene	10	Not Detected	38	Not Detected
trans-1,3-Dichloropropene	10	Not Detected	45	Not Detected
1,1,2-Trichloroethane	10	Not Detected	54	Not Detected
Tetrachloroethene	10	Not Detected	68	Not Detected
2-Hexanone	40	Not Detected	160	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2729-02

Lab ID#: 0511228-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111209	**Date of Collection:**	10/25/05
Dil. Factor:	20.0	**Date of Analysis:**	11/12/05 09:03 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	10	Not Detected	85	Not Detected
1,2-Dibromoethane (EDB)	10	Not Detected	77	Not Detected
Chlorobenzene	10	Not Detected	46	Not Detected
Ethyl Benzene	10	Not Detected	43	Not Detected
m,p-Xylene	10	15	43	66
o-Xylene	10	Not Detected	43	Not Detected
Styrene	10	Not Detected	42	Not Detected
Bromoform	10	Not Detected	100	Not Detected
Cumene	10	Not Detected	49	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected	69	Not Detected
Propylbenzene	10	Not Detected	49	Not Detected
4-Ethyltoluene	10	Not Detected	49	Not Detected
1,3,5-Trimethylbenzene	10	Not Detected	49	Not Detected
1,2,4-Trimethylbenzene	10	Not Detected	49	Not Detected
1,3-Dichlorobenzene	10	Not Detected	60	Not Detected
1,4-Dichlorobenzene	10	Not Detected	60	Not Detected
alpha-Chlorotoluene	10	Not Detected	52	Not Detected
1,2-Dichlorobenzene	10	Not Detected	60	Not Detected
1,2,4-Trichlorobenzene	40	Not Detected	300	Not Detected
Hexachlorobutadiene	40	Not Detected	430	Not Detected

E = Exceeds instrument calibration range.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2729-03

Lab ID#: 0511228-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111211	Date of Collection:	10/25/05
Dil. Factor:	10000	Date of Analysis:	11/12/05 10:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	5000	Not Detected	25000	Not Detected
Freon 114	5000	Not Detected	35000	Not Detected
Chloromethane	20000	Not Detected	41000	Not Detected
Vinyl Chloride	5000	Not Detected	13000	Not Detected
1,3-Butadiene	5000	Not Detected	11000	Not Detected
Bromomethane	5000	Not Detected	19000	Not Detected
Chloroethane	5000	Not Detected	13000	Not Detected
Freon 11	5000	Not Detected	28000	Not Detected
Ethanol	20000	Not Detected	38000	Not Detected
Freon 113	5000	Not Detected	38000	Not Detected
1,1-Dichloroethene	5000	Not Detected	20000	Not Detected
Acetone	20000	Not Detected	48000	Not Detected
2-Propanol	20000	Not Detected	49000	Not Detected
Carbon Disulfide	5000	Not Detected	16000	Not Detected
3-Chloropropene	20000	Not Detected	63000	Not Detected
Methylene Chloride	5000	Not Detected	17000	Not Detected
Methyl tert-butyl ether	5000	Not Detected	18000	Not Detected
trans-1,2-Dichloroethene	5000	Not Detected	20000	Not Detected
Hexane	5000	Not Detected	18000	Not Detected
1,1-Dichloroethane	5000	Not Detected	20000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5000	21000	15000	63000
cis-1,2-Dichloroethene	5000	19000	20000	75000
Tetrahydrofuran	5000	40000	15000	120000
Chloroform	5000	Not Detected	24000	Not Detected
1,1,1-Trichloroethane	5000	Not Detected	27000	Not Detected
Cyclohexane	5000	Not Detected	17000	Not Detected
Carbon Tetrachloride	5000	Not Detected	31000	Not Detected
2,2,4-Trimethylpentane	5000	Not Detected	23000	Not Detected
Benzene	5000	Not Detected	16000	Not Detected
1,2-Dichloroethane	5000	Not Detected	20000	Not Detected
Heptane	5000	Not Detected	20000	Not Detected
Trichloroethene	5000	1300000	27000	7000000
1,2-Dichloropropane	5000	Not Detected	23000	Not Detected
1,4-Dioxane	20000	Not Detected	72000	Not Detected
Bromodichloromethane	5000	Not Detected	34000	Not Detected
cis-1,3-Dichloropropene	5000	Not Detected	23000	Not Detected
4-Methyl-2-pentanone	5000	Not Detected	20000	Not Detected
Toluene	5000	Not Detected	19000	Not Detected
trans-1,3-Dichloropropene	5000	Not Detected	23000	Not Detected
1,1,2-Trichloroethane	5000	Not Detected	27000	Not Detected
Tetrachloroethene	5000	Not Detected	34000	Not Detected
2-Hexanone	20000	Not Detected	82000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2729-03

Lab ID#: 0511228-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111211	Date of Collection:	10/25/05
Dil. Factor:	10000	Date of Analysis:	11/12/05 10:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	5000	Not Detected	42000	Not Detected
1,2-Dibromoethane (EDB)	5000	Not Detected	38000	Not Detected
Chlorobenzene	5000	Not Detected	23000	Not Detected
Ethyl Benzene	5000	Not Detected	22000	Not Detected
m,p-Xylene	5000	Not Detected	22000	Not Detected
o-Xylene	5000	Not Detected	22000	Not Detected
Styrene	5000	Not Detected	21000	Not Detected
Bromoform	5000	Not Detected	52000	Not Detected
Cumene	5000	Not Detected	24000	Not Detected
1,1,2,2-Tetrachloroethane	5000	Not Detected	34000	Not Detected
Propylbenzene	5000	Not Detected	24000	Not Detected
4-Ethyltoluene	5000	Not Detected	24000	Not Detected
1,3,5-Trimethylbenzene	5000	Not Detected	24000	Not Detected
1,2,4-Trimethylbenzene	5000	Not Detected	24000	Not Detected
1,3-Dichlorobenzene	5000	Not Detected	30000	Not Detected
1,4-Dichlorobenzene	5000	Not Detected	30000	Not Detected
alpha-Chlorotoluene	5000	Not Detected	26000	Not Detected
1,2-Dichlorobenzene	5000	Not Detected	30000	Not Detected
1,2,4-Trichlorobenzene	20000	Not Detected	150000	Not Detected
Hexachlorobutadiene	20000	Not Detected	210000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2729-04

Lab ID#: 0511228-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111210	Date of Collection:	10/25/05
Dil. Factor:	10000	Date of Analysis:	11/12/05 09:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	5000	Not Detected	25000	Not Detected
Freon 114	5000	Not Detected	35000	Not Detected
Chloromethane	20000	Not Detected	41000	Not Detected
Vinyl Chloride	5000	Not Detected	13000	Not Detected
1,3-Butadiene	5000	Not Detected	11000	Not Detected
Bromomethane	5000	Not Detected	19000	Not Detected
Chloroethane	5000	Not Detected	13000	Not Detected
Freon 11	5000	Not Detected	28000	Not Detected
Ethanol	20000	Not Detected	38000	Not Detected
Freon 113	5000	Not Detected	38000	Not Detected
1,1-Dichloroethene	5000	Not Detected	20000	Not Detected
Acetone	20000	Not Detected	48000	Not Detected
2-Propanol	20000	Not Detected	49000	Not Detected
Carbon Disulfide	5000	Not Detected	16000	Not Detected
3-Chloropropene	20000	Not Detected	63000	Not Detected
Methylene Chloride	5000	Not Detected	17000	Not Detected
Methyl tert-butyl ether	5000	Not Detected	18000	Not Detected
trans-1,2-Dichloroethene	5000	Not Detected	20000	Not Detected
Hexane	5000	Not Detected	18000	Not Detected
1,1-Dichloroethane	5000	Not Detected	20000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5000	7200	15000	21000
cis-1,2-Dichloroethene	5000	20000	20000	80000
Tetrahydrofuran	5000	30000	15000	87000
Chloroform	5000	Not Detected	24000	Not Detected
1,1,1-Trichloroethane	5000	Not Detected	27000	Not Detected
Cyclohexane	5000	Not Detected	17000	Not Detected
Carbon Tetrachloride	5000	Not Detected	31000	Not Detected
2,2,4-Trimethylpentane	5000	Not Detected	23000	Not Detected
Benzene	5000	Not Detected	16000	Not Detected
1,2-Dichloroethane	5000	Not Detected	20000	Not Detected
Heptane	5000	Not Detected	20000	Not Detected
Trichloroethene	5000	1200000	27000	6400000
1,2-Dichloropropane	5000	Not Detected	23000	Not Detected
1,4-Dioxane	20000	Not Detected	72000	Not Detected
Bromodichloromethane	5000	Not Detected	34000	Not Detected
cis-1,3-Dichloropropene	5000	Not Detected	23000	Not Detected
4-Methyl-2-pentanone	5000	Not Detected	20000	Not Detected
Toluene	5000	Not Detected	19000	Not Detected
trans-1,3-Dichloropropene	5000	Not Detected	23000	Not Detected
1,1,2-Trichloroethane	5000	Not Detected	27000	Not Detected
Tetrachloroethene	5000	Not Detected	34000	Not Detected
2-Hexanone	20000	Not Detected	82000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2729-04

Lab ID#: 0511228-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111210	Date of Collection:	10/25/05
Dil. Factor:	10000	Date of Analysis:	11/12/05 09:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	5000	Not Detected	42000	Not Detected
1,2-Dibromoethane (EDB)	5000	Not Detected	38000	Not Detected
Chlorobenzene	5000	Not Detected	23000	Not Detected
Ethyl Benzene	5000	Not Detected	22000	Not Detected
m,p-Xylene	5000	Not Detected	22000	Not Detected
o-Xylene	5000	Not Detected	22000	Not Detected
Styrene	5000	Not Detected	21000	Not Detected
Bromoform	5000	Not Detected	52000	Not Detected
Cumene	5000	Not Detected	24000	Not Detected
1,1,2,2-Tetrachloroethane	5000	Not Detected	34000	Not Detected
Propylbenzene	5000	Not Detected	24000	Not Detected
4-Ethyltoluene	5000	Not Detected	24000	Not Detected
1,3,5-Trimethylbenzene	5000	Not Detected	24000	Not Detected
1,2,4-Trimethylbenzene	5000	Not Detected	24000	Not Detected
1,3-Dichlorobenzene	5000	Not Detected	30000	Not Detected
1,4-Dichlorobenzene	5000	Not Detected	30000	Not Detected
alpha-Chlorotoluene	5000	Not Detected	26000	Not Detected
1,2-Dichlorobenzene	5000	Not Detected	30000	Not Detected
1,2,4-Trichlorobenzene	20000	Not Detected	150000	Not Detected
Hexachlorobutadiene	20000	Not Detected	210000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2729-05

Lab ID#: 0511228-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111208	Date of Collection:	10/25/05
Dil. Factor:	20.0	Date of Analysis:	11/12/05 08:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	10	Not Detected	49	Not Detected
Freon 114	10	Not Detected	70	Not Detected
Chloromethane	40	Not Detected	83	Not Detected
Vinyl Chloride	10	Not Detected	26	Not Detected
1,3-Butadiene	10	Not Detected	22	Not Detected
Bromomethane	10	Not Detected	39	Not Detected
Chloroethane	10	Not Detected	26	Not Detected
Freon 11	10	Not Detected	56	Not Detected
Ethanol	40	Not Detected	75	Not Detected
Freon 113	10	Not Detected	77	Not Detected
1,1-Dichloroethene	10	Not Detected	40	Not Detected
Acetone	40	370	95	870
2-Propanol	40	39 J	98	97 J
Carbon Disulfide	10	Not Detected	31	Not Detected
3-Chloropropene	40	Not Detected	120	Not Detected
Methylene Chloride	10	Not Detected	35	Not Detected
Methyl tert-butyl ether	10	Not Detected	36	Not Detected
trans-1,2-Dichloroethene	10	Not Detected	40	Not Detected
Hexane	10	Not Detected	35	Not Detected
1,1-Dichloroethane	10	Not Detected	40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	10	2600	29	7600
cis-1,2-Dichloroethene	10	290	40	1200
Tetrahydrofuran	10	4700 E	29	14000 E
Chloroform	10	28	49	140
1,1,1-Trichloroethane	10	Not Detected	54	Not Detected
Cyclohexane	10	Not Detected	34	Not Detected
Carbon Tetrachloride	10	Not Detected	63	Not Detected
2,2,4-Trimethylpentane	10	Not Detected	47	Not Detected
Benzene	10	Not Detected	32	Not Detected
1,2-Dichloroethane	10	Not Detected	40	Not Detected
Heptane	10	Not Detected	41	Not Detected
Trichloroethene	10	2300	54	12000
1,2-Dichloropropane	10	Not Detected	46	Not Detected
1,4-Dioxane	40	Not Detected	140	Not Detected
Bromodichloromethane	10	Not Detected	67	Not Detected
cis-1,3-Dichloropropene	10	Not Detected	45	Not Detected
4-Methyl-2-pentanone	10	Not Detected	41	Not Detected
Toluene	10	Not Detected	38	Not Detected
trans-1,3-Dichloropropene	10	Not Detected	45	Not Detected
1,1,2-Trichloroethane	10	11	54	62
Tetrachloroethene	10	Not Detected	68	Not Detected
2-Hexanone	40	Not Detected	160	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2729-05

Lab ID#: 0511228-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111208	Date of Collection:	10/25/05
Dil. Factor:	20.0	Date of Analysis:	11/12/05 08:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	10	Not Detected	85	Not Detected
1,2-Dibromoethane (EDB)	10	Not Detected	77	Not Detected
Chlorobenzene	10	Not Detected	46	Not Detected
Ethyl Benzene	10	Not Detected	43	Not Detected
m,p-Xylene	10	Not Detected	43	Not Detected
o-Xylene	10	Not Detected	43	Not Detected
Styrene	10	Not Detected	42	Not Detected
Bromoform	10	Not Detected	100	Not Detected
Cumene	10	Not Detected	49	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected	69	Not Detected
Propylbenzene	10	Not Detected	49	Not Detected
4-Ethyltoluene	10	Not Detected	49	Not Detected
1,3,5-Trimethylbenzene	10	Not Detected	49	Not Detected
1,2,4-Trimethylbenzene	10	Not Detected	49	Not Detected
1,3-Dichlorobenzene	10	Not Detected	60	Not Detected
1,4-Dichlorobenzene	10	Not Detected	60	Not Detected
alpha-Chlorotoluene	10	Not Detected	52	Not Detected
1,2-Dichlorobenzene	10	Not Detected	60	Not Detected
1,2,4-Trichlorobenzene	40	Not Detected	300	Not Detected
Hexachlorobutadiene	40	Not Detected	430	Not Detected

J = Estimated value.
E = Exceeds instrument calibration range.
Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2729-06

Lab ID#: 0511228-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111212	Date of Collection:	10/25/05
Dil. Factor:	4000	Date of Analysis:	11/12/05 11:24 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2000	Not Detected	9900	Not Detected
Freon 114	2000	Not Detected	14000	Not Detected
Chloromethane	8000	Not Detected	16000	Not Detected
Vinyl Chloride	2000	40000	5100	100000
1,3-Butadiene	2000	Not Detected	4400	Not Detected
Bromomethane	2000	Not Detected	7800	Not Detected
Chloroethane	2000	Not Detected	5300	Not Detected
Freon 11	2000	Not Detected	11000	Not Detected
Ethanol	8000	Not Detected	15000	Not Detected
Freon 113	2000	Not Detected	15000	Not Detected
1,1-Dichloroethene	2000	Not Detected	7900	Not Detected
Acetone	8000	Not Detected	19000	Not Detected
2-Propanol	8000	Not Detected	20000	Not Detected
Carbon Disulfide	2000	Not Detected	6200	Not Detected
3-Chloropropene	8000	Not Detected	25000	Not Detected
Methylene Chloride	2000	3600	6900	12000
Methyl tert-butyl ether	2000	Not Detected	7200	Not Detected
trans-1,2-Dichloroethene	2000	14000	7900	54000
Hexane	2000	Not Detected	7000	Not Detected
1,1-Dichloroethane	2000	Not Detected	8100	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2000	Not Detected	5900	Not Detected
cis-1,2-Dichloroethene	2000	580000	7900	2300000
Tetrahydrofuran	2000	31000	5900	92000
Chloroform	2000	Not Detected	9800	Not Detected
1,1,1-Trichloroethane	2000	Not Detected	11000	Not Detected
Cyclohexane	2000	Not Detected	6900	Not Detected
Carbon Tetrachloride	2000	Not Detected	12000	Not Detected
2,2,4-Trimethylpentane	2000	Not Detected	9300	Not Detected
Benzene	2000	Not Detected	6400	Not Detected
1,2-Dichloroethane	2000	Not Detected	8100	Not Detected
Heptane	2000	Not Detected	8200	Not Detected
Trichloroethene	2000	600000	11000	3200000
1,2-Dichloropropane	2000	Not Detected	9200	Not Detected
1,4-Dioxane	8000	Not Detected	29000	Not Detected
Bromodichloromethane	2000	Not Detected	13000	Not Detected
cis-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
4-Methyl-2-pentanone	2000	Not Detected	8200	Not Detected
Toluene	2000	Not Detected	7500	Not Detected
trans-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
1,1,2-Trichloroethane	2000	Not Detected	11000	Not Detected
Tetrachloroethene	2000	Not Detected	14000	Not Detected
2-Hexanone	8000	Not Detected	33000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2729-06

Lab ID#: 0511228-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111212	Date of Collection:	10/25/05
Dil. Factor:	4000	Date of Analysis:	11/12/05 11:24 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	2000	Not Detected	17000	Not Detected
1,2-Dibromoethane (EDB)	2000	Not Detected	15000	Not Detected
Chlorobenzene	2000	Not Detected	9200	Not Detected
Ethyl Benzene	2000	Not Detected	8700	Not Detected
m,p-Xylene	2000	2700	8700	12000
o-Xylene	2000	Not Detected	8700	Not Detected
Styrene	2000	Not Detected	8500	Not Detected
Bromoform	2000	Not Detected	21000	Not Detected
Cumene	2000	Not Detected	9800	Not Detected
1,1,2,2-Tetrachloroethane	2000	Not Detected	14000	Not Detected
Propylbenzene	2000	Not Detected	9800	Not Detected
4-Ethyltoluene	2000	Not Detected	9800	Not Detected
1,3,5-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,2,4-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,3-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,4-Dichlorobenzene	2000	Not Detected	12000	Not Detected
alpha-Chlorotoluene	2000	Not Detected	10000	Not Detected
1,2-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,2,4-Trichlorobenzene	8000	Not Detected	59000	Not Detected
Hexachlorobutadiene	8000	Not Detected	85000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511228-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111205	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 04:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511228-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111205	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 04:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511228-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111202	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 01:49 AM

Compound	%Recovery
Freon 12	98
Freon 114	97
Chloromethane	102
Vinyl Chloride	97
1,3-Butadiene	100
Bromomethane	98
Chloroethane	113
Freon 11	97
Ethanol	102
Freon 113	98
1,1-Dichloroethene	97
Acetone	94
2-Propanol	104
Carbon Disulfide	99
3-Chloropropene	96
Methylene Chloride	98
Methyl tert-butyl ether	121
trans-1,2-Dichloroethene	94
Hexane	104
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	110
cis-1,2-Dichloroethene	101
Tetrahydrofuran	97
Chloroform	99
1,1,1-Trichloroethane	102
Cyclohexane	102
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	106
Benzene	94
1,2-Dichloroethane	102
Heptane	105
Trichloroethene	102
1,2-Dichloropropane	102
1,4-Dioxane	99
Bromodichloromethane	107
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	110
Toluene	96
trans-1,3-Dichloropropene	100
1,1,2-Trichloroethane	100
Tetrachloroethene	100
2-Hexanone	104

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511228-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111202	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 01:49 AM

Compound	%Recovery
Dibromochloromethane	109
1,2-Dibromoethane (EDB)	102
Chlorobenzene	97
Ethyl Benzene	96
m,p-Xylene	96
o-Xylene	96
Styrene	97
Bromoform	112
Cumene	91
1,1,2,2-Tetrachloroethane	88
Propylbenzene	90
4-Ethyltoluene	91
1,3,5-Trimethylbenzene	86
1,2,4-Trimethylbenzene	84
1,3-Dichlorobenzene	83
1,4-Dichlorobenzene	84
alpha-Chlorotoluene	80
1,2-Dichlorobenzene	77
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	79

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511228-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111203	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 02:55 AM

Compound	%Recovery
Freon 12	102
Freon 114	100
Chloromethane	108
Vinyl Chloride	98
1,3-Butadiene	109
Bromomethane	106
Chloroethane	121
Freon 11	99
Ethanol	102
Freon 113	100
1,1-Dichloroethene	97
Acetone	105
2-Propanol	110
Carbon Disulfide	111
3-Chloropropene	102
Methylene Chloride	102
Methyl tert-butyl ether	129
trans-1,2-Dichloroethene	107
Hexane	112
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	121
cis-1,2-Dichloroethene	130
Tetrahydrofuran	102
Chloroform	99
1,1,1-Trichloroethane	96
Cyclohexane	110
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	121
Benzene	92
1,2-Dichloroethane	98
Heptane	110
Trichloroethene	99
1,2-Dichloropropane	98
1,4-Dioxane	96
Bromodichloromethane	110
cis-1,3-Dichloropropene	99
4-Methyl-2-pentanone	107
Toluene	101
trans-1,3-Dichloropropene	110
1,1,2-Trichloroethane	98
Tetrachloroethene	102
2-Hexanone	88

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511228-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1111203	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/12/05 02:55 AM

Compound	%Recovery
Dibromochloromethane	110
1,2-Dibromoethane (EDB)	104
Chlorobenzene	97
Ethyl Benzene	99
m,p-Xylene	101
o-Xylene	93
Styrene	123
Bromoform	105
Cumene	79
1,1,2,2-Tetrachloroethane	83
Propylbenzene	86
4-Ethyltoluene	84
1,3,5-Trimethylbenzene	78
1,2,4-Trimethylbenzene	80
1,3-Dichlorobenzene	76
1,4-Dichlorobenzene	74
alpha-Chlorotoluene	78
1,2-Dichlorobenzene	69 Q
1,2,4-Trichlorobenzene	65 Q
Hexachlorobutadiene	70

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	99	70-130

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

November 23, 2005

Client: SAS Environmental Inc. (3403)
1270 S.Clevleand-Massillon Building A
Akron, OH 44321
Attn: Mark V. Allen

Work Order: NOJ2860
Project Name: UT Collierville
Project Nbr: 031091
Date Received: 10/27/05

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
SVE-20S	NOJ2860-01	10/26/05 11:27
SVE-34D	NOJ2860-02	10/26/05 16:48
SVE-34S	NOJ2860-03	10/26/05 17:30
SVE-31D	NOJ2860-04	10/26/05 18:45
SVE-48D	NOJ2860-05	10/26/05 11:55

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

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Tennessee Certification Number: 02008

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Jessica Vickers

Jessica Vickers
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2860
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/27/05 07:40

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch

Sample ID: NOJ2860-01 (SVE-20S - Air) Sampled: 10/26/05 11:27
Subcontracted Analysis
See Attached Report

Sample ID: NOJ2860-02 (SVE-34D - Air) Sampled: 10/26/05 16:48
Subcontracted Analysis
See Attached Report

Sample ID: NOJ2860-03 (SVE-34S - Air) Sampled: 10/26/05 17:30
Subcontracted Analysis
See Attached Report

Sample ID: NOJ2860-04 (SVE-31D - Air) Sampled: 10/26/05 18:45
Subcontracted Analysis
See Attached Report

ımple ID: NOJ2860-05 (SVE-48D - Air) Sampled: 10/26/05 11:55
ɔubcontracted Analysis
See Attached Report

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2860
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/27/05 07:40

CERTIFICATION SUMMARY

TestAmerica Analytical - Nashville

Method	Matrix	AIHA	Nelac	Tennessee
subcontract	Air			

TestAmerica
ANALYTICAL TESTING CORPORATION
Nashville Division

COOLER RECEIPT FORM **BC#** NOJ2860

Client Name : SAS Environmental, INC.

Cooler Received/Opened On: 10/27/05 **Accessioned By:** James D. Jacobs

Log-in Personnel Signature

1. Temperature of Cooler when triaged: N/A Degrees Celsius
2. Were custody seals on outside of cooler?..... YES...(NO)...NA
   a. If yes, how many and where:_____
3. Were custody seals on containers?..... (NO)...YES...NA
4. Were the seals intact, signed, and dated correctly?..... YES...NO...(NA)
5. Were custody papers inside cooler?..... (YES)...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?..... (YES)...NO...NA
7. Did you sign the custody papers in the appropriate place?..... (YES)...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Foam Insert Ziplock baggies Paper Other (None)
9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other (None)
10. Did all containers arrive in good condition (unbroken)?..... (YES)...NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)?..... (YES)...NO...NA
12. Did all container labels and tags agree with custody papers?..... (YES)...NO...NA
13. Were correct containers used for the analysis requested?..... (YES)...NO...NA
14. a. Were VOA vials received?..... YES...(NO)...NA
    b. Was there any observable head space present in any VOA vial?..... NO...YES...(NA)
15. Was sufficient amount of sample sent in each container?..... (YES)...NO...NA
16. Were correct preservatives used?..... YES...NO...(NA)
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?..... NO...YES...(NA)
18. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below:

    3659

    (Fed-Ex) UPS Velocity DHL Route Off-street Misc.
19. If a Non-Conformance exists, see attached or comments below:

BIS = Broken in shipment
Cooler Receipt Form

LF-1
End of Form

Revised 4/5/05

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

NOJ2860
11/07/05 17:00

Client Name: SAS Environmental Inc. Client #: 3463
Address: 1270 S Cleve Mass Rd.
City/State/Zip Code: Akron, OH 44321
Project Manager: Mark V. Allen
Telephone Number: (330) 666-1546 Fax: (330) 666-7443
Sampler Name: (Print Name) Omer Uppal, Matthew White, Dave Remilly
Sampler Signature:

Project Name: UT Collierville
Project #: 031091
Site/Location ID: Collierville State: TN
Report To: Mark V. Allen
Invoice To: SAS Environmental Inc.
Quote #: 090204PLK99 PO#: 7605

TAT: X Standard; ___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: (Y) N

QC Deliverables: ___ None; ___ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For:									REMARKS
SVE-26S	10-26-05	1127 am	G		Vapor						2		X									NOJ2860-01
SVE-34D	↓	415	G		↓						2		X									-02
SVE-34S	↓	530 pm	G		↓						2		X									-03
SVE-31D	↓	645 pm	G		↓						2		X									-04
SVE-48D	↓	1155 am	G		↓						2		X									-05

Special Instructions:
Standard TAT Email JFO121@aol.com

	Date	Time		Date	Time
Relinquished By:	10-26-05	752 pm	Received By: FedEx	10-26-05	753 pm
Relinquished By:			Received By:	10/27/05	940
Relinquished By:			Received By:		

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: N/A
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0511227

Work Order Summary

CLIENT:	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204	**BILL TO:**	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204
PHONE:	800-765-0980	**P.O. #**	
FAX:	615-726-3404	**PROJECT #**	NOJ2860
DATE RECEIVED:	11/11/2005	**CONTACT:**	Susan Alaniz
DATE COMPLETED:	11/21/2005		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	NOJ2860-01	Modified TO-15	Tedlar Bag
01AA	NOJ2860-01 Duplicate	Modified TO-15	Tedlar Bag
02A	NOJ2860-02	Modified TO-15	Tedlar Bag
03A	NOJ2860-03	Modified TO-15	Tedlar Bag
04A	NOJ2860-04	Modified TO-15	Tedlar Bag
05A	NOJ2860-05	Modified TO-15	Tedlar Bag
06A	Lab Blank	Modified TO-15	NA
06B	Lab Blank	Modified TO-15	NA
06C	Lab Blank	Modified TO-15	NA
07A	CCV	Modified TO-15	NA
07B	CCV	Modified TO-15	NA
07C	CCV	Modified TO-15	NA
08A	LCS	Modified TO-15	NA
08B	LCS	Modified TO-15	NA
08C	LCS	Modified TO-15	NA

CERTIFIED BY: Linda J. Freeman

Laboratory Director

DATE: 11/22/05

Certfication numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Test America
Workorder# 0511227

Five 1 Liter Tedlar Bag samples were received on November 11, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	+- 30 %RSD (TO-14A)	</= 30 % RSD with 2 compounds allowed out to </= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases. A list of these compounds is available.

Receiving Notes

Samples were received past the recommended hold time of 3 days. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the analysis proceeded.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

The reported LCS for each daily batch has been derived from more than one analytical file.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: NOJ2860-01

Lab ID#: 0511227-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	800	1300	2000	3200
Carbon Disulfide	200	250	620	790
2-Butanone (Methyl Ethyl Ketone)	200	890	590	2600
cis-1,2-Dichloroethene	200	3000	790	12000
Tetrahydrofuran	200	69000	590	200000
Trichloroethene	200	940	1100	5100

Client Sample ID: NOJ2860-01 Duplicate

Lab ID#: 0511227-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	800	1300	2000	3100
Carbon Disulfide	200	250	620	770
2-Butanone (Methyl Ethyl Ketone)	200	830	590	2400
cis-1,2-Dichloroethene	200	3000	790	12000
Tetrahydrofuran	200	68000	590	200000
Trichloroethene	200	910	1100	4900

Client Sample ID: NOJ2860-02

Lab ID#: 0511227-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	130	140	340	370
2-Propanol	530	920	1300	2300
Carbon Disulfide	130	170	420	530
trans-1,2-Dichloroethene	130	150	530	580
2-Butanone (Methyl Ethyl Ketone)	130	1400	390	4200
cis-1,2-Dichloroethene	130	11000	530	43000
Tetrahydrofuran	130	3300	390	9800
Trichloroethene	130	30000	720	160000

Client Sample ID: NOJ2860-03

Lab ID#: 0511227-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	130	160	340	410
Acetone	530	640	1300	1500
2-Propanol	530	1700	1300	4200
Carbon Disulfide	130	200	420	630

Client Sample ID: NOJ2860-03

Lab ID#: 0511227-03A

trans-1,2-Dichloroethene	130	170	530	670
2-Butanone (Methyl Ethyl Ketone)	130	2500	390	7400
cis-1,2-Dichloroethene	130	36000	530	140000
Tetrahydrofuran	130	17000	390	51000
Cyclohexane	130	140	460	480
Trichloroethene	130	17000	720	91000

Client Sample ID: NOJ2860-04

Lab ID#: 0511227-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	40	160	100	410
1,1-Dichloroethene	40	50	160	200
trans-1,2-Dichloroethene	40	77	160	310
cis-1,2-Dichloroethene	40	8600	160	34000
Tetrahydrofuran	40	380	120	1100
Trichloroethene	40	9600	210	51000

Client Sample ID: NOJ2860-05

Lab ID#: 0511227-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	400	1600	1000	4000
1,1-Dichloroethene	400	610	1600	2400
Methylene Chloride	400	800	1400	2800
trans-1,2-Dichloroethene	400	920	1600	3600
Hexane	400	460	1400	1600
cis-1,2-Dichloroethene	400	72000	1600	280000
Tetrahydrofuran	400	4600	1200	14000
Trichloroethene	400	58000	2100	310000
Toluene	400	870	1500	3300

AIR TOXICS LTD.

Client Sample ID: NOJ2860-01

Lab ID#: 0511227-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111308**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**400**	**Date of Analysis:**	**11/13/05 07:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	200	Not Detected	990	Not Detected
Freon 114	200	Not Detected	1400	Not Detected
Chloromethane	800	Not Detected	1600	Not Detected
Vinyl Chloride	200	Not Detected	510	Not Detected
1,3-Butadiene	200	Not Detected	440	Not Detected
Bromomethane	200	Not Detected	780	Not Detected
Chloroethane	200	Not Detected	530	Not Detected
Freon 11	200	Not Detected	1100	Not Detected
Ethanol	800	Not Detected	1500	Not Detected
Freon 113	200	Not Detected	1500	Not Detected
1,1-Dichloroethene	200	Not Detected	790	Not Detected
Acetone	800	Not Detected	1900	Not Detected
2-Propanol	800	1300	2000	3200
Carbon Disulfide	200	250	620	790
3-Chloropropene	800	Not Detected	2500	Not Detected
Methylene Chloride	200	Not Detected	690	Not Detected
Methyl tert-butyl ether	200	Not Detected	720	Not Detected
trans-1,2-Dichloroethene	200	Not Detected	790	Not Detected
Hexane	200	Not Detected	700	Not Detected
1,1-Dichloroethane	200	Not Detected	810	Not Detected
2-Butanone (Methyl Ethyl Ketone)	200	890	590	2600
cis-1,2-Dichloroethene	200	3000	790	12000
Tetrahydrofuran	200	69000	590	200000
Chloroform	200	Not Detected	980	Not Detected
1,1,1-Trichloroethane	200	Not Detected	1100	Not Detected
Cyclohexane	200	Not Detected	690	Not Detected
Carbon Tetrachloride	200	Not Detected	1200	Not Detected
2,2,4-Trimethylpentane	200	Not Detected	930	Not Detected
Benzene	200	Not Detected	640	Not Detected
1,2-Dichloroethane	200	Not Detected	810	Not Detected
Heptane	200	Not Detected	820	Not Detected
Trichloroethene	200	940	1100	5100
1,2-Dichloropropane	200	Not Detected	920	Not Detected
1,4-Dioxane	800	Not Detected	2900	Not Detected
Bromodichloromethane	200	Not Detected	1300	Not Detected
cis-1,3-Dichloropropene	200	Not Detected	910	Not Detected
4-Methyl-2-pentanone	200	Not Detected	820	Not Detected
Toluene	200	Not Detected	750	Not Detected
trans-1,3-Dichloropropene	200	Not Detected	910	Not Detected
1,1,2-Trichloroethane	200	Not Detected	1100	Not Detected
Tetrachloroethene	200	Not Detected	1400	Not Detected
2-Hexanone	800	Not Detected	3300	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2860-01

Lab ID#: 0511227-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111308**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**400**	**Date of Analysis:**	**11/13/05 07:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	200	Not Detected	1700	Not Detected
1,2-Dibromoethane (EDB)	200	Not Detected	1500	Not Detected
Chlorobenzene	200	Not Detected	920	Not Detected
Ethyl Benzene	200	Not Detected	870	Not Detected
m,p-Xylene	200	Not Detected	870	Not Detected
o-Xylene	200	Not Detected	870	Not Detected
Styrene	200	Not Detected	850	Not Detected
Bromoform	200	Not Detected	2100	Not Detected
Cumene	200	Not Detected	980	Not Detected
1,1,2,2-Tetrachloroethane	200	Not Detected	1400	Not Detected
Propylbenzene	200	Not Detected	980	Not Detected
4-Ethyltoluene	200	Not Detected	980	Not Detected
1,3,5-Trimethylbenzene	200	Not Detected	980	Not Detected
1,2,4-Trimethylbenzene	200	Not Detected	980	Not Detected
1,3-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,4-Dichlorobenzene	200	Not Detected	1200	Not Detected
alpha-Chlorotoluene	200	Not Detected	1000	Not Detected
1,2-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,2,4-Trichlorobenzene	800	Not Detected	5900	Not Detected
Hexachlorobutadiene	800	Not Detected	8500	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	108	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2860-01 Duplicate

Lab ID#: 0511227-01AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111309**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**400**	**Date of Analysis:**	**11/13/05 08:27 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	200	Not Detected	990	Not Detected
Freon 114	200	Not Detected	1400	Not Detected
Chloromethane	800	Not Detected	1600	Not Detected
Vinyl Chloride	200	Not Detected	510	Not Detected
1,3-Butadiene	200	Not Detected	440	Not Detected
Bromomethane	200	Not Detected	780	Not Detected
Chloroethane	200	Not Detected	530	Not Detected
Freon 11	200	Not Detected	1100	Not Detected
Ethanol	800	Not Detected	1500	Not Detected
Freon 113	200	Not Detected	1500	Not Detected
1,1-Dichloroethene	200	Not Detected	790	Not Detected
Acetone	800	Not Detected	1900	Not Detected
2-Propanol	800	1300	2000	3100
Carbon Disulfide	200	250	620	770
3-Chloropropene	800	Not Detected	2500	Not Detected
Methylene Chloride	200	Not Detected	690	Not Detected
Methyl tert-butyl ether	200	Not Detected	720	Not Detected
trans-1,2-Dichloroethene	200	Not Detected	790	Not Detected
Hexane	200	Not Detected	700	Not Detected
1,1-Dichloroethane	200	Not Detected	810	Not Detected
2-Butanone (Methyl Ethyl Ketone)	200	830	590	2400
cis-1,2-Dichloroethene	200	3000	790	12000
Tetrahydrofuran	200	68000	590	200000
Chloroform	200	Not Detected	980	Not Detected
1,1,1-Trichloroethane	200	Not Detected	1100	Not Detected
Cyclohexane	200	Not Detected	690	Not Detected
Carbon Tetrachloride	200	Not Detected	1200	Not Detected
2,2,4-Trimethylpentane	200	Not Detected	930	Not Detected
Benzene	200	Not Detected	640	Not Detected
1,2-Dichloroethane	200	Not Detected	810	Not Detected
Heptane	200	Not Detected	820	Not Detected
Trichloroethene	200	910	1100	4900
1,2-Dichloropropane	200	Not Detected	920	Not Detected
1,4-Dioxane	800	Not Detected	2900	Not Detected
Bromodichloromethane	200	Not Detected	1300	Not Detected
cis-1,3-Dichloropropene	200	Not Detected	910	Not Detected
4-Methyl-2-pentanone	200	Not Detected	820	Not Detected
Toluene	200	Not Detected	750	Not Detected
trans-1,3-Dichloropropene	200	Not Detected	910	Not Detected
1,1,2-Trichloroethane	200	Not Detected	1100	Not Detected
Tetrachloroethene	200	Not Detected	1400	Not Detected
2-Hexanone	800	Not Detected	3300	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2860-01 Duplicate

Lab ID#: 0511227-01AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111309**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**400**	**Date of Analysis:**	**11/13/05 08:27 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	200	Not Detected	1700	Not Detected
1,2-Dibromoethane (EDB)	200	Not Detected	1500	Not Detected
Chlorobenzene	200	Not Detected	920	Not Detected
Ethyl Benzene	200	Not Detected	870	Not Detected
m,p-Xylene	200	Not Detected	870	Not Detected
o-Xylene	200	Not Detected	870	Not Detected
Styrene	200	Not Detected	850	Not Detected
Bromoform	200	Not Detected	2100	Not Detected
Cumene	200	Not Detected	980	Not Detected
1,1,2,2-Tetrachloroethane	200	Not Detected	1400	Not Detected
Propylbenzene	200	Not Detected	980	Not Detected
4-Ethyltoluene	200	Not Detected	980	Not Detected
1,3,5-Trimethylbenzene	200	Not Detected	980	Not Detected
1,2,4-Trimethylbenzene	200	Not Detected	980	Not Detected
1,3-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,4-Dichlorobenzene	200	Not Detected	1200	Not Detected
alpha-Chlorotoluene	200	Not Detected	1000	Not Detected
1,2-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,2,4-Trichlorobenzene	800	Not Detected	5900	Not Detected
Hexachlorobutadiene	800	Not Detected	8500	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2860-02

Lab ID#: 0511227-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111215**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**267**	**Date of Analysis:**	**11/12/05 03:49 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	130	Not Detected	660	Not Detected
Freon 114	130	Not Detected	930	Not Detected
Chloromethane	530	Not Detected	1100	Not Detected
Vinyl Chloride	130	140	340	370
1,3-Butadiene	130	Not Detected	300	Not Detected
Bromomethane	130	Not Detected	520	Not Detected
Chloroethane	130	Not Detected	350	Not Detected
Freon 11	130	Not Detected	750	Not Detected
Ethanol	530	Not Detected	1000	Not Detected
Freon 113	130	Not Detected	1000	Not Detected
1,1-Dichloroethene	130	Not Detected	530	Not Detected
Acetone	530	Not Detected	1300	Not Detected
2-Propanol	530	920	1300	2300
Carbon Disulfide	130	170	420	530
3-Chloropropene	530	Not Detected	1700	Not Detected
Methylene Chloride	130	Not Detected	460	Not Detected
Methyl tert-butyl ether	130	Not Detected	480	Not Detected
trans-1,2-Dichloroethene	130	150	530	580
Hexane	130	Not Detected	470	Not Detected
1,1-Dichloroethane	130	Not Detected	540	Not Detected
2-Butanone (Methyl Ethyl Ketone)	130	1400	390	4200
cis-1,2-Dichloroethene	130	11000	530	43000
Tetrahydrofuran	130	3300	390	9800
Chloroform	130	Not Detected	650	Not Detected
1,1,1-Trichloroethane	130	Not Detected	730	Not Detected
Cyclohexane	130	Not Detected	460	Not Detected
Carbon Tetrachloride	130	Not Detected	840	Not Detected
2,2,4-Trimethylpentane	130	Not Detected	620	Not Detected
Benzene	130	Not Detected	430	Not Detected
1,2-Dichloroethane	130	Not Detected	540	Not Detected
Heptane	130	Not Detected	550	Not Detected
Trichloroethene	130	30000	720	160000
1,2-Dichloropropane	130	Not Detected	620	Not Detected
1,4-Dioxane	530	Not Detected	1900	Not Detected
Bromodichloromethane	130	Not Detected	890	Not Detected
cis-1,3-Dichloropropene	130	Not Detected	600	Not Detected
4-Methyl-2-pentanone	130	Not Detected	550	Not Detected
Toluene	130	Not Detected	500	Not Detected
trans-1,3-Dichloropropene	130	Not Detected	600	Not Detected
1,1,2-Trichloroethane	130	Not Detected	730	Not Detected
Tetrachloroethene	130	Not Detected	900	Not Detected
2-Hexanone	530	Not Detected	2200	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2860-02

Lab ID#: 0511227-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111215**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**267**	**Date of Analysis:**	**11/12/05 03:49 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	130	Not Detected	1100	Not Detected
1,2-Dibromoethane (EDB)	130	Not Detected	1000	Not Detected
Chlorobenzene	130	Not Detected	610	Not Detected
Ethyl Benzene	130	Not Detected	580	Not Detected
m,p-Xylene	130	Not Detected	580	Not Detected
o-Xylene	130	Not Detected	580	Not Detected
Styrene	130	Not Detected	570	Not Detected
Bromoform	130	Not Detected	1400	Not Detected
Cumene	130	Not Detected	660	Not Detected
1,1,2,2-Tetrachloroethane	130	Not Detected	920	Not Detected
Propylbenzene	130	Not Detected	660	Not Detected
4-Ethyltoluene	130	Not Detected	660	Not Detected
1,3,5-Trimethylbenzene	130	Not Detected	660	Not Detected
1,2,4-Trimethylbenzene	130	Not Detected	660	Not Detected
1,3-Dichlorobenzene	130	Not Detected	800	Not Detected
1,4-Dichlorobenzene	130	Not Detected	800	Not Detected
alpha-Chlorotoluene	130	Not Detected	690	Not Detected
1,2-Dichlorobenzene	130	Not Detected	800	Not Detected
1,2,4-Trichlorobenzene	530	Not Detected	4000	Not Detected
Hexachlorobutadiene	530	Not Detected	5700	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	108	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2860-03

