

D.1.a VAPOR MITIGATION SYSTEM MAINTENANCE PLAN

December 16, 2021

Property Located at:
223 Alfred Street, Athens, WI

FID #: 737203390

WDNR BRRTS #: 02-37-536610

Parcel Identification #: 102-3004-314-1097

Introduction

This document is the Maintenance Plan for a Vapor Mitigation System at the above-referenced property in accordance with the requirements of s. NR 724.13 (2), Wis. Adm. Code. The maintenance activities relate to the existing sub-slab vapor depressurization system (SSDS) which addresses or occupies the area over the contaminated groundwater plume or soil.

More site-specific information about this property/site may be found in:

- The case file in the DNR West Central Region office.
- At <http://dnr.wi.gov/topic/Brownfields/wrrd.html>, which includes:
 - BRRTS on the Web (DNR's internet-based data base of contaminated sites) for the link to a PDF for site-specific information at the time of closure and on continuing obligations.
 - RR Sites Map for a map view of the site.
- The DNR project manager for Marathon County.

Description of Contamination

Soil contaminated by chlorinated compounds (primarily tetrachloroethylene [PCE]) is located at a depth of 2 feet to 20 feet below ground surface located on the subject property and extending to south into Mueller Street/State Highway 97 right of way. Groundwater contaminated by chlorinated compounds (primarily PCE) is located at a depth of 14 feet to 45 feet below ground surface. The extent of the soil and groundwater contamination is shown on the attached Figure 2 – Site Map.

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Description of the Vapor Mitigation System to be Maintained

The Vapor Mitigation System consists of one (1) sub-slab depressurization system (SSDS) installed at 223 Alfred Street, Athens, WI. The SSDS utilizes Schedule 40, 3" PVC pipe and Obar GBR76 SOE intrinsically safe fan.

The SSDS includes (1) the collection point, (2) interior piping, (3) intrinsically safe fan, and (4) manometer/pressure gauge. The collection point consists of one hundred thirty (130) feet of four (4) inch perforated drain tile wrapped in a silt sock installed beneath the concrete slab. The sub slab drain tile extends the Pressure Field Extension (PFE) below the concrete slab with less invasive piping above the floor. The interior piping includes one (1) 3" PVC pipe extending from the collection point through the foundation and into the attic/crawl space of the building. The pipe runs horizontally approximately 3' then runs vertically and penetrates the roof. The piping between the foundation and the attic/crawl space is located within an interior wall between a bathroom and the utility room. The roof penetration is sealed watertight with compatible roof boots. The Obar GBR76 SOE intrinsically safe fan is located on the roof and is secured using the GBR roof mount and Pipe Pier Foam Mounts to reduce potential vibrations throughout the building. The manometer/pressure gauge is located in the utility room mounted to a wall.

The subject property location is shown on the attached Figure 1. The vapor mitigation system is shown on the attached Figure 2.

A copy of the S.W.A.T. Environmental - Operation and Maintenance Plan / Post Installation Report is attached.

Vapor Mitigation System Purpose

The Vapor Mitigation System installed at the subject property serves to actively prevent direct human contact with CVOC vapor due to off gas from documented residual soil and groundwater contamination that might otherwise pose a threat to human health.

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Annual Inspection

The Vapor Mitigation System installed at the subject property designed to actively remove the vapor pathway for chlorinated compounds from entering the Forward Bank building as depicted in Figure 2, will be inspected at least once a year. The inspections will be performed by the property owner or their designated representative. The inspections will be performed to evaluate the fan and pressure gauge to ensure the system is operational.

A log of the inspections and any repairs will be maintained by the property owner and is included as D.4, Form 4400-321, Vapor Mitigation System Inspection Log. The log will include recommendations for necessary repair of the Vapor Mitigation System. Once repairs are completed, they will be documented in the inspection log. A copy of the maintenance plan and inspection log will be kept at the site and available for submittal or inspection by Wisconsin Department of Natural Resources (DNR) representatives upon their request.

Maintenance Activities

If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. Repairs would be necessary if the following items are not found satisfactory during inspection:

- The fan is running and is not making screeching noise, grinding, hot or vibrating abnormally.
- The manometer is present and there is sufficient vacuum.
- A static pressure reading was taken and recorded in the table.
- The collection point is intact, without cracks or missing sealant.
- Piping is intact and free of cracks. No joints loose or open.
- Fire collars and intumescent fire caulk is intact.
- The piping remains securely bracketed or secured.
- The circuit breaker is functional and is switched to the "On" position.
- The wiring to the fan is intact and free of damage.
- The fan is securely connected to the power source.
- The flexible rubber couplings are free from cracks or damage.
- The system is free of signs of weather damages or vandalism.

Any replacement of the Vapor Mitigation System or portions of the system will be subject to the same maintenance and inspection guidelines as outlined in this Maintenance Plan unless indicated otherwise by the DNR or its successor.

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The property owner, in order to maintain the integrity of the Vapor Mitigation System will maintain a copy of this Maintenance Plan at the site and make it available to all interested parties (i.e. on-site employees, contractors, future property owners, etc.) for viewing.

Notification to WDNR if any problems occur for two (2) or more successive inspections.

Prohibition of Activities and Notification of DNR Prior to Actions Affecting a Vapor Mitigation System

The following activities are prohibited on any portion of the property where a Vapor Mitigation System required as shown on the attached map, unless prior written approval has been obtained from the Wisconsin Department of Natural Resources:

- 1) change in use of a vapor mitigation system.
- 2) changing the use or occupancy of the property to a residential exposure setting, which may include certain uses, such as single or multiple family residences, a school, day care, senior center, hospital, or similar residential exposure settings.
- 3) changing the use or occupancy of the property to single-family residential use.
- 4) changing the construction of a building that has a vapor mitigation system in place.

If removal, replacement, or other changes to a Vapor Mitigation System are considered, the property owner will contact DNR at least 45 days before taking such an action, to determine whether further action may be necessary to protect human health, safety, or welfare or the environment, in accordance with s. NR 727.07, Wis. Adm. Code.

Amendment or Withdrawal of Maintenance Plan

This Maintenance Plan can be amended or withdrawn by the property owner and its successors with the written approval of DNR.

D.1.a VAPOR MITIGATION SYSTEM MAINTENANCE PLAN

Contact Information

Site Owner and Operator:

Forward Bank
Branch Manager
225 Alfred Street
Athens, WI 54411
715-257- 2900

Environmental Consultant:

REI Engineering, Inc.
Brian Bailey
4080 North 20th Avenue
Wausau, WI 54401
715-675-9784

Regulatory Contact:

WDNR – Remediation and Redevelopment Program (West Central Region)
Matt Thompson
1300 W. Clairemont Avenue
Eau Claire, WI 54701
715-839-3700

SWAT Group Inc.
411 E. Wisconsin Ave.
Suite 1280
Milwaukee, WI 53202



Midwest Region Headquarters
16680 W Cleveland Ave, STE C
New Berlin, WI 53151
Office: 262-754-2211
www.swat-radon.com

7/12/2021

We are pleased to provide you with an Operation and Maintenance Plan/Post installation Report for (1) sub-slab depressurization systems (SSDS) installed at the following address:

223 Alfred St, Athens, Wisconsin, 54411

One sub-slab depressurization system was installed at the property located at 223 Alfred St, Athens, WI 54411. The system utilizes Schedule 40, 3" PVC pipe and Obar GBR76 SOE intrinsically safe fan.

One interior system is routed inside the wall in the men's bathroom, Northeast corner. The system continues into the attic/crawlspace of the building and is routed horizontally North of the building an additional 3', then runs vertical and penetrates the roof. The roof penetration is sealed water type with compatible roof boots. The GBR76 is located on the roof and is secured using the compatible GBR roof mount and Pipe Pier Foam Mounts to reduce potential vibrations throughout the building. The collection point consists of 130' of 4" perforated drain tile wrapped in a silt sock. The sub slab drain tile extends our Pressure Field Extension (PFE) below the slab with less invasive piping above the floor.