Lab ID#: 0511227-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111216**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**267**	**Date of Analysis:**	**11/12/05 04:32 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	130	Not Detected	660	Not Detected
Freon 114	130	Not Detected	930	Not Detected
Chloromethane	530	Not Detected	1100	Not Detected
Vinyl Chloride	130	160	340	410
1,3-Butadiene	130	Not Detected	300	Not Detected
Bromomethane	130	Not Detected	520	Not Detected
Chloroethane	130	Not Detected	350	Not Detected
Freon 11	130	Not Detected	750	Not Detected
Ethanol	530	Not Detected	1000	Not Detected
Freon 113	130	Not Detected	1000	Not Detected
1,1-Dichloroethene	130	Not Detected	530	Not Detected
Acetone	530	640	1300	1500
2-Propanol	530	1700	1300	4200
Carbon Disulfide	130	200	420	630
3-Chloropropene	530	Not Detected	1700	Not Detected
Methylene Chloride	130	Not Detected	460	Not Detected
Methyl tert-butyl ether	130	Not Detected	480	Not Detected
trans-1,2-Dichloroethene	130	170	530	670
Hexane	130	Not Detected	470	Not Detected
1,1-Dichloroethane	130	Not Detected	540	Not Detected
2-Butanone (Methyl Ethyl Ketone)	130	2500	390	7400
cis-1,2-Dichloroethene	130	36000	530	140000
Tetrahydrofuran	130	17000	390	51000
Chloroform	130	Not Detected	650	Not Detected
1,1,1-Trichloroethane	130	Not Detected	730	Not Detected
Cyclohexane	130	140	460	480
Carbon Tetrachloride	130	Not Detected	840	Not Detected
2,2,4-Trimethylpentane	130	Not Detected	620	Not Detected
Benzene	130	Not Detected	430	Not Detected
1,2-Dichloroethane	130	Not Detected	540	Not Detected
Heptane	130	Not Detected	550	Not Detected
Trichloroethene	130	17000	720	91000
1,2-Dichloropropane	130	Not Detected	620	Not Detected
1,4-Dioxane	530	Not Detected	1900	Not Detected
Bromodichloromethane	130	Not Detected	890	Not Detected
cis-1,3-Dichloropropene	130	Not Detected	600	Not Detected
4-Methyl-2-pentanone	130	Not Detected	550	Not Detected
Toluene	130	Not Detected	500	Not Detected
trans-1,3-Dichloropropene	130	Not Detected	600	Not Detected
1,1,2-Trichloroethane	130	Not Detected	730	Not Detected
Tetrachloroethene	130	Not Detected	900	Not Detected
2-Hexanone	530	Not Detected	2200	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2860-03

Lab ID#: 0511227-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111216**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**267**	**Date of Analysis:**	**11/12/05 04:32 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	130	Not Detected	1100	Not Detected
1,2-Dibromoethane (EDB)	130	Not Detected	1000	Not Detected
Chlorobenzene	130	Not Detected	610	Not Detected
Ethyl Benzene	130	Not Detected	580	Not Detected
m,p-Xylene	130	Not Detected	580	Not Detected
o-Xylene	130	Not Detected	580	Not Detected
Styrene	130	Not Detected	570	Not Detected
Bromoform	130	Not Detected	1400	Not Detected
Cumene	130	Not Detected	660	Not Detected
1,1,2,2-Tetrachloroethane	130	Not Detected	920	Not Detected
Propylbenzene	130	Not Detected	660	Not Detected
4-Ethyltoluene	130	Not Detected	660	Not Detected
1,3,5-Trimethylbenzene	130	Not Detected	660	Not Detected
1,2,4-Trimethylbenzene	130	Not Detected	660	Not Detected
1,3-Dichlorobenzene	130	Not Detected	800	Not Detected
1,4-Dichlorobenzene	130	Not Detected	800	Not Detected
alpha-Chlorotoluene	130	Not Detected	690	Not Detected
1,2-Dichlorobenzene	130	Not Detected	800	Not Detected
1,2,4-Trichlorobenzene	530	Not Detected	4000	Not Detected
Hexachlorobutadiene	530	Not Detected	5700	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2860-04

Lab ID#: 0511227-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111111**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**80.0**	**Date of Analysis:**	**11/11/05 09:24 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	40	Not Detected	200	Not Detected
Freon 114	40	Not Detected	280	Not Detected
Chloromethane	160	Not Detected	330	Not Detected
Vinyl Chloride	40	160	100	410
1,3-Butadiene	40	Not Detected	88	Not Detected
Bromomethane	40	Not Detected	160	Not Detected
Chloroethane	40	Not Detected	100	Not Detected
Freon 11	40	Not Detected	220	Not Detected
Ethanol	160	Not Detected U J	300	Not Detected U J
Freon 113	40	Not Detected	310	Not Detected
1,1-Dichloroethene	40	50	160	200
Acetone	160	Not Detected	380	Not Detected
2-Propanol	160	Not Detected	390	Not Detected
Carbon Disulfide	40	Not Detected	120	Not Detected
3-Chloropropene	160	Not Detected	500	Not Detected
Methylene Chloride	40	Not Detected	140	Not Detected
Methyl tert-butyl ether	40	Not Detected	140	Not Detected
trans-1,2-Dichloroethene	40	77	160	310
Hexane	40	Not Detected	140	Not Detected
1,1-Dichloroethane	40	Not Detected	160	Not Detected
2-Butanone (Methyl Ethyl Ketone)	40	Not Detected	120	Not Detected
cis-1,2-Dichloroethene	40	8600	160	34000
Tetrahydrofuran	40	380	120	1100
Chloroform	40	Not Detected	200	Not Detected
1,1,1-Trichloroethane	40	Not Detected	220	Not Detected
Cyclohexane	40	Not Detected	140	Not Detected
Carbon Tetrachloride	40	Not Detected	250	Not Detected
2,2,4-Trimethylpentane	40	Not Detected	190	Not Detected
Benzene	40	Not Detected	130	Not Detected
1,2-Dichloroethane	40	Not Detected	160	Not Detected
Heptane	40	Not Detected	160	Not Detected
Trichloroethene	40	9600	210	51000
1,2-Dichloropropane	40	Not Detected	180	Not Detected
1,4-Dioxane	160	Not Detected	580	Not Detected
Bromodichloromethane	40	Not Detected	270	Not Detected
cis-1,3-Dichloropropene	40	Not Detected	180	Not Detected
4-Methyl-2-pentanone	40	Not Detected	160	Not Detected
Toluene	40	Not Detected	150	Not Detected
trans-1,3-Dichloropropene	40	Not Detected	180	Not Detected
1,1,2-Trichloroethane	40	Not Detected	220	Not Detected
Tetrachloroethene	40	Not Detected	270	Not Detected
2-Hexanone	160	Not Detected	660	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2860-04

Lab ID#: 0511227-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111111**	**Date of Collection:**	**10/26/05**
Dil. Factor:	***80.0***	***Date of Analysis:***	***11/11/05 09:24 PM***

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	40	Not Detected	340	Not Detected
1,2-Dibromoethane (EDB)	40	Not Detected	310	Not Detected
Chlorobenzene	40	Not Detected	180	Not Detected
Ethyl Benzene	40	Not Detected	170	Not Detected
m,p-Xylene	40	Not Detected	170	Not Detected
o-Xylene	40	Not Detected	170	Not Detected
Styrene	40	Not Detected	170	Not Detected
Bromoform	40	Not Detected	410	Not Detected
Cumene	40	Not Detected	200	Not Detected
1,1,2,2-Tetrachloroethane	40	Not Detected	270	Not Detected
Propylbenzene	40	Not Detected	200	Not Detected
4-Ethyltoluene	40	Not Detected	200	Not Detected
1,3,5-Trimethylbenzene	40	Not Detected	200	Not Detected
1,2,4-Trimethylbenzene	40	Not Detected	200	Not Detected
1,3-Dichlorobenzene	40	Not Detected	240	Not Detected
1,4-Dichlorobenzene	40	Not Detected	240	Not Detected
alpha-Chlorotoluene	40	Not Detected	210	Not Detected
1,2-Dichlorobenzene	40	Not Detected	240	Not Detected
1,2,4-Trichlorobenzene	160	Not Detected	1200	Not Detected
Hexachlorobutadiene	160	Not Detected	1700	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2860-05

Lab ID#: 0511227-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111306**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**800**	**Date of Analysis:**	**11/13/05 06:06 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	400	Not Detected	2000	Not Detected
Freon 114	400	Not Detected	2800	Not Detected
Chloromethane	1600	Not Detected	3300	Not Detected
Vinyl Chloride	400	1600	1000	4000
1,3-Butadiene	400	Not Detected	880	Not Detected
Bromomethane	400	Not Detected	1600	Not Detected
Chloroethane	400	Not Detected	1000	Not Detected
Freon 11	400	Not Detected	2200	Not Detected
Ethanol	1600	Not Detected	3000	Not Detected
Freon 113	400	Not Detected	3100	Not Detected
1,1-Dichloroethene	400	610	1600	2400
Acetone	1600	Not Detected	3800	Not Detected
2-Propanol	1600	Not Detected	3900	Not Detected
Carbon Disulfide	400	Not Detected	1200	Not Detected
3-Chloropropene	1600	Not Detected	5000	Not Detected
Methylene Chloride	400	800	1400	2800
Methyl tert-butyl ether	400	Not Detected	1400	Not Detected
trans-1,2-Dichloroethene	400	920	1600	3600
Hexane	400	460	1400	1600
1,1-Dichloroethane	400	Not Detected	1600	Not Detected
2-Butanone (Methyl Ethyl Ketone)	400	Not Detected	1200	Not Detected
cis-1,2-Dichloroethene	400	72000	1600	280000
Tetrahydrofuran	400	4600	1200	14000
Chloroform	400	Not Detected	2000	Not Detected
1,1,1-Trichloroethane	400	Not Detected	2200	Not Detected
Cyclohexane	400	Not Detected	1400	Not Detected
Carbon Tetrachloride	400	Not Detected	2500	Not Detected
2,2,4-Trimethylpentane	400	Not Detected	1900	Not Detected
Benzene	400	Not Detected	1300	Not Detected
1,2-Dichloroethane	400	Not Detected	1600	Not Detected
Heptane	400	Not Detected	1600	Not Detected
Trichloroethene	400	58000	2100	310000
1,2-Dichloropropane	400	Not Detected	1800	Not Detected
1,4-Dioxane	1600	Not Detected	5800	Not Detected
Bromodichloromethane	400	Not Detected	2700	Not Detected
cis-1,3-Dichloropropene	400	Not Detected	1800	Not Detected
4-Methyl-2-pentanone	400	Not Detected	1600	Not Detected
Toluene	400	870	1500	3300
trans-1,3-Dichloropropene	400	Not Detected	1800	Not Detected
1,1,2-Trichloroethane	400	Not Detected	2200	Not Detected
Tetrachloroethene	400	Not Detected	2700	Not Detected
2-Hexanone	1600	Not Detected	6600	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2860-05

Lab ID#: 0511227-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111306**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**800**	**Date of Analysis:**	**11/13/05 06:06 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	400	Not Detected	3400	Not Detected
1,2-Dibromoethane (EDB)	400	Not Detected	3100	Not Detected
Chlorobenzene	400	Not Detected	1800	Not Detected
Ethyl Benzene	400	Not Detected	1700	Not Detected
m,p-Xylene	400	Not Detected	1700	Not Detected
o-Xylene	400	Not Detected	1700	Not Detected
Styrene	400	Not Detected	1700	Not Detected
Bromoform	400	Not Detected	4100	Not Detected
Cumene	400	Not Detected	2000	Not Detected
1,1,2,2-Tetrachloroethane	400	Not Detected	2700	Not Detected
Propylbenzene	400	Not Detected	2000	Not Detected
4-Ethyltoluene	400	Not Detected	2000	Not Detected
1,3,5-Trimethylbenzene	400	Not Detected	2000	Not Detected
1,2,4-Trimethylbenzene	400	Not Detected	2000	Not Detected
1,3-Dichlorobenzene	400	Not Detected	2400	Not Detected
1,4-Dichlorobenzene	400	Not Detected	2400	Not Detected
alpha-Chlorotoluene	400	Not Detected	2100	Not Detected
1,2-Dichlorobenzene	400	Not Detected	2400	Not Detected
1,2,4-Trichlorobenzene	1600	Not Detected	12000	Not Detected
Hexachlorobutadiene	1600	Not Detected	17000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511227-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/11/05 03:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected U J	3.8	Not Detected U J
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511227-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/11/05 03:12 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511227-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111205**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 06:20 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511227-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111205**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 06:20 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	82	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511227-06C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 05:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511227-06C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 05:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511227-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/11/05 11:44 AM**	

Compound	%Recovery
Freon 12	84
Freon 114	82
Chloromethane	85
Vinyl Chloride	75
1,3-Butadiene	76
Bromomethane	74
Chloroethane	73
Freon 11	82
Ethanol	66 Q
Freon 113	83
1,1-Dichloroethene	80
Acetone	70
2-Propanol	74
Carbon Disulfide	74
3-Chloropropene	73
Methylene Chloride	72
Methyl tert-butyl ether	101
trans-1,2-Dichloroethene	78
Hexane	80
1,1-Dichloroethane	81
2-Butanone (Methyl Ethyl Ketone)	91
cis-1,2-Dichloroethene	87
Tetrahydrofuran	87
Chloroform	90
1,1,1-Trichloroethane	92
Cyclohexane	97
Carbon Tetrachloride	94
2,2,4-Trimethylpentane	94
Benzene	88
1,2-Dichloroethane	88
Heptane	87
Trichloroethene	92
1,2-Dichloropropane	89
1,4-Dioxane	88
Bromodichloromethane	91
cis-1,3-Dichloropropene	95
4-Methyl-2-pentanone	96
Toluene	92
trans-1,3-Dichloropropene	92
1,1,2-Trichloroethane	90
Tetrachloroethene	94
2-Hexanone	87

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511227-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/11/05 11:44 AM**	

Compound	**%Recovery**
Dibromochloromethane	93
1,2-Dibromoethane (EDB)	92
Chlorobenzene	89
Ethyl Benzene	94
m,p-Xylene	100
o-Xylene	95
Styrene	98
Bromoform	95
Cumene	95
1,1,2,2-Tetrachloroethane	87
Propylbenzene	93
4-Ethyltoluene	96
1,3,5-Trimethylbenzene	91
1,2,4-Trimethylbenzene	95
1,3-Dichlorobenzene	87
1,4-Dichlorobenzene	88
alpha-Chlorotoluene	84
1,2-Dichlorobenzene	86
1,2,4-Trichlorobenzene	86
Hexachlorobutadiene	90

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511227-07B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 03:57 AM**	

Compound	%Recovery
Freon 12	78
Freon 114	84
Chloromethane	83
Vinyl Chloride	84
1,3-Butadiene	89
Bromomethane	80
Chloroethane	82
Freon 11	78
Ethanol	83
Freon 113	87
1,1-Dichloroethene	85
Acetone	82
2-Propanol	87
Carbon Disulfide	84
3-Chloropropene	82
Methylene Chloride	79
Methyl tert-butyl ether	108
trans-1,2-Dichloroethene	85
Hexane	90
1,1-Dichloroethane	85
2-Butanone (Methyl Ethyl Ketone)	96
cis-1,2-Dichloroethene	89
Tetrahydrofuran	96
Chloroform	86
1,1,1-Trichloroethane	84
Cyclohexane	96
Carbon Tetrachloride	85
2,2,4-Trimethylpentane	97
Benzene	92
1,2-Dichloroethane	86
Heptane	90
Trichloroethene	91
1,2-Dichloropropane	94
1,4-Dioxane	92
Bromodichloromethane	88
cis-1,3-Dichloropropene	97
4-Methyl-2-pentanone	106
Toluene	94
trans-1,3-Dichloropropene	94
1,1,2-Trichloroethane	94
Tetrachloroethene	99
2-Hexanone	98

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511227-07B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111202**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 03:57 AM**	

Compound	**%Recovery**
Dibromochloromethane	94
1,2-Dibromoethane (EDB)	95
Chlorobenzene	92
Ethyl Benzene	102
m,p-Xylene	106
o-Xylene	103
Styrene	104
Bromoform	99
Cumene	101
1,1,2,2-Tetrachloroethane	94
Propylbenzene	100
4-Ethyltoluene	103
1,3,5-Trimethylbenzene	97
1,2,4-Trimethylbenzene	101
1,3-Dichlorobenzene	93
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	91
1,2-Dichlorobenzene	94
1,2,4-Trichlorobenzene	94
Hexachlorobutadiene	96

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	108	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511227-07C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 02:44 PM**	

Compound	%Recovery
Freon 12	81
Freon 114	84
Chloromethane	82
Vinyl Chloride	79
1,3-Butadiene	81
Bromomethane	77
Chloroethane	77
Freon 11	80
Ethanol	76
Freon 113	85
1,1-Dichloroethene	81
Acetone	74
2-Propanol	79
Carbon Disulfide	78
3-Chloropropene	76
Methylene Chloride	75
Methyl tert-butyl ether	104
trans-1,2-Dichloroethene	81
Hexane	84
1,1-Dichloroethane	81
2-Butanone (Methyl Ethyl Ketone)	92
cis-1,2-Dichloroethene	87
Tetrahydrofuran	90
Chloroform	88
1,1,1-Trichloroethane	88
Cyclohexane	95
Carbon Tetrachloride	90
2,2,4-Trimethylpentane	94
Benzene	91
1,2-Dichloroethane	89
Heptane	90
Trichloroethene	93
1,2-Dichloropropane	92
1,4-Dioxane	92
Bromodichloromethane	92
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	102
Toluene	96
trans-1,3-Dichloropropene	95
1,1,2-Trichloroethane	94
Tetrachloroethene	99
2-Hexanone	94

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511227-07C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 02:44 PM**	

Compound	%Recovery
Dibromochloromethane	96
1,2-Dibromoethane (EDB)	95
Chlorobenzene	93
Ethyl Benzene	100
m,p-Xylene	105
o-Xylene	103
Styrene	103
Bromoform	100
Cumene	100
1,1,2,2-Tetrachloroethane	93
Propylbenzene	99
4-Ethyltoluene	103
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	100
1,3-Dichlorobenzene	94
1,4-Dichlorobenzene	94
alpha-Chlorotoluene	90
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	96
Hexachlorobutadiene	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511227-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/11/05 12:47 PM**	

Compound	%Recovery
Freon 12	78
Freon 114	77
Chloromethane	84
Vinyl Chloride	72
1,3-Butadiene	77
Bromomethane	80
Chloroethane	73
Freon 11	76
Ethanol	69
Freon 113	79
1,1-Dichloroethene	75
Acetone	78
2-Propanol	77
Carbon Disulfide	78
3-Chloropropene	72
Methylene Chloride	70
Methyl tert-butyl ether	102
trans-1,2-Dichloroethene	84
Hexane	82
1,1-Dichloroethane	74
2-Butanone (Methyl Ethyl Ketone)	91
cis-1,2-Dichloroethene	88
Tetrahydrofuran	85
Chloroform	82
1,1,1-Trichloroethane	78
Cyclohexane	93
Carbon Tetrachloride	83
2,2,4-Trimethylpentane	97
Benzene	84
1,2-Dichloroethane	80
Heptane	87
Trichloroethene	86
1,2-Dichloropropane	83
1,4-Dioxane	83
Bromodichloromethane	89
cis-1,3-Dichloropropene	89
4-Methyl-2-pentanone	92
Toluene	92
trans-1,3-Dichloropropene	94
1,1,2-Trichloroethane	85
Tetrachloroethene	93
2-Hexanone	72

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511227-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/11/05 12:47 PM**	

Compound	**%Recovery**
Dibromochloromethane	88
1,2-Dibromoethane (EDB)	89
Chlorobenzene	85
Ethyl Benzene	92
m,p-Xylene	99
o-Xylene	88
Styrene	111
Bromoform	85
Cumene	77
1,1,2,2-Tetrachloroethane	80
Propylbenzene	84
4-Ethyltoluene	83
1,3,5-Trimethylbenzene	78
1,2,4-Trimethylbenzene	86
1,3-Dichlorobenzene	78
1,4-Dichlorobenzene	78
alpha-Chlorotoluene	77
1,2-Dichlorobenzene	76
1,2,4-Trichlorobenzene	85
Hexachlorobutadiene	93

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511227-08B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111203**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 04:54 AM**

Compound	%Recovery
Freon 12	78
Freon 114	80
Chloromethane	84
Vinyl Chloride	82
1,3-Butadiene	88
Bromomethane	87
Chloroethane	90
Freon 11	75
Ethanol	77
Freon 113	85
1,1-Dichloroethene	80
Acetone	85
2-Propanol	81
Carbon Disulfide	87
3-Chloropropene	82
Methylene Chloride	78
Methyl tert-butyl ether	108
trans-1,2-Dichloroethene	92
Hexane	93
1,1-Dichloroethane	80
2-Butanone (Methyl Ethyl Ketone)	96
cis-1,2-Dichloroethene	92
Tetrahydrofuran	95
Chloroform	82
1,1,1-Trichloroethane	75
Cyclohexane	97
Carbon Tetrachloride	81
2,2,4-Trimethylpentane	104
Benzene	88
1,2-Dichloroethane	79
Heptane	89
Trichloroethene	86
1,2-Dichloropropane	88
1,4-Dioxane	86
Bromodichloromethane	89
cis-1,3-Dichloropropene	93
4-Methyl-2-pentanone	98
Toluene	95
trans-1,3-Dichloropropene	99
1,1,2-Trichloroethane	88
Tetrachloroethene	96
2-Hexanone	78

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511227-08B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/12/05 04:54 AM**	

Compound	%Recovery
Dibromochloromethane	89
1,2-Dibromoethane (EDB)	92
Chlorobenzene	87
Ethyl Benzene	94
m,p-Xylene	101
o-Xylene	90
Styrene	124
Bromoform	86
Cumene	78
1,1,2,2-Tetrachloroethane	82
Propylbenzene	85
4-Ethyltoluene	86
1,3,5-Trimethylbenzene	81
1,2,4-Trimethylbenzene	89
1,3-Dichlorobenzene	79
1,4-Dichlorobenzene	80
alpha-Chlorotoluene	76
1,2-Dichlorobenzene	78
1,2,4-Trichlorobenzene	76
Hexachlorobutadiene	83

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511227-08C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 03:28 PM**	

Compound	%Recovery
Freon 12	79
Freon 114	80
Chloromethane	87
Vinyl Chloride	79
1,3-Butadiene	84
Bromomethane	87
Chloroethane	86
Freon 11	77
Ethanol	76
Freon 113	85
1,1-Dichloroethene	80
Acetone	80
2-Propanol	81
Carbon Disulfide	84
3-Chloropropene	78
Methylene Chloride	76
Methyl tert-butyl ether	107
trans-1,2-Dichloroethene	90
Hexane	91
1,1-Dichloroethane	80
2-Butanone (Methyl Ethyl Ketone)	94
cis-1,2-Dichloroethene	92
Tetrahydrofuran	93
Chloroform	85
1,1,1-Trichloroethane	79
Cyclohexane	98
Carbon Tetrachloride	84
2,2,4-Trimethylpentane	103
Benzene	88
1,2-Dichloroethane	81
Heptane	88
Trichloroethene	89
1,2-Dichloropropane	88
1,4-Dioxane	87
Bromodichloromethane	92
cis-1,3-Dichloropropene	95
4-Methyl-2-pentanone	99
Toluene	98
trans-1,3-Dichloropropene	100
1,1,2-Trichloroethane	90
Tetrachloroethene	97
2-Hexanone	77

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511227-08C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 03:28 PM**	

Compound	**%Recovery**
Dibromochloromethane	93
1,2-Dibromoethane (EDB)	94
Chlorobenzene	91
Ethyl Benzene	95
m,p-Xylene	102
o-Xylene	92
Styrene	126
Bromoform	89
Cumene	80
1,1,2,2-Tetrachloroethane	83
Propylbenzene	86
4-Ethyltoluene	87
1,3,5-Trimethylbenzene	82
1,2,4-Trimethylbenzene	90
1,3-Dichlorobenzene	80
1,4-Dichlorobenzene	80
alpha-Chlorotoluene	80
1,2-Dichlorobenzene	78
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	86

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	104	70-130

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

November 23, 2005

Client: SAS Environmental Inc. (3403)
1270 S.Clevleand-Massillon Building A
Akron, OH 44321
Attn: Mark V. Allen

Work Order: NOJ2864
Project Name: UT Collierville
Project Nbr: 031091
Date Received: 10/27/05

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
SVE-26D	NOJ2864-01	10/26/05 12:28
SVE-31DS	NOJ2864-02	10/26/05 16:42
SVE-31S	NOJ2864-03	10/26/05 19:15

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

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Tennessee Certification Number: 02008

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Report Approved By:

Jessica Vickers
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2864
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/27/05 07:40

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch

Sample ID: NOJ2864-01 (SVE-26D - Air) Sampled: 10/26/05 12:28

Subcontracted Analysis

See Attached Report

Sample ID: NOJ2864-02 (SVE-31DS - Air) Sampled: 10/26/05 16:42

Subcontracted Analysis

See Attached Report

Sample ID: NOJ2864-03 (SVE-31S - Air) Sampled: 10/26/05 19:15

Subcontracted Analysis

See Attached Report

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ2864
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/27/05 07:40

CERTIFICATION SUMMARY

TestAmerica Analytical - Nashville

Method	Matrix	AIHA	Nelac	Tennessee
subcontract	Air			

TestAmerica
ANALYTICAL TESTING CORPORATION
Nashville Division

COOLER RECEIPT FORM **BC#** NOJ2864

Client Name : SAS Environmental, INC.

Cooler Received/Opened On: 10/27/05 **Accessioned By:** James D. Jacobs

Log-in Personnel Signature

1. Temperature of Cooler when triaged: N/A Degrees Celsius
2. Were custody seals on outside of cooler?..... YES...NO...NA
   a. If yes, how many and where:_____
3. Were custody seals on containers?..... NO...YES...NA
4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA
5. Were custody papers inside cooler?..... YES...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?..... YES...NO...NA
7. Did you sign the custody papers in the appropriate place?..... YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Foam Insert Ziplock baggies Paper Other None
9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None
10. Did all containers arrive in good condition (unbroken)?..... YES...NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)?..... YES...NO...NA
12. Did all container labels and tags agree with custody papers?..... YES...NO...NA
13. Were correct containers used for the analysis requested?..... YES...NO...NA
14. a. Were VOA vials received?..... YES...NO...NA
    b. Was there any observable head space present in any VOA vial?..... NO...YES...NA
15. Was sufficient amount of sample sent in each container?..... YES...NO...NA
16. Were correct preservatives used?..... YES...NO...NA
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?..... NO...YES...NA
18. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below:

    3659

    Fed-Ex UPS Velocity DHL Route Off-street Misc.
19. If a Non-Conformance exists, see attached or comments below:

BIS = Broken in shipment
Cooler Receipt Form

LF-1
End of Form

Revised 4/5/05

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes? Compliance Monitoring _____

NOJ2864

11/07/05 17:00

Client Name: SAS Environmental Inc. Client #: 3463
Address: 1270 S Cleve Mass Rd.
City/State/Zip Code: Akron, OH 44321
Project Manager: Mark V. Allen
Telephone Number: (330) 666-1546 Fax: (330) 666-7443
Sampler Name: (Print Name) Omer Uppal, Matthew White, Dave Romilly
Sampler Signature:

Project Name: UT Collierville
Project #: 031091
Site/Location ID: Collierville State: TN
Report To: Mark V. Allen
Invoice To: SAS Environmental Inc.
Quote #: 090204PLK99 PO#: 71608

TAT: X Standard; ___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: (Y) N

QC Deliverables: ___ None; ___ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	EPA Modified TO15									REMARKS
SVE-26D	10-26-05	12:28 pm	G		Vapor						2		X									NOJ2864-01
SVE-31DS	10-26-05	4:42 pm	G		Vapor						2		X									-02
SVE-31S	10-26-05	7:15	G		Vapor						2		X									-03

Special Instructions:
Standard TAT Email: JF0121@aol.com

Relinquished By:	Date: 10-26-05	Time: 7:52 pm	Received By: Fedex	Date: 10-26-05	Time: 7:57 pm
Relinquished By:	Date:	Time:	Received By:	Date: 10-27-05	Time: 940
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: N/A
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0511231

Work Order Summary

CLIENT:	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204	**BILL TO:**	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204
PHONE:	800-765-0980	**P.O. #**	
FAX:	615-726-3404	**PROJECT #**	NOJ2864
DATE RECEIVED:	11/11/2005	**CONTACT:**	Susan Alaniz
DATE COMPLETED:	11/22/2005		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	NOJ2864-01	Modified TO-15	Tedlar Bag
02A	NOJ2864-02	Modified TO-15	Tedlar Bag
03A	NOJ2864-03	Modified TO-15	Tedlar Bag
04A	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA

CERTIFIED BY: Linda D. Freeman

Laboratory Director

DATE: 11/22/05

Certfication numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
Test America
Workorder# 0511231

Three 1 Liter Tedlar Bag samples were received on November 11, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	+- 30 %RSD (TO-14A)	</= 30 % RSD with 2 compounds allowed out to </= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases. A list of these compounds is available.

Receiving Notes

Samples were received past the recommended hold time of 3 days hold time.The discrepancy was noted in the Sample Receipt Confirmation email/fax and the analysis proceeded.

Analytical Notes

The reported LCS for each daily batch has been derived from more than one analytical file.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: NOJ2864-01

Lab ID#: 0511231-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	400	700	1000	1800
Methylene Chloride	400	2100	1400	7200
trans-1,2-Dichloroethene	400	930	1600	3700
Hexane	400	1200	1400	4300
2-Butanone (Methyl Ethyl Ketone)	400	1300	1200	3900
cis-1,2-Dichloroethene	400	9300	1600	37000
Tetrahydrofuran	400	11000	1200	33000
Heptane	400	610	1600	2500
Trichloroethene	400	92000	2100	500000
Toluene	400	2300	1500	8700

Client Sample ID: NOJ2864-02

Lab ID#: 0511231-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
trans-1,2-Dichloroethene	200	320	790	1300
2-Butanone (Methyl Ethyl Ketone)	200	1400	590	4200
cis-1,2-Dichloroethene	200	15000	790	60000
Tetrahydrofuran	200	2200	590	6500
Trichloroethene	200	42000	1100	230000

Client Sample ID: NOJ2864-03

Lab ID#: 0511231-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	130	520	340	1300
1,1-Dichloroethene	130	230	530	930
2-Propanol	530	540	1300	1300
trans-1,2-Dichloroethene	130	330	530	1300
cis-1,2-Dichloroethene	130	35000	530	140000
Tetrahydrofuran	130	3100	390	9200
Trichloroethene	130	19000	720	100000

AIR TOXICS LTD.

Client Sample ID: NOJ2864-01

Lab ID#: 0511231-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111310**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**800**	**Date of Analysis:**	**11/13/05 09:14 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	400	Not Detected	2000	Not Detected
Freon 114	400	Not Detected	2800	Not Detected
Chloromethane	1600	Not Detected	3300	Not Detected
Vinyl Chloride	400	700	1000	1800
1,3-Butadiene	400	Not Detected	880	Not Detected
Bromomethane	400	Not Detected	1600	Not Detected
Chloroethane	400	Not Detected	1000	Not Detected
Freon 11	400	Not Detected	2200	Not Detected
Ethanol	1600	Not Detected	3000	Not Detected
Freon 113	400	Not Detected	3100	Not Detected
1,1-Dichloroethene	400	Not Detected	1600	Not Detected
Acetone	1600	Not Detected	3800	Not Detected
2-Propanol	1600	Not Detected	3900	Not Detected
Carbon Disulfide	400	Not Detected	1200	Not Detected
3-Chloropropene	1600	Not Detected	5000	Not Detected
Methylene Chloride	400	2100	1400	7200
Methyl tert-butyl ether	400	Not Detected	1400	Not Detected
trans-1,2-Dichloroethene	400	930	1600	3700
Hexane	400	1200	1400	4300
1,1-Dichloroethane	400	Not Detected	1600	Not Detected
2-Butanone (Methyl Ethyl Ketone)	400	1300	1200	3900
cis-1,2-Dichloroethene	400	9300	1600	37000
Tetrahydrofuran	400	11000	1200	33000
Chloroform	400	Not Detected	2000	Not Detected
1,1,1-Trichloroethane	400	Not Detected	2200	Not Detected
Cyclohexane	400	Not Detected	1400	Not Detected
Carbon Tetrachloride	400	Not Detected	2500	Not Detected
2,2,4-Trimethylpentane	400	Not Detected	1900	Not Detected
Benzene	400	Not Detected	1300	Not Detected
1,2-Dichloroethane	400	Not Detected	1600	Not Detected
Heptane	400	610	1600	2500
Trichloroethene	400	92000	2100	500000
1,2-Dichloropropane	400	Not Detected	1800	Not Detected
1,4-Dioxane	1600	Not Detected	5800	Not Detected
Bromodichloromethane	400	Not Detected	2700	Not Detected
cis-1,3-Dichloropropene	400	Not Detected	1800	Not Detected
4-Methyl-2-pentanone	400	Not Detected	1600	Not Detected
Toluene	400	2300	1500	8700
trans-1,3-Dichloropropene	400	Not Detected	1800	Not Detected
1,1,2-Trichloroethane	400	Not Detected	2200	Not Detected
Tetrachloroethene	400	Not Detected	2700	Not Detected
2-Hexanone	1600	Not Detected	6600	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2864-01

Lab ID#: 0511231-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111310**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**800**	**Date of Analysis:**	**11/13/05 09:14 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	400	Not Detected	3400	Not Detected
1,2-Dibromoethane (EDB)	400	Not Detected	3100	Not Detected
Chlorobenzene	400	Not Detected	1800	Not Detected
Ethyl Benzene	400	Not Detected	1700	Not Detected
m,p-Xylene	400	Not Detected	1700	Not Detected
o-Xylene	400	Not Detected	1700	Not Detected
Styrene	400	Not Detected	1700	Not Detected
Bromoform	400	Not Detected	4100	Not Detected
Cumene	400	Not Detected	2000	Not Detected
1,1,2,2-Tetrachloroethane	400	Not Detected	2700	Not Detected
Propylbenzene	400	Not Detected	2000	Not Detected
4-Ethyltoluene	400	Not Detected	2000	Not Detected
1,3,5-Trimethylbenzene	400	Not Detected	2000	Not Detected
1,2,4-Trimethylbenzene	400	Not Detected	2000	Not Detected
1,3-Dichlorobenzene	400	Not Detected	2400	Not Detected
1,4-Dichlorobenzene	400	Not Detected	2400	Not Detected
alpha-Chlorotoluene	400	Not Detected	2100	Not Detected
1,2-Dichlorobenzene	400	Not Detected	2400	Not Detected
1,2,4-Trichlorobenzene	1600	Not Detected	12000	Not Detected
Hexachlorobutadiene	1600	Not Detected	17000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2864-02

Lab ID#: 0511231-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111311**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**400**	**Date of Analysis:**	**11/13/05 09:57 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	200	Not Detected	990	Not Detected
Freon 114	200	Not Detected	1400	Not Detected
Chloromethane	800	Not Detected	1600	Not Detected
Vinyl Chloride	200	Not Detected	510	Not Detected
1,3-Butadiene	200	Not Detected	440	Not Detected
Bromomethane	200	Not Detected	780	Not Detected
Chloroethane	200	Not Detected	530	Not Detected
Freon 11	200	Not Detected	1100	Not Detected
Ethanol	800	Not Detected	1500	Not Detected
Freon 113	200	Not Detected	1500	Not Detected
1,1-Dichloroethene	200	Not Detected	790	Not Detected
Acetone	800	Not Detected	1900	Not Detected
2-Propanol	800	Not Detected	2000	Not Detected
Carbon Disulfide	200	Not Detected	620	Not Detected
3-Chloropropene	800	Not Detected	2500	Not Detected
Methylene Chloride	200	Not Detected	690	Not Detected
Methyl tert-butyl ether	200	Not Detected	720	Not Detected
trans-1,2-Dichloroethene	200	320	790	1300
Hexane	200	Not Detected	700	Not Detected
1,1-Dichloroethane	200	Not Detected	810	Not Detected
2-Butanone (Methyl Ethyl Ketone)	200	1400	590	4200
cis-1,2-Dichloroethene	200	15000	790	60000
Tetrahydrofuran	200	2200	590	6500
Chloroform	200	Not Detected	980	Not Detected
1,1,1-Trichloroethane	200	Not Detected	1100	Not Detected
Cyclohexane	200	Not Detected	690	Not Detected
Carbon Tetrachloride	200	Not Detected	1200	Not Detected
2,2,4-Trimethylpentane	200	Not Detected	930	Not Detected
Benzene	200	Not Detected	640	Not Detected
1,2-Dichloroethane	200	Not Detected	810	Not Detected
Heptane	200	Not Detected	820	Not Detected
Trichloroethene	200	42000	1100	230000
1,2-Dichloropropane	200	Not Detected	920	Not Detected
1,4-Dioxane	800	Not Detected	2900	Not Detected
Bromodichloromethane	200	Not Detected	1300	Not Detected
cis-1,3-Dichloropropene	200	Not Detected	910	Not Detected
4-Methyl-2-pentanone	200	Not Detected	820	Not Detected
Toluene	200	Not Detected	750	Not Detected
trans-1,3-Dichloropropene	200	Not Detected	910	Not Detected
1,1,2-Trichloroethane	200	Not Detected	1100	Not Detected
Tetrachloroethene	200	Not Detected	1400	Not Detected
2-Hexanone	800	Not Detected	3300	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2864-02

Lab ID#: 0511231-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111311**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**400**	**Date of Analysis:**	**11/13/05 09:57 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	200	Not Detected	1700	Not Detected
1,2-Dibromoethane (EDB)	200	Not Detected	1500	Not Detected
Chlorobenzene	200	Not Detected	920	Not Detected
Ethyl Benzene	200	Not Detected	870	Not Detected
m,p-Xylene	200	Not Detected	870	Not Detected
o-Xylene	200	Not Detected	870	Not Detected
Styrene	200	Not Detected	850	Not Detected
Bromoform	200	Not Detected	2100	Not Detected
Cumene	200	Not Detected	980	Not Detected
1,1,2,2-Tetrachloroethane	200	Not Detected	1400	Not Detected
Propylbenzene	200	Not Detected	980	Not Detected
4-Ethyltoluene	200	Not Detected	980	Not Detected
1,3,5-Trimethylbenzene	200	Not Detected	980	Not Detected
1,2,4-Trimethylbenzene	200	Not Detected	980	Not Detected
1,3-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,4-Dichlorobenzene	200	Not Detected	1200	Not Detected
alpha-Chlorotoluene	200	Not Detected	1000	Not Detected
1,2-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,2,4-Trichlorobenzene	800	Not Detected	5900	Not Detected
Hexachlorobutadiene	800	Not Detected	8500	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ2864-03

Lab ID#: 0511231-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111314**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**267**	**Date of Analysis:**	**11/14/05 12:04 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	130	Not Detected	660	Not Detected
Freon 114	130	Not Detected	930	Not Detected
Chloromethane	530	Not Detected	1100	Not Detected
Vinyl Chloride	130	520	340	1300
1,3-Butadiene	130	Not Detected	300	Not Detected
Bromomethane	130	Not Detected	520	Not Detected
Chloroethane	130	Not Detected	350	Not Detected
Freon 11	130	Not Detected	750	Not Detected
Ethanol	530	Not Detected	1000	Not Detected
Freon 113	130	Not Detected	1000	Not Detected
1,1-Dichloroethene	130	230	530	930
Acetone	530	Not Detected	1300	Not Detected
2-Propanol	530	540	1300	1300
Carbon Disulfide	130	Not Detected	420	Not Detected
3-Chloropropene	530	Not Detected	1700	Not Detected
Methylene Chloride	130	Not Detected	460	Not Detected
Methyl tert-butyl ether	130	Not Detected	480	Not Detected
trans-1,2-Dichloroethene	130	330	530	1300
Hexane	130	Not Detected	470	Not Detected
1,1-Dichloroethane	130	Not Detected	540	Not Detected
2-Butanone (Methyl Ethyl Ketone)	130	Not Detected	390	Not Detected
cis-1,2-Dichloroethene	130	35000	530	140000
Tetrahydrofuran	130	3100	390	9200
Chloroform	130	Not Detected	650	Not Detected
1,1,1-Trichloroethane	130	Not Detected	730	Not Detected
Cyclohexane	130	Not Detected	460	Not Detected
Carbon Tetrachloride	130	Not Detected	840	Not Detected
2,2,4-Trimethylpentane	130	Not Detected	620	Not Detected
Benzene	130	Not Detected	430	Not Detected
1,2-Dichloroethane	130	Not Detected	540	Not Detected
Heptane	130	Not Detected	550	Not Detected
Trichloroethene	130	19000	720	100000
1,2-Dichloropropane	130	Not Detected	620	Not Detected
1,4-Dioxane	530	Not Detected	1900	Not Detected
Bromodichloromethane	130	Not Detected	890	Not Detected
cis-1,3-Dichloropropene	130	Not Detected	600	Not Detected
4-Methyl-2-pentanone	130	Not Detected	550	Not Detected
Toluene	130	Not Detected	500	Not Detected
trans-1,3-Dichloropropene	130	Not Detected	600	Not Detected
1,1,2-Trichloroethane	130	Not Detected	730	Not Detected
Tetrachloroethene	130	Not Detected	900	Not Detected
2-Hexanone	530	Not Detected	2200	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ2864-03

Lab ID#: 0511231-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111314**	**Date of Collection:**	**10/26/05**
Dil. Factor:	**267**	**Date of Analysis:**	**11/14/05 12:04 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	130	Not Detected	1100	Not Detected
1,2-Dibromoethane (EDB)	130	Not Detected	1000	Not Detected
Chlorobenzene	130	Not Detected	610	Not Detected
Ethyl Benzene	130	Not Detected	580	Not Detected
m,p-Xylene	130	Not Detected	580	Not Detected
o-Xylene	130	Not Detected	580	Not Detected
Styrene	130	Not Detected	570	Not Detected
Bromoform	130	Not Detected	1400	Not Detected
Cumene	130	Not Detected	660	Not Detected
1,1,2,2-Tetrachloroethane	130	Not Detected	920	Not Detected
Propylbenzene	130	Not Detected	660	Not Detected
4-Ethyltoluene	130	Not Detected	660	Not Detected
1,3,5-Trimethylbenzene	130	Not Detected	660	Not Detected
1,2,4-Trimethylbenzene	130	Not Detected	660	Not Detected
1,3-Dichlorobenzene	130	Not Detected	800	Not Detected
1,4-Dichlorobenzene	130	Not Detected	800	Not Detected
alpha-Chlorotoluene	130	Not Detected	690	Not Detected
1,2-Dichlorobenzene	130	Not Detected	800	Not Detected
1,2,4-Trichlorobenzene	530	Not Detected	4000	Not Detected
Hexachlorobutadiene	530	Not Detected	5700	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511231-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 05:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511231-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 05:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511231-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 02:44 PM**	

Compound	%Recovery
Freon 12	81
Freon 114	84
Chloromethane	82
Vinyl Chloride	79
1,3-Butadiene	81
Bromomethane	77
Chloroethane	77
Freon 11	80
Ethanol	76
Freon 113	85
1,1-Dichloroethene	81
Acetone	74
2-Propanol	79
Carbon Disulfide	78
3-Chloropropene	76
Methylene Chloride	75
Methyl tert-butyl ether	104
trans-1,2-Dichloroethene	81
Hexane	84
1,1-Dichloroethane	81
2-Butanone (Methyl Ethyl Ketone)	92
cis-1,2-Dichloroethene	87
Tetrahydrofuran	90
Chloroform	88
1,1,1-Trichloroethane	88
Cyclohexane	95
Carbon Tetrachloride	90
2,2,4-Trimethylpentane	94
Benzene	91
1,2-Dichloroethane	89
Heptane	90
Trichloroethene	93
1,2-Dichloropropane	92
1,4-Dioxane	92
Bromodichloromethane	92
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	102
Toluene	96
trans-1,3-Dichloropropene	95
1,1,2-Trichloroethane	94
Tetrachloroethene	99
2-Hexanone	94

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511231-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 02:44 PM**	

Compound	%Recovery
Dibromochloromethane	96
1,2-Dibromoethane (EDB)	95
Chlorobenzene	93
Ethyl Benzene	100
m,p-Xylene	105
o-Xylene	103
Styrene	103
Bromoform	100
Cumene	100
1,1,2,2-Tetrachloroethane	93
Propylbenzene	99
4-Ethyltoluene	103
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	100
1,3-Dichlorobenzene	94
1,4-Dichlorobenzene	94
alpha-Chlorotoluene	90
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	96
Hexachlorobutadiene	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511231-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111303**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 03:28 PM**

Compound	%Recovery
Freon 12	79
Freon 114	80
Chloromethane	87
Vinyl Chloride	79
1,3-Butadiene	84
Bromomethane	87
Chloroethane	86
Freon 11	77
Ethanol	76
Freon 113	85
1,1-Dichloroethene	80
Acetone	80
2-Propanol	81
Carbon Disulfide	84
3-Chloropropene	78
Methylene Chloride	76
Methyl tert-butyl ether	107
trans-1,2-Dichloroethene	90
Hexane	91
1,1-Dichloroethane	80
2-Butanone (Methyl Ethyl Ketone)	94
cis-1,2-Dichloroethene	92
Tetrahydrofuran	93
Chloroform	85
1,1,1-Trichloroethane	79
Cyclohexane	98
Carbon Tetrachloride	84
2,2,4-Trimethylpentane	103
Benzene	88
1,2-Dichloroethane	81
Heptane	88
Trichloroethene	89
1,2-Dichloropropane	88
1,4-Dioxane	87
Bromodichloromethane	92
cis-1,3-Dichloropropene	95
4-Methyl-2-pentanone	99
Toluene	98
trans-1,3-Dichloropropene	100
1,1,2-Trichloroethane	90
Tetrachloroethene	97
2-Hexanone	77

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511231-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 03:28 PM**	

Compound	**%Recovery**
Dibromochloromethane	93
1,2-Dibromoethane (EDB)	94
Chlorobenzene	91
Ethyl Benzene	95
m,p-Xylene	102
o-Xylene	92
Styrene	126
Bromoform	89
Cumene	80
1,1,2,2-Tetrachloroethane	83
Propylbenzene	86
4-Ethyltoluene	87
1,3,5-Trimethylbenzene	82
1,2,4-Trimethylbenzene	90
1,3-Dichlorobenzene	80
1,4-Dichlorobenzene	80
alpha-Chlorotoluene	80
1,2-Dichlorobenzene	78
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	86

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	104	70-130

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

November 23, 2005

Client: SAS Environmental Inc. (3403)
1270 S.Clevleand-Massillon Building A
Akron, OH 44321
Attn: Mark V. Allen

Work Order: NOJ3172
Project Name: UT Collierville
Project Nbr: 031091
Date Received: 10/29/05

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
SVE-41S	NOJ3172-01	10/27/05 09:00
SVE-41D	NOJ3172-02	10/27/05 08:20
SVE-42S	NOJ3172-03	10/27/05 09:00
SVE-42D	NOJ3172-04	10/27/05 08:20
SVE-42DS	NOJ3172-05	10/27/05 09:45
SVE-51	NOJ3172-06	10/27/05 09:45

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

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Tennessee Certification Number: 02008

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Jessica Vickers

Jessica Vickers
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ3172
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/29/05 08:10

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch

Sample ID: NOJ3172-01 (SVE-41S - Air) Sampled: 10/27/05 09:00
Subcontracted Analysis
See Attached Report

Sample ID: NOJ3172-02 (SVE-41D - Air) Sampled: 10/27/05 08:20
Subcontracted Analysis
See Attached Report

Sample ID: NOJ3172-03 (SVE-42S - Air) Sampled: 10/27/05 09:00
Subcontracted Analysis
See Attached Report

Sample ID: NOJ3172-04 (SVE-42D - Air) Sampled: 10/27/05 08:20
Subcontracted Analysis
See Attached Report

Sample ID: NOJ3172-05 (SVE-42DS - Air) Sampled: 10/27/05 09:45
Subcontracted Analysis
See Attached Report

Sample ID: NOJ3172-06 (SVE-51 - Air) Sampled: 10/27/05 09:45
Subcontracted Analysis
See Attached Report

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOJ3172
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	10/29/05 08:10

CERTIFICATION SUMMARY

TestAmerica Analytical - Nashville

Method	Matrix	AIHA	Nelac	Tennessee
subcontract	Air			

TestAmerica
ANALYTICAL TESTING CORPORATION
Nashville Division

COOLER RECEIPT FORM **BC#** NOJ3172

Client Name : SAS Environmental, INC.

Cooler Received/Opened On: 10/29/05 **Accessioned By:** James D. Jacobs

Log-in Personnel Signature

1. Temperature of Cooler when triaged: N/A Degrees Celsius
2. Were custody seals on outside of cooler?..... YES...NO...NA
   a. If yes, how many and where:_____
3. Were custody seals on containers?..... NO...YES...NA
4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA
5. Were custody papers inside cooler?..... YES...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?..... YES...NO...NA
7. Did you sign the custody papers in the appropriate place?..... YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Foam Insert Ziplock baggies Paper Other None
9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None
10. Did all containers arrive in good condition (unbroken)?..... YES...NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)?..... YES...NO...NA
12. Did all container labels and tags agree with custody papers?..... YES...NO...NA
13. Were correct containers used for the analysis requested?..... YES...NO...NA
14. a. Were VOA vials received?..... YES...NO...NA
    b. Was there any observable head space present in any VOA vial?..... NO...YES...NA
15. Was sufficient amount of sample sent in each container?..... YES...NO...NA
16. Were correct preservatives used?..... YES...NO...NA
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?..... NO...YES...NA
18. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below:

    3019

    Fed-Ex UPS Velocity DHL Route Off-street Misc.
19. If a Non-Conformance exists, see attached or comments below:

BIS = Broken in shipment
Cooler Receipt Form

LF-1
End of Form

Revised 4/5/05

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

NOJ3172
11/09/05 17:00

Client Name: SAS Environmental Inc. Client #: 3403
Address: 1270 S Cleve Mass Rd.
City/State/Zip Code: Akron, OH 44321
Project Manager: Mark V. Allen
Telephone Number: 330-666-1546 Fax: 330-666-7443
Sampler Name: (Print Name) Omey Uppal, David Ramilly
Sampler Signature:

Project Name: UT Collierville, TN
Project #: 031091
Site/Location ID: Collierville State: TN
Report To: Mark V. Allen
Invoice To: SAS Environmental Inc.
Quote #: 090204PLK99 PO#: 7608

TAT: ✓ Standard; ___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	EPA Modified TO15	REMARKS
SVE-41S	10-27-05	9:10 AM	G		VAPOR						2		X	NOJ3172-01
SVE-41D	↓	8:20 AM	↓								2		X	-02
SVE-42S		9:00 AM									2		X	-03
SVE-42D		8:20 AM									2		X	-04
SVE-42DS		9:45 AM									2		X	-05
SVE-51	↓	9:45 AM	↓								2		X	-06

QC Deliverables: ___ None; ___ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: _____

Special Instructions:
Standard TAT Email: JF0121@aol.com

	Date:	Time:		Date:	Time:
Relinquished By:	10-28-05	11:30 am	Received By: FedEx	10-28-05	11:30
Relinquished By:			Received By:	10/29/05	Time: 810
Relinquished By:			Received By:		

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: N/A
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0511226

Work Order Summary

CLIENT:	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204	**BILL TO:**	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204
PHONE:	800-765-0980	**P.O. #**	
FAX:	615-726-3404	**PROJECT #**	NOJ3172
DATE RECEIVED:	11/11/2005	**CONTACT:**	Susan Alaniz
DATE COMPLETED:	11/21/2005		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	NOJ3172-01	Modified TO-15	Tedlar Bag
02A	NOJ3172-02	Modified TO-15	Tedlar Bag
03A	NOJ3172-03	Modified TO-15	Tedlar Bag
04A	NOJ3172-04	Modified TO-15	Tedlar Bag
05A	NOJ3172-05	Modified TO-15	Tedlar Bag
06A	NOJ3172-06	Modified TO-15	Tedlar Bag
07A	Lab Blank	Modified TO-15	NA
08A	CCV	Modified TO-15	NA
09A	LCS	Modified TO-15	NA

CERTIFIED BY: Linda J. Truman DATE: 11/22/05

Laboratory Director

Certfication numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
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LABORATORY NARRATIVE
Modified TO-15
Test America
Workorder# 0511226

Six 1 Liter Tedlar Bag samples were received on November 11, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-15*	*ATL Modifications*
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	+- 30 %RSD (TO-14A)	</= 30 % RSD with 2 compounds allowed out to </= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases. A list of these compounds is available.

Receiving Notes

Samples were received past the recommended hold time of 3 days. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the analysis proceeded.

Analytical Notes

The reported LCS for each daily batch has been derived from more than one analytical file.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: NOJ3172-01

Lab ID#: 0511226-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	10000	50000	26000	130000
Ethanol	40000	70000	75000	130000
Methylene Chloride	10000	130000	35000	460000
Hexane	10000	74000	35000	260000
cis-1,2-Dichloroethene	10000	570000	40000	2200000
Cyclohexane	10000	11000	34000	40000
2,2,4-Trimethylpentane	10000	11000	47000	50000
Heptane	10000	20000	41000	81000
Trichloroethene	10000	2200000	54000	12000000
Toluene	10000	110000	38000	410000
m,p-Xylene	10000	15000	43000	66000

Client Sample ID: NOJ3172-02

Lab ID#: 0511226-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	2000	3600	5100	9200
Ethanol	8000	15000	15000	28000
Methylene Chloride	2000	3100	6900	11000
trans-1,2-Dichloroethene	2000	4400	7900	18000
cis-1,2-Dichloroethene	2000	390000	7900	1600000
Tetrahydrofuran	2000	32000	5900	96000
Trichloroethene	2000	150000	11000	820000
Toluene	2000	5600	7500	21000

Client Sample ID: NOJ3172-03

Lab ID#: 0511226-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	100	700	260	1800
2-Butanone (Methyl Ethyl Ketone)	100	1500	290	4300
cis-1,2-Dichloroethene	100	20000	400	80000
Tetrahydrofuran	100	5300	290	16000
Trichloroethene	100	12000	540	65000

Client Sample ID: NOJ3172-04

Lab ID#: 0511226-04A

Client Sample ID: NOJ3172-04

Lab ID#: 0511226-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethanol	4000	11000	7500	21000
Methylene Chloride	1000	1900	3500	6600
Hexane	1000	1100	3500	3800
cis-1,2-Dichloroethene	1000	76000	4000	300000
Tetrahydrofuran	1000	1000	2900	3000
Trichloroethene	1000	200000	5400	1100000
Toluene	1000	3000	3800	11000

Client Sample ID: NOJ3172-05

Lab ID#: 0511226-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methylene Chloride	800	1900	2800	6500
Hexane	800	980	2800	3500
cis-1,2-Dichloroethene	800	9800	3200	39000
Tetrahydrofuran	800	1300	2400	3800
Trichloroethene	800	140000	4300	770000
Toluene	800	2100	3000	8100

Client Sample ID: NOJ3172-06

Lab ID#: 0511226-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methylene Chloride	1200	1900	4300	6600
cis-1,2-Dichloroethene	1200	20000	5000	79000
Tetrahydrofuran	1200	2400	3700	7000
Trichloroethene	1200	320000	6700	1700000
Toluene	1200	2300	4700	8800

AIR TOXICS LTD.

Client Sample ID: NOJ3172-01

Lab ID#: 0511226-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111313**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**20000**	**Date of Analysis:**	**11/13/05 11:24 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	10000	Not Detected	49000	Not Detected
Freon 114	10000	Not Detected	70000	Not Detected
Chloromethane	40000	Not Detected	83000	Not Detected
Vinyl Chloride	10000	50000	26000	130000
1,3-Butadiene	10000	Not Detected	22000	Not Detected
Bromomethane	10000	Not Detected	39000	Not Detected
Chloroethane	10000	Not Detected	26000	Not Detected
Freon 11	10000	Not Detected	56000	Not Detected
Ethanol	40000	70000	75000	130000
Freon 113	10000	Not Detected	77000	Not Detected
1,1-Dichloroethene	10000	Not Detected	40000	Not Detected
Acetone	40000	Not Detected	95000	Not Detected
2-Propanol	40000	Not Detected	98000	Not Detected
Carbon Disulfide	10000	Not Detected	31000	Not Detected
3-Chloropropene	40000	Not Detected	120000	Not Detected
Methylene Chloride	10000	130000	35000	460000
Methyl tert-butyl ether	10000	Not Detected	36000	Not Detected
trans-1,2-Dichloroethene	10000	Not Detected	40000	Not Detected
Hexane	10000	74000	35000	260000
1,1-Dichloroethane	10000	Not Detected	40000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	10000	Not Detected	29000	Not Detected
cis-1,2-Dichloroethene	10000	570000	40000	2200000
Tetrahydrofuran	10000	Not Detected	29000	Not Detected
Chloroform	10000	Not Detected	49000	Not Detected
1,1,1-Trichloroethane	10000	Not Detected	54000	Not Detected
Cyclohexane	10000	11000	34000	40000
Carbon Tetrachloride	10000	Not Detected	63000	Not Detected
2,2,4-Trimethylpentane	10000	11000	47000	50000
Benzene	10000	Not Detected	32000	Not Detected
1,2-Dichloroethane	10000	Not Detected	40000	Not Detected
Heptane	10000	20000	41000	81000
Trichloroethene	10000	2200000	54000	12000000
1,2-Dichloropropane	10000	Not Detected	46000	Not Detected
1,4-Dioxane	40000	Not Detected	140000	Not Detected
Bromodichloromethane	10000	Not Detected	67000	Not Detected
cis-1,3-Dichloropropene	10000	Not Detected	45000	Not Detected
4-Methyl-2-pentanone	10000	Not Detected	41000	Not Detected
Toluene	10000	110000	38000	410000
trans-1,3-Dichloropropene	10000	Not Detected	45000	Not Detected
1,1,2-Trichloroethane	10000	Not Detected	54000	Not Detected
Tetrachloroethene	10000	Not Detected	68000	Not Detected
2-Hexanone	40000	Not Detected	160000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ3172-01

Lab ID#: 0511226-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111313**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**20000**	**Date of Analysis:**	**11/13/05 11:24 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	10000	Not Detected	85000	Not Detected
1,2-Dibromoethane (EDB)	10000	Not Detected	77000	Not Detected
Chlorobenzene	10000	Not Detected	46000	Not Detected
Ethyl Benzene	10000	Not Detected	43000	Not Detected
m,p-Xylene	10000	15000	43000	66000
o-Xylene	10000	Not Detected	43000	Not Detected
Styrene	10000	Not Detected	42000	Not Detected
Bromoform	10000	Not Detected	100000	Not Detected
Cumene	10000	Not Detected	49000	Not Detected
1,1,2,2-Tetrachloroethane	10000	Not Detected	69000	Not Detected
Propylbenzene	10000	Not Detected	49000	Not Detected
4-Ethyltoluene	10000	Not Detected	49000	Not Detected
1,3,5-Trimethylbenzene	10000	Not Detected	49000	Not Detected
1,2,4-Trimethylbenzene	10000	Not Detected	49000	Not Detected
1,3-Dichlorobenzene	10000	Not Detected	60000	Not Detected
1,4-Dichlorobenzene	10000	Not Detected	60000	Not Detected
alpha-Chlorotoluene	10000	Not Detected	52000	Not Detected
1,2-Dichlorobenzene	10000	Not Detected	60000	Not Detected
1,2,4-Trichlorobenzene	40000	Not Detected	300000	Not Detected
Hexachlorobutadiene	40000	Not Detected	430000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ3172-02

Lab ID#: 0511226-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111315**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**4000**	**Date of Analysis:**	**11/14/05 12:48 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2000	Not Detected	9900	Not Detected
Freon 114	2000	Not Detected	14000	Not Detected
Chloromethane	8000	Not Detected	16000	Not Detected
Vinyl Chloride	2000	3600	5100	9200
1,3-Butadiene	2000	Not Detected	4400	Not Detected
Bromomethane	2000	Not Detected	7800	Not Detected
Chloroethane	2000	Not Detected	5300	Not Detected
Freon 11	2000	Not Detected	11000	Not Detected
Ethanol	8000	15000	15000	28000
Freon 113	2000	Not Detected	15000	Not Detected
1,1-Dichloroethene	2000	Not Detected	7900	Not Detected
Acetone	8000	Not Detected	19000	Not Detected
2-Propanol	8000	Not Detected	20000	Not Detected
Carbon Disulfide	2000	Not Detected	6200	Not Detected
3-Chloropropene	8000	Not Detected	25000	Not Detected
Methylene Chloride	2000	3100	6900	11000
Methyl tert-butyl ether	2000	Not Detected	7200	Not Detected
trans-1,2-Dichloroethene	2000	4400	7900	18000
Hexane	2000	Not Detected	7000	Not Detected
1,1-Dichloroethane	2000	Not Detected	8100	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2000	Not Detected	5900	Not Detected
cis-1,2-Dichloroethene	2000	390000	7900	1600000
Tetrahydrofuran	2000	32000	5900	96000
Chloroform	2000	Not Detected	9800	Not Detected
1,1,1-Trichloroethane	2000	Not Detected	11000	Not Detected
Cyclohexane	2000	Not Detected	6900	Not Detected
Carbon Tetrachloride	2000	Not Detected	12000	Not Detected
2,2,4-Trimethylpentane	2000	Not Detected	9300	Not Detected
Benzene	2000	Not Detected	6400	Not Detected
1,2-Dichloroethane	2000	Not Detected	8100	Not Detected
Heptane	2000	Not Detected	8200	Not Detected
Trichloroethene	2000	150000	11000	820000
1,2-Dichloropropane	2000	Not Detected	9200	Not Detected
1,4-Dioxane	8000	Not Detected	29000	Not Detected
Bromodichloromethane	2000	Not Detected	13000	Not Detected
cis-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
4-Methyl-2-pentanone	2000	Not Detected	8200	Not Detected
Toluene	2000	5600	7500	21000
trans-1,3-Dichloropropene	2000	Not Detected	9100	Not Detected
1,1,2-Trichloroethane	2000	Not Detected	11000	Not Detected
Tetrachloroethene	2000	Not Detected	14000	Not Detected
2-Hexanone	8000	Not Detected	33000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ3172-02

Lab ID#: 0511226-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111315**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**4000**	**Date of Analysis:**	**11/14/05 12:48 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	2000	Not Detected	17000	Not Detected
1,2-Dibromoethane (EDB)	2000	Not Detected	15000	Not Detected
Chlorobenzene	2000	Not Detected	9200	Not Detected
Ethyl Benzene	2000	Not Detected	8700	Not Detected
m,p-Xylene	2000	Not Detected	8700	Not Detected
o-Xylene	2000	Not Detected	8700	Not Detected
Styrene	2000	Not Detected	8500	Not Detected
Bromoform	2000	Not Detected	21000	Not Detected
Cumene	2000	Not Detected	9800	Not Detected
1,1,2,2-Tetrachloroethane	2000	Not Detected	14000	Not Detected
Propylbenzene	2000	Not Detected	9800	Not Detected
4-Ethyltoluene	2000	Not Detected	9800	Not Detected
1,3,5-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,2,4-Trimethylbenzene	2000	Not Detected	9800	Not Detected
1,3-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,4-Dichlorobenzene	2000	Not Detected	12000	Not Detected
alpha-Chlorotoluene	2000	Not Detected	10000	Not Detected
1,2-Dichlorobenzene	2000	Not Detected	12000	Not Detected
1,2,4-Trichlorobenzene	8000	Not Detected	59000	Not Detected
Hexachlorobutadiene	8000	Not Detected	85000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ3172-03

Lab ID#: 0511226-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111316**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**200**	**Date of Analysis:**	**11/14/05 01:31 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	100	Not Detected	490	Not Detected
Freon 114	100	Not Detected	700	Not Detected
Chloromethane	400	Not Detected	830	Not Detected
Vinyl Chloride	100	700	260	1800
1,3-Butadiene	100	Not Detected	220	Not Detected
Bromomethane	100	Not Detected	390	Not Detected
Chloroethane	100	Not Detected	260	Not Detected
Freon 11	100	Not Detected	560	Not Detected
Ethanol	400	Not Detected	750	Not Detected
Freon 113	100	Not Detected	770	Not Detected
1,1-Dichloroethene	100	Not Detected	400	Not Detected
Acetone	400	Not Detected	950	Not Detected
2-Propanol	400	Not Detected	980	Not Detected
Carbon Disulfide	100	Not Detected	310	Not Detected
3-Chloropropene	400	Not Detected	1200	Not Detected
Methylene Chloride	100	Not Detected	350	Not Detected
Methyl tert-butyl ether	100	Not Detected	360	Not Detected
trans-1,2-Dichloroethene	100	Not Detected	400	Not Detected
Hexane	100	Not Detected	350	Not Detected
1,1-Dichloroethane	100	Not Detected	400	Not Detected
2-Butanone (Methyl Ethyl Ketone)	100	1500	290	4300
cis-1,2-Dichloroethene	100	20000	400	80000
Tetrahydrofuran	100	5300	290	16000
Chloroform	100	Not Detected	490	Not Detected
1,1,1-Trichloroethane	100	Not Detected	540	Not Detected
Cyclohexane	100	Not Detected	340	Not Detected
Carbon Tetrachloride	100	Not Detected	630	Not Detected
2,2,4-Trimethylpentane	100	Not Detected	470	Not Detected
Benzene	100	Not Detected	320	Not Detected
1,2-Dichloroethane	100	Not Detected	400	Not Detected
Heptane	100	Not Detected	410	Not Detected
Trichloroethene	100	12000	540	65000
1,2-Dichloropropane	100	Not Detected	460	Not Detected
1,4-Dioxane	400	Not Detected	1400	Not Detected
Bromodichloromethane	100	Not Detected	670	Not Detected
cis-1,3-Dichloropropene	100	Not Detected	450	Not Detected
4-Methyl-2-pentanone	100	Not Detected	410	Not Detected
Toluene	100	Not Detected	380	Not Detected
trans-1,3-Dichloropropene	100	Not Detected	450	Not Detected
1,1,2-Trichloroethane	100	Not Detected	540	Not Detected
Tetrachloroethene	100	Not Detected	680	Not Detected
2-Hexanone	400	Not Detected	1600	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ3172-03

Lab ID#: 0511226-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111316**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**200**	**Date of Analysis:**	**11/14/05 01:31 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	100	Not Detected	850	Not Detected
1,2-Dibromoethane (EDB)	100	Not Detected	770	Not Detected
Chlorobenzene	100	Not Detected	460	Not Detected
Ethyl Benzene	100	Not Detected	430	Not Detected
m,p-Xylene	100	Not Detected	430	Not Detected
o-Xylene	100	Not Detected	430	Not Detected
Styrene	100	Not Detected	420	Not Detected
Bromoform	100	Not Detected	1000	Not Detected
Cumene	100	Not Detected	490	Not Detected
1,1,2,2-Tetrachloroethane	100	Not Detected	690	Not Detected
Propylbenzene	100	Not Detected	490	Not Detected
4-Ethyltoluene	100	Not Detected	490	Not Detected
1,3,5-Trimethylbenzene	100	Not Detected	490	Not Detected
1,2,4-Trimethylbenzene	100	Not Detected	490	Not Detected
1,3-Dichlorobenzene	100	Not Detected	600	Not Detected
1,4-Dichlorobenzene	100	Not Detected	600	Not Detected
alpha-Chlorotoluene	100	Not Detected	520	Not Detected
1,2-Dichlorobenzene	100	Not Detected	600	Not Detected
1,2,4-Trichlorobenzene	400	Not Detected	3000	Not Detected
Hexachlorobutadiene	400	Not Detected	4300	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ3172-04

Lab ID#: 0511226-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111317**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**2000**	**Date of Analysis:**	**11/14/05 02:22 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1000	Not Detected	4900	Not Detected
Freon 114	1000	Not Detected	7000	Not Detected
Chloromethane	4000	Not Detected	8300	Not Detected
Vinyl Chloride	1000	Not Detected	2600	Not Detected
1,3-Butadiene	1000	Not Detected	2200	Not Detected
Bromomethane	1000	Not Detected	3900	Not Detected
Chloroethane	1000	Not Detected	2600	Not Detected
Freon 11	1000	Not Detected	5600	Not Detected
Ethanol	4000	11000	7500	21000
Freon 113	1000	Not Detected	7700	Not Detected
1,1-Dichloroethene	1000	Not Detected	4000	Not Detected
Acetone	4000	Not Detected	9500	Not Detected
2-Propanol	4000	Not Detected	9800	Not Detected
Carbon Disulfide	1000	Not Detected	3100	Not Detected
3-Chloropropene	4000	Not Detected	12000	Not Detected
Methylene Chloride	1000	1900	3500	6600
Methyl tert-butyl ether	1000	Not Detected	3600	Not Detected
trans-1,2-Dichloroethene	1000	Not Detected	4000	Not Detected
Hexane	1000	1100	3500	3800
1,1-Dichloroethane	1000	Not Detected	4000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1000	Not Detected	2900	Not Detected
cis-1,2-Dichloroethene	1000	76000	4000	300000
Tetrahydrofuran	1000	1000	2900	3000
Chloroform	1000	Not Detected	4900	Not Detected
1,1,1-Trichloroethane	1000	Not Detected	5400	Not Detected
Cyclohexane	1000	Not Detected	3400	Not Detected
Carbon Tetrachloride	1000	Not Detected	6300	Not Detected
2,2,4-Trimethylpentane	1000	Not Detected	4700	Not Detected
Benzene	1000	Not Detected	3200	Not Detected
1,2-Dichloroethane	1000	Not Detected	4000	Not Detected
Heptane	1000	Not Detected	4100	Not Detected
Trichloroethene	1000	200000	5400	1100000
1,2-Dichloropropane	1000	Not Detected	4600	Not Detected
1,4-Dioxane	4000	Not Detected	14000	Not Detected
Bromodichloromethane	1000	Not Detected	6700	Not Detected
cis-1,3-Dichloropropene	1000	Not Detected	4500	Not Detected
4-Methyl-2-pentanone	1000	Not Detected	4100	Not Detected
Toluene	1000	3000	3800	11000
trans-1,3-Dichloropropene	1000	Not Detected	4500	Not Detected
1,1,2-Trichloroethane	1000	Not Detected	5400	Not Detected
Tetrachloroethene	1000	Not Detected	6800	Not Detected
2-Hexanone	4000	Not Detected	16000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ3172-04

Lab ID#: 0511226-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111317**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**2000**	**Date of Analysis:**	**11/14/05 02:22 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	1000	Not Detected	8500	Not Detected
1,2-Dibromoethane (EDB)	1000	Not Detected	7700	Not Detected
Chlorobenzene	1000	Not Detected	4600	Not Detected
Ethyl Benzene	1000	Not Detected	4300	Not Detected
m,p-Xylene	1000	Not Detected	4300	Not Detected
o-Xylene	1000	Not Detected	4300	Not Detected
Styrene	1000	Not Detected	4200	Not Detected
Bromoform	1000	Not Detected	10000	Not Detected
Cumene	1000	Not Detected	4900	Not Detected
1,1,2,2-Tetrachloroethane	1000	Not Detected	6900	Not Detected
Propylbenzene	1000	Not Detected	4900	Not Detected
4-Ethyltoluene	1000	Not Detected	4900	Not Detected
1,3,5-Trimethylbenzene	1000	Not Detected	4900	Not Detected
1,2,4-Trimethylbenzene	1000	Not Detected	4900	Not Detected
1,3-Dichlorobenzene	1000	Not Detected	6000	Not Detected
1,4-Dichlorobenzene	1000	Not Detected	6000	Not Detected
alpha-Chlorotoluene	1000	Not Detected	5200	Not Detected
1,2-Dichlorobenzene	1000	Not Detected	6000	Not Detected
1,2,4-Trichlorobenzene	4000	Not Detected	30000	Not Detected
Hexachlorobutadiene	4000	Not Detected	43000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ3172-05

Lab ID#: 0511226-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111318**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**1600**	**Date of Analysis:**	**11/14/05 03:05 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	800	Not Detected	4000	Not Detected
Freon 114	800	Not Detected	5600	Not Detected
Chloromethane	3200	Not Detected	6600	Not Detected
Vinyl Chloride	800	Not Detected	2000	Not Detected
1,3-Butadiene	800	Not Detected	1800	Not Detected
Bromomethane	800	Not Detected	3100	Not Detected
Chloroethane	800	Not Detected	2100	Not Detected
Freon 11	800	Not Detected	4500	Not Detected
Ethanol	3200	Not Detected	6000	Not Detected
Freon 113	800	Not Detected	6100	Not Detected
1,1-Dichloroethene	800	Not Detected	3200	Not Detected
Acetone	3200	Not Detected	7600	Not Detected
2-Propanol	3200	Not Detected	7900	Not Detected
Carbon Disulfide	800	Not Detected	2500	Not Detected
3-Chloropropene	3200	Not Detected	10000	Not Detected
Methylene Chloride	800	1900	2800	6500
Methyl tert-butyl ether	800	Not Detected	2900	Not Detected
trans-1,2-Dichloroethene	800	Not Detected	3200	Not Detected
Hexane	800	980	2800	3500
1,1-Dichloroethane	800	Not Detected	3200	Not Detected
2-Butanone (Methyl Ethyl Ketone)	800	Not Detected	2400	Not Detected
cis-1,2-Dichloroethene	800	9800	3200	39000
Tetrahydrofuran	800	1300	2400	3800
Chloroform	800	Not Detected	3900	Not Detected
1,1,1-Trichloroethane	800	Not Detected	4400	Not Detected
Cyclohexane	800	Not Detected	2800	Not Detected
Carbon Tetrachloride	800	Not Detected	5000	Not Detected
2,2,4-Trimethylpentane	800	Not Detected	3700	Not Detected
Benzene	800	Not Detected	2600	Not Detected
1,2-Dichloroethane	800	Not Detected	3200	Not Detected
Heptane	800	Not Detected	3300	Not Detected
Trichloroethene	800	140000	4300	770000
1,2-Dichloropropane	800	Not Detected	3700	Not Detected
1,4-Dioxane	3200	Not Detected	12000	Not Detected
Bromodichloromethane	800	Not Detected	5400	Not Detected
cis-1,3-Dichloropropene	800	Not Detected	3600	Not Detected
4-Methyl-2-pentanone	800	Not Detected	3300	Not Detected
Toluene	800	2100	3000	8100
trans-1,3-Dichloropropene	800	Not Detected	3600	Not Detected
1,1,2-Trichloroethane	800	Not Detected	4400	Not Detected
Tetrachloroethene	800	Not Detected	5400	Not Detected
2-Hexanone	3200	Not Detected	13000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ3172-05

Lab ID#: 0511226-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111318**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**1600**	**Date of Analysis:**	**11/14/05 03:05 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	800	Not Detected	6800	Not Detected
1,2-Dibromoethane (EDB)	800	Not Detected	6100	Not Detected
Chlorobenzene	800	Not Detected	3700	Not Detected
Ethyl Benzene	800	Not Detected	3500	Not Detected
m,p-Xylene	800	Not Detected	3500	Not Detected
o-Xylene	800	Not Detected	3500	Not Detected
Styrene	800	Not Detected	3400	Not Detected
Bromoform	800	Not Detected	8300	Not Detected
Cumene	800	Not Detected	3900	Not Detected
1,1,2,2-Tetrachloroethane	800	Not Detected	5500	Not Detected
Propylbenzene	800	Not Detected	3900	Not Detected
4-Ethyltoluene	800	Not Detected	3900	Not Detected
1,3,5-Trimethylbenzene	800	Not Detected	3900	Not Detected
1,2,4-Trimethylbenzene	800	Not Detected	3900	Not Detected
1,3-Dichlorobenzene	800	Not Detected	4800	Not Detected
1,4-Dichlorobenzene	800	Not Detected	4800	Not Detected
alpha-Chlorotoluene	800	Not Detected	4100	Not Detected
1,2-Dichlorobenzene	800	Not Detected	4800	Not Detected
1,2,4-Trichlorobenzene	3200	Not Detected	24000	Not Detected
Hexachlorobutadiene	3200	Not Detected	34000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

Client Sample ID: NOJ3172-06

Lab ID#: 0511226-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111319**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**2500**	**Date of Analysis:**	**11/14/05 03:51 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1200	Not Detected	6200	Not Detected
Freon 114	1200	Not Detected	8700	Not Detected
Chloromethane	5000	Not Detected	10000	Not Detected
Vinyl Chloride	1200	Not Detected	3200	Not Detected
1,3-Butadiene	1200	Not Detected	2800	Not Detected
Bromomethane	1200	Not Detected	4800	Not Detected
Chloroethane	1200	Not Detected	3300	Not Detected
Freon 11	1200	Not Detected	7000	Not Detected
Ethanol	5000	Not Detected	9400	Not Detected
Freon 113	1200	Not Detected	9600	Not Detected
1,1-Dichloroethene	1200	Not Detected	5000	Not Detected
Acetone	5000	Not Detected	12000	Not Detected
2-Propanol	5000	Not Detected	12000	Not Detected
Carbon Disulfide	1200	Not Detected	3900	Not Detected
3-Chloropropene	5000	Not Detected	16000	Not Detected
Methylene Chloride	1200	1900	4300	6600
Methyl tert-butyl ether	1200	Not Detected	4500	Not Detected
trans-1,2-Dichloroethene	1200	Not Detected	5000	Not Detected
Hexane	1200	Not Detected	4400	Not Detected
1,1-Dichloroethane	1200	Not Detected	5000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1200	Not Detected	3700	Not Detected
cis-1,2-Dichloroethene	1200	20000	5000	79000
Tetrahydrofuran	1200	2400	3700	7000
Chloroform	1200	Not Detected	6100	Not Detected
1,1,1-Trichloroethane	1200	Not Detected	6800	Not Detected
Cyclohexane	1200	Not Detected	4300	Not Detected
Carbon Tetrachloride	1200	Not Detected	7900	Not Detected
2,2,4-Trimethylpentane	1200	Not Detected	5800	Not Detected
Benzene	1200	Not Detected	4000	Not Detected
1,2-Dichloroethane	1200	Not Detected	5000	Not Detected
Heptane	1200	Not Detected	5100	Not Detected
Trichloroethene	1200	320000	6700	1700000
1,2-Dichloropropane	1200	Not Detected	5800	Not Detected
1,4-Dioxane	5000	Not Detected	18000	Not Detected
Bromodichloromethane	1200	Not Detected	8400	Not Detected
cis-1,3-Dichloropropene	1200	Not Detected	5700	Not Detected
4-Methyl-2-pentanone	1200	Not Detected	5100	Not Detected
Toluene	1200	2300	4700	8800
trans-1,3-Dichloropropene	1200	Not Detected	5700	Not Detected
1,1,2-Trichloroethane	1200	Not Detected	6800	Not Detected
Tetrachloroethene	1200	Not Detected	8500	Not Detected
2-Hexanone	5000	Not Detected	20000	Not Detected

AIR TOXICS LTD.

Client Sample ID: NOJ3172-06

Lab ID#: 0511226-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111319**	**Date of Collection:**	**10/27/05**
Dil. Factor:	**2500**	**Date of Analysis:**	**11/14/05 03:51 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	1200	Not Detected	11000	Not Detected
1,2-Dibromoethane (EDB)	1200	Not Detected	9600	Not Detected
Chlorobenzene	1200	Not Detected	5800	Not Detected
Ethyl Benzene	1200	Not Detected	5400	Not Detected
m,p-Xylene	1200	Not Detected	5400	Not Detected
o-Xylene	1200	Not Detected	5400	Not Detected
Styrene	1200	Not Detected	5300	Not Detected
Bromoform	1200	Not Detected	13000	Not Detected
Cumene	1200	Not Detected	6100	Not Detected
1,1,2,2-Tetrachloroethane	1200	Not Detected	8600	Not Detected
Propylbenzene	1200	Not Detected	6100	Not Detected
4-Ethyltoluene	1200	Not Detected	6100	Not Detected
1,3,5-Trimethylbenzene	1200	Not Detected	6100	Not Detected
1,2,4-Trimethylbenzene	1200	Not Detected	6100	Not Detected
1,3-Dichlorobenzene	1200	Not Detected	7500	Not Detected
1,4-Dichlorobenzene	1200	Not Detected	7500	Not Detected
alpha-Chlorotoluene	1200	Not Detected	6500	Not Detected
1,2-Dichlorobenzene	1200	Not Detected	7500	Not Detected
1,2,4-Trichlorobenzene	5000	Not Detected	37000	Not Detected
Hexachlorobutadiene	5000	Not Detected	53000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511226-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 05:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0511226-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 05:13 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511226-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 02:44 PM**	

Compound	%Recovery
Freon 12	81
Freon 114	84
Chloromethane	82
Vinyl Chloride	79
1,3-Butadiene	81
Bromomethane	77
Chloroethane	77
Freon 11	80
Ethanol	76
Freon 113	85
1,1-Dichloroethene	81
Acetone	74
2-Propanol	79
Carbon Disulfide	78
3-Chloropropene	76
Methylene Chloride	75
Methyl tert-butyl ether	104
trans-1,2-Dichloroethene	81
Hexane	84
1,1-Dichloroethane	81
2-Butanone (Methyl Ethyl Ketone)	92
cis-1,2-Dichloroethene	87
Tetrahydrofuran	90
Chloroform	88
1,1,1-Trichloroethane	88
Cyclohexane	95
Carbon Tetrachloride	90
2,2,4-Trimethylpentane	94
Benzene	91
1,2-Dichloroethane	89
Heptane	90
Trichloroethene	93
1,2-Dichloropropane	92
1,4-Dioxane	92
Bromodichloromethane	92
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	102
Toluene	96
trans-1,3-Dichloropropene	95
1,1,2-Trichloroethane	94
Tetrachloroethene	99
2-Hexanone	94

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0511226-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 02:44 PM**	

Compound	**%Recovery**
Dibromochloromethane	96
1,2-Dibromoethane (EDB)	95
Chlorobenzene	93
Ethyl Benzene	100
m,p-Xylene	105
o-Xylene	103
Styrene	103
Bromoform	100
Cumene	100
1,1,2,2-Tetrachloroethane	93
Propylbenzene	99
4-Ethyltoluene	103
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	100
1,3-Dichlorobenzene	94
1,4-Dichlorobenzene	94
alpha-Chlorotoluene	90
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	96
Hexachlorobutadiene	100

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511226-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 03:28 PM**	

Compound	%Recovery
Freon 12	79
Freon 114	80
Chloromethane	87
Vinyl Chloride	79
1,3-Butadiene	84
Bromomethane	87
Chloroethane	86
Freon 11	77
Ethanol	76
Freon 113	85
1,1-Dichloroethene	80
Acetone	80
2-Propanol	81
Carbon Disulfide	84
3-Chloropropene	78
Methylene Chloride	76
Methyl tert-butyl ether	107
trans-1,2-Dichloroethene	90
Hexane	91
1,1-Dichloroethane	80
2-Butanone (Methyl Ethyl Ketone)	94
cis-1,2-Dichloroethene	92
Tetrahydrofuran	93
Chloroform	85
1,1,1-Trichloroethane	79
Cyclohexane	98
Carbon Tetrachloride	84
2,2,4-Trimethylpentane	103
Benzene	88
1,2-Dichloroethane	81
Heptane	88
Trichloroethene	89
1,2-Dichloropropane	88
1,4-Dioxane	87
Bromodichloromethane	92
cis-1,3-Dichloropropene	95
4-Methyl-2-pentanone	99
Toluene	98
trans-1,3-Dichloropropene	100
1,1,2-Trichloroethane	90
Tetrachloroethene	97
2-Hexanone	77

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0511226-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**f111303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/13/05 03:28 PM**	

Compound	**%Recovery**
Dibromochloromethane	93
1,2-Dibromoethane (EDB)	94
Chlorobenzene	91
Ethyl Benzene	95
m,p-Xylene	102
o-Xylene	92
Styrene	126
Bromoform	89
Cumene	80
1,1,2,2-Tetrachloroethane	83
Propylbenzene	86
4-Ethyltoluene	87
1,3,5-Trimethylbenzene	82
1,2,4-Trimethylbenzene	90
1,3-Dichlorobenzene	80
1,4-Dichlorobenzene	80
alpha-Chlorotoluene	80
1,2-Dichlorobenzene	78
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	86

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	104	70-130

SVE STARTUP PERFORMANCE AND DISCHARGE SAMPLING (DECEMBER 2005)

LABORATORY ANALYTICAL RESULTS

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

December 08, 2005

Client: SAS Environmental Inc. (3403)
1270 S.Clevleand-Massillon Building A
Akron, OH 44321
Attn: Mark V. Allen

Work Order: NOL0745
Project Name: UT Collierville
Project Nbr: 031091
Date Received: 12/07/05

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
01A Deep SVE Influent	NOL0745-01	12/06/05 15:52
02A Shallow SVE Influent	NOL0745-02	12/06/05 15:47
03A Combined SVE Influent	NOL0745-03	12/06/05 15:55
04A Intermediate SVE Effluent	NOL0745-04	12/06/05 15:34
05A System SVE Effluent	NOL0745-05	12/06/05 15:31

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

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Tennessee Certification Number: 02008

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Roxanne L. Connor

Roxanne Connor
Senior Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403)	Work Order:	NOL0745
	1270 S.Clevleand-Massillon Building A	Project Name:	UT Collierville
	Akron, OH 44321	Project Number:	031091
Attn	Mark V. Allen	Received:	12/07/05 13:21

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Analyst	Batch

Sample ID: NOL0745-01 (01A Deep SVE Influent - Air) Sampled: 12/06/05 15:52
Modified TO-15
See Attached Report

Sample ID: NOL0745-02 (02A Shallow SVE Influent - Air) Sampled: 12/06/05 15:47
Modified TO-15
See Attached Report

Sample ID: NOL0745-03 (03A Combined SVE Influent - Air) Sampled: 12/06/05 15:55
Modified TO-15
See Attached Report

Sample ID: NOL0745-04 (04A Intermediate SVE Effluent - Air) Sampled: 12/06/05 15:34
Modified TO-15
See Attached Report

Sample ID: NOL0745-05 (05A System SVE Effluent - Air) Sampled: 12/06/05 15:31
Modified TO-15
See Attached Report

TestAmerica
ANALYTICAL TESTING CORPORATION
2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	SAS Environmental Inc. (3403) 1270 S.Clevleand-Massillon Building A Akron, OH 44321	Work Order:	NOL0745
		Project Name:	UT Collierville
		Project Number:	031091
Attn	Mark V. Allen	Received:	12/07/05 13:21

CERTIFICATION SUMMARY

TestAmerica Analytical - Nashville

Method	Matrix	AIHA	Nelac	Tennessee
subcontract	Air			

TestAmerica INCORPORATED

Sample NonConformance/COC Revision Form

Initiated by:	kthompson	**Phone:**	330-666-1546	NC Closed	☐
Client Name:	SAS ENVIRONME	**Sample Range:**		Date Closed	
Client Contact:		**SDG:**			
Client Account:	3403	**Analyst:**			
Date Created:	12/7/2005	**Supervisor:**			
NC #:		**NC Type:**			
Project Name:	UT Collierville	**Terminal Manager:**			
Project Number:	031091				
Project Origin					
Regulatory :					

Process: Other NC/Process: See Comment Section Below

Action: Corrected action not chosen

Corrected By: Jim Jacobs

Closed: ☑ JDJacobs

Comments: Comment added by: JDJacobs on 12/7/2005 1:26:05 PM
Done Work Order NOL0745

****

Please assign a work order number for this project. Samples sent direct to Air Toxics. I need this done ASAP to subcontract COC to Air Toxics. This is a quick TAT project.