This OM&M/Post Installation Report does not include information regarding electrical work. Electrical work was performed by a third-party electrician that was not supplied by SWAT Environmental. Please refer to electricians who performed work if maintenance needs to be performed on those components of the system.

PFE testing was done at the property to ensure that the sub-slab has been depressurized. A total of 4 tests were performed and recorded on the attached floor plan.

Test Point #1- Located in SW corner of office room 105 (see attached diagram) Results: -1.868" W.C
Test Point #2- Located in center of workroom 106 (see attached diagram) Results: -0.237" W.C
Test Point #3- Located in SW corner of the breakroom 112 (see attached diagram) Results: -0.567" W.C
Test Point #4- Located in SE corner of office room 115 (see attached diagram) Results: -0.336" W.C

All test locations show strong negative pressure readings indicating that the sub-slab is depressurized.

All workmanship is warranted for 5 years from date of completion 5/20/2021 Expires 5/20/2026
The GBR 76SOE is warranted for 3 years from date of purchase 4/12/2021 Expires 4/12/2024

The contents of this Operation and Maintenance Plan should be followed diligently, with periodic visual inspections of the fans and pressure gauges. We recommend recording the static pressure quarterly. All systems have a visual pressure gauge attached to the interior section of piping.

Questions regarding this Operation and Maintenance Plan, or any system abnormalities or malfunctions, shall be directed to:

SWAT Group Inc., Midwest Region
(262) 754-2211
swatenv@swat-radon.com

Air quality retesting and a service call should occur in the event of major structural change or nearby construction work (primarily blasting), particularly any type of work in which the foundation is breached or expanded.

Thank you for your attention to these procedural recommendations. We sincerely appreciate your business.

Sincerely,

A handwritten signature in black ink that reads 'George Booth'.

George Booth, Regional Tech Manager, Midwest Region

SUB SLAB SYSTEM OPERATION

- Operation:** Vapor mitigation systems are designed to operate 24 hours per day, 7 days per week, except for brief periods of time when the system may be disconnected from the power source, de-energized, and locked out for routine maintenance or service.
- Activation:** A sub-slab depressurization system is activated when the circuit breaker is active and the mitigation fan is plugged into a duplex GFCI receptacle, or directly hard wired. Activations are to be conducted by or with a mitigation professional. Under no circumstances is this system to be disconnected or deactivated permanently without first contacting an AARST/NRPP Certified Vapor Mitigation Professional.
- Deactivation:** A sub-slab depressurization system may be safely deactivated by first disconnecting the mitigation fan from the duplex GFCI receptacle and placing a protective cover over the male plug to prevent it from being reinserted and then flipping the circuit breaker to the off position. We recommend securing a lockout cover which identifies the system is being serviced and prevents the breaker from being re-activated.

SSDS DIAGNOSTIC REFERENCE

A SSDS should be inspected once every three (3) months for operation, and a static pressure reading taken and recorded. There are some instances when an AARST/NRPP Certified Mitigation Professional should be contacted as soon as possible:

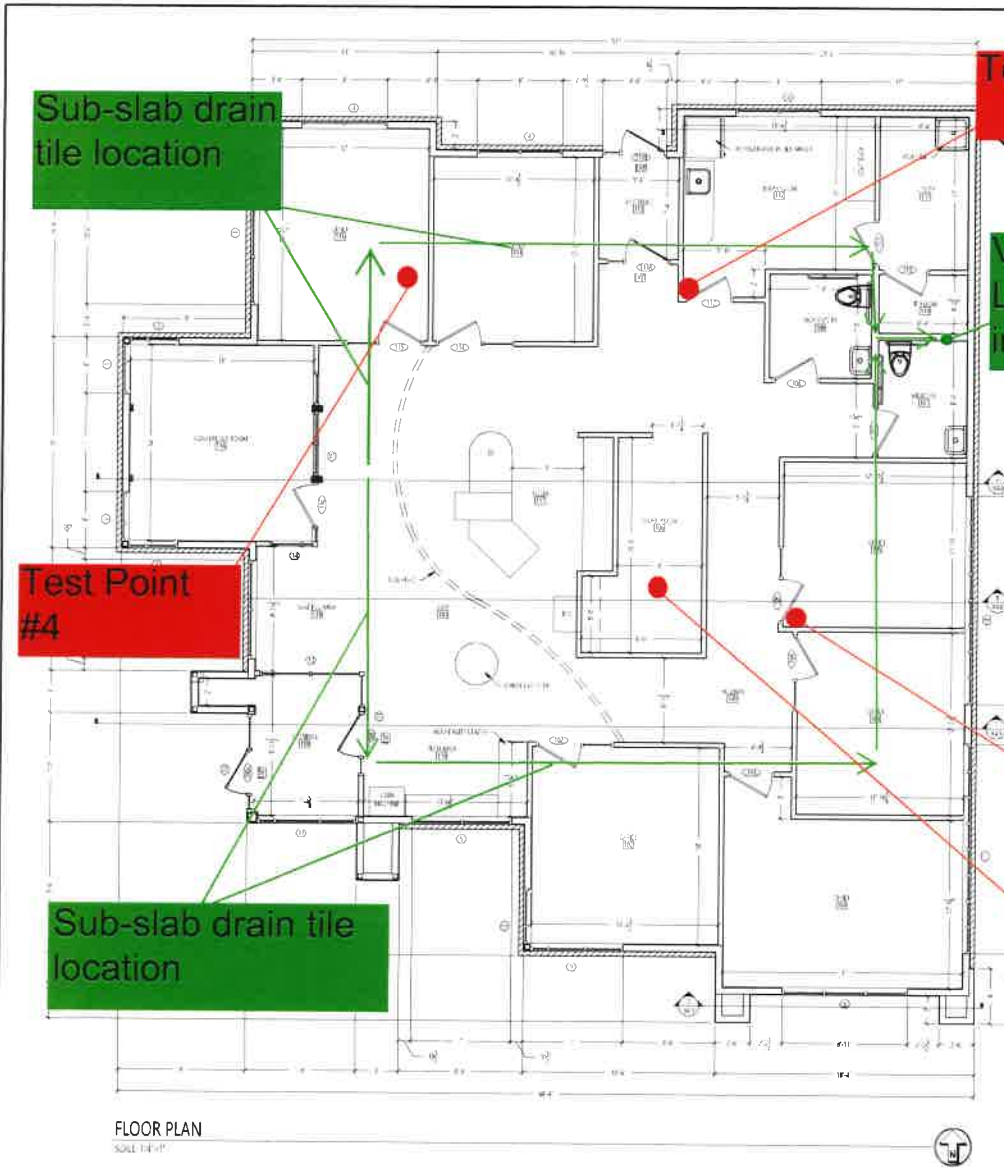
1. The mitigation fan is not operational, or the Manometer is registering outside of the recommended operating range. (<<.0" W>C to 16" W.C for GBR 76 SOE fan>>). First check the electrical connection and make sure that the circuit breaker is set to "on".
2. The mitigation fan is vibrating abnormally (beyond the subtle vibration of normal operation), is making a "screeching" or "grinding" sound, or, is unusually hot to the touch.
3. The electrical wire has been damaged or altered, or the fan has been vandalized or is no longer present.
4. There are visible cracks in the suction line or vent stack piping, or piping is no longer structurally supported.
5. There are visible cracks in or missing material from the seal where the suction line enters the collection chamber.
6. Major structural changes have been made to the building, or construction has occurred which affects the foundation.
7. In the event the property has changed ownership, warranties may be transferred to the new owner without additional charge.

SSDS: ORIGINAL STARTUP SYSTEM COMPONENTS AND SETTINGS

System#/Unit	223 Alfred St, WI 54411							
Pressure Gauge Location	Utility room (111)							
Fan Model	GBR 76 SOE							
Fan Location	Rooftop Fan location							
Original Fan WC"	3.0" W.C							

SSDS INSPECTION/MAINTENANCE LOG EXAMPLE

Year		Qtr 1	Qtr 2	Qtr 3	Qtr 4
Sys. #1	Monitor WC"				
	Sealed Items				
	Piping/Labels				
	Noted concerns				
	Last Radon Test (at least every 2 years)				
Sys. #2	Monitor WC"				
	Sealed Items				
	Piping/Labels				
	Noted concerns				
	Last Radon Test (at least every 2 years)				
Sys. #3	Monitor WC"				
	Sealed Items				
	Piping/Labels				
	Noted concerns				
	Last Radon Test (at least every 2 years)				
Sys. #4	Monitor WC"				
	Sealed Items				
	Piping/Labels				
	Noted concerns				
	Last Radon Test (at least every 2 years)				



Test Point #3

Vent Riser, Located inside wall

Sub-slab drain tile location

Test Point #4

Sub-slab drain tile location

Test Point #1

Test Point #2

FLOOR PLAN
SCALE 1/4"=1'-0"



ROOM FINISH SCHEDULE						
NO.	DESCRIPTION	FLOOR	AREA	FINISH	NOTES	WALL
100	VARIABLE	WALL OH 7A		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
101	CEILING	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
102	DRIFT	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
103	DRIFT	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
104	DRIFT	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
105	DRIFT	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
106	WC & SLOOM	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
107	MSW/4E/70C/7	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
108	600VMS/4E/70C/7	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
109	HALLWAY	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
110	IF HALLWAY	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
111	DRIFT ROOM	ACET. FILL		V.V.		1/2" PAINT ED AL. P.WOOD
112	BRKFAST RM	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
113	VITRINE	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
114	DRIFT	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
115	DRIFT	CORPET. FILL		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL
116	CONFERENCE ROOM	CORPET. FILL		WOOD PLANK		1/2" PAINT ED DR/VAL
117	TILE	WVT		DRY ACCEL. KUM. FILL		1/2" PAINT ED DR/VAL W/ 1/4" INSULATION
118	WANTL/STAIR	WVT		DRY ACCEL. KUM. FILL & HALLWAY DR/VAL		1/2" PAINT ED DR/VAL
119	STAIR	ACT. FLOOR		V.V.		1/2" PAINT ED DR/VAL

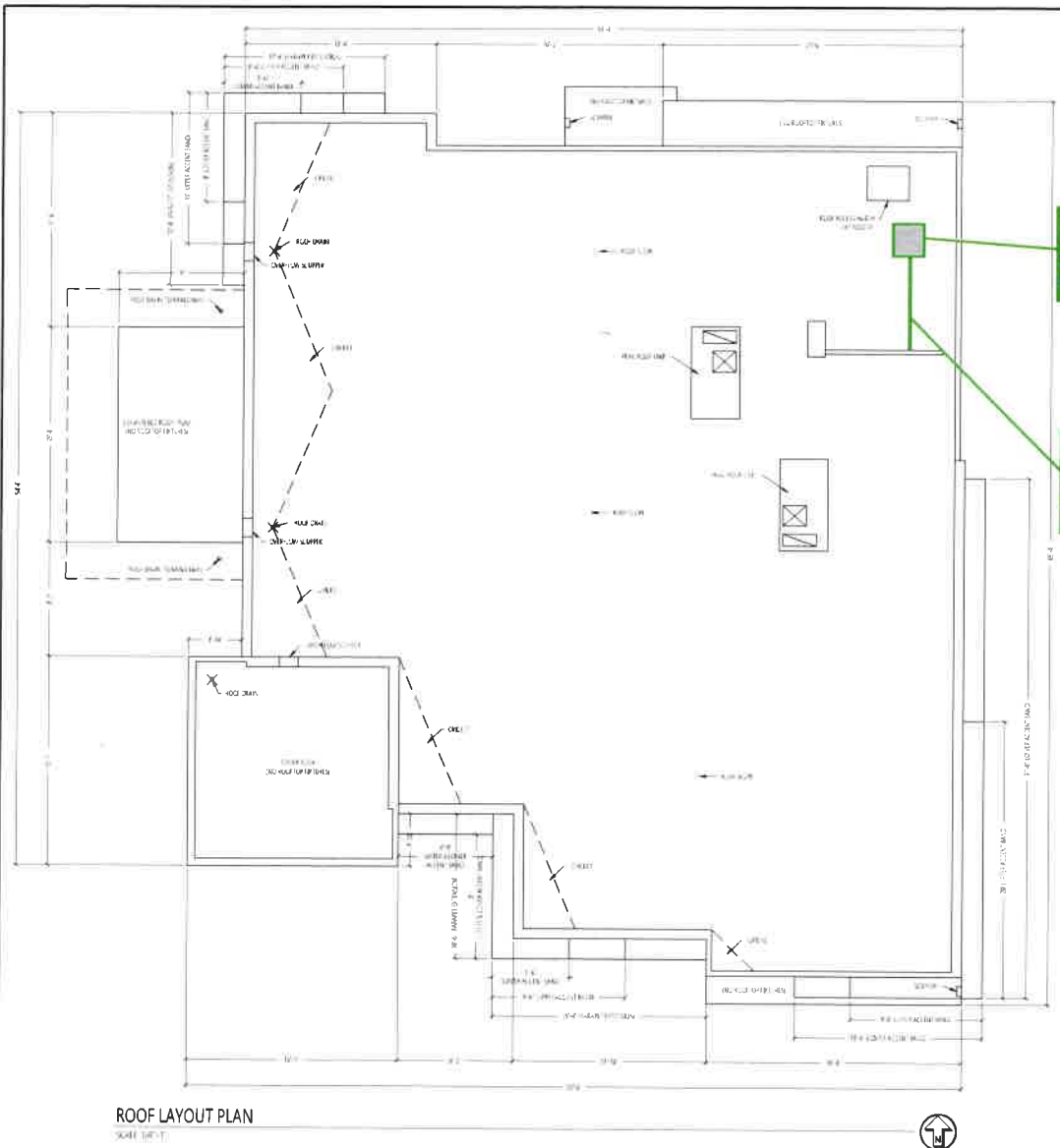
DOOR SCHEDULE						
No.	Loc.	Size	Frame	Door	Hardware	Notes
100A	100A	1'-11 1/2" x 6'-6"	ALUMINUM	SLIP-RESISTANT	SLIP-RESISTANT	SLIP-RESISTANT
100B	100B	6'-6" x 11'-11 1/2"	ALUMINUM	MURPHY	MURPHY	SLIP-RESISTANT
02	02	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
10	10	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
104	104	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
105	105	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
107	107	6'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
109	109	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
111	111	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
112	112	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
113A	113A	6'-0" x 8'-0"	ALUMINUM	SLIP-RESISTANT	SLIP-RESISTANT	SLIP-RESISTANT
113B	113B	6'-0" x 8'-0"	ALUMINUM	SLIP-RESISTANT	SLIP-RESISTANT	SLIP-RESISTANT
114	114	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
115	115	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
116	116	2'-0" x 8'-0"	ALUMINUM	F-AM	F-AM	PANACEA/1000/1000/1000/1000
118A	118A	8'-0" x 6'-0"	ALUMINUM	SLIP-RESISTANT	SLIP-RESISTANT	SLIP-RESISTANT
118B	118B	8'-0" x 6'-0"	ALUMINUM	SLIP-RESISTANT	SLIP-RESISTANT	SLIP-RESISTANT