NOL0745

0512143

NOL0745

12/16/05 17:00

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: SAS ENVIRONMENTAL INC. Client #: 3402

Address: 1270 S.CLEVELAND-MASSILLON A

City/State/Zip Code: AKRON OH 44321

Project Manager: Mark V. Allen

Telephone Number: 330-666-1546 Fax: 8,13306667443

Sampler Name: (Print Name) James A. O'Quinn III

Sampler Signature: James A O'Quinn III

Project Name: UT Collierville / Carrier

Project #: 031091

Site/Location ID: Collierville State: Tn

Report To: Mark Allen

Invoice To: SAS Environmental

Quote #: _____ PO#: _____

TAT: ___ Standard; X Rush (surcharges may apply)

Date Needed: _____

Fax Results: (Y) N

QC Deliverables: ___ None; ___ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: _____

Matrix: SL - Sludge DW - Drinking Water; GW - Groundwater S - Soil/Solid; WW - Wastewater Specify Other

Preservation & # of Containers

Analyze For: EPA T.O. 15 Modified

	SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	EPA T.O. 15 Modified										REMARKS
01A	Deep SVE Influent	12-06-05	1552	G		Air						X						NOL	0745	-01				24 Hr TAT
02A	Shallow SVE Influent	12-06-05	1547	G		Air						X								-02				24 Hr TAT
03A	Combined SVE Influent	12-06-05	1555	G		Air						X								-03				24 Hr TAT
04A	Intermediate SVE Effluent	12/06/05	1534	G		Air						X								-04				24 Hr TAT
05A	System SVE Effluent	12/06/05	15:31	G		Air						X								-05				24 Hr TAT

CUSTODY SEAL INTACT? Y N (NONE) TEMP ✓

Special Instructions: E-Mail - JFO121@aol.com

Relinquished By: James A O'Quinn III	Date: 12-06-05	Time: 1700	Received By: Fed Ex	Date: 12-06-05	Time: 1700
Relinquished By:	Date:	Time:	Received By: C.M. Watson III	Date: 12/7/05	Time: 9:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp:
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific

AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0512143

Work Order Summary

CLIENT:	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204	**BILL TO:**	Ms. Kenyatta Thompson Test America 2960 Foster Creighton Dr. Nashville, TN 37204
PHONE:	800-765-0980	**P.O. #**	
FAX:	615-726-3404	**PROJECT #**	NOL0745
DATE RECEIVED:	12/07/2005	**CONTACT:**	Susan Alaniz
DATE COMPLETED:			

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	Deep SVE Influent	Modified TO-15	Tedlar Bag
02A	Shallow SVE Influent	Modified TO-15	Tedlar Bag
03A	Combined SVE Influent	Modified TO-15	Tedlar Bag
04A	Intermediate SVE Effluent	Modified TO-15	Tedlar Bag
04AA	Intermediate SVE Effluent Duplicate	Modified TO-15	Tedlar Bag
05A	System SVE Effluent	Modified TO-15	Tedlar Bag
06A	Lab Blank	Modified TO-15	NA
07A	CCV	Modified TO-15	NA
08A	LCS	Modified TO-15	NA

CERTIFIED BY: Linda D. Truman

Laboratory Director

DATE: 12/08/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Test America
Workorder# 0512143

Five 1 Liter Tedlar Bag samples were received on December 07, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples are summarized in the below table. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-15*	*ATL Modifications*
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

The Chain of Custody (COC) information for samples Intermediate SVE Effluent and System SVE Effluent did not match the entries on the sample tags with regard to sample identification. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the information on the COC was used to process and report the samples.

Analytical Notes

The reported LCS for each daily batch has been derived from more than one analytical file.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: Deep SVE Influent

Lab ID#: 0512143-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	500	520	1300	1300
Acetone	2000	2200	4800	5300
2-Propanol	2000	3200	4900	8000
Carbon Disulfide	500	1300	1600	4100
cis-1,2-Dichloroethene	500	14000	2000	58000
Tetrahydrofuran	500	560	1500	1600
1,1,1-Trichloroethane	500	590	2700	3200
Trichloroethene	500	130000	2700	700000
Toluene	500	660	1900	2500

Client Sample ID: Shallow SVE Influent

Lab ID#: 0512143-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	250	1400	640	3600
Acetone	1000	2000	2400	4700
2-Propanol	1000	2100	2400	5200
Carbon Disulfide	250	1200	780	3900
Methylene Chloride	250	310	870	1100
trans-1,2-Dichloroethene	250	470	990	1900
2-Butanone (Methyl Ethyl Ketone)	250	630	740	1900
cis-1,2-Dichloroethene	250	29000	990	110000
Tetrahydrofuran	250	500	740	1500
1,1,1-Trichloroethane	250	450	1400	2500
Cyclohexane	250	340	860	1200
Trichloroethene	250	53000	1300	280000
Toluene	250	520	940	1900
m,p-Xylene	250	250	1100	1100

Client Sample ID: Combined SVE Influent

Lab ID#: 0512143-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	250	430	640	1100
Acetone	1000	2200	2400	5200
2-Propanol	1000	1900	2400	4600
Carbon Disulfide	250	1500	780	4800
Methylene Chloride	250	280	870	990
2-Butanone (Methyl Ethyl Ketone)	250	320	740	930

Client Sample ID: Combined SVE Influent

Lab ID#: 0512143-03A

cis-1,2-Dichloroethene	250	12000	990	46000
Tetrahydrofuran	250	290	740	860
Trichloroethene	250	75000	1300	400000
Toluene	250	520	940	2000

Client Sample ID: Intermediate SVE Effluent

Lab ID#: 0512143-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethanol	2.0	4.0	3.8	7.6
Acetone	2.0	7.2	4.8	17
2-Propanol	2.0	5.1	4.9	12
Carbon Disulfide	0.50	3.0	1.6	9.3
2-Butanone (Methyl Ethyl Ketone)	0.50	14	1.5	41
Tetrahydrofuran	0.50	26	1.5	76
Cyclohexane	0.50	0.66	1.7	2.3
Trichloroethene	0.50	1.1	2.7	6.1
Toluene	0.50	1.9	1.9	7.1
m,p-Xylene	0.50	0.74	2.2	3.2

Client Sample ID: Intermediate SVE Effluent Duplicate

Lab ID#: 0512143-04AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethanol	2.0	3.8	3.8	7.3
Acetone	2.0	7.1	4.8	17
2-Propanol	2.0	5.6	4.9	14
Carbon Disulfide	0.50	2.8	1.6	8.6
2-Butanone (Methyl Ethyl Ketone)	0.50	13	1.5	39
Tetrahydrofuran	0.50	25	1.5	74
Cyclohexane	0.50	0.60	1.7	2.0
Trichloroethene	0.50	0.95	2.7	5.1
Toluene	0.50	1.8	1.9	6.7
m,p-Xylene	0.50	0.60	2.2	2.6

Client Sample ID: System SVE Effluent

Lab ID#: 0512143-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethanol	2.0	7.1	3.8	13
Acetone	2.0	6.0	4.8	14
2-Propanol	2.0	5.3	4.9	13
Carbon Disulfide	0.50	2.5	1.6	7.7
2-Butanone (Methyl Ethyl Ketone)	0.50	29	1.5	85
cis-1,2-Dichloroethene	0.50	1.8	2.0	7.2
Tetrahydrofuran	0.50	51	1.5	150

Client Sample ID: System SVE Effluent

Lab ID#: 0512143-05A

Cyclohexane	0.50	0.92	1.7	3.2
Trichloroethene	0.50	16	2.7	86
Toluene	0.50	1.4	1.9	5.4
m,p-Xylene	0.50	1.4	2.2	6.1
o-Xylene	0.50	0.56	2.2	2.4
1,2,4-Trimethylbenzene	0.50	0.52	2.4	2.6

AIR TOXICS LTD.

Client Sample ID: Deep SVE Influent

Lab ID#: 0512143-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120717**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**1000**	**Date of Analysis:**	**12/8/05 02:47 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	500	Not Detected	2500	Not Detected
Freon 114	500	Not Detected	3500	Not Detected
Chloromethane	2000	Not Detected	4100	Not Detected
Vinyl Chloride	500	520	1300	1300
1,3-Butadiene	500	Not Detected	1100	Not Detected
Bromomethane	500	Not Detected	1900	Not Detected
Chloroethane	500	Not Detected	1300	Not Detected
Freon 11	500	Not Detected	2800	Not Detected
Ethanol	2000	Not Detected	3800	Not Detected
Freon 113	500	Not Detected	3800	Not Detected
1,1-Dichloroethene	500	Not Detected	2000	Not Detected
Acetone	2000	2200	4800	5300
2-Propanol	2000	3200	4900	8000
Carbon Disulfide	500	1300	1600	4100
3-Chloropropene	2000	Not Detected	6300	Not Detected
Methylene Chloride	500	Not Detected	1700	Not Detected
Methyl tert-butyl ether	500	Not Detected	1800	Not Detected
trans-1,2-Dichloroethene	500	Not Detected	2000	Not Detected
Hexane	500	Not Detected	1800	Not Detected
1,1-Dichloroethane	500	Not Detected	2000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	500	Not Detected	1500	Not Detected
cis-1,2-Dichloroethene	500	14000	2000	58000
Tetrahydrofuran	500	560	1500	1600
Chloroform	500	Not Detected	2400	Not Detected
1,1,1-Trichloroethane	500	590	2700	3200
Cyclohexane	500	Not Detected	1700	Not Detected
Carbon Tetrachloride	500	Not Detected	3100	Not Detected
2,2,4-Trimethylpentane	500	Not Detected	2300	Not Detected
Benzene	500	Not Detected	1600	Not Detected
1,2-Dichloroethane	500	Not Detected	2000	Not Detected
Heptane	500	Not Detected	2000	Not Detected
Trichloroethene	500	130000	2700	700000
1,2-Dichloropropane	500	Not Detected	2300	Not Detected
1,4-Dioxane	2000	Not Detected	7200	Not Detected
Bromodichloromethane	500	Not Detected	3400	Not Detected
cis-1,3-Dichloropropene	500	Not Detected	2300	Not Detected
4-Methyl-2-pentanone	500	Not Detected	2000	Not Detected
Toluene	500	660	1900	2500
trans-1,3-Dichloropropene	500	Not Detected	2300	Not Detected
1,1,2-Trichloroethane	500	Not Detected	2700	Not Detected
Tetrachloroethene	500	Not Detected	3400	Not Detected
2-Hexanone	2000	Not Detected	8200	Not Detected

AIR TOXICS LTD.

Client Sample ID: Deep SVE Influent

Lab ID#: 0512143-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120717**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**1000**	**Date of Analysis:**	**12/8/05 02:47 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	500	Not Detected	4200	Not Detected
1,2-Dibromoethane (EDB)	500	Not Detected	3800	Not Detected
Chlorobenzene	500	Not Detected	2300	Not Detected
Ethyl Benzene	500	Not Detected	2200	Not Detected
m,p-Xylene	500	Not Detected	2200	Not Detected
o-Xylene	500	Not Detected	2200	Not Detected
Styrene	500	Not Detected	2100	Not Detected
Bromoform	500	Not Detected	5200	Not Detected
Cumene	500	Not Detected	2400	Not Detected
1,1,2,2-Tetrachloroethane	500	Not Detected	3400	Not Detected
Propylbenzene	500	Not Detected	2400	Not Detected
4-Ethyltoluene	500	Not Detected	2400	Not Detected
1,3,5-Trimethylbenzene	500	Not Detected	2400	Not Detected
1,2,4-Trimethylbenzene	500	Not Detected	2400	Not Detected
1,3-Dichlorobenzene	500	Not Detected	3000	Not Detected
1,4-Dichlorobenzene	500	Not Detected	3000	Not Detected
alpha-Chlorotoluene	500	Not Detected	2600	Not Detected
1,2-Dichlorobenzene	500	Not Detected	3000	Not Detected
1,2,4-Trichlorobenzene	2000	Not Detected	15000	Not Detected
Hexachlorobutadiene	2000	Not Detected	21000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

Client Sample ID: Shallow SVE Influent

Lab ID#: 0512143-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120715**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**500**	**Date of Analysis:**	**12/7/05 11:05 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	250	Not Detected	1200	Not Detected
Freon 114	250	Not Detected	1700	Not Detected
Chloromethane	1000	Not Detected	2100	Not Detected
Vinyl Chloride	250	1400	640	3600
1,3-Butadiene	250	Not Detected	550	Not Detected
Bromomethane	250	Not Detected	970	Not Detected
Chloroethane	250	Not Detected	660	Not Detected
Freon 11	250	Not Detected	1400	Not Detected
Ethanol	1000	Not Detected	1900	Not Detected
Freon 113	250	Not Detected	1900	Not Detected
1,1-Dichloroethene	250	Not Detected	990	Not Detected
Acetone	1000	2000	2400	4700
2-Propanol	1000	2100	2400	5200
Carbon Disulfide	250	1200	780	3900
3-Chloropropene	1000	Not Detected	3100	Not Detected
Methylene Chloride	250	310	870	1100
Methyl tert-butyl ether	250	Not Detected	900	Not Detected
trans-1,2-Dichloroethene	250	470	990	1900
Hexane	250	Not Detected	880	Not Detected
1,1-Dichloroethane	250	Not Detected	1000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	250	630	740	1900
cis-1,2-Dichloroethene	250	29000	990	110000
Tetrahydrofuran	250	500	740	1500
Chloroform	250	Not Detected	1200	Not Detected
1,1,1-Trichloroethane	250	450	1400	2500
Cyclohexane	250	340	860	1200
Carbon Tetrachloride	250	Not Detected	1600	Not Detected
2,2,4-Trimethylpentane	250	Not Detected	1200	Not Detected
Benzene	250	Not Detected	800	Not Detected
1,2-Dichloroethane	250	Not Detected	1000	Not Detected
Heptane	250	Not Detected	1000	Not Detected
Trichloroethene	250	53000	1300	280000
1,2-Dichloropropane	250	Not Detected	1200	Not Detected
1,4-Dioxane	1000	Not Detected	3600	Not Detected
Bromodichloromethane	250	Not Detected	1700	Not Detected
cis-1,3-Dichloropropene	250	Not Detected	1100	Not Detected
4-Methyl-2-pentanone	250	Not Detected	1000	Not Detected
Toluene	250	520	940	1900
trans-1,3-Dichloropropene	250	Not Detected	1100	Not Detected
1,1,2-Trichloroethane	250	Not Detected	1400	Not Detected
Tetrachloroethene	250	Not Detected	1700	Not Detected
2-Hexanone	1000	Not Detected	4100	Not Detected

AIR TOXICS LTD.

Client Sample ID: Shallow SVE Influent

Lab ID#: 0512143-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120715**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**500**	**Date of Analysis:**	**12/7/05 11:05 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	250	Not Detected	2100	Not Detected
1,2-Dibromoethane (EDB)	250	Not Detected	1900	Not Detected
Chlorobenzene	250	Not Detected	1200	Not Detected
Ethyl Benzene	250	Not Detected	1100	Not Detected
m,p-Xylene	250	250	1100	1100
o-Xylene	250	Not Detected	1100	Not Detected
Styrene	250	Not Detected	1100	Not Detected
Bromoform	250	Not Detected	2600	Not Detected
Cumene	250	Not Detected	1200	Not Detected
1,1,2,2-Tetrachloroethane	250	Not Detected	1700	Not Detected
Propylbenzene	250	Not Detected	1200	Not Detected
4-Ethyltoluene	250	Not Detected	1200	Not Detected
1,3,5-Trimethylbenzene	250	Not Detected	1200	Not Detected
1,2,4-Trimethylbenzene	250	Not Detected	1200	Not Detected
1,3-Dichlorobenzene	250	Not Detected	1500	Not Detected
1,4-Dichlorobenzene	250	Not Detected	1500	Not Detected
alpha-Chlorotoluene	250	Not Detected	1300	Not Detected
1,2-Dichlorobenzene	250	Not Detected	1500	Not Detected
1,2,4-Trichlorobenzene	1000	Not Detected	7400	Not Detected
Hexachlorobutadiene	1000	Not Detected	11000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

Client Sample ID: Combined SVE Influent

Lab ID#: 0512143-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120713**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**500**	**Date of Analysis:**	**12/7/05 09:01 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	250	Not Detected	1200	Not Detected
Freon 114	250	Not Detected	1700	Not Detected
Chloromethane	1000	Not Detected	2100	Not Detected
Vinyl Chloride	250	430	640	1100
1,3-Butadiene	250	Not Detected	550	Not Detected
Bromomethane	250	Not Detected	970	Not Detected
Chloroethane	250	Not Detected	660	Not Detected
Freon 11	250	Not Detected	1400	Not Detected
Ethanol	1000	Not Detected	1900	Not Detected
Freon 113	250	Not Detected	1900	Not Detected
1,1-Dichloroethene	250	Not Detected	990	Not Detected
Acetone	1000	2200	2400	5200
2-Propanol	1000	1900	2400	4600
Carbon Disulfide	250	1500	780	4800
3-Chloropropene	1000	Not Detected	3100	Not Detected
Methylene Chloride	250	280	870	990
Methyl tert-butyl ether	250	Not Detected	900	Not Detected
trans-1,2-Dichloroethene	250	Not Detected	990	Not Detected
Hexane	250	Not Detected	880	Not Detected
1,1-Dichloroethane	250	Not Detected	1000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	250	320	740	930
cis-1,2-Dichloroethene	250	12000	990	46000
Tetrahydrofuran	250	290	740	860
Chloroform	250	Not Detected	1200	Not Detected
1,1,1-Trichloroethane	250	Not Detected	1400	Not Detected
Cyclohexane	250	Not Detected	860	Not Detected
Carbon Tetrachloride	250	Not Detected	1600	Not Detected
2,2,4-Trimethylpentane	250	Not Detected	1200	Not Detected
Benzene	250	Not Detected	800	Not Detected
1,2-Dichloroethane	250	Not Detected	1000	Not Detected
Heptane	250	Not Detected	1000	Not Detected
Trichloroethene	250	75000	1300	400000
1,2-Dichloropropane	250	Not Detected	1200	Not Detected
1,4-Dioxane	1000	Not Detected	3600	Not Detected
Bromodichloromethane	250	Not Detected	1700	Not Detected
cis-1,3-Dichloropropene	250	Not Detected	1100	Not Detected
4-Methyl-2-pentanone	250	Not Detected	1000	Not Detected
Toluene	250	520	940	2000
trans-1,3-Dichloropropene	250	Not Detected	1100	Not Detected
1,1,2-Trichloroethane	250	Not Detected	1400	Not Detected
Tetrachloroethene	250	Not Detected	1700	Not Detected
2-Hexanone	1000	Not Detected	4100	Not Detected

AIR TOXICS LTD.

Client Sample ID: Combined SVE Influent

Lab ID#: 0512143-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120713**	**Date of Collection:**	**12/6/05**
Dil. Factor:	***500***	**Date of Analysis:**	***12/7/05 09:01 PM***

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	250	Not Detected	2100	Not Detected
1,2-Dibromoethane (EDB)	250	Not Detected	1900	Not Detected
Chlorobenzene	250	Not Detected	1200	Not Detected
Ethyl Benzene	250	Not Detected	1100	Not Detected
m,p-Xylene	250	Not Detected	1100	Not Detected
o-Xylene	250	Not Detected	1100	Not Detected
Styrene	250	Not Detected	1100	Not Detected
Bromoform	250	Not Detected	2600	Not Detected
Cumene	250	Not Detected	1200	Not Detected
1,1,2,2-Tetrachloroethane	250	Not Detected	1700	Not Detected
Propylbenzene	250	Not Detected	1200	Not Detected
4-Ethyltoluene	250	Not Detected	1200	Not Detected
1,3,5-Trimethylbenzene	250	Not Detected	1200	Not Detected
1,2,4-Trimethylbenzene	250	Not Detected	1200	Not Detected
1,3-Dichlorobenzene	250	Not Detected	1500	Not Detected
1,4-Dichlorobenzene	250	Not Detected	1500	Not Detected
alpha-Chlorotoluene	250	Not Detected	1300	Not Detected
1,2-Dichlorobenzene	250	Not Detected	1500	Not Detected
1,2,4-Trichlorobenzene	1000	Not Detected	7400	Not Detected
Hexachlorobutadiene	1000	Not Detected	11000	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

Client Sample ID: Intermediate SVE Effluent

Lab ID#: 0512143-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120711**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**1.00**	**Date of Analysis:**	**12/7/05 07:01 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	4.0	3.8	7.6
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	7.2	4.8	17
2-Propanol	2.0	5.1	4.9	12
Carbon Disulfide	0.50	3.0	1.6	9.3
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	14	1.5	41
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	26	1.5	76
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	0.66	1.7	2.3
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	1.1	2.7	6.1
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	1.9	1.9	7.1
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Intermediate SVE Effluent

Lab ID#: 0512143-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120711**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**1.00**	**Date of Analysis:**	**12/7/05 07:01 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	0.74	2.2	3.2
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

Client Sample ID: Intermediate SVE Effluent Duplicate

Lab ID#: 0512143-04AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120714**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**1.00**	**Date of Analysis:**	**12/7/05 10:09 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	3.8	3.8	7.3
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	7.1	4.8	17
2-Propanol	2.0	5.6	4.9	14
Carbon Disulfide	0.50	2.8	1.6	8.6
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	13	1.5	39
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	25	1.5	74
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	0.60	1.7	2.0
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	0.95	2.7	5.1
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	1.8	1.9	6.7
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Intermediate SVE Effluent Duplicate

Lab ID#: 0512143-04AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120714**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**1.00**	**Date of Analysis:**	**12/7/05 10:09 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	0.60	2.2	2.6
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: System SVE Effluent

Lab ID#: 0512143-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120710**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**1.00**	**Date of Analysis:**	**12/7/05 06:13 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	7.1	3.8	13
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	6.0	4.8	14
2-Propanol	2.0	5.3	4.9	13
Carbon Disulfide	0.50	2.5	1.6	7.7
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	29	1.5	85
cis-1,2-Dichloroethene	0.50	1.8	2.0	7.2
Tetrahydrofuran	0.50	51	1.5	150
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	0.92	1.7	3.2
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	16	2.7	86
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	1.4	1.9	5.4
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: System SVE Effluent

Lab ID#: 0512143-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120710**	**Date of Collection:**	**12/6/05**
Dil. Factor:	**1.00**	**Date of Analysis:**	**12/7/05 06:13 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	1.4	2.2	6.1
o-Xylene	0.50	0.56	2.2	2.4
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	0.52	2.4	2.6
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0512143-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120709**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/7/05 05:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0512143-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120709**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/7/05 05:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0512143-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120705**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/7/05 02:00 PM**	

Compound	%Recovery
Freon 12	109
Freon 114	107
Chloromethane	102
Vinyl Chloride	102
1,3-Butadiene	99
Bromomethane	105
Chloroethane	120
Freon 11	106
Ethanol	100
Freon 113	101
1,1-Dichloroethene	102
Acetone	99
2-Propanol	104
Carbon Disulfide	99
3-Chloropropene	90
Methylene Chloride	104
Methyl tert-butyl ether	119
trans-1,2-Dichloroethene	98
Hexane	99
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	107
cis-1,2-Dichloroethene	103
Tetrahydrofuran	98
Chloroform	100
1,1,1-Trichloroethane	103
Cyclohexane	102
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	99
Benzene	96
1,2-Dichloroethane	107
Heptane	103
Trichloroethene	104
1,2-Dichloropropane	101
1,4-Dioxane	100
Bromodichloromethane	107
cis-1,3-Dichloropropene	94
4-Methyl-2-pentanone	111
Toluene	99
trans-1,3-Dichloropropene	106
1,1,2-Trichloroethane	99
Tetrachloroethene	102
2-Hexanone	94

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0512143-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120705**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 12/7/05 02:00 PM**

Compound	%Recovery
Dibromochloromethane	106
1,2-Dibromoethane (EDB)	93
Chlorobenzene	97
Ethyl Benzene	96
m,p-Xylene	95
o-Xylene	92
Styrene	110
Bromoform	109
Cumene	92
1,1,2,2-Tetrachloroethane	88
Propylbenzene	91
4-Ethyltoluene	92
1,3,5-Trimethylbenzene	84
1,2,4-Trimethylbenzene	82
1,3-Dichlorobenzene	85
1,4-Dichlorobenzene	80
alpha-Chlorotoluene	78
1,2-Dichlorobenzene	80
1,2,4-Trichlorobenzene	90
Hexachlorobutadiene	91

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0512143-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120706**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/7/05 02:52 PM**	

Compound	%Recovery
Freon 12	106
Freon 114	101
Chloromethane	103
Vinyl Chloride	98
1,3-Butadiene	110
Bromomethane	110
Chloroethane	123
Freon 11	102
Ethanol	95
Freon 113	103
1,1-Dichloroethene	99
Acetone	107
2-Propanol	103
Carbon Disulfide	112
3-Chloropropene	110
Methylene Chloride	102
Methyl tert-butyl ether	140
trans-1,2-Dichloroethene	109
Hexane	111
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	122
cis-1,2-Dichloroethene	133 Q
Tetrahydrofuran	104
Chloroform	101
1,1,1-Trichloroethane	98
Cyclohexane	110
Carbon Tetrachloride	104
2,2,4-Trimethylpentane	114
Benzene	93
1,2-Dichloroethane	102
Heptane	110
Trichloroethene	99
1,2-Dichloropropane	98
1,4-Dioxane	97
Bromodichloromethane	112
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	109
Toluene	102
trans-1,3-Dichloropropene	112
1,1,2-Trichloroethane	100
Tetrachloroethene	106
2-Hexanone	88

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0512143-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**1120706**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/7/05 02:52 PM**	

Compound	**%Recovery**
Dibromochloromethane	114
1,2-Dibromoethane (EDB)	105
Chlorobenzene	99
Ethyl Benzene	100
m,p-Xylene	100
o-Xylene	94
Styrene	123
Bromoform	108
Cumene	80
1,1,2,2-Tetrachloroethane	85
Propylbenzene	87
4-Ethyltoluene	85
1,3,5-Trimethylbenzene	78
1,2,4-Trimethylbenzene	79
1,3-Dichlorobenzene	76
1,4-Dichlorobenzene	76
alpha-Chlorotoluene	80
1,2-Dichlorobenzene	68 Q
1,2,4-Trichlorobenzene	60 Q
Hexachlorobutadiene	65 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	106	70-130

APPENDIX E

SVE EQUIPMENT MANUAL
(APPENDIX IS INCLUDED ON ATTACHED CD)

HERITAGE
BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, AR 72114

FILE

ENGINEERED FOR THE LONG RUN

BUILDING SPECIFICATIONS

THE STRUCTURE UNDER THIS CONTRACT HAS BEEN DESIGNED AND DETAILED FOR THE LOADS AND CONDITIONS STIPULATED IN THE CONTRACT AND SHOWN ON THESE DRAWINGS. ANY ALTERATIONS TO THE STRUCTURAL SYSTEM OR REMOVAL OF ANY COMPONENT PARTS, OR THE ADDITION OF OTHER CONSTRUCTION MATERIALS OR LOADS MUST BE DONE UNDER THE ADVICE OF A REGISTERED ARCHITECT, CIVIL OR STRUCTURAL ENGINEER. HERITAGE BUILDING SYSTEMS WILL ASSUME NO RESPONSIBILITY FOR ANY LOADS NOT INDICATED.

THIS HERITAGE METAL BUILDING IS DESIGNED USING STANDARD DESIGN PRACTICES BASED ON PERTINENT PROCEDURES AND RECOMMENDATIONS OF THE FOLLOWING ORGANIZATIONS AND CODES.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION: "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", 9TH EDITION.

AMERICAN IRON AND STEEL INSTITUTE: "SPECIFICATION FOR THE DESIGN OF COLD FORMED STRUCTURAL MEMBERS", 1980.

AMERICAN WELDING SOCIETY: "STRUCTURAL WELDING CODE" AWS D1.1–88, SECT. 5, PART B.

MATERIAL PROPERTIES OF STEEL PLATE AND SHEET STEEL USED IN THE FABRICATION OF PRIMARY RIGID FRAMES AND ALL PRIMARY STRUCTURAL FRAMING MEMBERS (OTHER THAN COLD FORMED SECTIONS) CONFORM TO ASTM A–36 MODIFIED WITH A MINIMUM YIELD OF 50,000 PSI, OR A–570 OR A–572 GRADE 50.

MATERIAL PROPERTIES OF COLD FORMED LIGHT GAGE STEEL MEMBERS CONFORM TO THE REQUIREMENTS OF ASTM–570, WITH A MINIMUM YIELD OF 55,000 PSI.

HIGH STRENGTH BOLTS AND THEIR INSTALLATION SHALL CONFORM TO ASTM SPECIFICATIONS A–325 AND ARE DESIGNED AS BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN THE SHEAR PLANE. TIGHTENING OF THESE BOLTS IS RECOMMENDED BY THE TURN–OF–THE–NUT METHOD, PER "AISC SPECIFICATIONS FOR STRUCTURAL JOINTS."

ALL STEEL MEMBERS EXCEPT BOLTS AND FASTENERS SHALL RECEIVE ONE SHOP COAT OF INHIBITIVE PRIMER UNLESS STATED OTHERWISE IN THE CONTRACT.

SHOP AND FIELD INSPECTIONS AND ASSOCIATED FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS STIPULATED OTHERWISE.

BUILDERS RESPONSIBILITIES

THE BUILDER MUST SECURE ALL REQUIRED APPROVALS AND PERMITS FROM THE APPROPRIATE AGENCY AS REQUIRED.

APPROVAL OF HERITAGE BUILDING SYSTEMS DRAWINGS AND CALCULATIONS INDICATES THAT HERITAGE HAS CORRECTLY INTERPRETED AND APPLIED THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS. (SECT. 4.2.1 AISC CODE OF STANDARD PRACTICE, 9TH EDITION.)

WHERE DISCREPANCIES EXIST BETWEEN THE HERITAGE STRUCTURAL STEEL PLANS AND THE PLANS FOR OTHER TRADES, THE STRUCTURAL STEEL PLANS WILL GOVERN. (SECT. 3.3 AISC CODE OF STANDARD PRACTICE, 9TH EDITION.)

DESIGN CONSIDERATONS OF ANY MATERIALS IN THE STRUCTURE WHICH ARE NOT FURNISHED BY HERITAGE ARE THE RESPONSIBILITY OF THE BUILDER AND ENGINEERS OTHER THAN HERITAGE ENGINEERING UNLESS SPECIFICALLY INDICATED.

THE BUILDER IS RESPONSIBLE FOR ALL ERECTION OF STEEL AND ASSOCIATED WORK IN COMPLIANCE WITH HERITAGE CONSTRUCTION DRAWINGS.

TEMPORARY SUPPORTS, SUCH AS TEMPORARY GUYS, BRACES, FALSEWORK OR OTHER ELEMENTS REQUIRED FOR ERECTION WILL BE DETERMINED, FURNISHED, AND INSTALLED BY THE BUILDER, (SECT 7.9.1 AISC CODE OF STANDARD PRACTICE, 9TH EDITION.)

IT IS THE BUILDERS RESPONSIBILITY TO APPLY AND OBSERVE ALL PERTINENT SAFETY RULES AND REGULATIONS, AND PER OSHA STANDARDS AS APPLICABLE.

THE BUILDER IS RESPONSIBLE FOR THE VERIFICATION OF ALL SHIPMENTS RECEIVED, AND MUST INVENTORY BUILDING AT TIME OF DELIVERY.

GENERAL NOTES

NO CHANGES SHOULD BE MADE TO THIS BUILDING SYSTEM UNLESS APPROVED IN WRITING BY THE MANUFACTURERS ENGINEERING DEPARTMENT.

UNAPPROVED CHANGES COULD RESULT IN AN UNSAFE BUILDING DESIGN AND COULD ENDANGER PUBLIC SAFETY.

DESIGN LOADING

THIS STRUCTURE IS DESIGNED UTILIZING THE LOADS INDICATED AND APPLIED AS REQUIRED BY:

SBC 99

THE BUILDER IS TO CONFIRM THAT THESE LOADS COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT.

16 / 20	PSF FRAME / ROOF LIVE LOAD
10	PSF ROOF SNOW LOAD
90	WIND SPEED (MPH)
1	PSF COLLATERAL LOAD
0.200	SEISMIC COEFFICIENT
–	EXPOSURE

DESIGN DATA

PEAK VELOCITY RATED ACCELERATION, Av = 0.200
PEAK ACCELERATION, Aa = 0.200
SEISMIC HAZARD EXPOSURE GROUP = GROUP 1
SEISMIC PERFORMANCE CATEGORY = D
SOIL PROFILE TYPE = UNKNOWN SITE COEFF. = 2.0
BASIC STRUCTURAL SYSTEM AND SEISMIC RESISTING SYSTEM
= ORDINARY MOMENT FRAME OF STEEL.
RESPONSE MODIFICATION FACTOR, R = 4.5
DEFLECTION AMPLIFICATION FACTOR, Cd = 4.0
ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE.

DRAWING INDEX

L1 of 1	COVER SHEET
AB1	ANCHOR BOLT PLAN
AB2	ANCHOR BOLT REACTIONS
RFP	ROOF FRAMING PLAN
FCS	FRAME CROSS SECTION
LEW	LEFT ENDWALL
REW	RIGHT ENDWALL
FSW	FRONT SIDEWALL
BSW	BACK SIDEWALL
DET	GENERAL DETAILS
TRM	TRIM DETAILS

THESE DRAWINGS ARE:

- [x] FOR CONSTRUCTION
- [ ] NOT FOR CONSTRUCTION
- [ ] FOR PERMITS ONLY
- [ ] FOR APPROVAL *
- [ ] OTHER _____

* APPROVAL ORDERS MUST BE RELEASED FOR FABRICATION WITHIN 30 CALENDAR DAYS AFTER SUBMITTAL DRAWINGS ARE ISSUED OR THE ORDER WILL BE SUBJECT TO ANY CURRENT PRICE INCREASE.

FOR QUESTIONS OR ASSISTANCE CONCERNING ERECTION OF HERITAGE BUILDINGS, CALL:
1–800–643–5555
MONDAY – FRIDAY 7:00AM TO 5:00PM CENTRAL STANDARD TIME.

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CHARLES LEON LOYD
REGISTERED ENGINEER
AGRICULTURE
No. 19840
STATE OF TENNESSEE

DRAWN	DATE
AKW	5/14/05
CHECKED	DATE
SW	
APPROVED	DATE
SCALE	
N.T.S.	

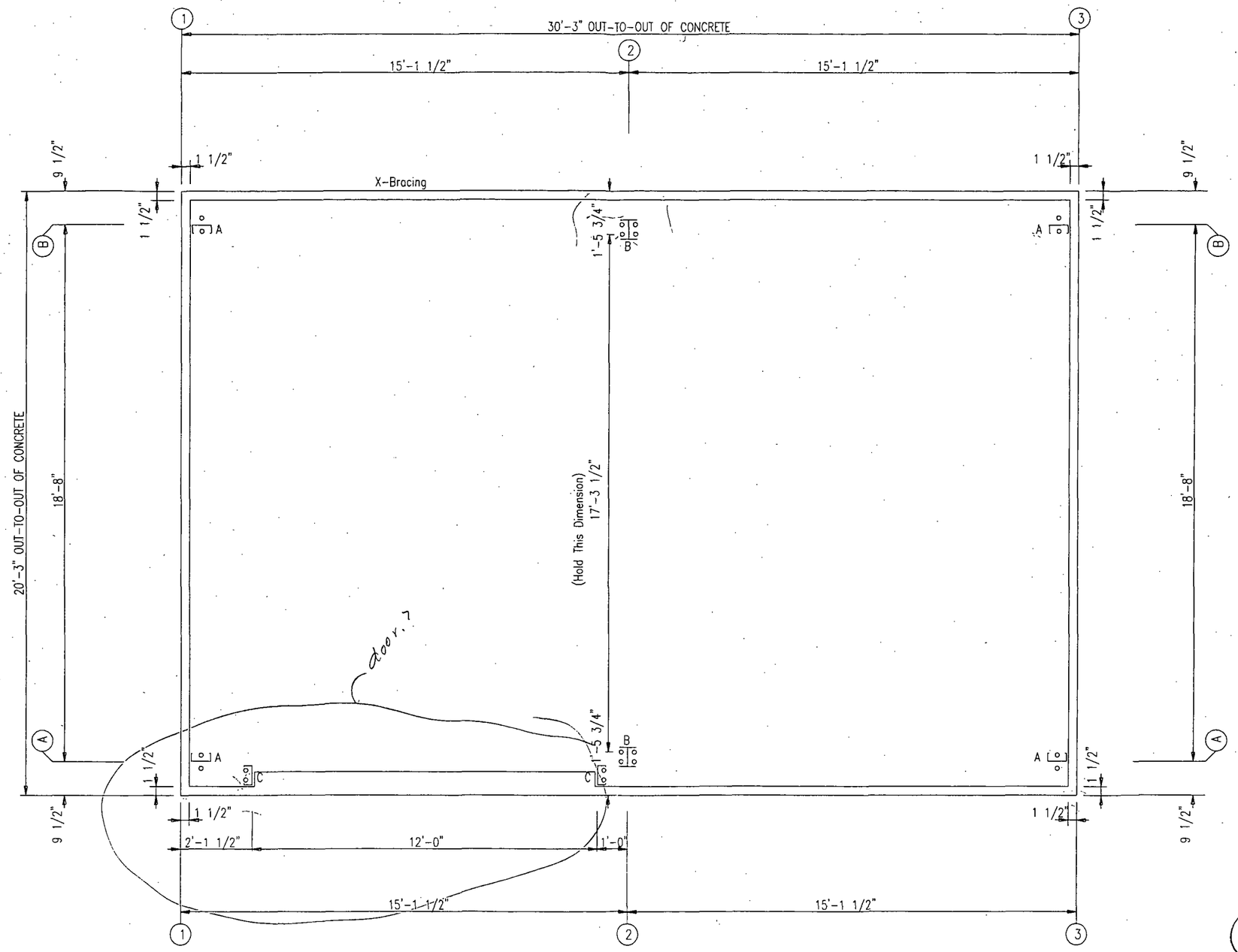
HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, AR 72114
800–643–5555

CUSTOMER:
FRANK O'CONNELL
COLLIERVILLE, TN 38017

BUILDING:
20'–0" x 30'–0" x 14'–0" 1.0:12

JOB NO.
TNX27845

REV. NO.	SHEET NO.
	L1 of 1



ANCHOR BOLT PLAN

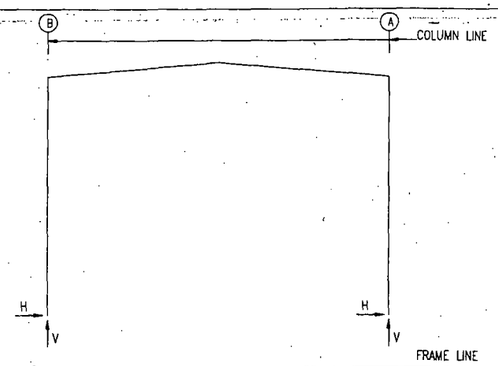
NOTE: All Base Plates @ 100'-0" (U.N.)

○ Dia= 3/4"

NOTE: ALL WALKDOORS ARE FIELD LOCATED, UNLESS NOTED.