MARAWOOD
2025 West Wisconsin Parkway
Marshfield, WI 54449
Phone (715) 389-1256
Fax (715) 389-2158
www.marawood.com

PROPOSED PROJECT FOR:
FORWARD BANK
ATHENS, WI

PLAN ISSUED FOR CONSTRUCTION

DATE:	1/12/21	FORWARD BANK
REVISIONS:		JOB NO: 20177
		DRAWN BY: J.A.K.
		SHEET
		A1.0



Intrinsically Safe VOC fan.
Roof top mounted

Pipe routed in attic/
crawlspce

ROOF LAYOUT PLAN
SCALE: 1/8"=1'-0"

MARAWOOD
Construction Solutions
2025 Wood Veterans Parkway
Marshfield, WI 54449
Phone: (715) 389-1256
Fax: (715) 389-2158
www.marawood.com

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PROPOSED PROJECT FOR:
FORWARD BANK
ATHENS, WI

PLAN ISSUED FOR CONSTRUCTION

DATE	1/12/21	FORWARD BANK
REVISIONS		JOB NO: 20.177
		DRAWN BY: J.A.K.
		SHEET:
		S2.0



Sub-slab drain
tile installation



Sub-Slab Drain Tile
Installation



Sub-Slab drain tile installation





Interior pipe route



Attic/crawlspace
pipe run

RMS 2/13



Manometer/Pressure Gauge

RADON REDUCTION SYSTEM
Model: RRS-1000
Capacity: 1000 CFM
Voltage: 115V AC
Power: 1500W
Radon Reduction System
Radon Reduction System
Radon Reduction System



Test Point #1





-23.7



DIGITAL
MICRO-
MANOMETER

Model: DM1
Serial: 378506
Waynesboro, VA
(540) 943-2776
WWW.INFILTEC.COM

Reference port side

MAX PRES = 5K PA
TEMP = 0 TO 50 C

Signal port side

ZERO

Press to rezero
(the zero may vary if
temperature and
orientation change)

TIME
AVG.

Press once to
see **avg. period**
(press again to reset
period from 1-32 sec)

UNITS

Press for metric
(0.0 Pa) or
US (0.000 " wc)

ON/
OFF

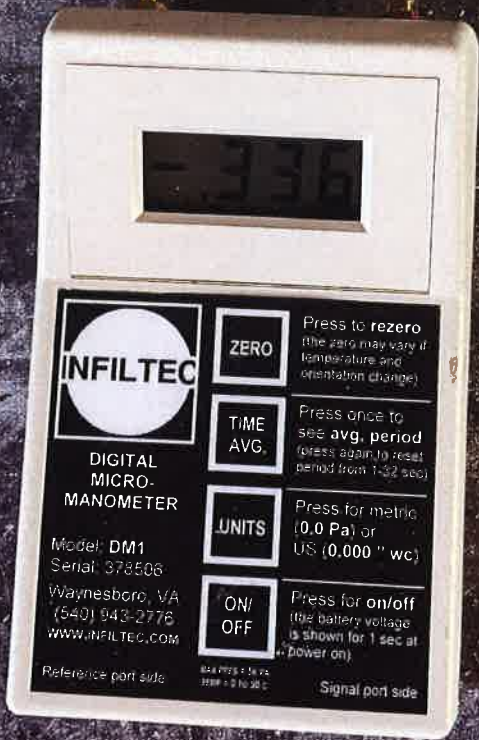
Press for **on/off**
(the battery voltage
is shown for 1 sec at
power on)

Test Point #2

Test Point #3



Test Point #4



THE OBAR GBR76

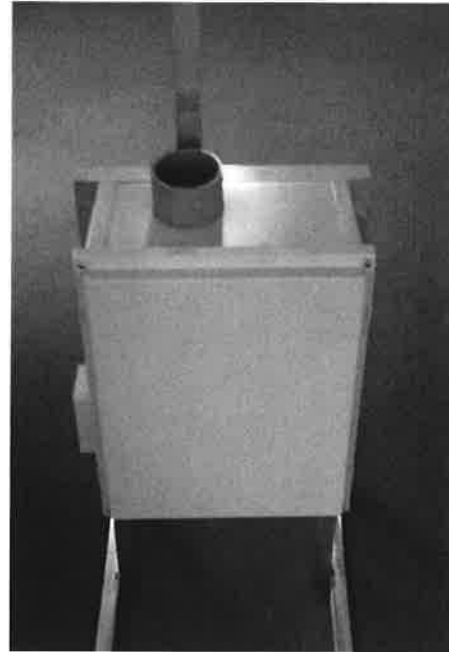
COMPACT RADIAL BLOWER



Based on 25 years of experience and 2 years of research and development, the patent pending GBR series of compact radial blowers provide the perfect combination of performance and design.

PERFORMANCE

- GBR76 SOE 16" WC @ 0 Max flow 155 CFM.
- GBR76 UD 40" WC @ 0 Max flow 195 CFM.
- Built in speed control to customize performance.
- Condensate bypass built in.
- 12 month warranty - 40,000 hr sealed bearings.



GBR76 WITH ROOF MOUNT

DESIGN

- Our modular design means the blower and manifold assembly can be removed and replaced as a unit. This makes repairs cost effective and easy and allows contractors to upgrade systems simply by swapping assemblies.
- The GBR series is based on a bypass blower designed to handle combustible materials.
- The housing is not required to be air tight, so you can add gauges and alarms without compromising the system.
- Built in condensate bypass.
- Built in speed control.
- Quick disconnect electrical harness.
- All UL listed components including UL listed enclosure for outside use.
- Wall fastening lugs included.
- GBR series roof and wall mounts available to quickly configure the blowers for your installation while providing a custom built look.
- Compact design 16"x 14"x 8" weighing only 18 lbs.
- 3" schedule 40 inlet and exhaust.
- Universal Drive model accepts voltage from 120-240V without alteration

COST

GBR76 SOE

GBR76 UD

COMPLETE UNIT
3 YEAR WARRANTY

\$1289.00
\$450.00

\$1489.00
\$550.00

D.1.b O&M Plan

GBR76 SOE	0"	2"	4"	6"	8"	10"	12"	16"	Wattage
SOE 16	150	140	129	118	105	90	75	35	150-320
SOE 12	125	115	100	83	62	39	0		110-200
SOE 8	105	90	70	42	0				60-120
SOE 4	75	50	0						37-50

GBR SOE performance using built in potentiometer set at sealed vacuums of 16, 12, 8, and 4" WC

GBR76 UD	0"	10"	20"	30"	37"	Wattage
110V	195	158	118	63	20	700-870
220V	197	162	130	89	50	800-1100

Blower Specifications

Notes:

Input Voltage Range: 108-132 Volts AC RMS, 50/60 Hz, single phase.

Input Current: 6 amps AC RMS

Operating Temperature (Ambient Air and Working Air): 0°C to 50°C

Storage Temperature: -40°C to 85°C

Dielectric Testing: 1500 Volts AC RMS 60 Hz applied for one second between input pins and ground. 3mA leakage maximum.

Speed Control Methods: PWM (Pulse Width Modulation) (1 kHz to 10 kHz)

0 to 10 VDC speed control.

Mechanical: A potentiometer is available for speed control of the blower. The potentiometer can be preset for a specific speed. Access for speed adjustment located in motor housing.

Approximate Weight: 4.8 Lbs. / 2.2 Kg

Regulatory Agency Certification: Underwriters Laboratories Inc. UL507 Recognized under File E94403 and compliant under the CE Low Voltage Directive 2006/95/EC.

Design Features: Designed to provide variable airflow for low NOx & CO emission in high efficiency gas fired combustion systems. Built with non-sparking materials. Blower housing assembly constructed of die cast aluminum. Impeller constructed from hardened aluminum. Rubber isolation mounts built into blower construction to dampen vibration within the motor. Two piece blower housing assembly sealed with O-ring gasket for combustion applications. Customer is responsible to check for any leakage once the blower is installed into the final application.

Miscellaneous: Blower inlet, discharge, and all motor cooling inlet and discharge vents must not be obstructed. Motor ventilation air to be free of oils and other foreign particles, (i.e. breathing quality air). Blower is to be mounted so ventilation air cannot be re-circulated.

POWER CONNECTION: Blower connector, AMP Universal MATE-N-LOK, part no. 1 350943-0.

SPEED CONNECTION: Blower connector, Molex Mini Fit Jr, part no. 39 30 3056.

Mating harnesses available upon request.

Enclosure Specifications

atings:

Ingress Protection (EN 60529): 66/67

Electrical insulation: Totally insulated

Halogen free (DIN/VDE 0472, Part 815): yes

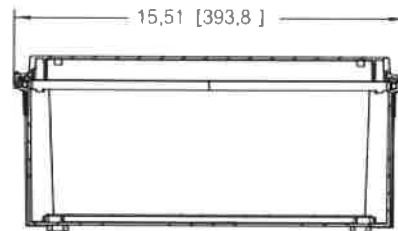
UV resistance: UL 508

Flammability Rating (UL 746 C 5): complies with UL 508

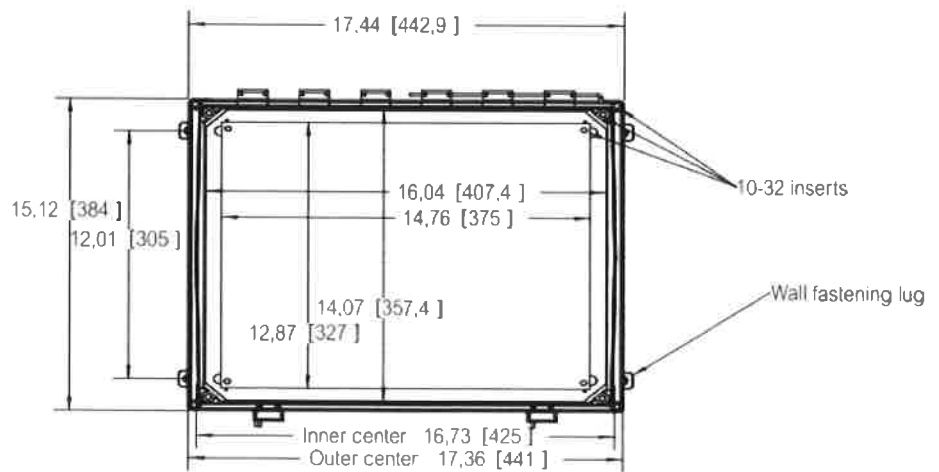
Low Wire Test (IEC 695-2-1) °C: 960

EMA Class: UL Type 4, 4X, 6, 6P, 12 and 13

Certificates: Underwriters Laboratories



Screw cover



Top View - cover removed



Distributed by Obar Systems
Installation & Warranty

Read these instructions completely and retain for future reference.

1. Warning! The use of this fan may affect combustion devices, always check for a backdraft on all combustion devices before and after installation.
2. Warning! This fan is not intended for use in hazardous environments where a motor spark could ignite combustible or flammable materials.
3. All wiring must be performed by a licensed electrical contractor in accordance with the National Electrical Code and all local and state codes governing the municipality in which it is installed.
4. The GBR series blowers are intended for use and installation by professionals familiar with installation and design of systems for the remediation of radon and volatile organic compounds. Unqualified or unlicensed individuals should not undertake the installation or service of this product.

INSTALLATION

The installation instructions provided are for guidance only, any installation should meet all state and local codes and guidelines.

1. Temperature restrictions: The GBR SOE/UD will run and start in a temperature range from -20 to 180 degrees F. The GBR HA will run at a temperature of -20 to 180 degrees F but may not start if the motor temperature is below 0 degrees F at time of startup.
2. Ground water restrictions: The blower should not be installed at a height above water table that is less than the vacuum setting for the blower, if the water table is unknown then the base of the slab should be used as a default. The GBR series is a high vacuum blower and will draw water into the assembly and damage the impeller and motor if not properly installed.
3. Speed control: The GBR series blowers have a built in speed control that can be used to field adjust the vacuum on your system. These should only be adjusted by an experienced installer familiar advanced systems design and installation. For information regarding on site adjustments please contact Obar Systems for further information.
4. Enclosure: It is not recommended that the enclosure be opened except for repairs and adjustments. Contact Obar Systems before removing the cover.
5. Mounting: The fan should be mounted in a vertical orientation with the discharge pointing

upward. The inlet and discharge should be attached with a PipeConx or similar flexible connector of the appropriate size. The connector should provide a gap of 1.5 inches between the inlet pipe and inlet fitting and discharge pipe and discharge fitting. This will allow for motor assembly replacement in future repairs. The GBR comes with wall fastening lugs that provide for a flush installation on a flat even surface. Optional roof and wall mounts are available and are designed to reduce installation times dramatically. Contact Obar Systems for additional information on mounting systems. The fan should be located in an area that provides easy access and does not obstruct the operations of the building to which it is attached.

6. Discharge: Make sure the discharge meets or exceeds National guidelines and local codes for the installation and venting of Radon and or VOCs (Volatile Organic Compounds). In the event that there is the possibility of debris entering the discharge of the fan, it is recommended that a guard be installed to protect the blower from damage.

Warranty

Subject to any applicable consumer protection legislation, Obar Systems warrants the GBR series fans for 12 months from the date of purchase.

Obar systems will repair or replace any fan which fails due to defects in materials and workmanship. A RMA must be obtained and proof of purchase is required to be serviced by this warranty.

This warranty is contingent upon the fan having been installed as per the installation requirements set forth by Obar Systems and in accordance with the requirements of federal and state authorities governing the installation systems designed for radon and volatile organic compounds.

Obar systems is not responsible for the installation, removal or delivery costs associated with this warranty.

Except as stated, the GBR series are provided without warranty of any kind, either expressed or implied, including without limitation, implied warranties of merchantability and fitness for a particular use.

Obar systems is in no way responsible for any direct or indirect damages relating to the performance of the GBR series fan. Any liability shall not exceed the purchase price of the unit. The sole remedy under this warranty shall be the repair or replacement of the unit

Contact Obar Systems to obtain a RMA (Return Material Authorization) number for any and all warranties. If return is required, the customer is responsible for all freight charges.