CHARLES LEON LOYD
REGISTERED ENGINEER
No. 19,664
STATE OF TENNESSEE

HERITAGE BUILDING SYSTEMS 2612 GRIBBLE STREET NORTH LITTLE ROCK, ARK 72114 1-800-643-5555	DESCRIPTION: ANCHOR BOLT PLAN			
	CUSTOMER: FRANK O'CONNELL			
	LOCATION: COLLIERVILLE, TN 38017			
	HERITAGE JOB # TNX27845			
	DRAWING BY AKW	DATE 5/14/05	LOADS SEE COVER	SCALE N.T.S.
	CHECK BY SW	TIME 12:42am	DRAWING # AB1	REV # 0



RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Anc. Bolt No	Anc. Bolt D(in)	Base Plate (in) Wid	Base Plate (in) Len	Base Plate (in) Thk	Grout (in)
2	B	5	1.9	1.2	6	-2.3	-2.3	4	0.750	6.000	10.50	0.500	0.0
		9	1.0	4.0	2	-1.7	-3.5						
2	A	7	2.3	-2.3	4	-1.9	1.2	4	0.750	6.000	10.50	0.500	0.0
		8	-1.0	4.0	3	1.7	-3.5						

ANCHOR BOLT SUMMARY

Qnt	Loc	Dia (in)	Total Len (in)	Bend Len (in)	Proj (in)
○ 4	DJ	3/4"	18.00	3.00	2.50
○ 8	EW	3/4"	18.00	3.00	2.50
○ 8	RF	3/4"	18.00	3.00	2.50

GENERAL NOTES

1. THE BOLT DETAILS SHOWN ON THIS DRAWING LOCATE THE ANCHOR BOLTS IN REFERENCE TO BOTH THE BUILDING STEEL LINE AND THE OUTSIDE OF HERITAGE'S SUGGESTED PANEL RECESS OF 1-1/2".
2. HERITAGE BUILDING SYSTEMS IS RESPONSIBLE FOR THE DESIGN OF THE ANCHOR BOLT TO PERMIT THE TRANSFER OF FORCES BETWEEN THE BASE PLATE AND THE ANCHOR BOLT IN SHEAR, BEARING AND TENSION, BUT IS NOT RESPONSIBLE FOR THE TRANSFER OF ANCHOR BOLTS IN RELATION TO THE CONCRETE. UNLESS OTHERWISE PROVIDED IN THE ORDER DOCUMENTS, HERITAGE BUILDING SYSTEMS DOES NOT DESIGN AND IS NOT RESPONSIBLE FOR THE DESIGN, MATERIAL AND CONSTRUCTION OF THE FOUNDATION EMBEDMENTS. THE END USE CUSTOMER SHOULD ASSURE HIMSELF THAT ADEQUATE PROVISIONS ARE MADE IN THE FOUNDATION DESIGN FOR LOADS IMPOSED BY COLUMN REACTIONS OF THE BUILDING, OTHER IMPOSED LOADS, AND BEARING CAPACITY OF THE SOIL AND OTHER CONDITIONS OF THE BUILDING SITE. IT IS RECOMMENDED THAT THE ANCHORAGE AND FOUNDATION OF THE BUILDING BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER EXPERIENCED IN THE DESIGN OF SUCH STRUCTURES, (SECTION A10 MBMA 1986 LOW RISE BUILDING SYSTEMS MANUAL).
3. BOTTOM OF ALL BASE PLATES ARE AT THE SAME ELEVATION. (UNLESS NOTED)

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Wind_L1 Horiz	Wind_L1 Vert	Wind_R1 Horiz	Wind_R1 Vert	Wind_L2 Horiz	Wind_L2 Vert
2	B	0.07	0.67	0.03	0.19	0.42	3.00	-1.76	-4.16	1.62	-0.96	-2.35	-2.92
2	A	-0.07	0.67	-0.03	-0.19	-0.42	3.00	-1.62	-0.96	1.76	-4.16	-1.04	0.28

Frame Line	Column Line	Wind_R2 Horiz	Wind_R2 Vert	Seismic_L Horiz	Seismic_L Vert	Seismic_R Horiz	Seismic_R Vert	LnWind_L Horiz	LnWind_L Vert	LnWind_R Horiz	LnWind_R Vert	LnSeis Horiz	LnSeis Vert
2	B	1.04	0.28	-0.13	-0.19	0.13	0.19	1.02	-3.67	1.02	-3.67	0.00	-0.35
2	A	2.35	-2.92	-0.13	0.19	0.13	-0.19	-1.02	-2.17	-1.02	-2.17	0.00	0.00

ENDWALL COLUMN REACTIONS(k)

MAXIMUM VERTICAL DL+CL+LL = 1.8
MAXIMUM VERTICAL DL+WL = -1.4
MAXIMUM HORIZONTAL DL+WL = 0.0

BRACING REACTIONS, PANEL SHEAR

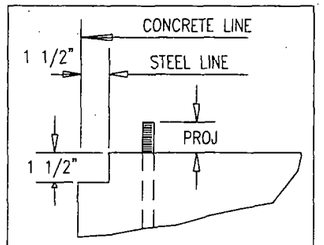
Wall Loc	Wall Line	Col Line	Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel Shear (lb/ft)
L_EW	1						64
F_SW	A	Torsional Bracing Used					
R_EW	3						64
B_SW	B	2 ,1	1.9	1.5	0.4	0.3	

NOTES FOR REACTIONS

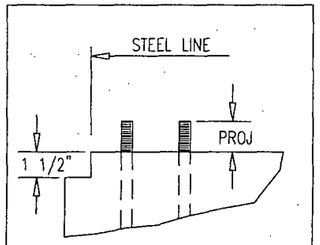
Building reactions are based on the following building data:

Width (ft)	=	20.0
Length (ft)	=	30.0
Eave Height (ft)	=	14.0/14.0
Roof Slope (rise/12)	=	1.0/ 1.0
Dead Load (psf)	=	2.0
Collateral Load (psf)	=	1.0
Roof Live Load (psf)	=	20.0
Frame Live Load (psf)	=	16.0
Snow Load (psf)	=	10.0
Wind Speed (mph)	=	90.0
Wind Code	=	SBC 99
Exposure	=	-
Closed/Open	=	C
Importance - Wind	=	1.00
Importance - Seismic	=	1.00
Seismic Coeff (Aa)	=	0.20

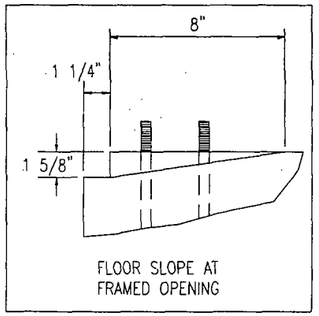
Id	Description
1	DL+CL+LL
2	DL+WL1
3	DL+WR1
4	DL+LL/2+WL1
5	DL+LL/2+WR1
6	DL+WL2
7	DL+WR2
8	DL+CL+LL+WL2/2
9	DL+CL+LL+WR2/2
10	DL+WL1+WS
11	DL+WR1+WS



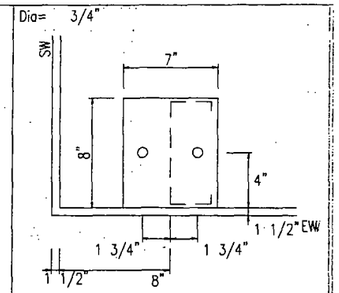
CONCRETE NOTCH AND ANCHOR BOLT PROJECTION



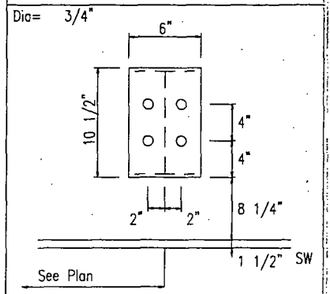
CONCRETE NOTCH AND TWO ROWS OF ANCHOR BOLTS



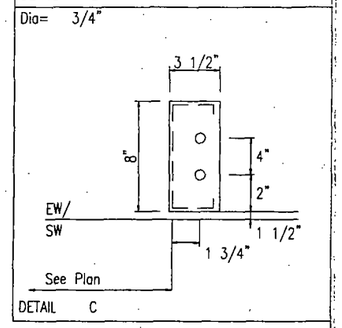
FLOOR SLOPE AT FRAMED OPENING



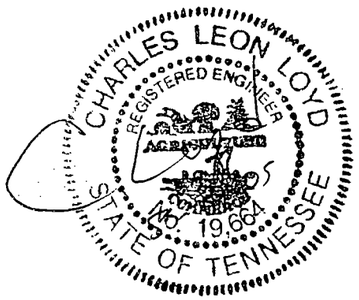
DETAIL A



DETAIL B



DETAIL C



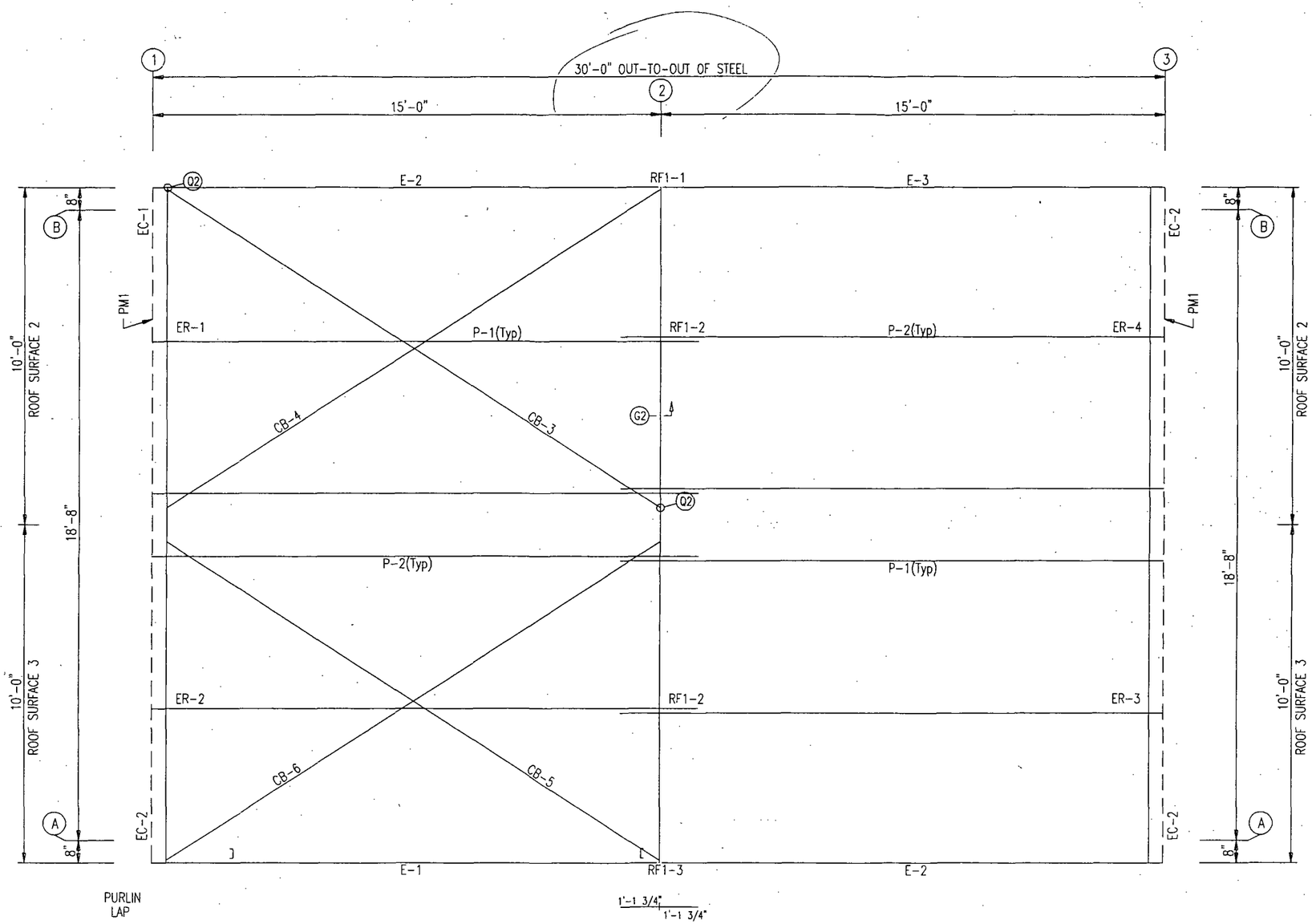
HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, ARK 72114
1-800-643-5555

DESCRIPTION: ANCHOR BOLT REACTIONS
CUSTOMER: FRANK O'CONNELL
LOCATION: COLLIERVILLE, TN 38017
HERITAGE JOB # TNX27845

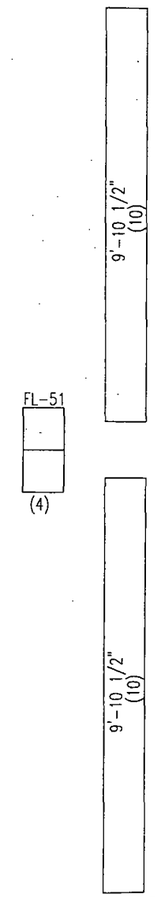
DRAWING BY	DATE	LOADS	SCALE
AKW	5/14/05	SEE COVER	N.T.S.
CHECK BY	TIME	DRAWING #	REV #
SW	12:42am	AB2	0

MEMBER TABLE
ROOF PLAN

MARK	PART	LENGTH	DIA
P-1	8X25Z16	16'-1 1/2"	
P-2	8X25Z16	16'-1 1/2"	
E-1	8ES1L14	14'-11 1/2"	
E-2	8ES1L14	14'-11 1/2"	
E-3	8ES1L14	14'-11 1/2"	
CB-3	HW-3730	17'-5"	1/4"
CB-4	HW-3730	17'-4"	1/4"
CB-5	HW-3730	17'-0"	1/4"
CB-6	HW-3730	17'-1"	1/4"



ROOF FRAMING PLAN



ROOF SHEETING

PANELS: 26 Ga. PR Galvalume

CHARLES LEON LOYD
REGISTERED ENGINEER
AGRICULTURE
No. 19,864
STATE OF TENNESSEE

GENERAL NOTES:

1. ALL ALL PURLIN AND FLANGE BRACES (FB) AS SHOWN.
2. ROOF PANEL MAY PROVIDE STRUCTURAL STABILITY TO THE BUILDING.
3. DO NOT ADD ANY ADDITIONAL ROOF OPENINGS WITHOUT BUILDING MANUFACTURER APPROVAL OR PROFESSIONAL ENGINEER APPROVAL.
4. DO NOT STACK SHEET BUNDLES ON ROOF. ONLY RAISE INDIVIDUAL SHEETS AS NEEDED.
5. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

NOTE:
Alternate Arrows ▽-△ Up And Down From Bay To Bay For Purlins To Lap.

HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, ARK 72114
1-800-643-5555

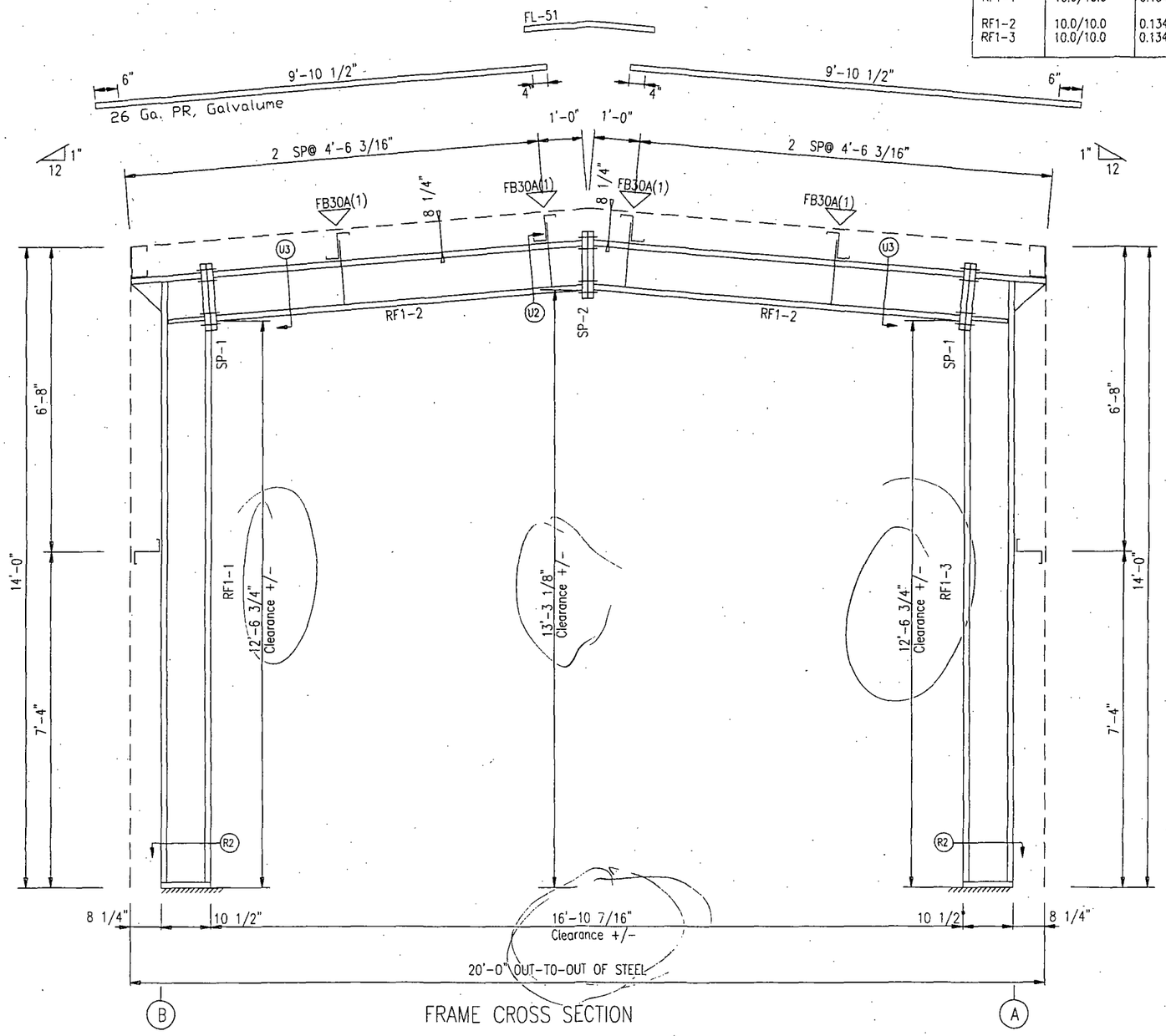
DESCRIPTION:	ROOF FRAMING PLAN
CUSTOMER:	FRANK O'CONNELL
LOCATION:	COLLIERVILLE, TN 38017
HERITAGE JOB #	TNX27845

DRAWING BY	DATE	LOADS	SCALE
AKW	5/14/05	SEE COVER	N.T.S.
CHECK BY	TIME	DRAWING #	REV #
SW	12:42am	RFP	0

SPLICE BOLTS							
Splice Mark	Quan Top	Quan Bot	Quan Ini	Bolt Type	Bolt Dia	Bolt Len	
SP- 1	4	4	0	A325	3/4"	1	3/4"
SP- 2	4	4	0	A325	3/4"	1	3/4"

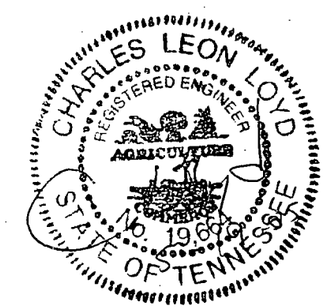
ANGE BRACES: Both Sides(Unless Noted))
BxxA(1): xx=length(in)
A - L2X2X14G

MEMBER SIZE TABLE (in)					
PIECE	WEB DEPTH START/END	WEB PLATE THICK	WEB PLATE LENGTH	OUTSIDE FLANGE W x T x LEN	INSIDE FLANGE W x T x LEN
RF1-1	10.0/10.0	0.134	160.4	5x1/4" x159.7 5x1/4" x 17.4	5x1/4" x146.7
RF1-2	10.0/10.0	0.134	101.8	5x1/4" x101.8	5x1/4" x101.0
RF1-3	10.0/10.0	0.134	160.4	5x1/4" x 17.4 5x1/4" x159.7	5x1/4" x146.7



FRAME CROSS SECTION

FOR FRAME LINE 2



GENERAL NOTES:

1. ALL FIELD CONNECTIONS OF PRIMARY FRAMING MEMBERS SHALL BE BOLTED. WITH A325 H. S. BOLTS AND INSTALLED BY THE 'TURN OF THE NUT' METHOD.
2. ALL FIELD CONNECTIONS OF SECONDARY FRAMING SHALL BE BOLTED WITH A307 MACHINE BOLTS.
3. INSTALL ALL FLANGE BRACES ON COLUMN AND RAFTER AS SHOWN.

HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, ARK 72114
1-800-643-5555

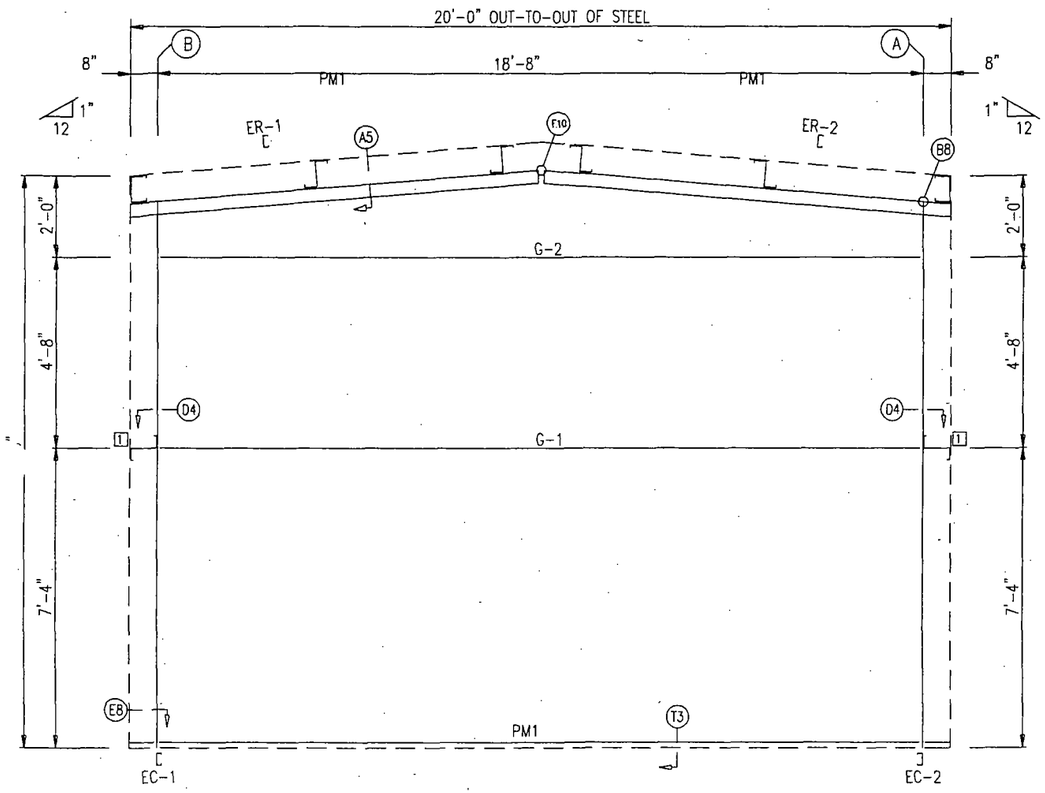
DESCRIPTION: FRAME CROSS SECTION
CUSTOMER: FRANK O'CONNELL
LOCATION: COLLIERVILLE, TN 38017
HERITAGE JOB # TNX27845

DRAWING BY	DATE	LOADS	SCALE
AKW	5/14/05	SEE COVER	N.T.S.
CHECK BY	TIME	DRAWING #	REV #
SW	12:42am	FCS1	0

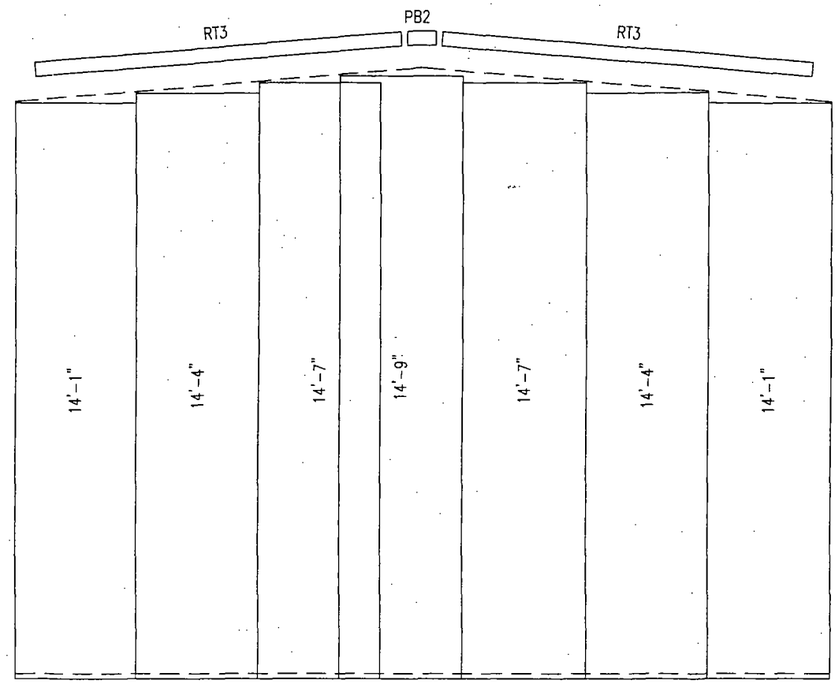
MEMBER TABLE FRAME LINE 1			
MARK	PART	LENGTH	DIA
EC-1	8F25C16	13'-3 3/8"	
EC-2	8F25C16	13'-3 3/8"	
ER-1	10F35C14	10'-0 3/16"	
ER-2	10F35C14	10'-0 3/16"	
G-1	8X25Z14	18'-0"	
G-2	8X25Z16	18'-0"	

BOLT TABLE FRAME LINE 1				
LOCATION	QUAN	TYPE	DIA	LENGTH
ER-1/ER-2	4	A325	5/8"	1 3/4"
Columns	2	A325	1/2"	1 1/4"

CONNECTION PLATES FRAME LINE 1	
ID	MARK/PART
1	SC-5



ENDWALL FRAMING: FRAME LINE 1



ENDWALL SHEETING & TRIM: FRAME LINE 1

PANELS: 26 Ga. PR – Polar White

G 'AL NOTES:

1. INSTALL ALL GIRTS AND FLANGE BRACES (FB) AS SHOWN.
2. WALL PANEL MAY PROVIDE STRUCTURAL STABILITY TO THE BUILDING.
3. OTHER THAN FOR WALK DOORS AND WINDOWS SHOWN ON THE CONTRACT, DO NOT ADD ADDITIONAL WALL OPENINGS WITHOUT APPROVAL OF BUILDING MANUFACTURER OR PROFESSIONAL ENGINEER.
4. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

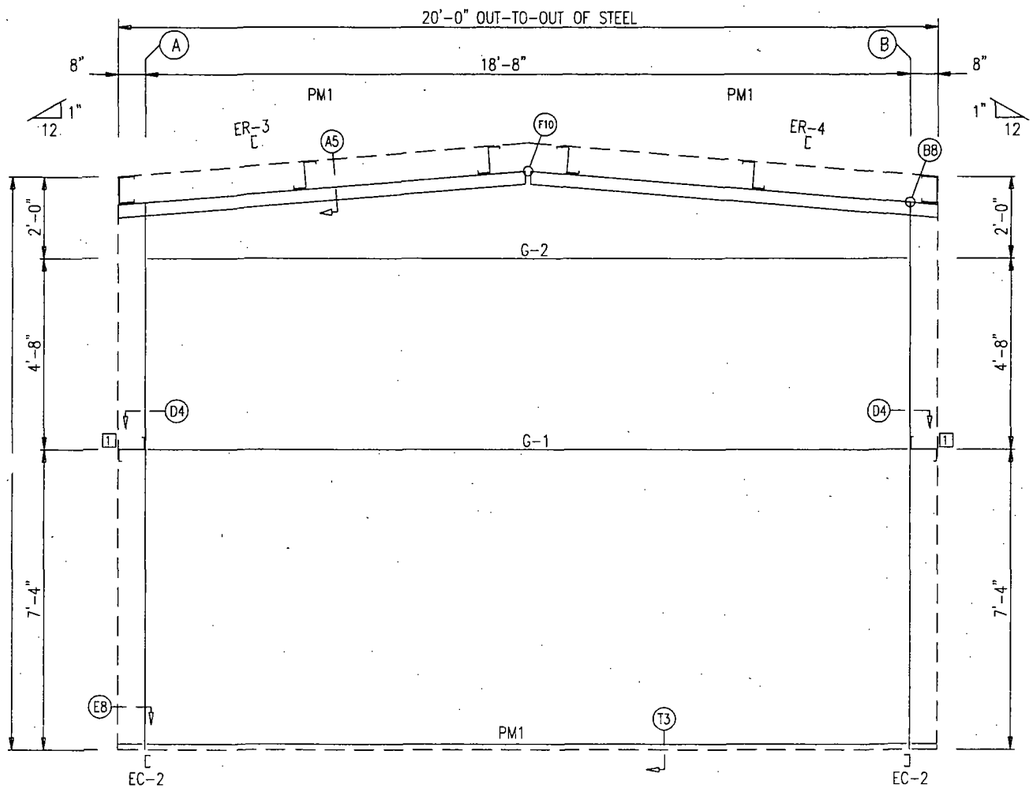
HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, ARK 72114
1-800-643-5555

DESCRIPTION: LEFT ENDWALL			
CUSTOMER: FRANK O'CONNELL			
LOCATION: COLLIERVILLE, TN 38017			
HERITAGE JOB # TNX27845			
DRAWING BY AKW	DATE 5/14/05	LOADS SEE COVER	SCALE N.T.S.
CHECK BY SW	TIME 12:42am	DRAWING # LEW	REV # 0

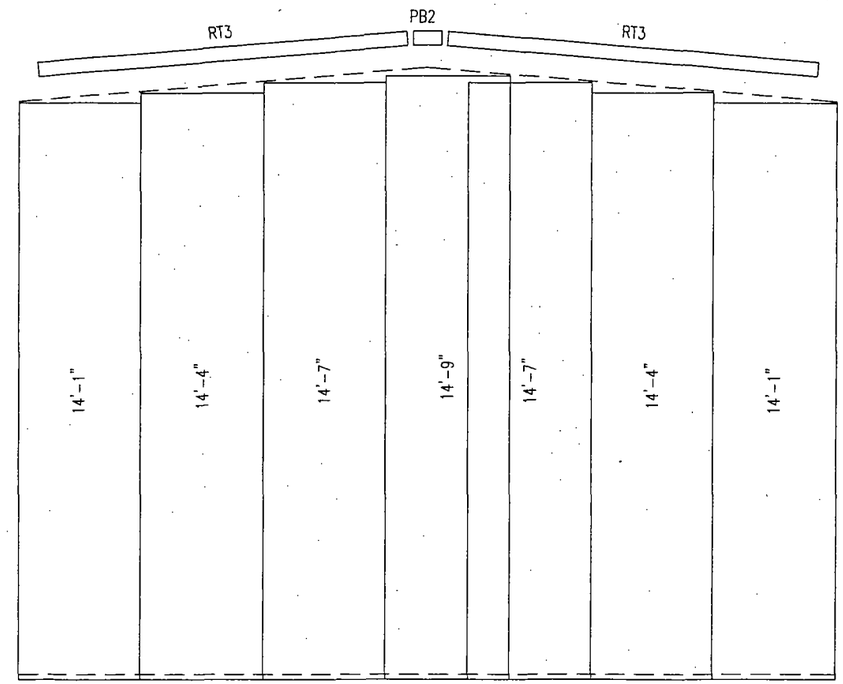
MEMBER TABLE FRAME LINE 3			
MARK	PART	LENGTH	DIA
EC-2	8F25C16	13'-3 3/8"	
ER-3	10F35C14	10'-0 3/16"	
ER-4	10F35C14	10'-0 3/16"	
G-1	8X25Z14	18'-0"	
G-2	8X25Z16	18'-0"	

BOLT TABLE FRAME LINE 3				
LOCATION	QUAN	TYPE	DIA	LENGTH
ER-3/ER-4	4	A325	5/8"	1 3/4"
Columns	2	A325	1/2"	1 1/4"

CONNECTION PLATES FRAME LINE 3	
ID	MARK/PART
1	SC-5



ENDWALL FRAMING: FRAME LINE 3



ENDWALL SHEETING & TRIM: FRAME LINE 3

PANELS: 26 Ga. PR – Polar White

G RAL NOTES:

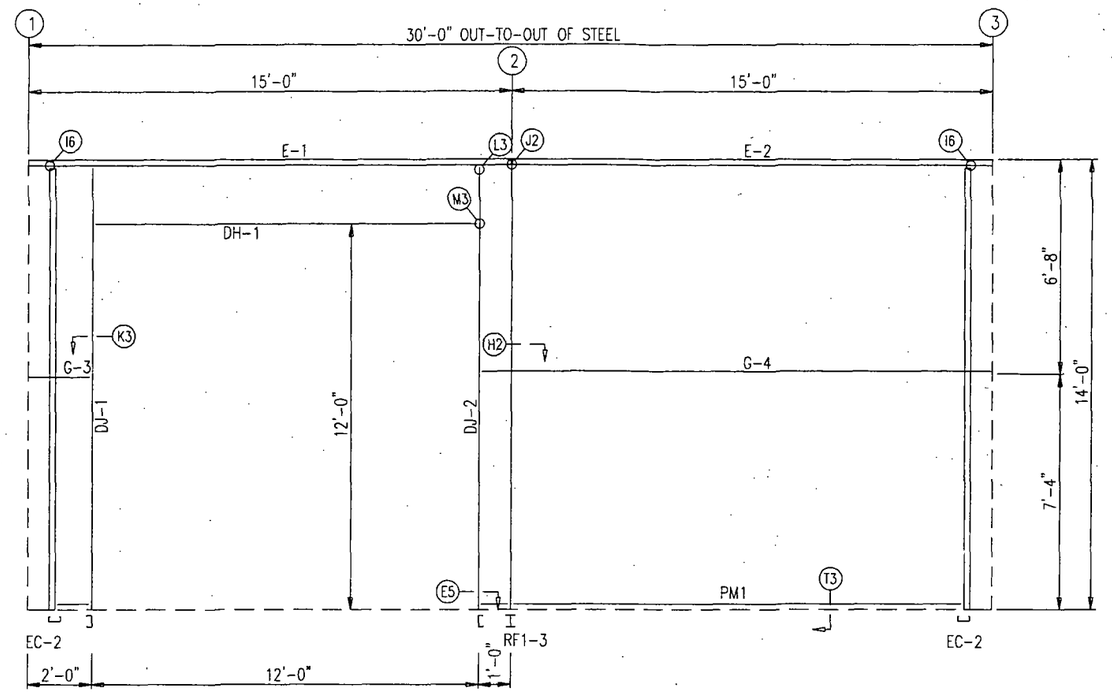
1. INSTALL ALL GIRTS AND FLANGE BRACES (FB) AS SHOWN.
2. WALL PANEL MAY PROVIDE STRUCTURAL STABILITY TO THE BUILDING.
3. OTHER THAN FOR WALK DOORS AND WINDOWS SHOWN ON THE CONTRACT, DO NOT ADD ADDITIONAL WALL OPENINGS WITHOUT APPROVAL OF BUILDING MANUFACTURER OR PROFESSIONAL ENGINEER.
4. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, ARK 72114
1-800-643-5555

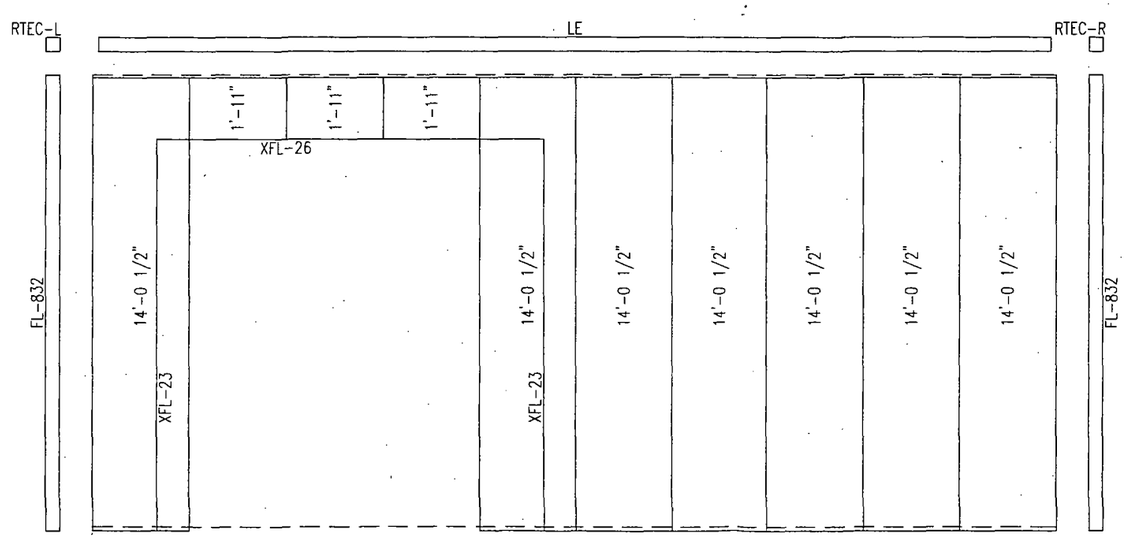
DESCRIPTION: RIGHT ENDWALL
CUSTOMER: FRANK O'CONNELL
LOCATION: COLLIERVILLE, TN 38017
HERITAGE JOB # TNX27845

DRAWING BY	DATE	LOADS	SCALE
AKW	5/14/05	SEE COVER	N.T.S.
CHECK BY	TIME	DRAWING #	REV #
SW	12:42am	REW	0

MEMBER TABLE FRAME LINE A			
MARK	PART	LENGTH	DIA
DJ-1	8F25C16	13'-3 3/4"	
DJ-2	8F25C16	13'-3 3/4"	
DH-1	8F25C16	12'-0"	
E-1	8ES1L14	14'-11 1/2"	
E-2	8ES1L14	14'-11 1/2"	
G-3	8X25Z16	1'-9"	
G-4	8X25Z16	15'-9"	



SIDEWALL FRAMING: FRAME LINE A



SIDEWALL SHEETING & TRIM: FRAME LINE A

PANELS: 26 Ga. PR – Polar White

G :AL NOTES:

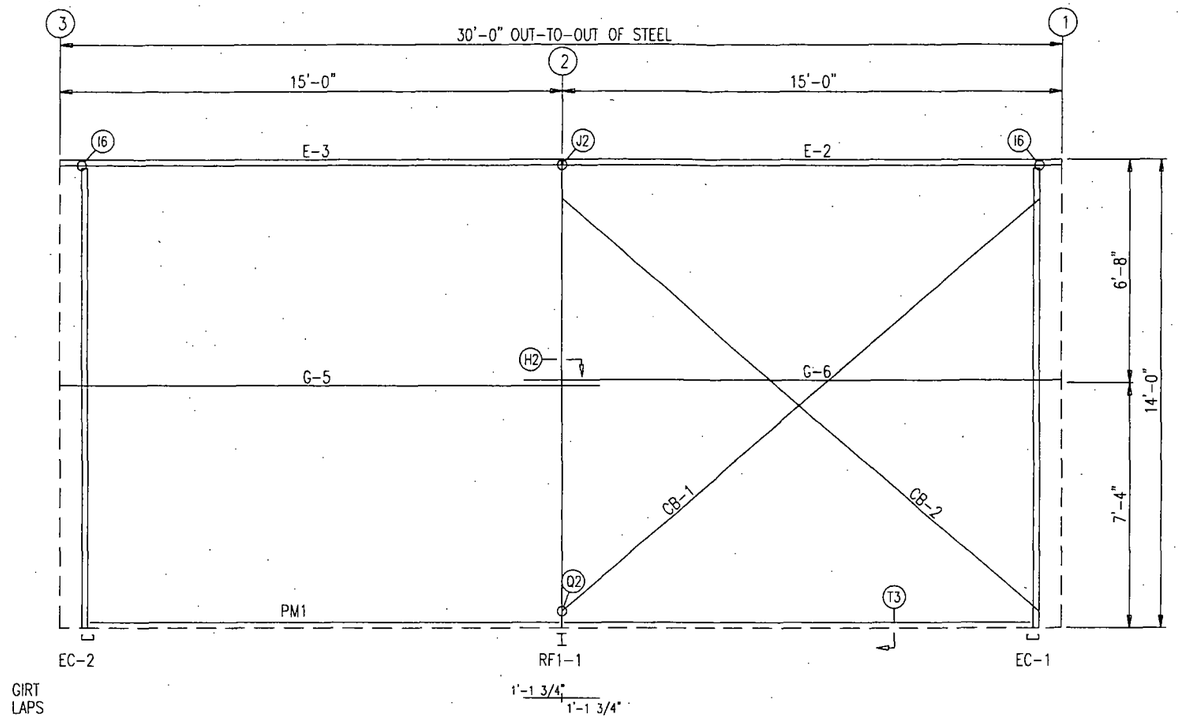
1. INSTALL ALL GIRTS AND FLANGE BRACES (FB) AS SHOWN.
2. WALL PANEL MAY PROVIDE STRUCTURAL STABILITY TO THE BUILDING.
3. OTHER THAN FOR WALK DOORS AND WINDOWS SHOWN ON THE CONTRACT, DO NOT ADD ADDITIONAL WALL OPENINGS WITHOUT APPROVAL OF BUILDING MANUFACTURER OR PROFESSIONAL ENGINEER.
4. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, ARK 72114
1-800-643-5555

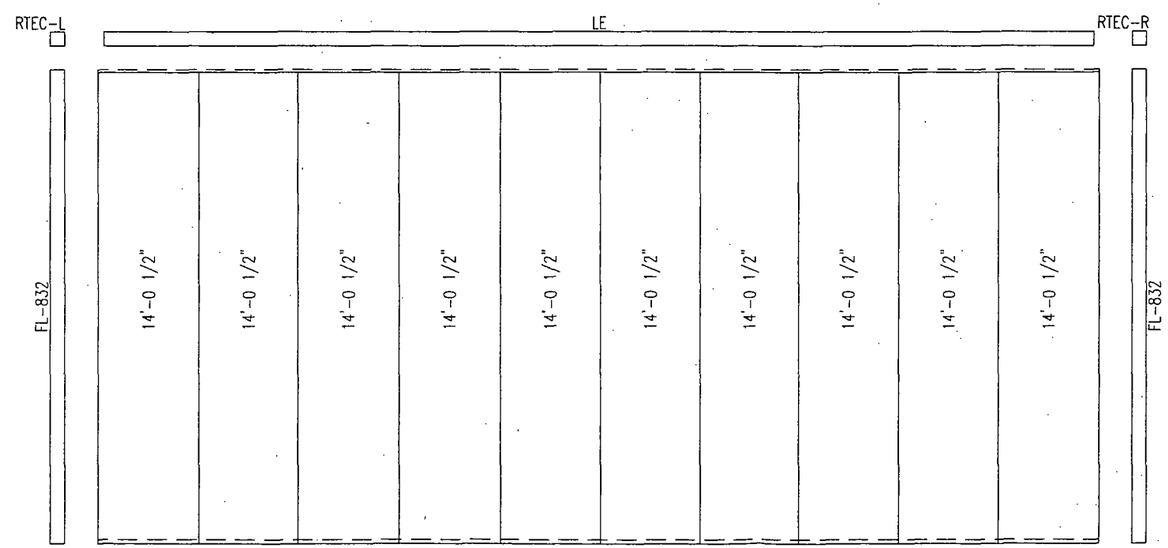
DESCRIPTION: FRONT SIDEWALL
CUSTOMER: FRANK O'CONNELL
LOCATION: COLLIERVILLE, TN 38017
HERITAGE JOB # TNX27845

DRAWING BY	DATE	LOADS	SCALE
AKW	5/14/05	SEE COVER	N.T.S.
CHECK BY	TIME	DRAWING #	REV #
SW	12:42am	FSW	0

MEMBER TABLE FRAME LINE B			
MARK	PART	LENGTH	DIA
E-2	8ES1L14	14'-11 1/2"	
E-3	8ES1L14	14'-11 1/2"	
G-5	8X25Z16	16'-1 1/2"	
G-6	8X25Z16	16'-1 1/2"	
CB-1	HW-3730	19'-2"	1/4"
CB-2	HW-3730	19'-9"	1/4"



SIDEWALL FRAMING: FRAME LINE B



SIDEWALL SHEETING & TRIM: FRAME LINE B

PANELS: 26 Ga. PR – Polar White

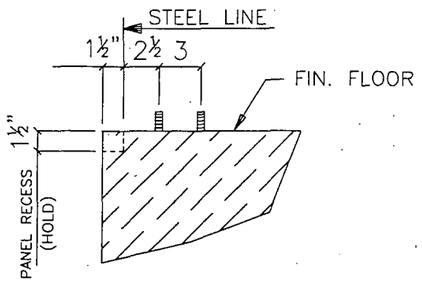
G RAL NOTES:

1. INSTALL ALL GIRTS AND FLANGE BRACES (FB) AS SHOWN.
2. WALL PANEL MAY PROVIDE STRUCTURAL STABILITY TO THE BUILDING.
3. OTHER THAN FOR WALK DOORS AND WINDOWS SHOWN ON THE CONTRACT, DO NOT ADD ADDITIONAL WALL OPENINGS WITHOUT APPROVAL OF BUILDING MANUFACTURER OR PROFESSIONAL ENGINEER.
4. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

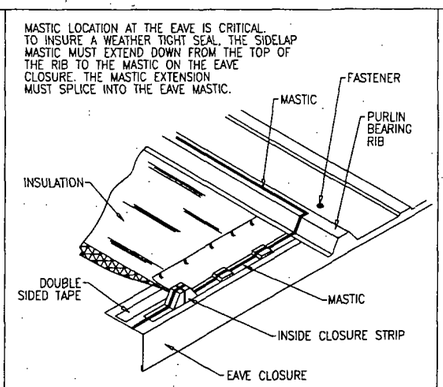
HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, ARK 72114
1-800-543-5555

DESCRIPTION: BACK SIDEWALL
CUSTOMER: FRANK O'CONNELL
LOCATION: COLLIERVILLE, TN 38017
HERITAGE JOB # TNX27845

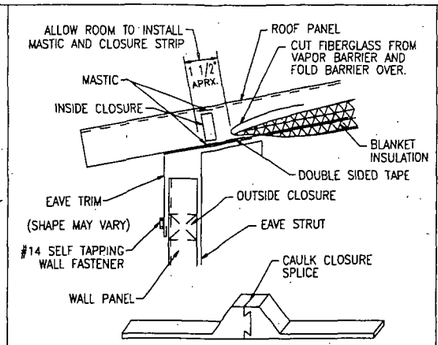
DRAWING BY	DATE	LOADS	SCALE
AKW	5/14/05	SEE COVER	N.T.S.
CHECK BY	TIME	DRAWING #	REV #
SW	12:42am	BSW	0



CONCRETE DETAIL FOR WALKDOOR



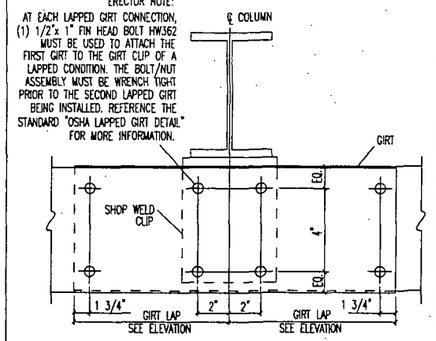
SEALING THE EAVE



NOTE: INSULATION MUST BE INSTALLED AS SHOWN OR ROOF WILL LEAK.

SEALING THE EAVE

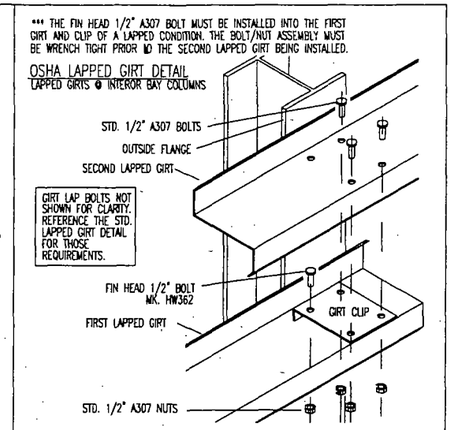
ERECTOR NOTE:
AT EACH LAPPED GIRT CONNECTION, (1) 1/2"x 1" FIN HEAD BOLT HW362 MUST BE USED TO ATTACH THE FIRST GIRT TO THE GIRT CLIP OF A LAPPED CONDITION. THE BOLT/NUT ASSEMBLY MUST BE WRENCH TIGHT PRIOR TO THE SECOND LAPPED GIRT BEING INSTALLED. REFERENCE THE STANDARD "OSHA LAPPED GIRT DETAIL" FOR MORE INFORMATION.

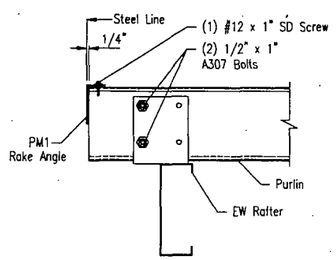


SW OR EW GIRT DETAIL
LAPPED GIRTS @ INTERIOR BAY COLUMNS
NOTE: USE (3) 1/2"x1 1/2" A307 BOLTS
REFERENCE ERECTOR NOTE FOR TYPICAL WASHER REQUIREMENTS

*** THE FIN HEAD 1/2" A307 BOLT MUST BE INSTALLED INTO THE FIRST GIRT AND CLIP OF A LAPPED CONDITION. THE BOLT/NUT ASSEMBLY MUST BE WRENCH TIGHT PRIOR TO THE SECOND LAPPED GIRT BEING INSTALLED.

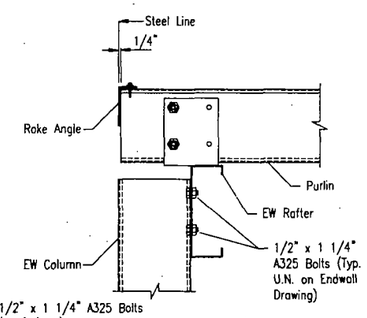
OSHA LAPPED GIRT DETAIL
LAPPED GIRTS @ INTERIOR BAY COLUMNS





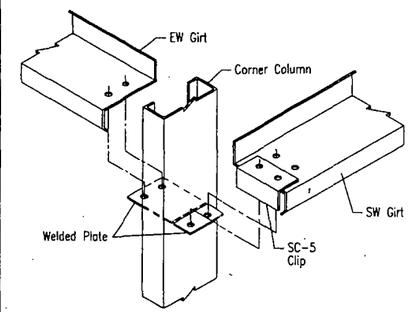
1/2" x 1" A307 Bolts
(Typ.) (U.N.)

(A5) SECTION THRU COLD FORMED RAFTER



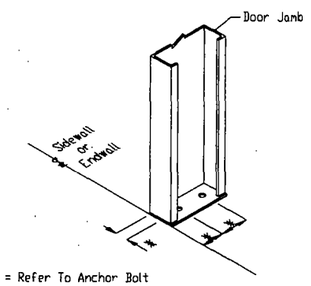
1/2" x 1 1/4" A325 Bolts
(Typ.) (U.N.)

(B8) ENDWALL COLUMN TO COLD FORMED RAFTER



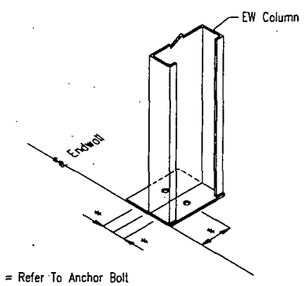
1/2" x 1" A307 Bolts
(Typ.) (U.N.)

(D4) CORNER COLUMN TO WALL GIRT



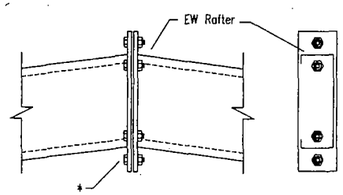
(*) = Refer To Anchor Bolt Plan

(E5) BASE PLATE FOR DOOR JAMB



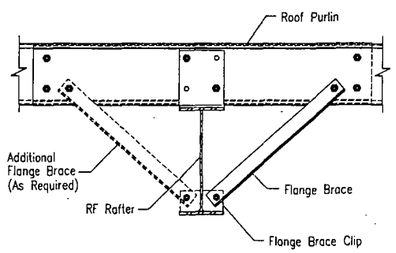
(*) = Refer To Anchor Bolt Plan

(E8) BASE PLATE FOR ENDWALL COLUMN



(*) = Refer To Endwall Drawing For Bolt Dia. & Type

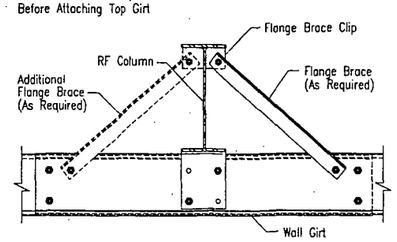
(F10) RAFTER SPLICE AT SURFACE CHANGE



1/2" x 1" A307 Bolts
(Typ.) (U.N.)

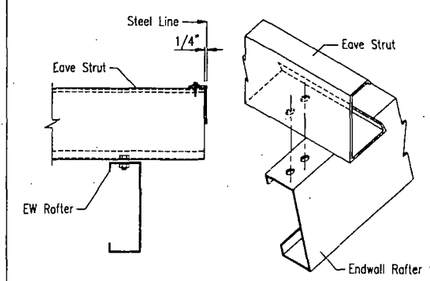
(G2) ROOF PURLIN TO INTERIOR FRAME RAFTER

NOTE:
Attach Bottom Girt W/ Finhead Bolt Before Attaching Top Girt



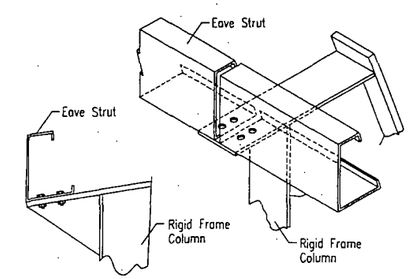
1/2" x 1" A307 Bolts
(Typ.) (U.N.)

(H2) WALL GIRT TO RIGID FRAME COLUMN



1/2" x 1" A307 Bolts
(Typ.) (U.N.)

(I6) EAVE STRUT TO COLD FORMED RAFTER



1/2" x 1" A307 Bolts
(Typ.) (U.N.)

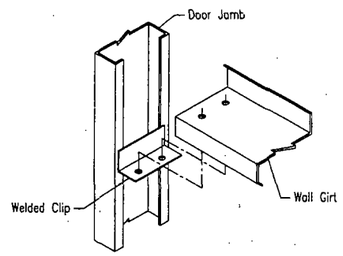
(J2) EAVE STRUT TO RIGID FRAME

CHARLES EDWIN LOYD
REGISTERED ENGINEER
AGRICULTURE
CIVIL
NO. 19664
STATE OF TENNESSEE

HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, ARK 72114
1-800-643-5555

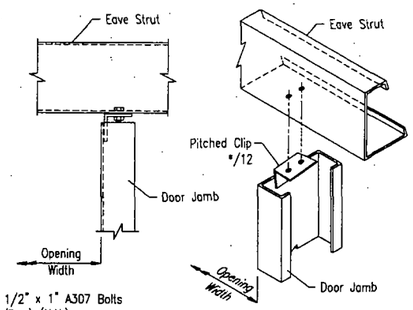
DESCRIPTION: DETAIL DRAWINGS
CUSTOMER: FRANK O'CONNELL
LOCATION: COLLIERVILLE, TN 38017
HERITAGE JOB # TNX27845

DRAWING BY	DATE	LOADS	SCALE
AKW	5/14/05	SEE COVER	N.T.S.
CHECK BY	TIME	DRAWING #	REV #
SW	12:42am	DET1	0



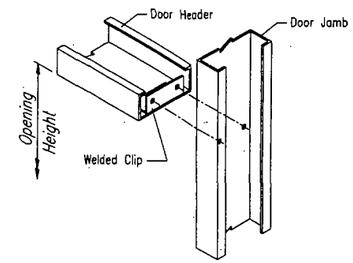
1/2" x 1" A307 Bolts
(Typ.) (U.N.)

K3 WALL GIRT TO DOOR JAMB



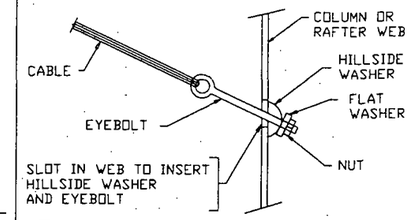
1/2" x 1" A307 Bolts
(Typ.) (U.N.)

L3 DOOR JAMB TO EAVE STRUT

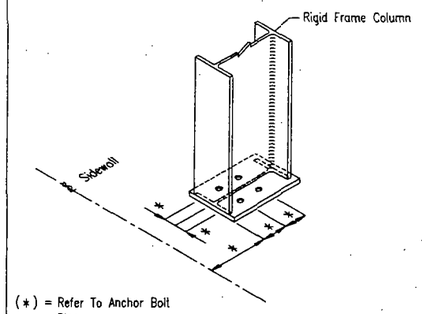


1/2" x 1" A307 Bolts
(Typ.) (U.N.)

M3 DOOR HEADER TO DOOR JAMB

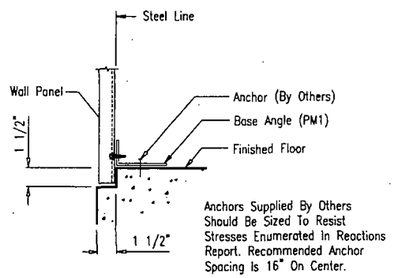


Q2 DIAGONAL CABLE, EYEBOLT END

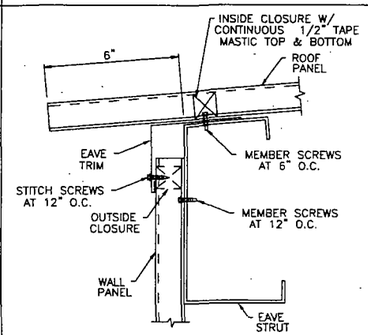


(*) = Refer To Anchor Bolt
Plan

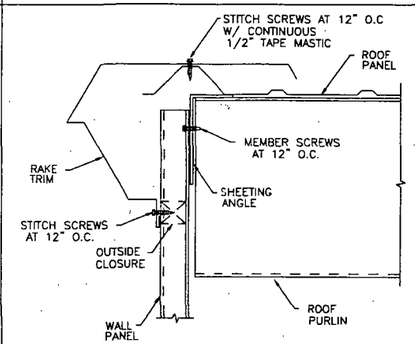
R2 ANCHOR BOLTS AT SIDEWALL COLUMNS



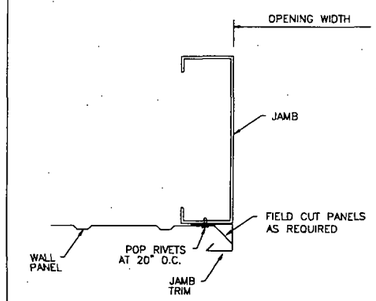
T3 SECTION THRU WALL PANEL AND
CONCRETE FOUNDATION



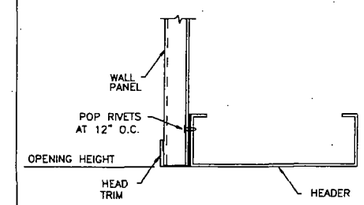
EAVE DETAIL WITH SIMPLE
EAVE TRIM AND SHEETED WALL
TRIM_3.DXF



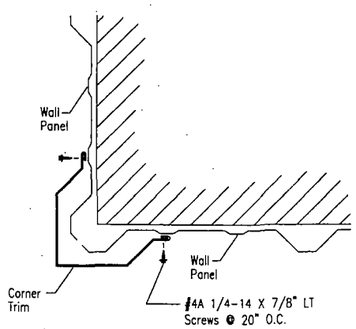
RAKE DETAIL WITH
SHEETED WALL
TRIM_4.DXF



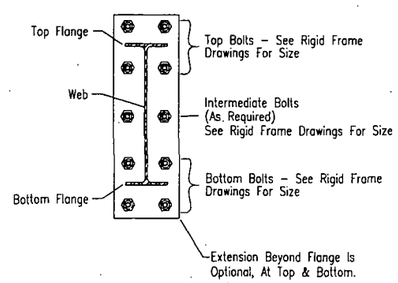
JAMB TRIM DETAIL
FOR "R" PANEL
TRIM_5.DXF



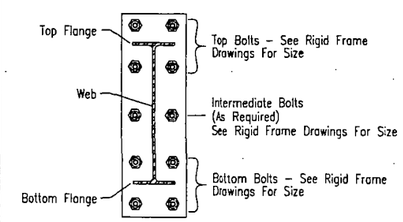
HEAD TRIM DETAIL
FOR "R" & "A" PANEL
TRIM_7.DXF



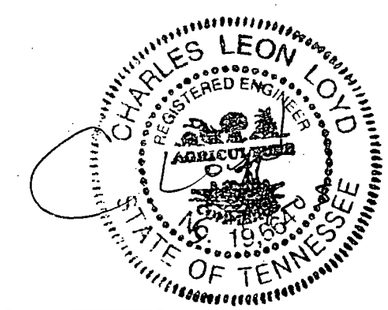
CORNER TRIM DETAIL FOR "R" PANEL



U2 BOLTS FOR RIGID FRAME RAFTER
AT BUILDING PEAK



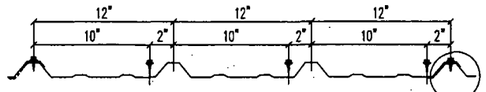
U3 BOLTS FOR RIGID FRAME RAFTER
TO COLUMN CONNECTION



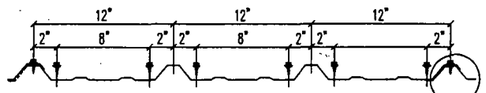
HERITAGE
BUILDING
SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, ARK 72114
1-800-643-5555

DESCRIPTION: DETAIL DRAWINGS
CUSTOMER: FRANK O'CONNELL
LOCATION: COLLIERVILLE, TN 38017
HERITAGE JOB # TNX27845

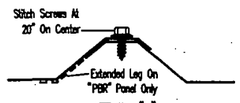
DRAWING BY	DATE	LOADS	SCALE
AKW	5/14/05	SEE COVER	N.T.S.
CHECK BY	TIME	DRAWING #	REV #
SW	12:42am	DET2	0



MEMBER SCREW LOCATION
(ALL MEMBERS EXCEPT AS NOTED)

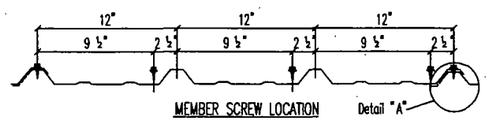


MEMBER SCREW LOCATION
(EAVE STRUT, BASE, AND PANEL END LAPS)

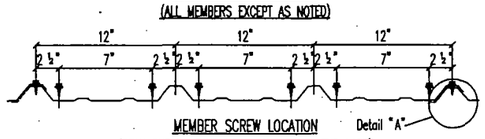


DETAIL "A"

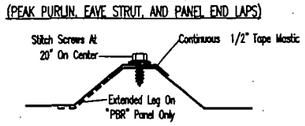
" PBR" PANEL WALL



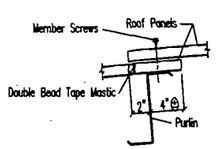
MEMBER SCREW LOCATION
(ALL MEMBERS EXCEPT AS NOTED)



MEMBER SCREW LOCATION
(PEAK PURLIN, EAVE STRUT, AND PANEL END LAPS)



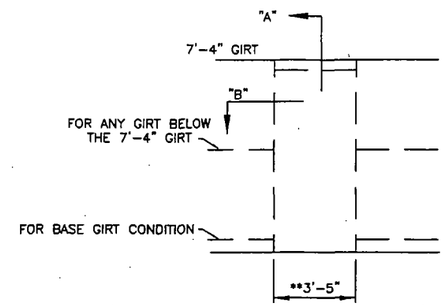
DETAIL "A"



SECTION THRU PEAK PURLIN AND PANEL END LAPS

NOTE!
SCREW PATTERNS SHOWN, SATISFY UL-90 REQUIREMENTS FOR ROOF.

" PBR" AND " R" PANEL ROOF

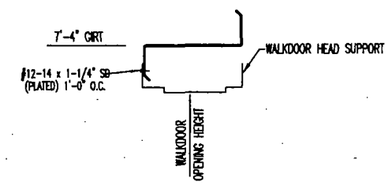


ERECTOR NOTE:
FIELD CUT GIRTS BELOW 7'-4" TO ATTACH TO THE WALKDOOR JAMBS WITH #12-14 x 1-1/4" SELF DRILLER SCREWS (2) EACH SIDE AS PER SECTION "B"

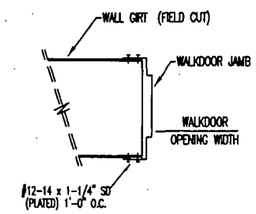
**THE 3'-5" DIMENSION INCLUDES THE WALKDOOR OPENING PLUS THE MAXIMUM WIDTH OF THE WALKDOOR FRAME.

WALKDOOR DETAIL

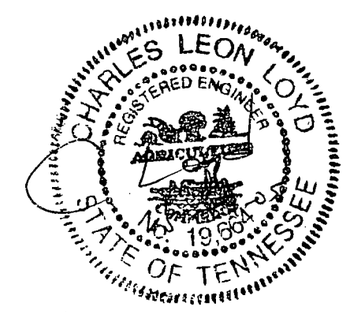
3070 WALKDOOR



SECTION "A"



SECTION "B"



HERITAGE BUILDING SYSTEMS 2612 GRIBBLE STREET NORTH LITTLE ROCK, ARK 72114 1-800-643-5555	DESCRIPTION: TRIM DETAILS			
	CUSTOMER: FRANK O'CONNELL			
	LOCATION: COLLIERVILLE, TN 38017			
	HERITAGE JOB # TNX27845			
	DRAWING BY AKW	DATE 5/14/05	LOADS SEE COVER	SCALE N.T.S.
	CHECK BY SW	TIME	DRAWING # TRM	REV # 0

APPENDIX G

SSV EQUIPMENT MANUAL
(APPENDIX IS INCLUDED ON ATTACHED CD)

APPENDIX H

AIR AND WATER DISCHARGE PERMITS

AIR DISCHARGE PERMIT

D. Emission Unit 8 (EU8) – North Remediation System.

(1) Emission Limits and Restrictions

Pollutant	Limitation	Cite
VOC	10.0 tons/yr rolling annual limit (Condition 1)	Town of Collierville, Tennessee Air Pollution Control Code 8-304(109), Reference Rules and Regulations of Tennessee, Rule 1200-3-9-.02(11)(e)1(i) as effective on June 30, 2003

1. The maximum VOC emissions from EU8 shall not exceed 10,0 tons per rolling 12-month period.

(2) Monitoring & Record-keeping

Pollutant/Parameter	Description	Frequency	Cite
VOC	Monitoring (sampling) (Condition 1)	Once every two months	Town of Collierville, Tennessee Air Pollution Control Code 8-304(110), Reference Rules and Regulations of Tennessee, Rule 1200-3-10-.04(2) as effective on June 30, 2003
VOC	Record keeping (emission calculations) (Condition 2)	Monthly	Town of Collierville, Tennessee Air Pollution Control Code 8-304(110), Reference Rules and Regulations of Tennessee, Rule 1200-3-10-.04(2) as effective on June 30, 2003
VOC	Record keeping (results of periodic samplings) (Condition 3)	Once every two months	Town of Collierville, Tennessee Air Pollution Control Code 8-304(110), Reference Rules and Regulations of Tennessee, Rule 1200-3-10-.04(2) as effective on June 30, 2003

1. The owner/ operator shall perform samplings to determine VOC emissions once every two months.

2. The owner/operator shall maintain the following records:

   (a) Monthly and rolling annual actual VOC emissions to demonstrate compliance with the emission limits in this permit. Monthly emission rates shall be based on results from the last samplings conducted and monthly flow rates obtained.

3. The owner/operator shall maintains records of results of the periodic sampling.

TN RR

(3) Reporting

Conditions	Citations
[illegible]	Requirements
1. Information to be listed in semiannual report	Town of Collierville, Tennessee Air Pollution Control Code 8-304(110), Reference Rules and Regulations of Tennessee, Rule 1200-3-10-.04(2) as effective on June 30, 2003

1. The following information shall be included in the semiannual monitoring report as required in paragraph A(4)1 of Section V stated in this permit:

   a. Monthly and rolling 12-month period VOC emission rates.

RR

E. Emission Unit 9 (EU9) – Central Remediation System.

(1) Emission Limits and Restrictions

Pollutant	Limitation	Cite
HAP	Hourly and annual emission limits (Condition 1)	Town of Collierville, Tennessee Air Pollution Control Code 8-304(109), Reference Rules and Regulations of Tennessee, Rule 1200-3-9-.02(11)(e)1(i) as effective on June 30, 2003
HAP	Control efficiency of carbon bed adsorption (Condition 2)	Town of Collierville, Tennessee Air Pollution Control Code 8-304(109), Reference Rules and Regulations of Tennessee, Rule 1200-3-9-.02(11)(e)1(i) as effective on June 30, 2003
HAP	Off-site destruction of waste material (Condition 3)	Town of Collierville, Tennessee Air Pollution Control Code 8-304(109), Reference Rules and Regulations of Tennessee, Rule 1200-3-9-.02(11)(e)1(i) as effective on June 30, 2003

1. The maximum emissions from EU9 shall not exceed the following:

Pollutant	lb/hr*	Tons per rolling 12-month period
1,1,1 Trichloroethylene	0.11	0.50
Dichloroethylenes (total)	0.008	0.04
Vinyl Chloride	0.0004	0.002

*This short term emission rate is based upon a quarterly average.

2. Carbon bed adsorption beds shall be used to control emissions from this process with the following control efficiencies:

Pollutant	Control Efficiency
1,1,1 Trichloroethylene	99.9%
Dichloroethylenes (total)	98.8%

3. Spent carbon shall be managed in accordance with appropriate regulations.

TN RR

(2) Monitoring & Record-keeping

Pollutant/Parameter	Monitoring Description	Frequency	Citation
HAP	Monitoring (periodic vapor sampling (Condition 1)	Once every two months	Town of Collierville, Tennessee Air Pollution Control Code 8-304(110), Reference Rules and Regulations of Tennessee, Rule 1200-3-10-.04(2) as effective on June 30, 2003
HAP	Record keeping (maintenance performed) (Condition 2)	Each occurrence	Town of Collierville, Tennessee Air Pollution Control Code 8-304(110), Reference Rules and Regulations of Tennessee, Rule 1200-3-10-.04(2) as effective on June 30, 2003
HAP	Record keeping (results of vapor sampling) (Condition 3)	Once every two months	Town of Collierville, Tennessee Air Pollution Control Code 8-304(110), Reference Rules and Regulations of Tennessee, Rule 1200-3-10-.04(2) as effective on June 30, 2003
HAP	Records of emission calculations (Condition 4)	Monthly	Town of Collierville, Tennessee Air Pollution Control Code 8-304(110), Reference Rules and Regulations of Tennessee, Rule 1200-3-10-.04(2) as effective on June 30, 2003

1. To demonstrate compliance with condition 2 of Section VE(1), periodic process vapor sampling shall be conducted at least once every two months.

2. The owner/operator shall maintain records of all maintenance performed on the carbon adsorption beds.

3. The owner/operator shall maintains records of results of the process vapor sampling.

4. The owner/operator shall maintains records of monthly and rolling annual actual HAP emissions to demonstrate compliance with the emission limits in this permit.

(3) Reporting

Conditions	Citations
1. Information to be listed in semiannual report	Town of Collierville, Tennessee Air Pollution Control Code 8-304(110), Reference Rules and Regulations of Tennessee, Rule 1200-3-10-.04(2) as effective on June 30, 2003

1. The following information shall be included in the semiannual monitoring report as required in paragraph A(4)1 of Section V stated in this permit:

   a. Monthly and rolling 12-month period VOC emission rates. Monthly emission rates shall be based on results from the last samplings conducted and monthly flow rates obtained.

JN RR

ENSAFE

ENSAFE INC. ENVIRONMENTAL AND MANAGEMENT CONSULTANTS

5724 Summer Trees Drive • Memphis, Tennessee 38134 • Telephone 901-372-7962 • Facsimile 901-372-2454 • www.ensafe.com

December 17, 2004

Mr. Jimmy Nguyen
Permit Engineer
M&SCHD Air Pollution Control District
814 Jefferson Avenue, 4th Floor
Memphis, TN 38105

Subject: Carrier Corporation, Collierville
Title V Permit No. 00083-01TV
Modifications to Emissions Unit EU 9; and a New Emissions Unit

Dear Mr. Nguyen:

As we have discussed previously, Carrier Corporation is currently expanding the Collierville manufacturing facility. The expansion process required shut down of Emissions Unit (EU) 9, the Central Remediation System (CRS). As we discussed in our telephone conversation of November 8, 2004, Carrier is replacing the CRS during construction activities and adding a new emissions unit: the Sub-Slab Ventilation (SSV) System. Carrier's activities are described in more detail below.

Emissions Unit 9 – CRS

Per a previous notification from Carrier, the CRS was shut down in August 2004 due to construction in the immediate area. The CRS is required by the Unilateral Administrative Order (UAO) issued by USEPA for CERCLA remedial actions at the site. Carrier has been required by USEPA to replace the CRS as soon as possible following construction of the expanded manufacturing facility.

Carrier will replace the existing CRS vapor treatment system with a similar but larger system. Air emissions limits listed in the current Title V permit are shown in Table 1.

Table 1: Current EU 9 (CRS) Emissions Limits

Pollutant	Maximum Emissions Rate[1] (lbs/hr)	12-Month Emissions Limit[2] (tons)
Trichloroethylene	0.11	0.5
Dichloroethylenes	0.008	0.04
Vinyl Chloride	0.0004	0.002

Notes:

1 Short-term emissions are based upon a quarterly average.
2 Annual emissions are based upon a 12-month rolling period

The replacement system for the CRS, described in Attachment 1, will be designed to meet the emissions limits stipulated in the current Title V permit. Major changes in the CRS design are shown in Table 2.

Table 2:
Comparison of EU 9 (CRS) Treatment Systems

Element	Former CRS	Replacement CRS
Maximum air flow rate	240 cfm	550 cfm
Average air flow rate	100 cfm	250 cfm
Carbon treatment configuration	2 GAC Units (2,000 lbs each) In series	2 GAC Units (minimum 2,000 lbs each) in series
Carbon design removal rate	90%	TCE 99.9% DCE 98.8%

Emissions rate calculations, assuming treatment using vapor-phase granular activated carbon, are shown in Attachment 2. The CRS will be replaced during the spring of 2005, with construction completion anticipated no later than July 1, 2005.

New Emissions Unit – Sub-Slab Ventilation

The SSV exhaust will be a new emission point. Vapor collection piping will be installed beneath the floor slab of the 300,000-square-foot facility expansion area to vent any vapors which may accumulate beneath the building's foundation. Vapor extraction rates are projected to be 146 cubic feet per minute from the SSV system. Concentrations of accumulated vapor are expected to be less than that observed in the replacement Soil Vapor Extraction system. Based on the percent of impacted soil beneath the building foundation, a projected vapor concentration was developed. This concentration was used to determine the mass removal estimates for the SSV.

Based on potential emissions from the SSV which are summarized below, a construction permit is not needed for this new source. The SSV can be considered an insignificant activity as defined in 1200-3-9-.04(2)(a)(3) as "any activity or emissions unit at a stationary source for which the emissions unit or activity has a potential to emit less than 5 tons per year of each air contaminant and each regulated air pollutant that is not a hazardous air pollutant, and less than 1,000 pounds per year of each hazardous air pollutant."

Table 3:
Potential VOC/HAP Emissions from SSV System

Pollutant	Estimated Emission Discharge		Insignificant Activity Emission Limit
	(lbs/yr)	(tons/yr)	
TCE	856.4	0.428	1,000 lbs/yr for individual HAP
DCE	199	0.005	Not Applicable
Vinyl Chloride	0	0.00	1,000 lbs/yr for individual HAP
Total VOC	1,055.4	0.433	5 tons/yr for total VOC

Please accept this letter as a request for written documentation of your concurrence with the following items: 1) the CRS replacement will not require a construction permit and 2) the SSV can be considered an insignificant activity based on the above information. If you have any questions or need any additional information, please contact me at 372-7962.

Sincerely,
EnSafe Inc.

Kimberly S. Sass

Kimberly S. Sass, EI
Project Manager Compliance Services

Cc: Frank Sizemore, Carrier Corporation
Bruce Cliff, XDD
Bryan Kielbania, UTC

Attachments

Attachment 1: Replacement Carbon System Information

CALGON

CALGON CARBON CORPORATION
P.O. Box 717 Pittsburgh, PA 15230-0717 412.787.6700

12/15/2004

Tom Trenholm
Expert Design and Diagnostics
Manchester, NH

Dear Tom,

In a perfectly designed system, granular activated carbon will remove Trichloroethylene to non-detectable levels. Eric Hasis ran a proprietary predictive model for you with regards to Trichloroethylene removal. Its results do not carry an expressed or implied warranty with them; they are for estimating purposes only. In order for Calgon Carbon Corporation to issue any process guarantees, pilot testing must be performed on the stream. Through pilot testing we will be able to truly understand how the stream components and the carbon selected will react with each other.

With Regards,

Michael Pealer
Inside Sales Representative
Calgon Carbon Corporation
Pittsburgh, PA
412-787-4543
mpealer@calgoncarbon-us.com

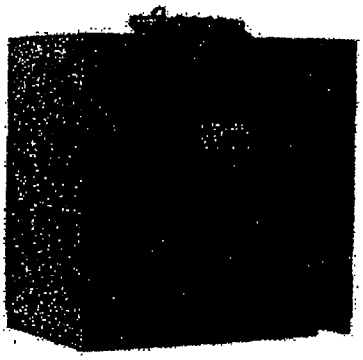
CALGON

CALGON CARBON CORPORATION

Making Water and Air Safer and Cleaner

HIGH FLOW VENTSORB

Emission Control Unit



Specification Standard Features

Vessel Material:	Carbon Steel
Vessel Lining:	Epoxy
Vessel Exterior:	Epoxy
Manway:	One (1) 20" diameter manway on top of the unit for GAC loading with Buna-N Gasket
Temperature Rating:	Maximum continuous operating temperature 140°F, with excursions to 200°F.
Pressure Rating:	3 psig
Vacuum Rating:	HFVS not rated for vacuum
Underdrain	Style: False Bottom
Drain:	1/2" Plugged Drain Coupling
Connection:	Flanged Inlet/Outlet Nozzles, drilled to ANSI 150 lb. pattern

Description

Calgon Carbon Corporation's High Flow VentSorb® (HFVS) emission control units were developed to utilize granular activated carbon to treat air/vapor containing VOC emissions from a variety of applications at industrial, commercial, or remedial sites.

There are four sizes available to treat airflows up to 3,000 cfm. These units are designed to allow selection of the optimum size to economically solve air treatment needs. The units are constructed with features that allow for ease of installation and operation.

The HFVS units are available in four sizes: 500 cfm, 1,000 cfm, 2,000 cfm and 3,000 cfm. The units are constructed of carbon steel with an internal epoxy lining and external coating.

Model	Maximum Air Flow Capacity cfm	Carbon Capacity pounds	Shipping Weight pounds
HFVS	500	500	1,100
HFVS	1000	1,000	2,000
HFVS	2000	2,000	3,700
HFVS	3000	3,000	5,500

Features and Benefits

Easy to Install

The HFVS is fitted with supports for ease of off-loading and positioning near the emission source using a fork truck.

Ready to Use

The units are delivered pre-loaded with GAC to minimize labor costs for set-up.

Optimum Design

The HFVS units are designed to optimize the amount of GAC installed in each unit taking into consideration the air flow requirements, available space and low system pressure drop.

Reusable Unit

When the GAC in the HFVS is spent and no can longer remove additional contaminants, it can easily be removed and refilled using the large 20" diameter manway installed on top of the unit.

Corrosion Resistant

The HFVS units are constructed of epoxy lined and painted carbon steel with a stainless steel bed support.

Effective Treatment of a Wide Variety of Contaminants

The HFVS can be provided with different types of GAC to provide treatment tailored to specific requirements.

Continuous Treatment

The HFVS unit works 24 hours per day to remove contaminants from air emissions regardless of fluctuations of air flow rate.

Flexibility to Meet a Variety of Needs

The HFVS unit requires relatively little space. When necessary, the units can be installed side by side then piped for either series or parallel operation.

HIGH FLOW VENT SORB

Emission Control Unit

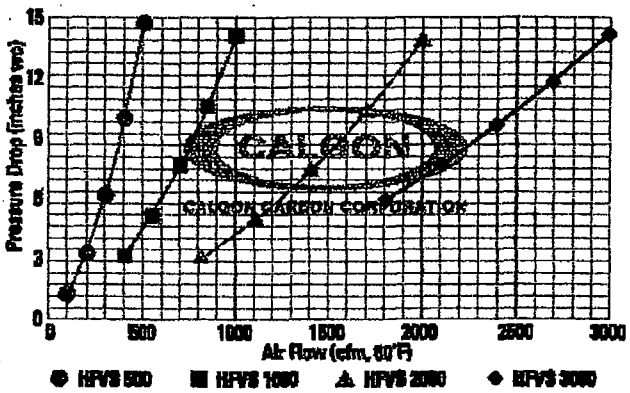
HFVS Installation

The HFVS units are shipped ready for installation. The unit can be moved using a fork truck and should be placed as near as possible to the emission source. After placement, remove the manway and check that the GAC is level (it may shift during shipment).

Connect from the emission source to bottom inlet connection on the HFVS using flexible hose, lightweight ductwork or pipe. Connect the discharge piping to the upper outlet connection.

The maximum recommended airflow is listed in the Specification Section of this bulletin. If higher flows are required, another unit should be added in parallel. The unit operates upflow, so high airflow rates above the maximum listed could expand the bed, causing premature breakthrough.

HFVS Series Vapor Adsorber
AP4-60 Pellet Carbon



Pressure drop is based on using AP4-60 type carbon, which is a 4mm pellet. For other types of GAC, the pressure drop should be adjusted. For BPL4x10, multiply the pressure drop by 1.5. For VPR 4x10, multiply the pressure drop by 1.6.

Special Considerations

When the HFVS is used to control vapors from an organic solvent storage tank, the following precautions are recommended:

- A safety relief valve must be provided. This protects the storage tank should the HFVS become plugged or blocked in any fashion. Such a vent would open in this emergency situation, thereby relieving pressure.
- Under appropriate conditions, a flame arrestor and/or a backflow preventer must be installed as shown. This prevents backflow of air when the storage tank is empty.
- Pre-wetting the carbon helps dissipate excessive heat that may be caused by high organic concentrations (>0.5 to 1 Vol%).

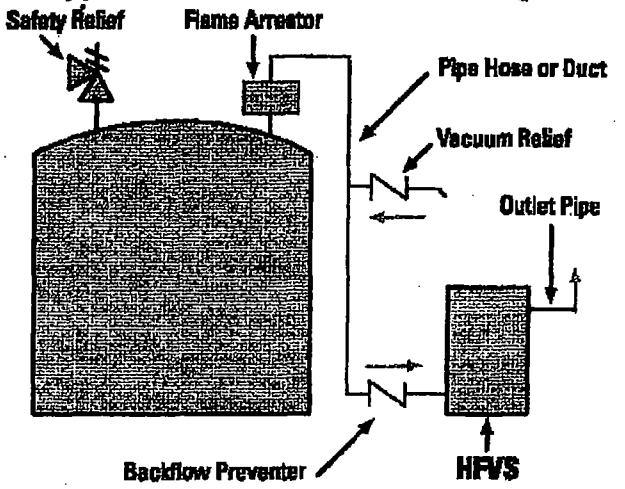
When the HFVS is used to control organic emissions from air strippers or other high moisture sources, Calgon Carbon recommends that humidity in the air stream be reduced to less than 50%. Lower humidity optimizes adsorption capacity of the GAC. Also, a condensate drain trap should be installed on the drain connection to carry away any moisture that collects in the unit.

Carbon Bed Life Estimate

For an estimate of carbon bed life, contact your local sales representative. Carbon Replacement When it has been determined that the carbon is spent (no longer adsorbs the target compounds), it is time to replace the carbon. Follow these steps to replace the spent carbon with fresh carbon.

1. Isolate the HFVS by either disconnecting the ductwork or by closing the inlet and outlet valves.
2. Open the manway and remove the spent carbon by vacuuming or by bucket to appropriate storage containers. If the unit must be entered to access spent carbon, take the appropriate safety measures for confined space entry. Refer to the safety message on this bulletin.
3. When all the spent carbon is removed, inspect the bed support for signs of damage.
4. Refill the unit with fresh carbon by loading it through the manway. After each bag is loaded to the vessel, level the surface using a rake or similar device.
5. Replace the manway and reconnect the ductwork.

Typical HFVS Installation at Storage tank



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HIGH FLOW VENTSORB

Emission Control Unit

Spent Carbon Return

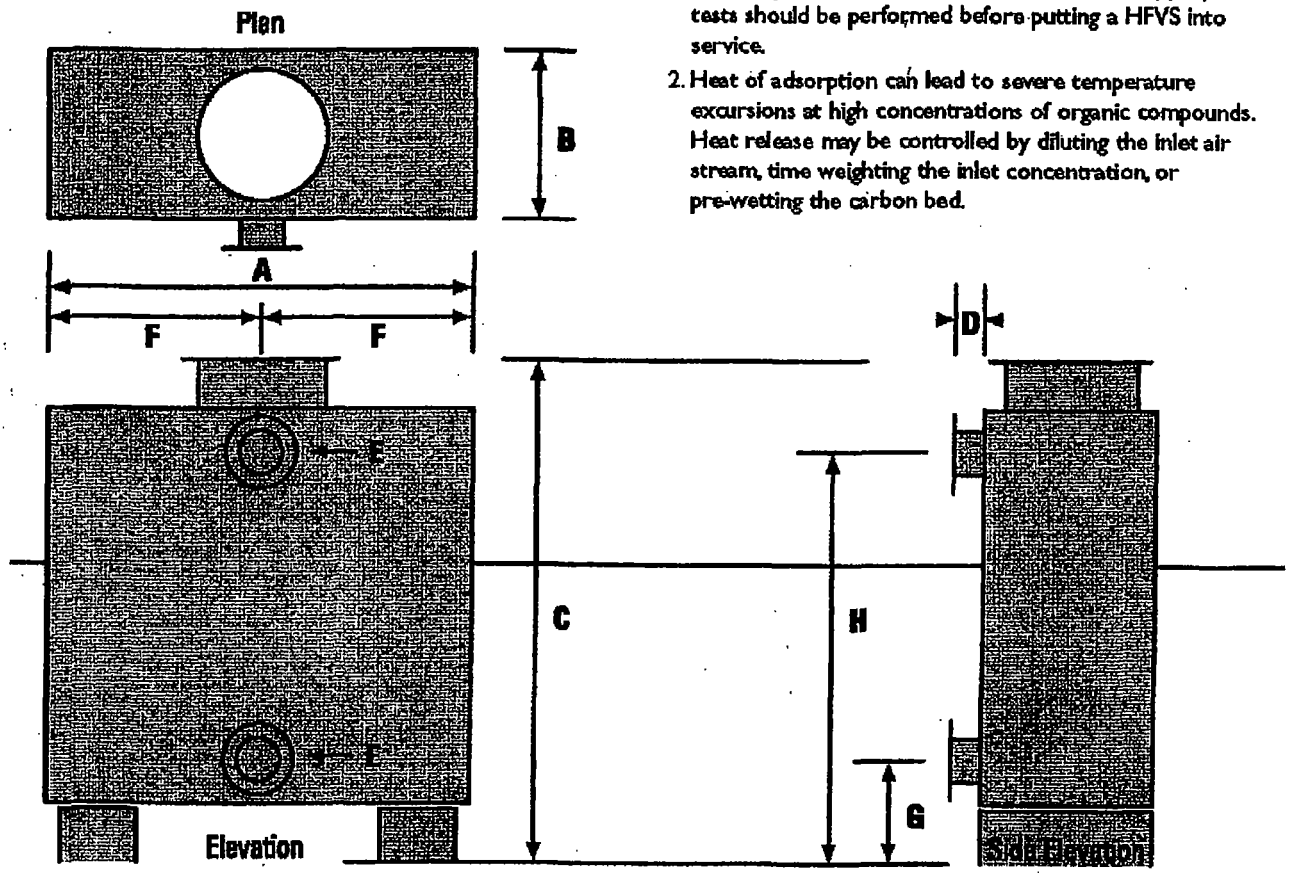
Spent carbon can be returned to Calgon Carbon for reactivation after the carbon acceptance procedure is complete. Contact your local representative for detailed instructions and to arrange for carbon acceptance testing. It is recommended that you start the carbon acceptance testing before change-out to minimize handling of the spent carbon. This should be done when ordering fresh carbon.