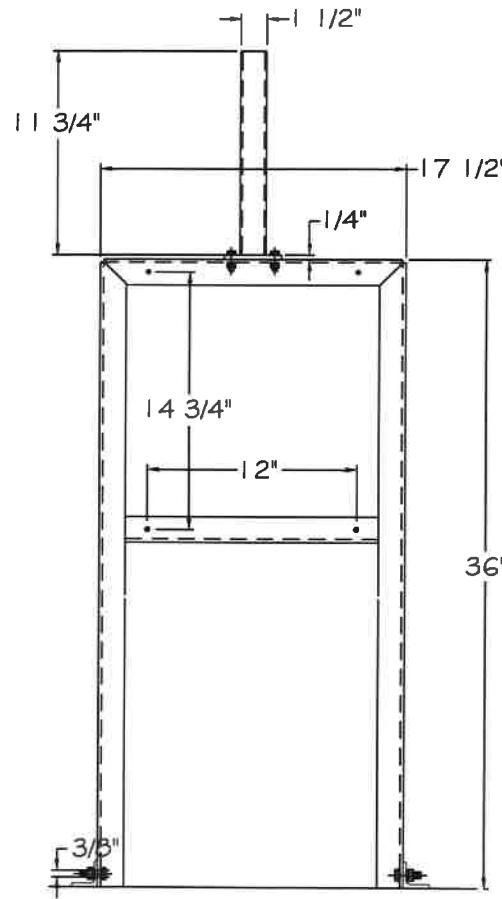
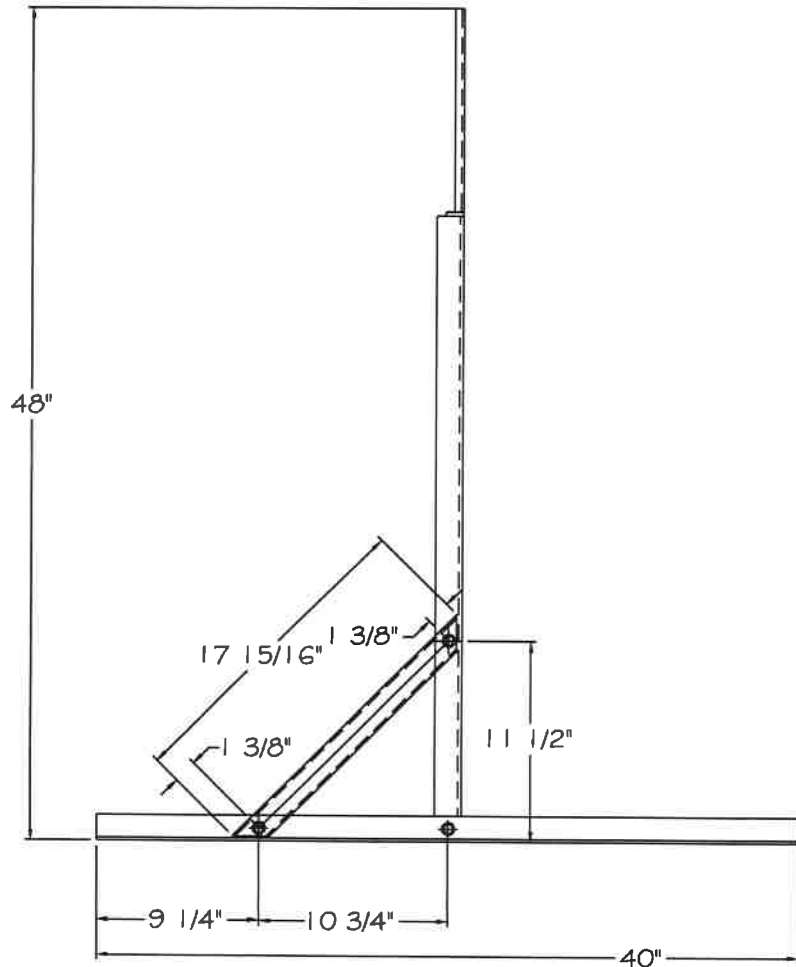
Obar Systems Inc.
2969 Route 23 South
Newfoundland NJ 07435
800 949 6227

Cutlist:

- 1 1/2"-3/16" Angle
- 2 pcs. - 40" long square ends
- 1 pc. - 17 1/8" 45 deg. P-F both ends
- 1 pc. - 17 1/8" coped both ends
- 2 pcs - 35 13/16" long 45deg. P-F one end

1 1/2" x 3/4" - 1/8" channel

- 2 pcs. - 17 15/16" long 45 deg P-F both ends
- 1 pc. - 11 3/4" long Square ends



AWS D1.1 Certified

File Name: Obar_Systems_2011.dwg
 DRAWN by: Jim Stanlok
 CHECKED:
 UNLESS OTHERWISE SPECIFIED:
 LINEAR TOLERANCES +/- 1/16"

NOTES:

REV. 1

MATERIALS:
6061 Aluminum

FINISH:
Painted Finish

APPROVAL:

APPROV. FOR					
PRINTS:	REV.	DATE:	REQ'D:	BY:	DESCRIPTION:

Detail of:
**Alum. Frame - Fan Box
 Free Standing Unit**

Project Name & Location:

Contractor:
OBAR Systems

Architect:

Architect's Drawing Reference:

PRECISION WELDING

"Quality Metal Fabricators"

845 Berkshire Valley Road
 Wharton, NJ 07885
 (973) 214-1065





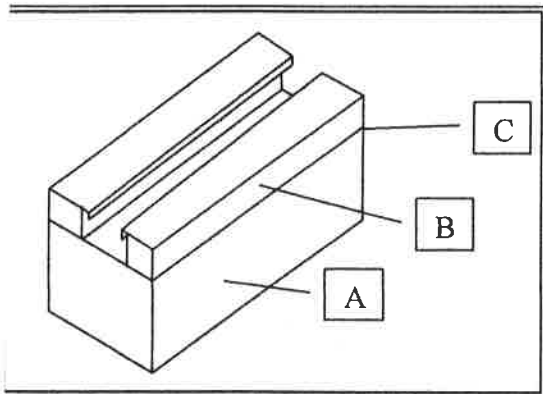
PIPE PIER® Elite Submittal Sheet

PE PIER® support blocks have been designed and engineered specifically for rooftop and raised floor applications. The PE PIER® Elite series is offered in the following dimensions:

- PP50ELH4 – 4”H x 4”W x 10-1/2”L with 50 lbs max load.
- PP50ELH6 – 6”H x 4”W x 10-1/2”L with 50 lbs max load.
- PP30ELH4 – 4”H x 4”W x 5”L with 30 lbs max load.

Components

Closed-cell, medium density, black expanded polypropylene foam
 High density molded polyethylene cap with integrated strut design.
 Hot melt adhesive-bonded HDP to foam block – American Chemical

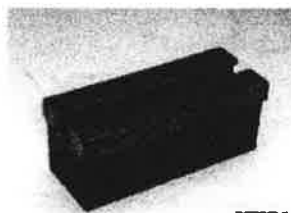


Arplank 1.9# EPP foam offers excellent strength, resistance to creep under loadings up to 5.0psi, vibration & shock absorbency and water resistance characteristics. It has successfully passed MVSS 302 flammability testing and meets or exceeds the requirements for U.S. Federal Standard CID AA-59136 Type IV.

Physical Properties	Test Method	Direction	Value
Density	D3575, Suffix W, Method B	N/A	3.9 pcf
Compression Set	ASTM D 3575, Suffix B	Vertical	12%
Compression Creep @ 5.0 psi (1000 hr/72 F)	ASTM D 3575, Suffix BB	Vertical	<10%
Thermal Stability	ASTM D 3575, Suffix S	N/A	<1%
Water Absorption	ASTM D 3575, Suffix L	N/A	<1.0%