Safety Considerations

While complying with recommended installation instructions, operators should also be aware of these additional heat related safety considerations:

1. When GAC adsorbs some types of chemical compounds, such as those in the ketone, aldehyde, organic acid or organic sulfur families, the chemical may react on the carbon surface, causing severe exotherm or temperature excursions. If you are unaware or unsure of the reaction of an organic compound on activated carbon, appropriate tests should be performed before putting a HFVS into service.
2. Heat of adsorption can lead to severe temperature excursions at high concentrations of organic compounds. Heat release may be controlled by diluting the inlet air stream, time weighting the inlet concentration, or pre-wetting the carbon bed.

HFVS Dimensional Data



HFVS Dimensional Data

Model	Width A	Depth B	Canister Height C	Nozzle Length D	Inlet/Outlet Nozzle Diameter E	Nozzle Position F	Inlet Nozzle Height G	Outlet Nozzle Height H
HFVS 500	36"	24"	66"	3"	6"	18"	10"	$57\frac{5}{16}$"
HFVS 1000	45"	39"	68"	3"	8"	$22\frac{1}{16}$"	10"	58"
HFVS 2000	72"	48"	76"	3"	12"	36"	$11\frac{1}{2}$"	$64\frac{3}{8}$"
HFVS 3000	72"	72"	79"	3"	14"	36"	$12\frac{1}{2}$"	67"

ES-EB1027-0104

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HIGH FLOW VENTSORB

Emission Control Unit

Warranty

Calgon Carbon Corporation (Seller) warrants that the High Flow Ventsorb® sold shall be free from defects in materials and workmanship for a period of one (1) year from the date of shipment. This warranty does not apply to problems associated with normal wear and tear, improper maintenance, negligence, misuse, or the failure to operate in strict accordance with the operating and maintenance plan provided. For those items provided by, but not directly manufactured by the Seller, the manufacturer's warranty shall apply provided warranty coverage exceeds that which is provided by the Seller. All other warranties, either express or implied, are hereby disclaimed including, but not limited to, the warranty of merchantability and fitness for a particular purpose.

Seller warrants that any/all activated carbon provided hereunder shall conform to the specifications for such grade as published from time to time by the Seller. There are no warranties made with regard to the activated carbon or equipment to be sold hereunder other than those contained in this paragraph or stated elsewhere in the proposal. All other warranties, either express or implied, are hereby disclaimed including, but not limited to, the warranty of merchantability and fitness for a particular purpose.

This warranty is limited to the replacement and/or repair by the Seller of any part, parts or material, which in the Seller's determination are defective. This warranty does not cover any charges by the Buyer for replacement of parts, adjustments or repairs, or any other work unless such charges shall be assumed or authorized in advance in writing by the Seller.

Limitation of Liability

Seller's liability and the Purchaser's exclusive remedy for any cause of action arising out of purchase and use of the High Flow Ventsorb® including, but not limited to, breach of warranty, negligence and/or indemnification, is expressly limited to a maximum of the purchase price of the High Flow Ventsorb® as sold. All claims of whatsoever nature shall be deemed waived unless made in writing within forty-five (45) days of the occurrence giving rise to the claim. In no event shall the Seller for any reason or pursuant to any provision of these warranties be liable for incidental or consequential damages, or damages in excess of the purchase price of the High Flow Ventsorb®, nor shall the Seller be liable for loss of profits or fines imposed by Governmental agencies.

Safety Message

Wet activated carbon preferentially removes oxygen from air. In closed or partially closed containers and vessels, oxygen depletion may reach hazardous levels. If workers are to enter a vessel *containing carbon*, appropriate sampling and work procedures for potentially low oxygen spaces should be followed, including all Federal and State requirements. For additional details, see Calgon Carbon Bulletin AB-006-08/94: Safety Considerations with Activated Carbon

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Calgon Carbon Corporation's activated carbon products and services are continuously being improved and changes may have taken place since this publications was issued.

Visit our website at www.calgoncarbon.com

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Calgon Carbon Corporation
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1-800-422-7266
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Tel: + 32 (0) 64 51 18 11
Fx: + 32 (0) 64 54 15 91

Your local office

ES-EB 1027-0104

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Attachment 2: Emission Calculations

XPERT DESIGN AND DIAGNOSTICS, LLC
22 MARIN WAY STRATHAM, NH 03885 (603) 778-1100 (603) 778-2121 FAX

MEMORANDUM

To:	Lori Goetz, ENSAFE	**Date:**	12/17/2004
From:	Bruce Cliff, XDD	**cc:**	Bryan Kielbania, Carrier UTC
Re:	Air Emission Projection Calculations for SVE and SSV		

Introduction

The calculations in this memo represent the most conservative estimate of the projected maximum VOC emission discharges resulting from the reconstructed Main Plant Area (MPA) Soil Vapor Extraction (SVE) and Subslab Ventilation (SSV) Systems at the Carrier Air Conditioning Site (Site) located at 57 South Byhalia Rd., Collierville, TN 38017. The MPA is also referred to as Emission Unit 9 (EU9).

Sample Calculation for MPA SVE System VOC Emissions

1. Estimating the Projected Pre-Carbon Treatment VOC Emissions:

$$C_{max} * Q_{SVE} = q_{pre}$$

Where,
C_{max} = Maximum VOC Concentration for the year 10/1/2003 -10/1/2004 [MASS/VOLUME]
Q_{SVE} = Proposed MPA SVE System Flow [VOLUME/TIME]
q_{pre} = Projected Pre-Carbon Treatment VOC Emissions [MASS/TIME]

2. Estimating the Projected Post-Carbon Treatment VOC Emissions:

$$q_{pre} - (q_{pre} * 99.9\%) = q_{max}$$

Where,
q_{pre} = Projected Pre-Carbon Treatment VOC Emissions [MASS/TIME]
q_{max} = Projected Post-Carbon Treatment VOC Emissions [MASS/TIME]

Sample Calculation for MPA SSV System VOC Emissions

3. Estimating the Projected VOC Emissions:

$$C_{max} * Q_{SSV} * (A_{SVE} / A_{SSV}) = q_{SSV}$$

Where,
C_{max} = Maximum VOC Concentration for the year 10/1/2003 -10/1/2004 [MASS/VOLUME]
Q_{SSV} = Proposed MPA SSV System Flow [VOLUME/TIME]
A_{SVE} = Delineated area of site COCs/VOCs [LENGTH^2]
A_{SSV} = Approximate area of the SSV influence [LENGTH^2]
q_{SSV} = Projected MPA SSV VOC Emissions [MASS/TIME]

Method of Calculation

These calculations are based upon performance data from the former SVE system that was collected between 10/1/2003 and 10/1/2004 and all projected emission discharge estimates are based upon the maximum VOC concentration for each VOC of concern from this time period (see Table 1). The maximum VOC concentration for each VOC of concern was used in this projection in order to insure that the most conservative estimate of the future emission discharge was obtained.

Because both system projections are based upon historical data for the former SVE system only, several assumptions were made in order to develop a realistic estimate for the SSV projected maximum VOC emission discharges. However, it is worth noting that the calculations for the SSV system are grossly conservative given that the system will be installed in uncontaminated fill an average of 4 feet above the existing surface of the site's area of concern.

First, the proposed SVE system will treat an area of approximately 60,000 square feet (See Figure S-1B) of the property. This treatment zone is the area affected by the site COCs. The proposed SSV system will cover approximately five times the area of the SVE system (300,000 square feet – See Figure S-1V) and therefore only one-fifth of the SSV coverage area will be in soils affected by the site COCs. This is accounted for in equation 3, by computing the ratio of the SVE coverage area to the SSV coverage area.

Secondly, the blowers for each system will be operating at different flowrates and therefore the SSV estimate is calculated using the ratio of the SVE blower flowrate to the SSV blower flowrate (See equation 3).

Furthermore, the final VOC emission discharge for the SVE system is calculated assuming that the carbon units accomplish the 99.9% removal efficiency which is demonstrated in the attached manufacturer information sheet. Equation 2 is not replicated for the SSV calculations because the SSV system design does not utilize a carbon treatment unit prior to discharge into ambient air.

Summary

These calculations demonstrate that all emission discharge limits for the site (Town of Collierville, Tennessee Air Pollution Control Code 8-304(109), Rule 1200-3-9-.02(11)(e)1(i)) listed in Tables 1 and 2 will be adhered to by the proposed modifications to EU9.

The projected maximum TCE emission discharge of 0.0008 and 0.428 tons per year for both the SVE and SSV, respectively are each at least an order of magnitude less than the mandated yearly emission discharge limits of 0.5 and 5 tons per year for the SVE and SSV, respectively. Moreover, for the proposed SSV system the emission discharge limit of 1,000 pounds per year for the hazardous air pollutants is above the projected values of 856.4 and 0.0 pounds per year of TCE and VC respectively.

System and Equipment specs

A total of three blowers we will be used in the proposed design to the new MPA system (See Figure 9-SVE and Subslab Ventilation Process and Instrumentation Diagram, attached). The SSV system will utilize one low vacuum blower and the SVE system will incorporate two blowers operating at a total flow of approximately 500 SCFM.

The SSV blower will be a Roots Universal RAI Rotary Positive Blower – Frame size 24 – with a speed of 5275 RPM and a maximum flow rate of 146 SCFM @ 15 inches Hg or comparable.

The SVE blowers (2) will be Roots Universal RAI Rotary Positive Blowers – Frame size 53- with an operating speed of 2850 RPM and a maximum flow rate of 329 SCFM @ 16 inches Hg or comparable.

More information and the blower manual can be found at:
http://www.rootsblower.com/DocCentral/Document/IOM-URAI-RAM.pdf

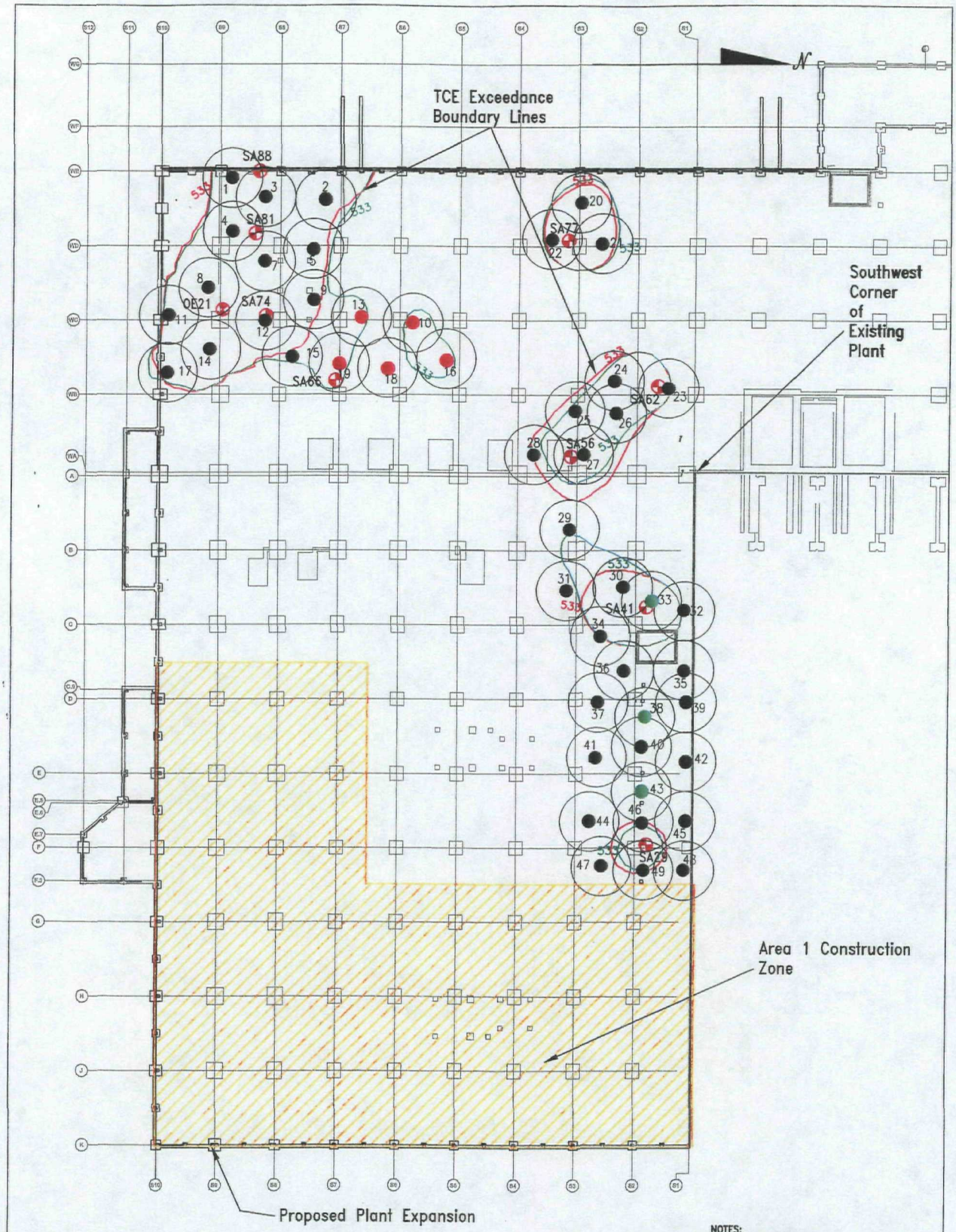
The carbon units proposed for the SVE system will be High Flow Ventsorb vapor phase adsorption systems manufactured by Calgon Carbon Corporation or comparable units. The design will utilize two 2,000 pound units in series. Attached are the manufacturer's specifications for the proposed units and a statement addressing the required 99.9% removal efficiency for TCE & DCE.

TABLE 1 - Projected VOC Emission Discharge for Reconstructed MPA SVE System

Site VOCs	Reconstructed MPA SVE Flow		Max VOC Concentration (10/1/2003-10/1/2004)		Projected Pre-Treatment VOC Emission Discharge from Reconstructed MPA SVE System		Projected Post-Treatment VOC Emission Discharge from Reconstructed MPA SVE System		Post-Treatment Emission Discharge Limit	Post-Treatment Emission Discharge Limit
	(cfm)	(ft3/yr)	(ug/m^3)	(lbs/ft^3)	(lbs/yr)	(tons/yr)	(lbs/hour)	(tons/yr)	(lbs/hour)	(tons/yr)
TCE	550	2.89E8	870000	5.43E-05	15701	7.850	*0.002*	*0.008*	*0.1100*	*0.50*
DCE	550	2.89E8	11000	6.87E-07	199	0.099	*2.72E-04*	*0.001*	*0.0080*	*0.04*
VC	550	2.89E8	0.00	0.00	0.00	0.00	*0.00E+00*	*0.000*	*0.0004*	*0.002*

TABLE 2 - Projected VOC Emission Discharge for Proposed SSV System

Site VOCs	Projected Pre-Treatment VOC Emission Discharge from Reconstructed MPA SVE System	Projected SSV VOC Emission Discharge		Emission Discharge Limit (Non-Hazardous Regulated Air Pollutant)	Emission Discharge Limit (Hazardous Air Pollutant)
	(lbs/yr)	(lbs/yr)	(tons/yr)	(tons/yr)	(lbs/yr)
TCE	15701	*856.4*	*0.428*	*5*	*1000*
DCE	199	*10.83*	*0.005*	*5*	*1000*
VC	0.00	*0.00*	*0.00*	*5*	*1000*
TCE & VC	0.00	*856.4*	*0.428*	*5*	*1000*



LEGEND

- Geoprobe Point > 533 ug/Kg TCE (2004)
- TCE 533 ug/Kg Contour Line 0 – 6 FT BGS (2004)
- TCE 533 ug/Kg Contour Line 6 – 20 FT BGS (2004)
- Proposed Multilevel Soil Vapor Extraction Wells (Shallow, Deep, and Deep Sand–See Figs. S-2,3 for Design Details)
- Proposed Dual Level Soil Vapor Extraction Wells (Shallow and Deep–See Figs. S-2,3 for Design Details)
- Proposed Single Level Soil Vapor Extraction Well (Deep–See Figure S-3 for Design Details)
- Area of Influence of proposed MPA SVE wells
- Area 1 Construction Zone

NOTES

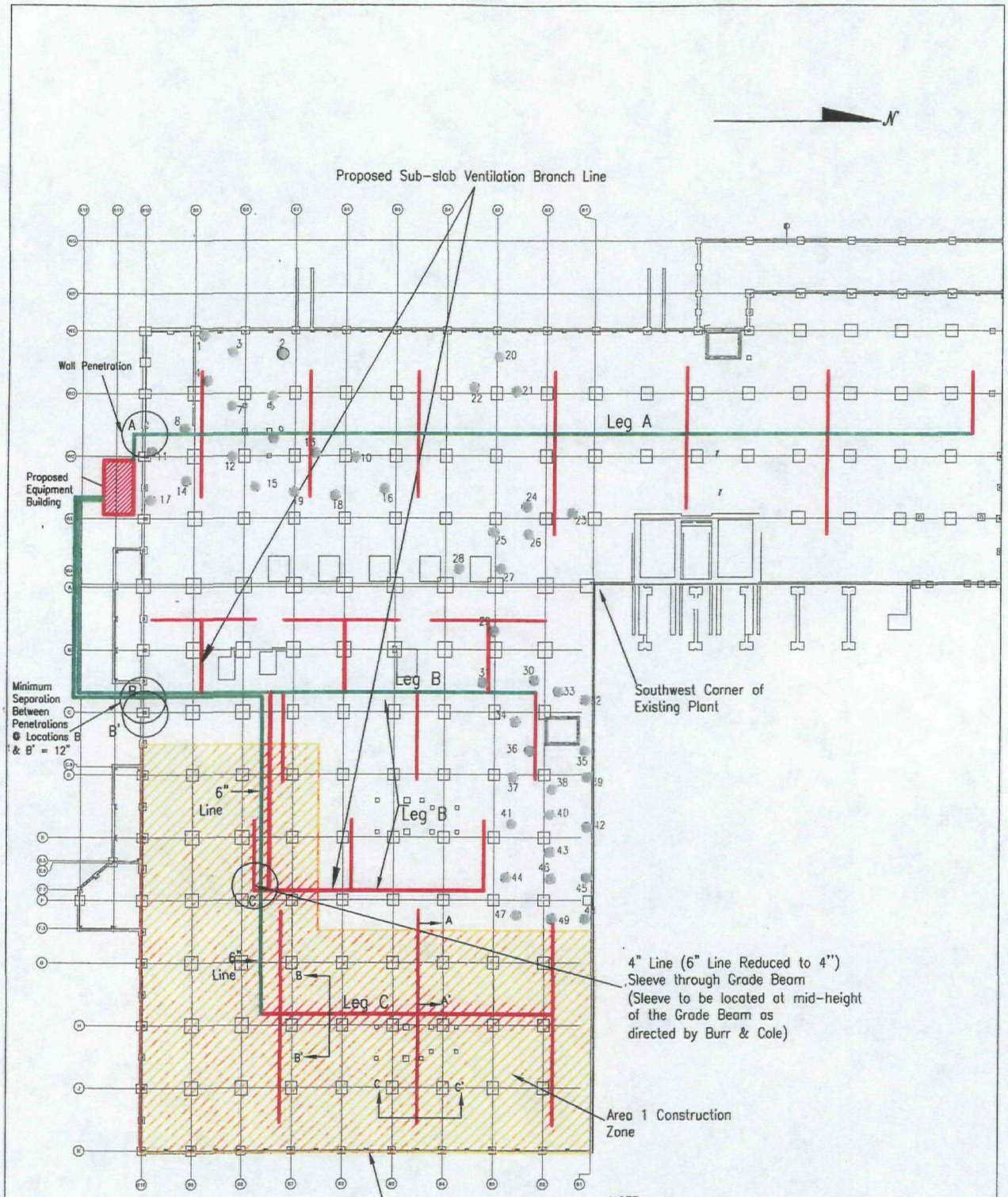
SVE Wells are spaced approximately 40' on center
SVE Well #6 has been removed from the design

0 30 60 120
GRAPHIC SCALE

NOTES:
The drawing is Design–Build and is based upon the most recent structural design drawings from Burr & Cole–received by XDD 12-01-04.

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: AS SHOWN	TITLE: MPA SVE WELL LAYOUT UTC – Carrier Air Conditioning Collierville, TN
DATE: DECEMBER 2, 2004	
PROJECT No.: 73271	
CLIENT: UTC – COLLIERVILLE	
DRAWN BY: MTT	FIGURE S-1B
CHECKED BY: OU	REV. L
PROJ. MGMT. APPROVAL:	



NOTE:
The drawing is Design-Build and is based upon the most recent structural design drawings from Burr & Cole - received by XDD 12-01-04.

LEGEND

- Proposed Soil Vapor Extraction (SVE) Wells (See Figs. S-2,3 for Design Details)
- Proposed Subslab Ventilation (SSV) Main Line (Below grade, 6" ID PVC, SCH 80- See Figure V-2 for Design Details)
- Proposed SSV Branch Line Below Slab (4" ID PVC, SCH 80-See Figure V-2 for Design Details)
- Proposed S SV Horizontal Well Screen (2" ID PVC, SCH 40, 100' On-Center, 50' L, 20-Slot-See Figure V-2 for Design Details)
- Area 1 Construction Zone

NOTES

SVE Wells are spaced approximately 40' on center
SVE Well #6 has been removed from the design

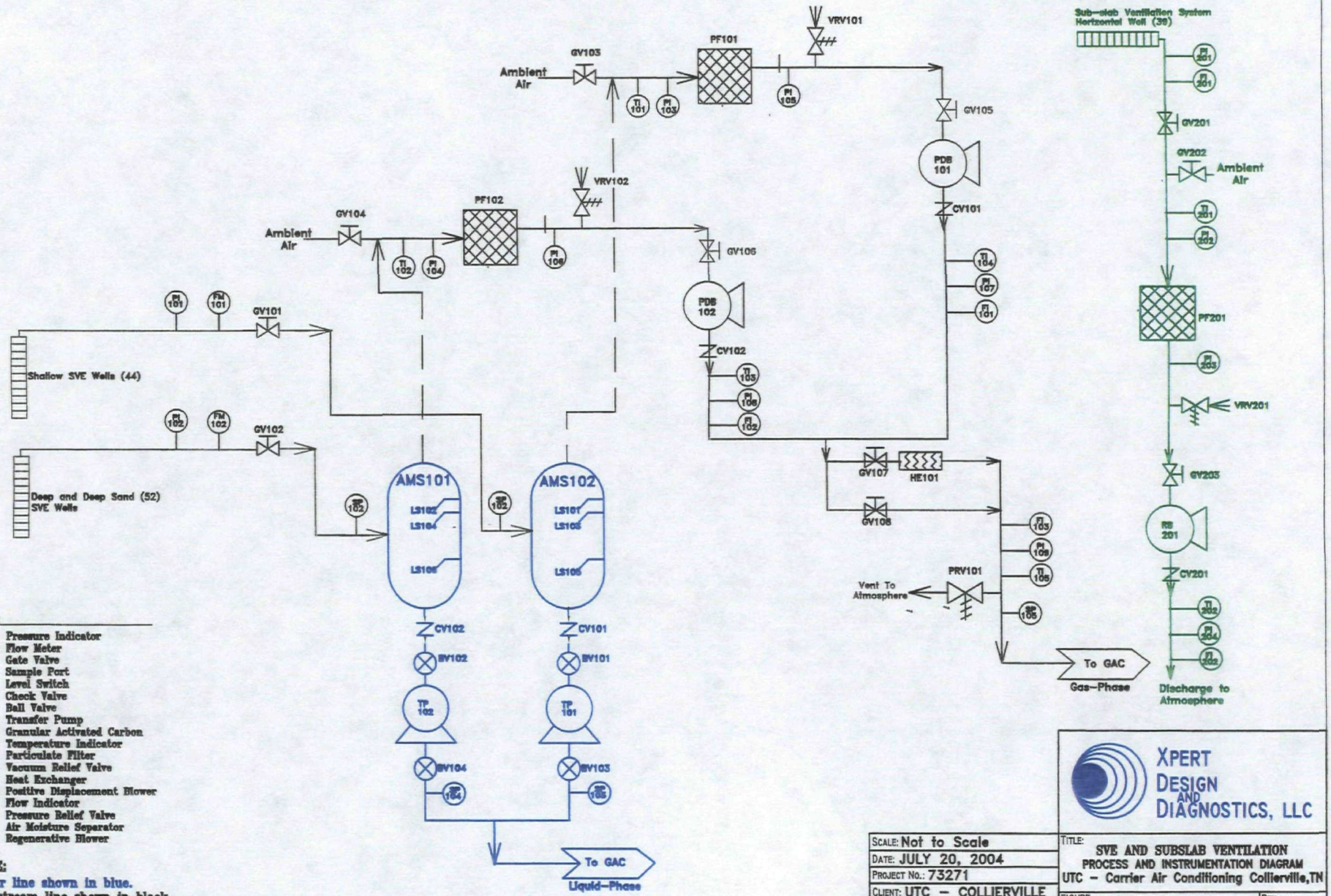
0 60 120
GRAPHIC SCALE

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: AS SHOWN	TITLE: PROPOSED SUBSLAB VENTILATION HORIZONTAL WELL LAYOUT UTC - Carrier Air Conditioning Collierville, TN
DATE: DECEMBER 2, 2004	
PROJECT NO.: 73271	
CLIENT: UTC - COLLIERVILLE	
DRAWN BY: MTT	FIGURE NO. V-1B
CHECKED BY: DU	REV. L
PROJ. MGMT. APPROVAL:	

MAIN PLANT AREA (MPA) SVE SYSTEM

SUBSLAB VENTILATION SYSTEM



KEY:

PI	Pressure Indicator
FM	Flow Meter
GV	Gate Valve
SP	Sample Port
LS	Level Switch
CV	Check Valve
BV	Ball Valve
TP	Transfer Pump
GAC	Granular Activated Carbon
TI	Temperature Indicator
PF	Particulate Filter
VRV	Vacuum Relief Valve
HE	Heat Exchanger
PDB	Positive Displacement Blower
FI	Flow Indicator
PRV	Pressure Relief Valve
AMS	Air Moisture Separator
RB	Regenerative Blower

NOTE:

Water line shown in blue.
Air stream line shown in black.
Sub-slab ventilation system shown in green.

XPERT DESIGN AND DIAGNOSTICS, LLC

SCALE: Not to Scale	TITLE: SVE AND SUBSLAB VENTILATION PROCESS AND INSTRUMENTATION DIAGRAM UTC – Carrier Air Conditioning Collierville,TN
DATE: JULY 20, 2004	
PROJECT NO.: 73271	
CLIENT: UTC – COLLIERVILLE	FIGURE: 9
DRAWN BY: OU	REV.: D
CHECKED BY:	
PROJ. MGMT. APPROVAL:	

ENSAFE

EnSafe Inc. Environmental and Management Consultants

5724 Summer Trees Drive • Memphis, Tennessee 38134 • Telephone 901-372-7962 • Facsimile 901-372-2454 • www.ensafe.com

March 3, 2005

Mr. Albert Givens
Permit Engineer
M&SCHD Air Pollution Control District
814 Jefferson Avenue, 4th Floor
Memphis, TN 38105

Subject: Carrier Corporation, Collierville
Title V Permit No. 00083-01TV
Pilot Study

Dear Mr. Givens:

On behalf of Carrier Corporation, EnSafe is submitting this letter to notify the department of pilot testing that will occur the week of March 14, 2005, to confirm equipment sizing for the replacement of emission unit 9 (EU-9), the CRS vapor treatment system. The testing will consist of approximately 8 individual tests which will last 2 hours each. All emissions during testing will be treated using granular activated carbon prior to discharge. No emission deviations will occur due to the pilot testing.

As discussed in our December 17, 2004 letter, EU-9 is being replaced with an in-kind system during facility expansion activities. Per previous correspondence with the department, an in-kind replacement does not affect the facility's Title V permit and does not require a construction permit.

Any pilot plant can be considered insignificant per 1200-3-9-.04(5)(f)84, provided the following conditions are met:

(i) Pilot plant facilities which demonstrate to the satisfaction of the Technical Secretary, that such facilities do not significantly impact ambient air quality.

(ii) The facility is constructed and operated only for the purpose of:

- (I) Testing the manufacturing or marketing potential of a proposed product,
- (II) Defining the design of a larger plant or future processes, or
- (II) Studying the behavior of an existing plant through modeling in the pilot plant.

Since the pilot testing is being conducted to verify in-kind replacement of EU-9, this testing should be considered an insignificant activity.

If you have any questions or need any additional information, please contact me at 372-7962.

Sincerely,
EnSafe Inc.

Kimberly S. Sass

Kimberly S. Sass, EI
Project Manager Compliance Services

Cc: Frank Sizemore, Carrier Corporation
Bruce Cliff, XDD
Bryan Kielbania, UTC

ENSAFE

ENSAFE

EnSafe Inc. Environmental and Management Consultants

5724 Summer Trees Drive • Memphis, Tennessee 38134 • Telephone 901-372-7962 • Facsimile 901-372-2454 • www.ensafe.com

September 12, 2005

Mr. Bill Smith
Major Source Supervisor
M&SCHD Air Pollution Control District
814 Jefferson Avenue, 4th Floor
Memphis, TN 38105

Subject: Carrier Corporation, Collierville
Title V Permit No. 00083-01TV

Dear Mr. Smith:

On behalf of Carrier Corporation, EnSafe is submitting this letter in response to a request made by Mr. Jimmy Nguyen to update the department status of replacing Emission Unit 9, the Central Remediation System (CRS), and the pilot study, which were discussed in letters to the department dated December 17, 2004 and March 3, 2005, respectively.

In April 2005, seven new soil vapor extraction (SVE) wells located within the most affected portion of the source area were sampled in order to gather data that which would then be used to design the replacement CRS. All estimated post-treatment emissions from this pilot study were below the current discharge limits listed in the Title V permit. See attachment for emission calculations based on the results from the pilot study.

At this time, construction and startup of the replacement CRS will be completed by November 2005. If there are any changes to this tentative schedule, Carrier will notify the department.

If you have any questions or need any additional information, please contact me at 372-7962.

Sincerely,
EnSafe Inc.

Kimberly Sass

Kimberly S. Sass, EI
Project Manager Compliance Services

Cc: Frank Sizemore, Carrier Corporation
Bruce Cliff, XDD

Analytical Results from vapor sampling of selected wells during April 2005 Field Event in ug/m³

Well ID	VC	TCE	DCE
	[illegible]	[illegible]	[illegible]
37D	[illegible]	[illegible]	[illegible]
37S	[illegible]	[illegible]	[illegible]
40S	[illegible]	[illegible]	[illegible]
40D	[illegible]	[illegible]	[illegible]
37DS	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
min	[illegible]	[illegible]	[illegible]
max	[illegible]	[illegible]	[illegible]
avg	[illegible]	[illegible]	[illegible]

Estimating VOC loads in tons per year:

assume flow = 550 cfm

(ft^3/min) X	*(ug/m^3) X*	*(m^3/ft^3) X*	*(min/hr) X*	*(hr/day) X*	*(days/yr) X*	*(ton/ug) X =*	*tons of VOC influent per year*
550	*[analytical]*	*0.028316847*	*60*	*24*	*365*	*1.102E-12*	

Estimated Pre-treatment VOC loads based upon April 2005 Field Event Analytical Results in tons per year

well ID	VC	TCE	DCE
	(tons/year)	(tons/year)	(tons/year)
37D	0.078	19.665	0.029
37S	0.244	43.751	0.081
40S	0.003	0.655	0.001
40D	0.016	5.178	0.009
37DS	0.002	2.959	0.002
avg	0.069	14.442	0.025

Post-treatment emission discharge limits in tons per year:

VC	TCE	DCE
(tons/year)	(tons/year)	(tons/year)
0.002	0.5	0.04

Estimated Post-treatment VOC loads based upon April 2005 Field Event Analytical Results in tons per year

well ID	VC	TCE	DCE
	(tons/year)	(tons/year)	(tons/year)
37D	0.0009	0.0197	0.0003
37S	0.0029	0.0438	0.0010
40S	0.0000	0.0007	0.0000
40D	0.0002	0.0052	0.0001
37DS	0.0000	0.0030	0.0000
avg	0.0008	0.0144	0.0003

NOTES:

Analytical results are from wells within most affected portion of the source area and therefore contribute to conservative estimates of VOC loads for the replacement system.
Post-treatment loads/fluxes are computed based upon 99.9% removal for TCE and 98.8% removal for DCE & VC.

WATER DISCHARGE PERMIT

letter in writing

Town of Collierville
Department of Public Services

Linda Kerley, *Mayor*
James H. Lewellen, *Town Administrator*
Chip Petersen, *Asst. Town Administrator*

William J. Kilp, *Director*
Wilbur Betty, *Director, Public Works Division*
Tim Overly, *Director, Public Utilities Division*

Authorization To Discharge
under the
Wastewater Treatment Code
of the
Town of Collierville

Permit # 90-005
Effective Date March 5,2004
Expiration Date January 7,2007

EnSafe, Inc. located at 97 South Byhalia Rd. is authorized to discharge from their facility into the Wastewater Collection System of the Town of Collierville in accordance with the Town of Collierville Sewer Use Ordinance, Chapter 13, Sections 201 through 212 Inclusive, of the Municipal Code of Ordinances.

This permit is conditional upon conformance to the above-mentioned ordinances and all other requirements and limitations set forth in Parts I-X hereof.

Signed this 5th day of March 2004

Director Collierville Public Utilities

Part I. Authorization to discharge is limited to those discharge points described in Attachment A.

Part II. A. Any substantial change in the information contained in the Industrial Waste Discharge Permit application dated October 30,2003 remove (Attachment B) which would change the nature of the wastewater loading shall be filed with the Director of Public Utilities Department within 14 days of known changes.

B. All accidental discharges of substances regulated in the Sewer Use Ordinance shall be reported to the Town of Collierville, Public Utilities Department as soon as said discharge is known to occur. A 24-hour number is provided for this purpose, (901) 853-3215, 7:00 AM - 4:00 PM, Nights and weekends 853-3920

Within five (5) working days a report detailing the nature of the discharge shall be filed with the Director of Public Utilities. At a minimum, this report shall include the substance(s), volume, time and duration of discharge, and measures taken to correct and prevent reoccurrence of the discharge.

Be it known that if said discharge causes interference or damage to the collection system or the wastewater treatment plant of the Town, the management of EnSafe, Inc. shall be held responsible.

C. No intentional discharge of substances regulated in the Sewer Use Ordinance shall be allowed unless stipulated in writing to the Director of Public Utilities.

D. Except where expressly authorized to do so by an applicable Pretreatment Standard or Requirement, no industrial user shall ever increase the use of process water, or in another way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with a Pretreatment Standard or Requirement. 40 CFR 403.6 (d) 7.

Part III. A. An annual review shall be made to the Industrial Waste Discharge Permit application by the person in responsible charge.

A submittal of an update of the application shall be filed with the Manager 30 days prior to expiration of this permit.

B. An effluent monitoring report shall be submitted to the Public Utilities Department on the last working day of each reporting period. This report shall include: flow volume, method of sampling, duration of sample, date and time of sampling, any pertinent operating conditions at time of sample, date of analysis if different from date of sampling, laboratory which conducted analysis, and concentration value of the parameters cited in Part III, C.

C. The parameters in Attachment B shall be analyzed at the designated frequency and reported as set forth in Part III, B. Pending further investigation and at the discretion of the Town, the list of parameters and monitoring requirements in Attachment B is subject to change. The Permittee shall be notified in advance of any change and shall have 60 working days to comply with said change.

D. Records shall be kept detailing chemicals purchased, disposed of, and methods of disposal. These records shall include the volume of specific chemicals and ultimate disposal site with the name, and address of the hauler. This information shall be made available upon request to the Public Utilities Department.

E. The duration of each reporting period shall be six (6) months starting at the permit effective date. A minimum of four (4) Grab Samples must be used for pH, Cyanide TE, Total Phenols oil and grease, Sulfide and Volatile Organics taken at intervals of no more than one (1) hour over a normal period of operations for all other pollutants, 24-hour Composite Samples must be obtained through Flow Proportional Composite sampling techniques where possible. Where Composite samples are not possible, a Grab Sample may be taken with the prior approval of the Public Utilities Department. (Ref. Federal Regulations 131.2683 (5) (III).) (CFR 403.12 (5) (III).)

Part IV. The monitoring structure described in Attachment A shall be maintained by the Permittee and 24-hour access provided to the Department of Public Utilities personnel.

Part V. Variance from and conditions set forth in Part IV may be granted by the Director. Requests for variance shall be made in writing not less than 30 days preceding the date on which a compliance goal is to be completed.

Part VI. Be it known that violation of any conditions, requirements or limitation set forth in this Permit or the Sewer Use Ordinance shall cause the Permittee to be subjected to enforcement actions as set forth in Chapter 13-210 (2) of the Sewer Use Ordinance.

Part VII. Wastewater Discharge Permits are issued to a specific User for a specific operation. A wastewater discharge permit shall not be reassigned or transferred or sold to a new owner, new user, different premises, or a new or changed operation without the approval of the Town. Any succeeding owner or User shall also comply with the terms and conditions of the existing permit. Records of monitoring shall be maintained for a minimum of three (3) years and shall be available for inspection by the Public Utilities Department.

Part VIII. If sampling performed by the Permittee indicates a violation, the Permittee shall notify the Public Utilities Department within 24 hours of becoming aware of the violation. The Permittee shall also repeat the sampling and analysis and submit the results of the repeat analysis to the Public Utilities Department within 30 days after becoming aware of the violation.

Part IX. If directed in writing by the Public Utilities Department, the Permittee shall develop a slug discharge control plan to meet the requirements of 40 CFR 403.8 (f) (2) (v). The evaluation of the need for a plan will be made at least once every two (2) years. A slug discharge is any discharge of a non-routine episodic nature, including but not limited to an accidental spill or a non-customary batch discharge.