PP20ELH4



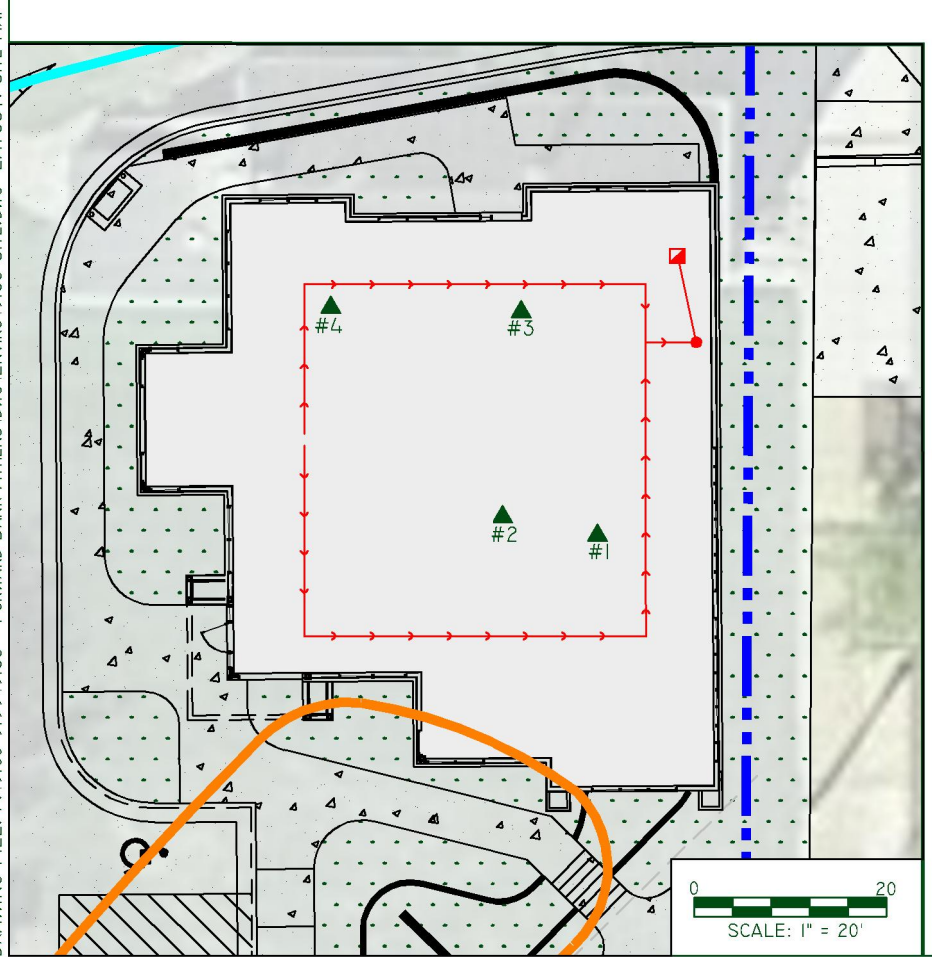
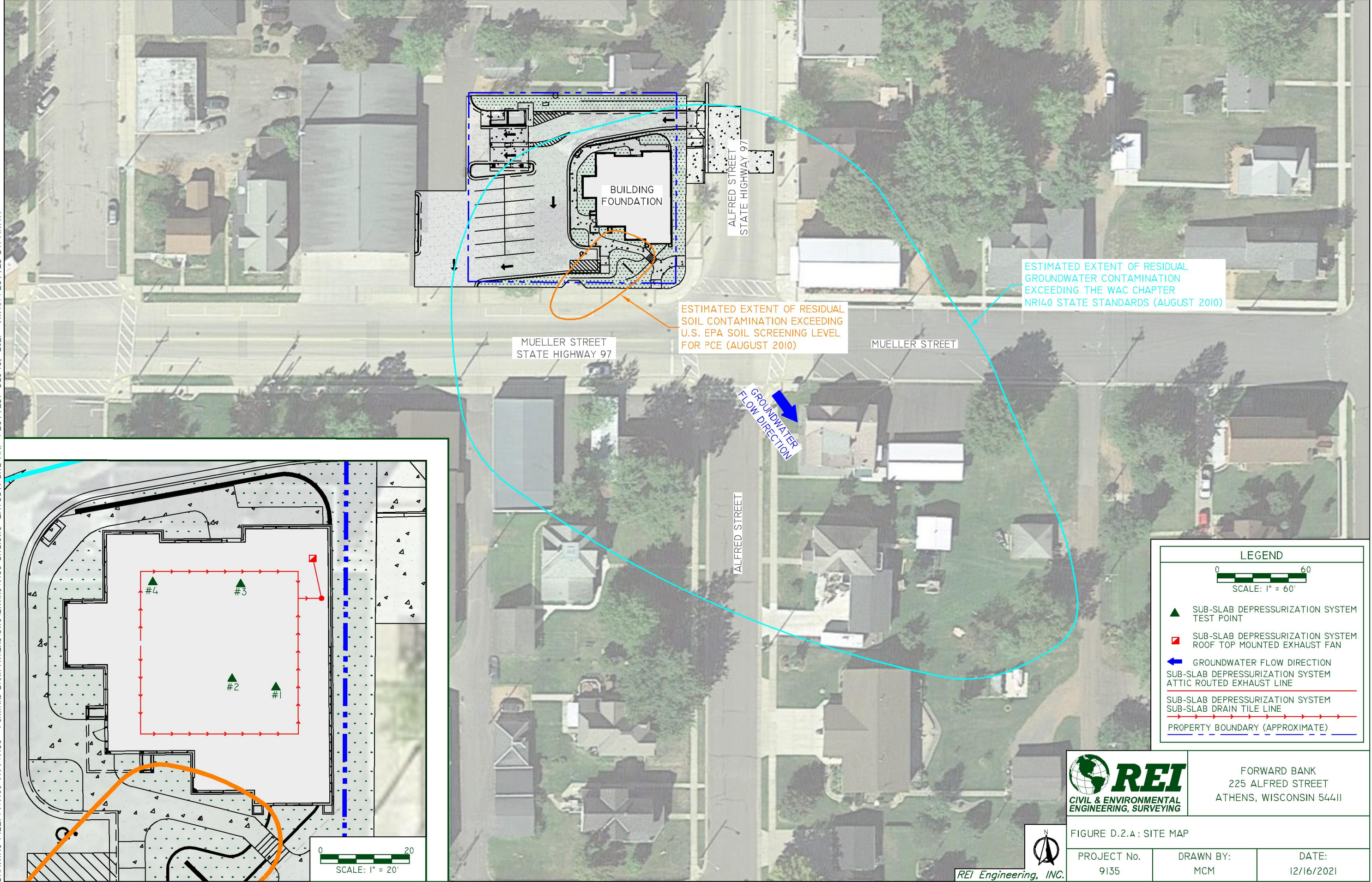
PP30ELH4

American Chemical is a sprayable heat & moisture-resistant hot melt adhesive. It has a 400 degree flash point and is applied by a nozzle applicator during the manufacturing process.

U.S. Patent No. 5855342, U.S. Patent No. 6305650, U.S. Patent No. 6679461, Other patents pending

PIPE PIER® Support Systems, P: 763.745.4223 F: 763.745.4222 www.pipepier.com

DRAWING FILE: P:\9100-9199\9135 - FORWARD BANK ATHENS\DWG\ENVIRO\9135-SITE.DWG LAYOUT: SITE MAP PLOTTED: Dec 16, 2021 - 9:17AM PLOTTED BY: MATTM



LEGEND

0 60
SCALE: 1" = 60'

- ▲ SUB-SLAB DEPRESSURIZATION SYSTEM TEST POINT
- ▣ SUB-SLAB DEPRESSURIZATION SYSTEM ROOF TOP MOUNTED EXHAUST FAN
- ← GROUNDWATER FLOW DIRECTION
- SUB-SLAB DEPRESSURIZATION SYSTEM ATTIC ROUTED EXHAUST LINE
- SUB-SLAB DEPRESSURIZATION SYSTEM SUB-SLAB DRAIN TILE LINE
- - - PROPERTY BOUNDARY (APPROXIMATE)



FORWARD BANK
225 ALFRED STREET
ATHENS, WISCONSIN 54411

FIGURE D.2.A : SITE MAP

PROJECT No. 9135	DRAWN BY: MCM	DATE: 12/16/2021
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REI Engineering, INC.

D.3 Photographs

Photographs are included in Attachment D.1.b Operation and Maintenance Plan/ Post Installation Report (7/12/2021) Prepared by SWAT Environmental

D.4. Continuing Obligation Inspection & Maintenance Log

Notice: In accordance with s. NR 727.05 (1) (b) 3., Wis. Adm. Code, use of this form for documenting the inspections and maintenance of certain vapor-related continuing obligations is required. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records law [ss. 19.31-19.39, Wis. Stats.].

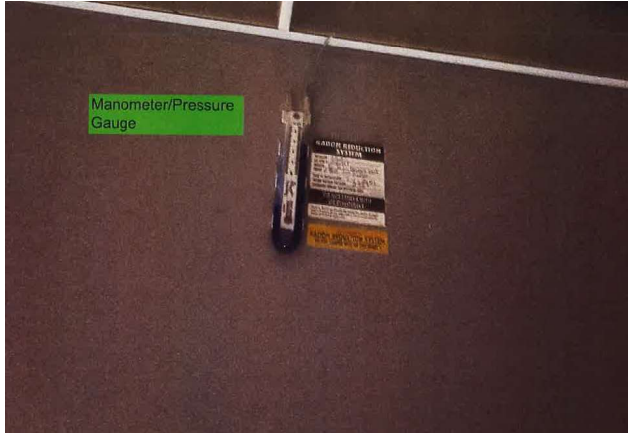
Directions: This form was developed to provide the results of a site inspection of a vapor related continuing obligation, typically a vapor mitigation system. See the closure approval letter for this site for requirements regarding the submittal of this form to the Department of Natural Resources. A copy of this inspection log is required to be maintained either on the property, or at a location specified in the closure approval letter. The closure letter may be found in the database, [BRRTS on the Web](#), by searching for the site using the BRRTS ID number, and then looking in the "Action" section, for code 56.

Activity (Site) Name: Former Englebrecht Building

BRRTS No. 02-37-536610

Date of Inspection: _____

When submittal of this form is required, submit an electronic version or a scanned copy of this completed form to the [RR Submittal Portal](#).

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
Manometer or Differential Pressure Gauge	Measures differential pressure between vacuum side of vent pipe and indoor space. This measurement confirms there is a vacuum being pulled by the fan.	Liquid Level on Manometer or Gauge	Liquid level in manometer should be offset (not level with each other).	A change in liquid level indicates a change in the vacuum below foundation. This could be caused by failure of fan, blockage of vent pipe, change in water level below building, or other conditions. Hire a professional to identify cause and repair if needed.
PHOTO			NOTES: (Record the reading on the gauge. Identify specific building and location description:)	
			<input type="checkbox"/> Not Applicable	
			Northeast Utility Room/Closet. Original Fan W.C. = 3.0" W.C.	

D.4. Continuing Obligation Inspection & Maintenance Log

BRRTS No. 02-37-536610

Site Name: Former Englebrecht Building

Vapor Mitigation System Inspection Log

Form 4400-321 (R 09/20)

Page 2 of 5

SYSTEM COMPONENT		WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME	WHAT DOES IT DO?			WHAT TO FIX?
Fan	<p>Fan creates a vacuum and lowers pressure below foundation.</p> <p>The fan also removes soil gases from below foundation for discharge to atmosphere.</p>	<p>Fan Operation</p> <p>Fan Location</p> <p>Motor Noise</p>	<p>Fan is on.</p> <p>Fan mounted outside & secure.</p> <p>Fan motor is quiet (loud motor may indicate problem).</p>	<p>Replace the fan immediately once the fan stops running. Fans typically run for 10-20 years, but it may be less.</p> <p>Replacement fan to have similar specifications as original with respect to flow and vacuum.</p> <p>After a fan is replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p> <p>Original Fan Make and Model: GBR76 SOE</p>

PHOTO



NOTES: (Identify specific building and location description:)

Not Applicable



D.4. Continuing Obligation Inspection & Maintenance Log

BRRTS No. 02-37-536610

Vapor Mitigation System Inspection Log

Site Name: Former Englebrecht Building

Form 4400-321 (R 09/20)

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
<p>Suction Drop Point w/ Vent Pipe</p>	<p>Suction Point : Soil gases are collected in a void space below the foundation, and tight seal prevents soil gas from getting inside the home. Vent Pipe: Pipe conveys the vacuum from the fan, and collects soil gases for discharge to the atmosphere.</p>	<p>Suction Point Seal Vent Pipe Condition</p>	<p>Seal is air tight around pipe penetration. Vent pipe is connected to fan, has not cracked.</p>	<p>Suction point seal or vent pipe may need to be sealed or replaced if cracks or leaks appear. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.</p>
<p>PHOTO</p> 			<p>NOTES: (Identify specific building and location description:) <input type="checkbox"/> Not Applicable Installed inside interior wall and above the ceiling.</p>	
<p>Sealed Sump w/Vent Pipe</p>	<p>Sump Cover: Soil gases are collected in sump and the cover prevents soil gas from getting inside home. Vent Pipe: Pipe transports the soil gas from the sump for discharge to the atmosphere.</p>	<p>Suction Point Seal Vent Pipe Seal Condition</p>	<p>Seal is airtight to floor. Vent pipe is connected to the sump cover and is not cracked.</p>	<p>Sump cover or vent pipe may need to be sealed or replaced if cracks or leaks appear. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a plumber or a mitigation professional to verify effectiveness, which includes pressure readings.</p>
<p>PHOTO</p> 			<p>NOTES: (Identify specific building and location description:) <input checked="" type="checkbox"/> Not Applicable</p>	

D.4. Continuing Obligation Inspection & Maintenance Log

BRRTS No. 02-37-536610

Vapor Mitigation System Inspection Log

Site Name: Former Englebrecht Building

Form 4400-321 (R 09/20)

Page 4 of 5

SYSTEM COMPONENT	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	DATE:
NAME				WHAT TO FIX?
Outdoor Vent Pipe	Pipe transports the soil gas from beneath the foundation for discharge to the atmosphere.	Vent Pipe Condition Vent Pipe Location	Vent pipe remains connected to fan. End of pipe free from obstructions. The exhaust is more than 15 feet from windows or air intakes.	Vent pipe may require replacement, or cleaning to remove ice or debris. If any piping or sealing of the system is altered or replaced, the system should be evaluated by a mitigation professional to verify effectiveness, which includes pressure readings.

PHOTO



NOTES: (Identify specific building and location description:)

Not Applicable

Northeast Corner of the Roof.

Foundation Floor	Foundation is a barrier that minimizes soil gas entry into building, and helps fan to work efficiently.	Foundation Condition Foundation Footprint	No penetrating cracks or holes in foundation. Check if there have been alterations or additions to building or footprint.	Seal cracks or other penetrations as you would to prevent water from entering. If building floor plan has changed, notify DNR and contact a mitigation professional to evaluate if modifications to the vapor mitigation system are necessary.
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PHOTO



Optional:
Click on photo to upload your own.

NOTES: (Identify specific building and location description:)

Not Applicable

D.4. Continuing Obligation Inspection & Maintenance Log


BRRTS No. 02-37-536610

Site Name: Former Englebrecht Building

Vapor Mitigation System Inspection Log

Form 4400-321 (R 09/20)

Page 5 of 5

SYSTEM COMPONENT				DATE:
NAME	WHAT DOES IT DO?	WHAT DO I CHECK?	WHAT SHOULD I SEE?	WHAT TO FIX?
Sub Slab Vapor Port	This is a sample port to measure vacuum or take sample of soil gas if needed. It needs to remain sealed when not in use to prevent soil gas entry into the home.	Port Seal/Cap	If able to measure the vacuum with a micromanometer, the pressure differential should be at least 0.004 inches of H ₂ O or at least one Pascal.	Repair or replace the seal and cover as needed.
		Port Condition	Port is sealed and capped when not in use.	Permanently seal hole if sample port is ever removed.
PHOTO			<p>NOTES: (If taken, record the pressure differential reading. Identify specific building and location description:)</p> <p><input checked="" type="checkbox"/> Not Applicable</p>	
 <p>Optional: Click on photo to upload your own.</p>				