Part X. The Permittee shall notify the Public Utilities Department immediately for all discharges that could cause problems to the wastewater treatment plant, including any slug loadings as defined by 40 CFR 403.5 (b). In addition, the following pollutants shall not be introduced into a POTW:

(1) Pollutants which create a fire or explosion hazard in the POTW including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

(2) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such discharges;

(3) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;

(4) Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;

(5) Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40°C (104°F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;

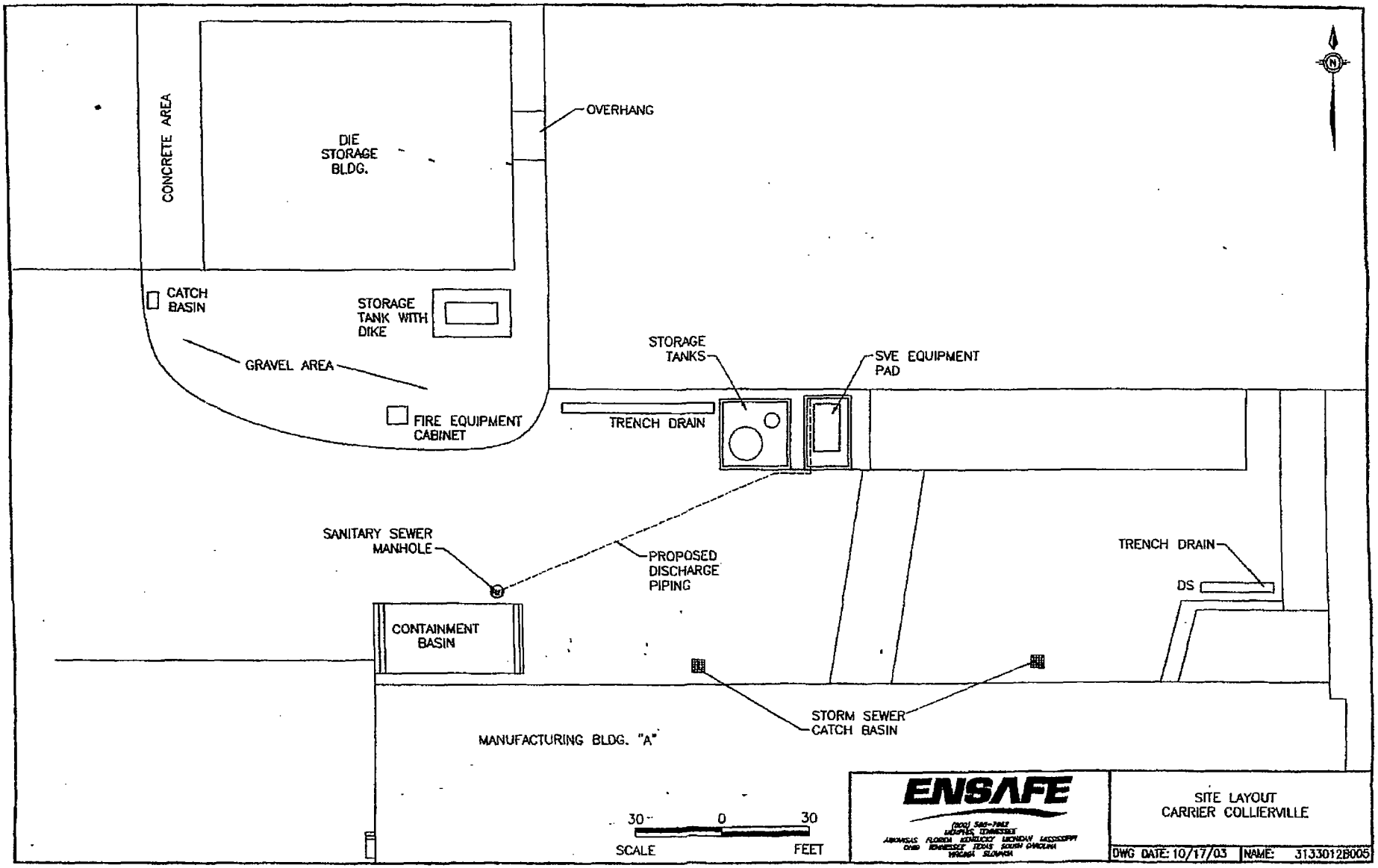
(6) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

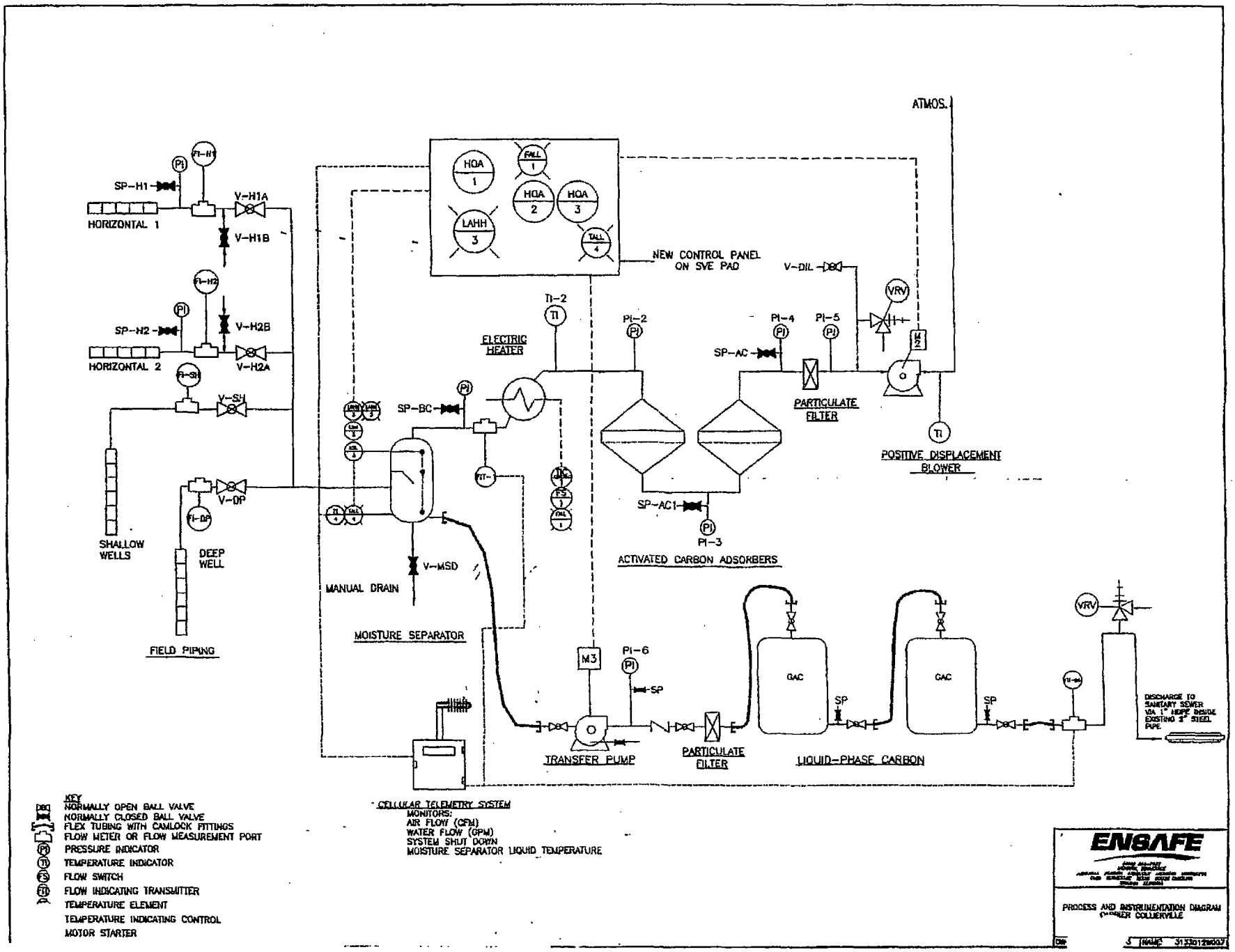
(7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quality that may cause acute worker health and safety problems;

(8) Any trucked or hauled pollutants, except at discharge points designated by the POTW.

Attachment A

See attached site layout and process diagram for effluent discharge and sample point.


CONCRETE AREA
DIE STORAGE BLDG.
OVERHANG
CATCH BASIN
STORAGE TANK WITH DIKE
GRAVEL AREA
FIRE EQUIPMENT CABINET
STORAGE TANKS
SVE EQUIPMENT PAD
TRENCH DRAIN
SANITARY SEWER MANHOLE
PROPOSED DISCHARGE PIPING
TRENCH DRAIN
DS
CONTAINMENT BASIN
STORM SEWER CATCH BASIN
MANUFACTURING BLDG. "A"
30 0 30
SCALE FEET
ENSAFE
SITE LAYOUT
CARRIER COLLIERVILLE
DWG DATE: 10/17/03
NAME: 3133012B005


ATMOS.
HOA 1
FALL 1
HOA 2
HOA 3
LAHH 3
TALL 4
NEW CONTROL PANEL ON SVE PAD
SP-H1
V-H1A
HORIZONTAL 1
V-H1B
SP-H2
V-H2B
HORIZONTAL 2
V-H2A
V-SH
SHALLOW WELLS
V-DP
DEEP WELL
FIELD PIPING
SP-BC
ELECTRIC HEATER
TI-2
PI-2
PI-4
PI-5
SP-AC
PARTICULATE FILTER
V-DIL
VRV
POSITIVE DISPLACEMENT BLOWER
SP-AC1
PI-3
ACTIVATED CARBON ADSORBERS
V-MSD
MANUAL DRAIN
MOISTURE SEPARATOR
M3
PI-6
SP
TRANSFER PUMP
PARTICULATE FILTER
GAC
GAC
LIQUID-PHASE CARBON
DISCHARGE TO SANITARY SEWER VIA 1" HDPE INSIDE EXISTING 4" STEEL PIPE
CELLULAR TELEMETRY SYSTEM
MONITORS:
AIR FLOW (CFM)
WATER FLOW (GPM)
SYSTEM SHUT DOWN
MOISTURE SEPARATOR LIQUID TEMPERATURE
KEY
NORMALLY OPEN BALL VALVE
NORMALLY CLOSED BALL VALVE
FLEX TUBING WITH CAMLOCK FITTINGS
FLOW METER OR FLOW MEASUREMENT PORT
PRESSURE INDICATOR
TEMPERATURE INDICATOR
FLOW SWITCH
FLOW INDICATING TRANSMITTER
TEMPERATURE ELEMENT
TEMPERATURE INDICATING CONTROL
MOTOR STARTER
ENSAFE
PROCESS AND INSTRUMENTATION DIAGRAM
COLLIERVILLE
NAME 3133012M007

Attachment B

Discharge Limitations and Monitoring Requirements

Wastewater discharge from an industrial facility, EnSafe, Inc enters the Town of Collierville's sewer system at 97 South Byhalia Rd.

Discharge shall be limited to and monitored by the Permittee as specified below:

Effluent Characteristics	Daily Minimum Concentration; mg/l	Daily Maximum Concentration; mg/l	Monitoring Frequency *
Dissolved Oxygen	1.0		1/Week
pH	6.0 SU	9.0 SU	1/Week
BOD		250	1/Week
Total Suspended Solids		225	1/Week
Chromium, Total		0.13	1/Week
Toluene		0.015	1/Week
Benzene		0.003	1/Week
1,1,1 Trichloroethane		0.03	1/Week
Ethylbenzene		0.004	1/Week
Carbon Tetrachloride		0.015	1/Week
Chloroform		0.085	1/Week
Tetrachloroethylene		0.027	1/Week
Trichloroethylene		0.01	1/Week
1,2 trans Dichloroethylene		0.0017	1/Week
Methylene Chloride		0.052	1/Week

*A written request for reduction in monitoring frequency may be made after 90 days from the effective date of the discharge permit based upon test results and other considerations.

Effluent Characteristic	Daily Maximum Concentration; mg/l	Monitoring Frequency
TTO	2.13	Semi-annual

July 12, 2005

Mr. David Harrison
Pretreatment Coordinator
Town of Collierville
Public Services Department
136 East Shelton Road,
Collierville, TN 38017

Reference: Carrier Corporation
97 South Byhalia Road
Collierville, Tennessee
Discharge Permit No. 90-001-A
SAS Project No. 031091

Dear Mr. Harrison:

On behalf of United Technologies Corporation (UTC), SAS Environmental, Inc. (SAS) is pleased to contact the Town of Collierville to follow application procedures to modify and/or amend the existing Town of Collierville Sewer Use Ordinance permit (90-001-A) for the above referenced site. This permit was originally associated with the former operations at the Main Plant Area (MPA) soil vapor extraction (SVE) system that was in operation at the site. The water from the moisture separator of the system was discharged into the Town of Collierville Wastewater Collection System. The system was deactivated and removed {add date}in conjunction with the expansion of the Carrier Corporation (Carrier) facility.

During the current facility expansion activities, a new SVE system is being installed to replace the MPA system. It is anticipated that installation of the new system will completed in September 2005. In addition, the anticipated amount of water generated by the new system will be equivalent to the old system, have the same characteristics, and be treated in the same manner as the previous system (i.e. carbon adsorption). Analytical data from operation of the former MPA system demonstrated that the system efficiently removed dissolved-phase volatile organic compounds to levels acceptable for discharge into the Town of Collierville Wastewater Collection System. Based on this information UTC would like to utilize the permit for the former MPA system for the new system. UTC will maintain with the same sampling frequency.

The anticipated start of discharge will be in September of 2005. SAS will contact the Town of Collierville for pre-inspection prior to discharging the system water to the Town of Collierville Wastewater Collection System.

We look forward to receiving your permission to continue discharge under the former MPA permit and for acceptance of the reduced sampling program. If you have any questions or require additional information, please contact me at 330-666-1546.

Respectfully,
SAS Environmental, Inc.

J. Frank O'Connell, Jr.
Project Supervisor

Pc: Bryan Kielbania, United Technologies Corporation
Bruce Cliff, Xpert Design and Diagnostics, LLC
Mark V. Allen, SAS Environmental, Inc.

APPENDIX I

CONSTRUCTION PERMITS AND INSPECTIONS

- EQUIPMENT BUILDING PERMIT / INSPECTION
- ELECTRICAL PERMIT / INSPECTION
- FIRE INSPECTION

EQUIPMENT BUILDING PERMIT / INSPECTION

OCT 7 2005

The Town of Collierville

500 Poplar View Pkwy.
Collierville, TN 38017
Phone (901) 457-2310
FAX (901) 457-2329

APPLICATION FOR BUILDING PERMIT

DATE: 10/3/05 PERMIT NO. 05-4878 CONTRACTOR LIC. NO. 00049630 COLL. BUS. LIC. applied

OWNER Carrier Corporation ADDRESS ~~97 S. Byhalia~~ Collierville, TN PHONE 901-854-3121

ARCHITECT Burr & Cole ADDRESS ~~3485 Poplar Ave., # 200~~ Memphis, TN 38017 PHONE 901-452-9696

CONTRACTOR Dyson Construction, LLC ADDRESS ~~Cordova, TN 38018~~ 275 S. Walnut Bend, # 200 38017 PHONE 901-309-669

ADDRESS 500 Winchester Blvd. Collierville, TN LOT NO. _____ SUB. DIV. _____

NOTE: Fill in the following information as accurately and completely as possible. This application is not acceptable unless all required information is furnished

CHECK ONE: ☒ New Construction ☐ Alteration ☐ Change in use ☐ Addition

☐ Proposed Use House electrical equipment (vapor extraction building)

☐ No of Stories 1 ☐ Fire District _____ ☒ Height in Feet 14'

☐ Pool ☐ Vinyl ☐ Gunite ☐ Above Ground ☐ Fiberglass

Total AreaOccupied by building Percentage of Lot Covered

FEES		AREAS		GENERAL	
$ 30.00	Use & Occupancy	20' x 30'	1st Floor		Zoning District
270.00	Building		2nd Floor		Front Yd. Setback
137.50	Plans Review Fee		3rd Floor		Rear Yd. Setback
	Pool		4th Floor		Right Side Yd. Setback
	Demolish		Att. Garage		Left Side Setback
	Curb Cut		Porchs		Bath or Rest Rms.
42 180.00	Fire Dev. Fee		Balconies		Bed Rooms
	Hist Pres: Fee		Other		Total Rooms
	Alt. Trans: Fee				Water Heater
203) 100.00	Fire Plan Review Fee				Heating
					Fireplace
	TOTAL FEE	600	Total Square Ft.		Chimney
590.00				Foundation: ☐ Joist ☒ Slab	

$ _____ TOTAL _____ REC.NO. _____ CHECK NO. 1904 DATE PAID 10/10/05

NOTE: Issuance of Permit SHALL NOT be held to permit or to be an approval of the Violation of any provision of any Town code or State Law.

ESTIMATED BUILDING VALUE $ 50,000 (not including property)

In making application for a building permit, the applicant states that the information given is, to the best of his knowledge, true and accurate. It is understood and agreed by the applicant that any error, misstatement or misrepresentation of fact, either with or without intention on his part, such as might, if unknown cause a refusal of this application or any alteration or change in plans made without the approval of the building official subsequent to the issuance of the building permit, shall constitute sufficient grounds for the revocation of such permit.

CALL FOR FOLLOWING INSPECTIONS (when ready): Site, Footing, Posthole, Slab, Floor Joist, Framing, Deep Seal, Brick Tie, Strapping, Fire Protection, Rough-In Plumbing, Rough-In Electrical, Final Plumbing, Final Electrical, Curb Cut, Sidewalk, Rough-In Gas, Gas Final, Mech. Temp., Mech. Final, Certificate of Occupancy.

FOR INSPECTIONS CALL: 853-3272.

APPLICANT SIGNATURE: [signature] ☐ Home Owner - Builder Dyson Construction, LLC

PERMIT VOID: If construction not begun within six (6) months from date permit issued: if more than one (1) year elapses between inspections: if incorrect information is given on application for permit.

☐ Finish Floor Elevation
☐ Foundation Survey Required
☐ Seismic Construction Required
☐ 2 Trees Required
☐ Model Energy

Plans Approved By: _____

Fire Marshall _____

Engineering Dept. _____

Planning Dept. _____

BUILDING PERMIT ISSUED

DATE 10/6/05 SIGNED [signature]
Building Official or Plans Examiner

Principals
Bruce W. Burr, P.E.
B. Jack Cole, P.E.
Stephen J. Green, P.E.
Joel T. Johnson, P.E.
Bernard Zawadu, P.E.

Collierville Building D
Reviewed for Code Compl
Reviewed By: Date: 10/4/05

September 30, 2005

Town of Collierville
Construction Code Enforcement
500 Poplar View Parkway
Collierville, TN 38017

Re: Vapor Extraction Building – Carrier Corporation
97 South Byhalia Road
Collierville, Tennessee

Gentlemen:

This is to notify you that our firm has performed structural engineering construction review of soil bearing conditions and concrete reinforcing and for the above project and to the best of our knowledge the construction was in accordance with the approved plans and specifications.

Sincerely,

BURR & COLE CONSULTING ENGINEERS, INC.

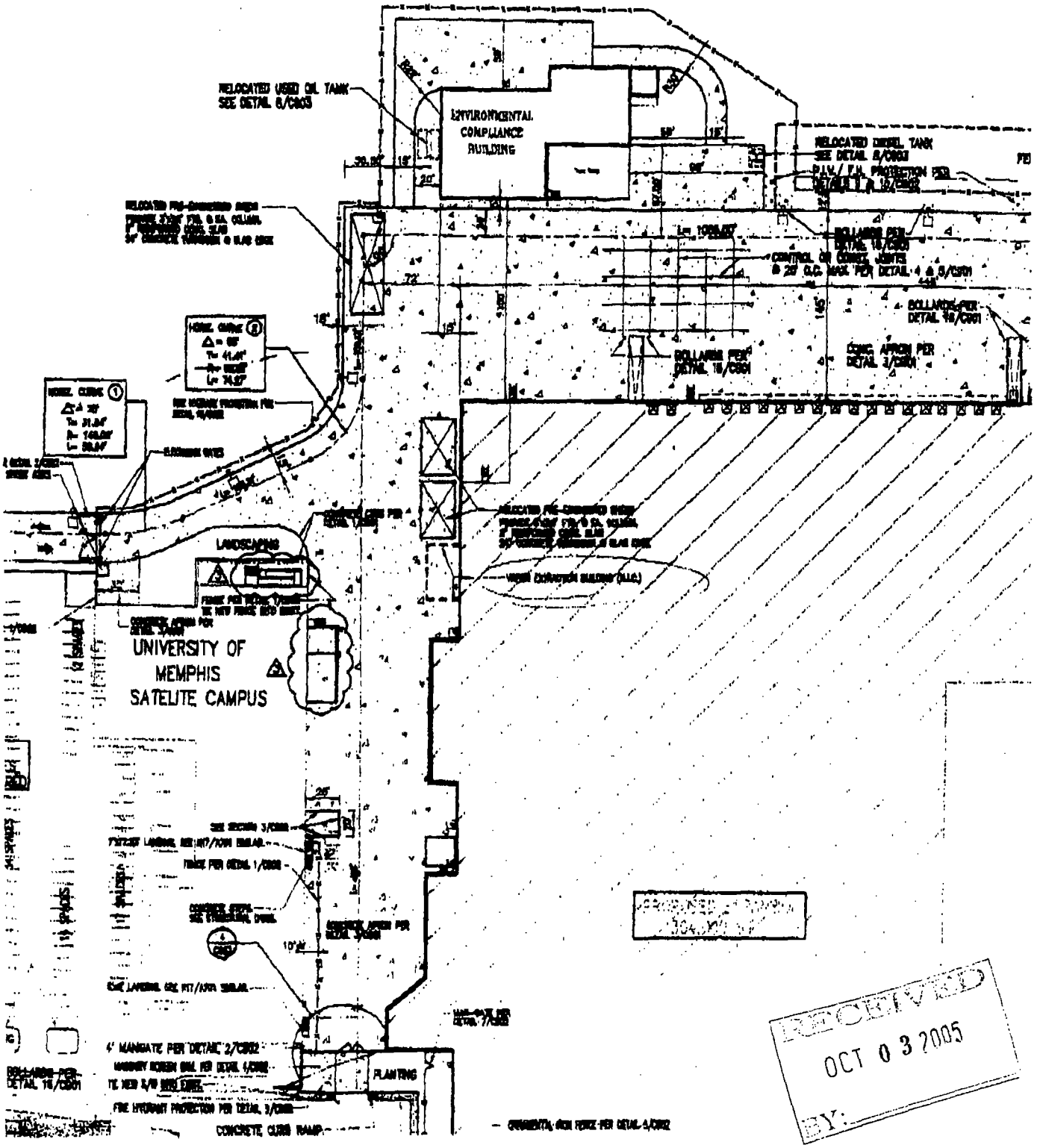
Joel T. Johnson

Joel T. Johnson

RECEIVED
OCT 03 2005
BY:

Copy: Frank O'Connell Jr.

BURR & COLE CONSULTING ENGINEERS, INC. 3485 Poplar Avenue, Suite 200, Memphis, Tennessee 38111
phone 901.452.9676 • fax 901.458.9640 • e-mail burrcole@burrcole.com



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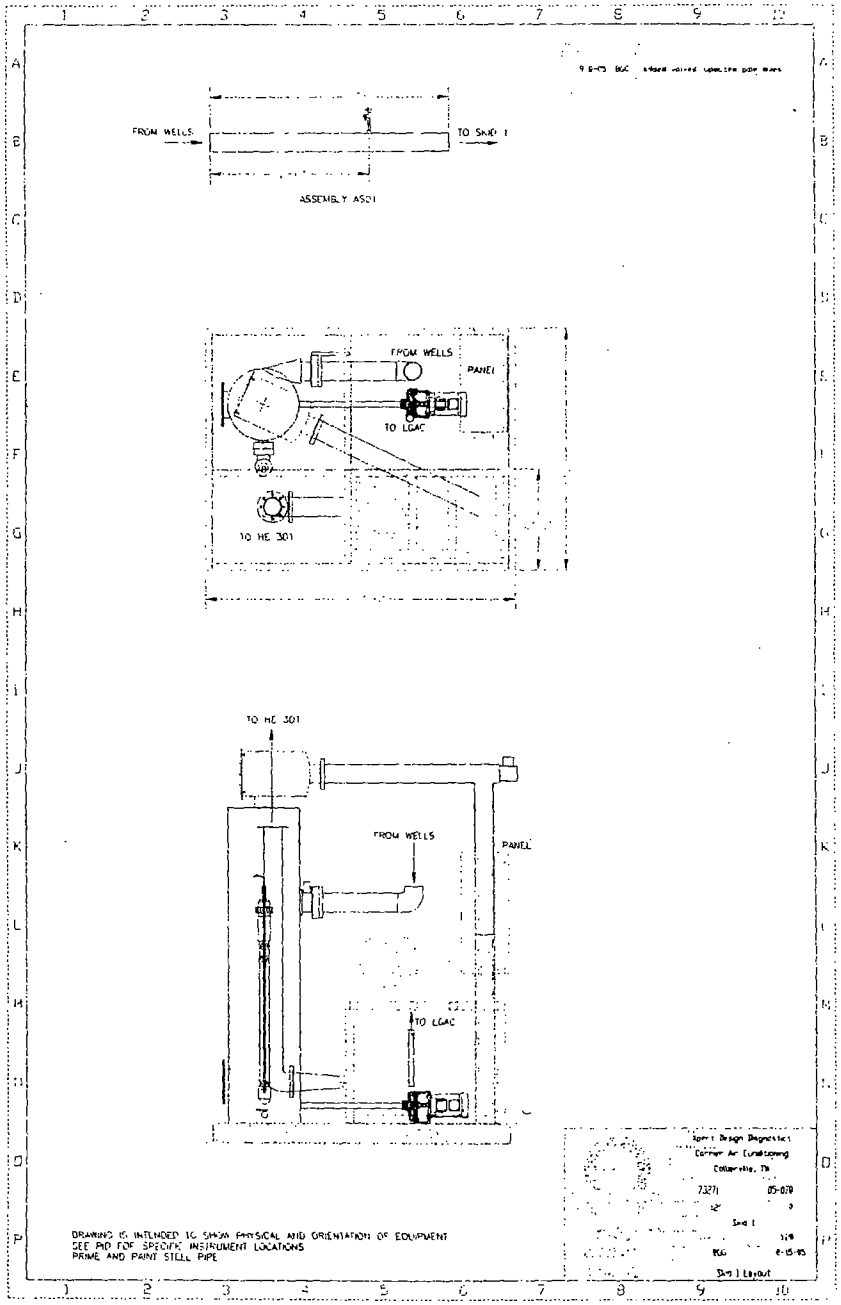
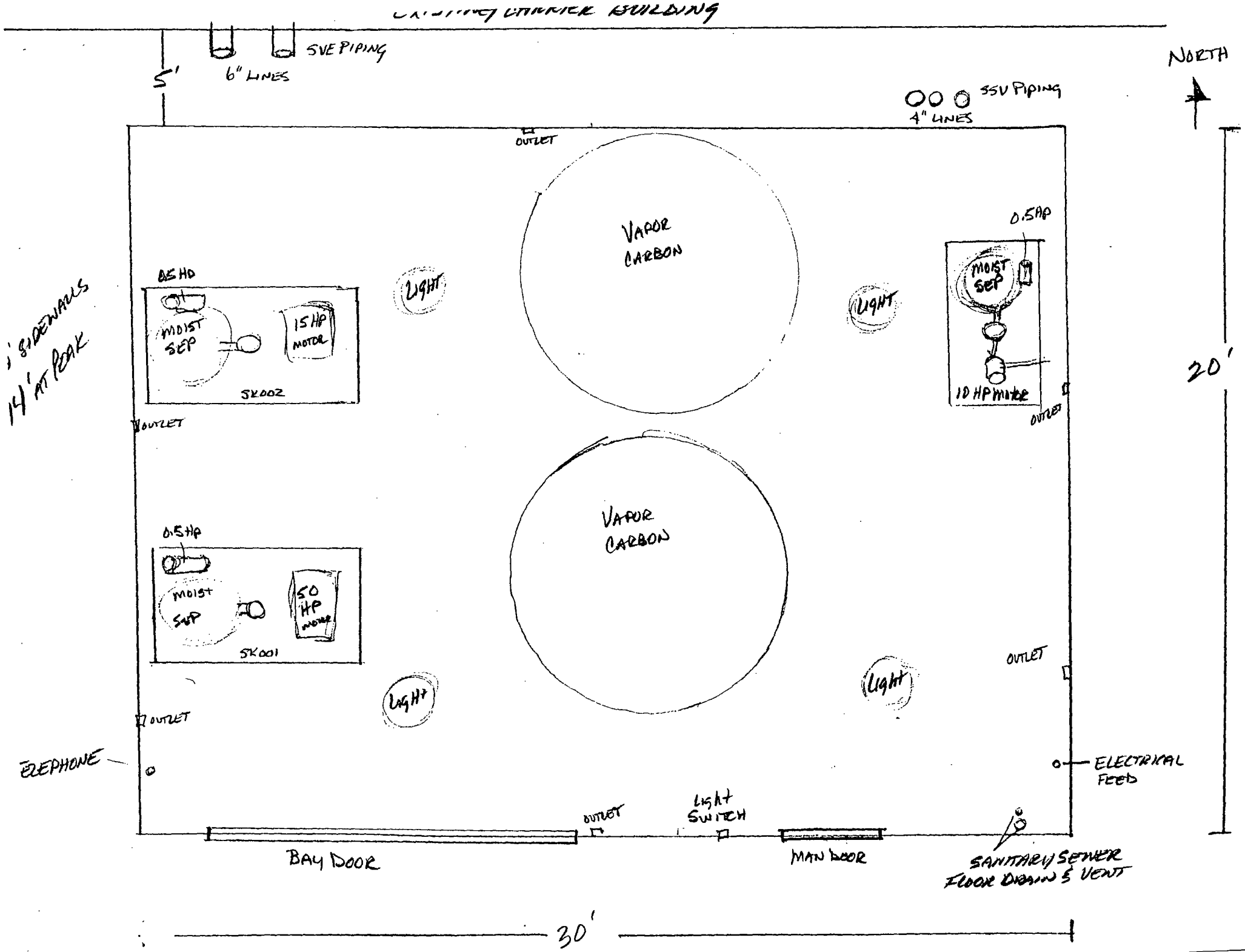
OCT 0 3 2005
BY:


FROM WELLS
TO SKID 1
ASSEMBLY AS01
FROM WELLS
PANEL
TO LGAC
TO HE 301
TO HE 301
FROM WELLS
PANEL
TO LGAC
DRAWING IS INTENDED TO SHOW PHYSICAL AND ORIENTATION OF EQUIPMENT
SEE PID FOR SPECIFIC INSTRUMENT LOCATIONS
PRIME AND PAINT STEEL PIPE
Xpert Design Diagnostics
Corner Air Conditioning
Collierville, TN
73271
05-078
Skid 1
Skid 1 Layout


EXISTING CARRIER BUILDING
SVE PIPING
6" LINES
5'
SSV PIPING
4" LINES
NORTH
OUTLET
VAPOR CARBON
VAPOR CARBON
LIGHT
LIGHT
LIGHT
LIGHT
0.5HP
MOIST SEP
15HP MOTOR
SK002
0.5HP
MOIST SEP
10 HP motor
OUTLET
OUTLET
0.5HP
MOIST SEP
50 HP motor
SK001
OUTLET
OUTLET
OUTLET
ELEPHONE
ELECTRICAL FEED
Light SWITCH
OUTLET
BAY DOOR
MAN DOOR
SANITARY SEWER FLOOR DRAIN & VENT
20'
30'
' SIDEWALLS
14' AT PEAK

HERITAGE
BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, AR 72114

ENGINEERED FOR THE LONG RUN

Town of Collierville Building Department
Reviewed for Code Compliance
Reviewed By: Date: 10/4/05

RECEIVED
OCT 03 2005
BY:

BUILDING SPECIFICATIONS

THE STRUCTURE UNDER THIS CONTRACT HAS BEEN DESIGNED AND DETAILED FOR THE LOADS AND CONDITIONS STIPULATED IN THE CONTRACT AND SHOWN ON THESE DRAWINGS. ANY ALTERATIONS TO THE STRUCTURAL SYSTEM OR REMOVAL OF ANY COMPONENT PARTS, OR THE ADDITION OF OTHER CONSTRUCTION MATERIALS OR LOADS MUST BE DONE UNDER THE ADVICE OF A REGISTERED ARCHITECT, CIVIL OR STRUCTURAL ENGINEER. HERITAGE BUILDING SYSTEMS WILL ASSUME NO RESPONSIBILITY FOR ANY LOADS NOT INDICATED.

THIS HERITAGE METAL BUILDING IS DESIGNED USING STANDARD DESIGN PRACTICES BASED ON PERTINENT PROCEDURES AND RECOMMENDATIONS OF THE FOLLOWING ORGANIZATIONS AND CODES.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION: "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", 9TH EDITION.

AMERICAN IRON AND STEEL INSTITUTE: "SPECIFICATION FOR THE DESIGN OF COLD FORMED STRUCTURAL MEMBERS", 1980.

AMERICAN WELDING SOCIETY: "STRUCTURAL WELDING CODE" AWS D1.1–88, SECT. 5, PART B.

MATERIAL PROPERTIES OF STEEL PLATE AND SHEET STEEL USED IN THE FABRICATION OF PRIMARY RIGID FRAMES AND ALL PRIMARY STRUCTURAL FRAMING MEMBERS (OTHER THAN COLD FORMED SECTIONS) CONFORM TO ASTM A–36 MODIFIED WITH A MINIMUM YIELD OF 50,000 PSI, OR A–570 OR A–572 GRADE 50.

MATERIAL PROPERTIES OF COLD FORMED LIGHT GAGE STEEL MEMBERS CONFORM TO THE REQUIREMENTS OF ASTM–570, WITH A MINIMUM YIELD OF 55,000 PSI.

HIGH STRENGTH BOLTS AND THEIR INSTALLATION SHALL CONFORM TO ASTM SPECIFICATIONS A–325 AND ARE DESIGNED AS BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN THE SHEAR PLANE. TIGHTENING OF THESE BOLTS IS RECOMMENDED BY THE TURN–OF–THE–NUT METHOD, PER "AISC SPECIFICATIONS FOR STRUCTURAL JOINTS."

ALL STEEL MEMBERS EXCEPT BOLTS AND FASTENERS SHALL RECEIVE ONE SHOP COAT OF INHIBITIVE PRIMER UNLESS STATED OTHERWISE IN THE CONTRACT.

SHOP AND FIELD INSPECTIONS AND ASSOCIATED FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS STIPULATED OTHERWISE.

BUILDERS RESPONSIBILITIES

THE BUILDER MUST SECURE ALL REQUIRED APPROVALS AND PERMITS FROM THE APPROPRIATE AGENCY AS REQUIRED.

APPROVAL OF HERITAGE BUILDING SYSTEMS DRAWINGS AND CALCULATIONS INDICATES THAT HERITAGE HAS CORRECTLY INTERPRETED AND APPLIED THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS. (SECT. 4.2.1 AISC CODE OF STANDARD PRACTICE, 9TH EDITION.)

WHERE DISCREPANCIES EXIST BETWEEN THE HERITAGE STRUCTURAL STEEL PLANS AND THE PLANS FOR OTHER TRADES, THE STRUCTURAL STEEL PLANS WILL GOVERN. (SECT. 3.3 AISC CODE OF STANDARD PRACTICE, 9TH EDITION.)

DESIGN CONSIDERATONS OF ANY MATERIALS IN THE STRUCTURE WHICH ARE NOT FURNISHED BY HERITAGE ARE THE RESPONSIBILITY OF THE BUILDER AND ENGINEERS OTHER THAN HERITAGE ENGINEERING UNLESS SPECIFICALLY INDICATED.

THE BUILDER IS RESPONSIBLE FOR ALL ERECTION OF STEEL AND ASSOCIATED WORK IN COMPLIANCE WITH HERITAGE CONSTRUCTION DRAWINGS.

TEMPORARY SUPPORTS, SUCH AS TEMPORARY GUYS, BRACES, FALSEWORK OR OTHER ELEMENTS REQUIRED FOR ERECTION WILL BE DETERMINED, FURNISHED, AND INSTALLED BY THE BUILDER, (SECT 7.9.1 AISC CODE OF STANDARD PRACTICE, 9TH EDITION.)

IT IS THE BUILDERS RESPONSIBILITY TO APPLY AND OBSERVE ALL PERTINENT SAFETY RULES AND REGULATIONS, AND PER OSHA STANDARDS AS APPLICABLE.

THE BUILDER IS RESPONSIBLE FOR THE VERIFICATION OF ALL SHIPMENTS RECEIVED, AND MUST INVENTORY BUILDING AT TIME OF DELIVERY.

GENERAL NOTES

NO CHANGES SHOULD BE MADE TO THIS BUILDING SYSTEM UNLESS APPROVED IN WRITING BY THE MANUFACTURERS ENGINEERING DEPARTMENT.

UNAPPROVED CHANGES COULD RESULT IN AN UNSAFE BUILDING DESIGN AND COULD ENDANGER PUBLIC SAFETY.

DESIGN LOADING

THIS STRUCTURE IS DESIGNED UTILIZING THE LOADS INDICATED AND APPLIED AS REQUIRED BY:

SBC 99

THE BUILDER IS TO CONFIRM THAT THESE LOADS COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT.

16 / 20	PSF FRAME / ROOF LIVE LOAD
10	PSF ROOF SNOW LOAD
90	WIND SPEED (MPH)
1	PSF COLLATERAL LOAD
0.200	SEISMIC COEFFICIENT
–	EXPOSURE

DESIGN DATA

PEAK VELOCITY RATED ACCELERATION, Av = 0.200
PEAK ACCELERATION, Aa = 0.200
SEISMIC HAZARD EXPOSURE GROUP = GROUP 1
SEISMIC PERFORMANCE CATEGORY = D
SOIL PROFILE TYPE = UNKNOWN SITE COEFF. = 2.0
BASIC STRUCTURAL SYSTEM AND SEISMIC RESISTING SYSTEM
= ORDINARY MOMENT FRAME OF STEEL.
RESPONSE MODIFICATION FACTOR, R = 4.5
DEFLECTION AMPLIFICATION FACTOR, Cd = 4.0
ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE.

DRAWING INDEX

L1 of 1	COVER SHEET
AB1	ANCHOR BOLT PLAN
AB2	ANCHOR BOLT REACTIONS
RFP	ROOF FRAMING PLAN
FCS	FRAME CROSS SECTION
LEW	LEFT ENDWALL
REW	RIGHT ENDWALL
FSW	FRONT SIDEWALL
BSW	BACK SIDEWALL
DET	GENERAL DETAILS
TRM	TRIM DETAILS

THESE DRAWINGS ARE:
- [x] FOR CONSTRUCTION
- [ ] NOT FOR CONSTRUCTION
- [ ] FOR PERMITS ONLY
- [ ] FOR APPROVAL *
- [ ] OTHER _____

* APPROVAL ORDERS MUST BE RELEASED FOR FABRICATION WITHIN 30 CALENDAR DAYS AFTER SUBMITTAL DRAWINGS ARE ISSUED OR THE ORDER WILL BE SUBJECT TO ANY CURRENT PRICE INCREASE.

FOR QUESTIONS OR ASSISTANCE CONCERNING ERECTION OF HERITAGE BUILDINGS, CALL:
1–800–643–5555
MONDAY – FRIDAY 7:00AM TO 5:00PM CENTRAL STANDARD TIME.

PROPERTY OF: HERITAGE BUILDING SYSTEMS®
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CONFIDENTIAL: THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF HERITAGE BUILDING SYSTEMS UNAUTHORIZED COPYING, DISCLOSURE OR OTHER UNAUTHORIZED USES ARE PROHIBITED.

CHARLES LEON LOVE
REGISTERED ENGINEER
AGRICULTURE
No. 19864
STATE OF TENNESSEE

DRAWN	DATE
AKW	5/14/05
CHECKED	DATE
SW	
APPROVED	DATE
SCALE	
N.T.S.	

HERITAGE BUILDING SYSTEMS
2612 GRIBBLE STREET
NORTH LITTLE ROCK, AR 72114
800–643–5555

CUSTOMER:
FRANK O'CONNELL
COLLIERVILLE, TN 38017

BUILDING:
20'–0" x 30'–0" x 14'–0" 1.0:12

JOB NO.
TNX27845

REV. NO.	SHEET NO.
	L1 of 1

Contractor Copy

Town of Collierville Building Dept.

Reviewed for Code Compliance

Reviewed by: [illegible] Date: 10/4/05

500 WINCHESTER Rd.

VAPOR EXTRACTION Bldg

CARRIER Corp.

ELECTRICAL PERMIT / INSPECTION

DATE 11/30/05 TIME _____ CALLED BY SHELBY
TIME READY _____ REC'D BY _____

TOWN OF COLLIERVILLE BUILDING DEPARTMENT

500 POPLAR VIEW PKWY.
COLLIERVILLE, TN 38017

BUILDING DEPARTMENT
PHONE (901) 457-2310
FAX (901) 457-2329

INSPECTION TAG

LOT# Carrier ADDRESS: 500 Winchester

SUBDIVISION: Environmental Bld. (Shed)
Out Bldg South Side

	Approved	Refused	of new addition	Re-Insp
Site				
Foundation ( )			200 AMP - 3/0	
Sewer				
Rough-in Plumbing				
Brick Tie				
Framing				
Top Out				
Mechanical Temp.				
Rough-in Electrical				
Rough-in Gas				
Temp.				
Final Plumbing				
Final Electrical	✓			
Final Gas				
Mechanical Final				
Building Final				
Cert. Of Occupancy				

APPROVAL OF INSPECTION IN NO WAY APPROVES ANY VIOLATION OF CITY, OR STATE ORDINANCE OR LAW.

INSPECTOR'S SIGNATURE [signature]
DATE 11/30/05
TIME _____

FIRE INSPECTION

COLLIERVILLE FIRE DEPARTMENT
INSPECTION CHECKLIST

Address: 500 Winchester Suite 101

Business Name: Carrier Soil Vapor Extraction Bldg Phone: ( )

Business Type: [ ] Update occupancy information

TYPE OCCUPANCY

[ ] Assembly [ ] Business [✓] Industrial [ ] Storage [ ] Hospital/Nursing Home [ ] School/Daycare [ ] Mercantile [ ] Residential

TYPE INSPECTION		RI	TIME			RI	TIME			RI	TIME
[ ] ANNUAL INSPECTION	200			[ ] BUCKET FLOW	225			[ ] FEDERAL	261		
[ ] HOOD AND DUCT	201			[ ] COMM HYDRO	226			[ ] STATE	262		
[ ] COMPLAINT	205			[ ] R. SPKR TOP OUT	227			[ ] BUS. LICENSE INSPECTIOI	265		
[ ] REFERRAL	206			[ ] ABOVE CEILING COMM SPKR	228			[ ] ALCOHOL INSPECTION	266		
[ ] ELEVATOR	207			[ ] BUILDING INSPECTION	230			[ ] SPECIAL INSPECTION	270		
[ ] SITE	210			[ ] ABOVE CEILING FIRE WALL	231			[ ] INDUSTRIAL	271		
[ ] UNDERGRD / KICKER	211			[ ] HAZARDOUS OPERATION	240			[ ] ANN. BUS. INSPECTION FM	272		
[ ] FIRE PROTECTION	220			[ ] UNDERGROUND TANK INSP.	241			[ ] FIRE STATION INSPECTIOI	280		
[ ] FIRE ALARM	221			[ ] PERMIT	250			[ ] INSPECTION OTHER	290		
[ ] SPKR SYSTEM	222			[✓] C/O see note below	251			[ ] WATER FLOW	291		
[ ] R SPKR INSTALL.	223			[ ] TEMP. C/O see note below	252			[ ] CONSULTATION	600		
[ ] RESD. HYDRO	224										

A. EXITS AND PASSAGE WAYS
[ ] PASSED [ ] FAILED [ ] N/A

1. [ ] DOORS 2. [ ] CORRIDORS
3. [ ] STAIRS 4. [ ] PANIC HARDWARE
5. [ ] EXIT SIGNS 6. [ ] EMERGENCY LIGHTING
7. [ ] F.D KEY BOX

B. HAZARDOUS MATERIALS
[ ] PASSED [ ] FAILED [ ] N/A

1. [ ] SAFETY CANS 2. [ ] STORAGE ROOMS
3. [ ] TANKS 4. [ ] 704 MARKING
5. [ ] Misuse of Material 6. [ ] FUELING / DISPENSING

C. ELECTRICAL
[ ] PASSED [ ] FAILED [ ] N/A

1. [ ] WIRING 2. [ ] EXTENSION CORDS
3. [ ] JUNCTION BOX 4. [ ] COVER PLATES
5. [ ] APPLIANCE

D. FIRE PROTECTION
[ ] PASSED [ ] FAILED [ ] N/A

1. [ ] EXTINGUISHERS 2. [ ] EXT OBSTRUCT/MOUNT
3. [ ] SMOKE/HEAT DETECTOR. 4. [ ] MANUAL ALARM
5. [ ] HOOD AND DUCT 6. [ ] ALARM SYSTEM

E. SPRINKLER SYSTEM
[ ] PASSED [ ] FAILED [ ] N/A

1. [ ] IN SERVICE 2. [ ] CLEARANCE
3. [ ] Valves Leaking 4. [ ] Valves Obstruct
5. [ ] FDC 6. [ ] WPIV/PIV
7. [ ] FIRE HYDRANT 8. [ ] INSTALLATION

[ ] Reinspection #

F. GENERAL HAZARDS
[ ] PASSED [ ] FAILED [ ] N/A

1. [ ] RUBBISH 2. [ ] NO SMOKING SIGNS
3. [ ] STOCK 4. [ ] OUTSIDE GROUNDS
5. [ ] HEATING EQUIPMENT 6. [ ] UNLISTED HTG DEVICE USE
7. [ ] OCC. LOAD SIGN 8. [ ] CLEANING SUPPLIES
9. [ ] EVACUATION PLAN 10 [ ] ADDRESS

Final c/o inspection - (ok)

Extinguishers (ok)
Exit + Emergency lights - (ok)

(ok) to c/o contingent on building dept

The above listed hazards were observed during a Fire Safety Inspection of your facility this date. The listed hazards found on this inspection are referenced by Codes and Ordinances Adopted by the Town of Collierville. Refer any questions concerning this inspection to the Fire Marshal's Office at 901-853-3290 7am-4pm Monday through Friday.

[✓] Final Fire Inspection is not approval to occupy this facility. Final C/O must be obtained from the Building and Codes Department.

Copy received by: [signature] Position: Project Supervisor Date: 12-13-05

Signing this form does not mean that you agree or disagree, only that the inspection has been discussed with you and you have received a copy of this report.

Date: 12/13/05 Time in: 10:00 Time out: 10:20 Inspector(s): Paul Witt

[ ] Re-inspection Fee Due Before Next Inspection [✓] Paul Witt [ ] Scott Sumner [ ] Buddy Billings

[ ] To be re-inspected on: Time: