POET SAMPLING, OPERATION, AND MAINTENANCE PLAN PETERSBURGH AREA OF INTEREST (Revision 1)

Prepared by

TACONIC
Finding a better way

136 Coonbrook Road
Petersburgh, NY 12138

January 2018

Taconic shall sample all private water wells located within the Well Investigation Area (as depicted in Appendix G) for PFOA and 5 other UCMR3 PFC contaminants using the ELAP certified test method ISO 25101 or Method 537 with the same reporting limits achievable under ISO 25101.

CLEARANCE SAMPLING

Clearance of POET systems includes a visual inspection of the POET system, photo documentation, and sampling. Sampling consists of mid and post GAC samples which will be analyzed for PFOA and 5 other UCMR3 PFC contaminants, arsenic and lead. Flushing instructions will be provided to the property owner at the time of installation. (See Appendix A).

Clearance Criteria:

Analyte	Clearance Criteria	MCL	MCL Standard
6 UCMR3 PFC contaminants - Post GAC	Non-Detect (ND)	Advisory is 70 ppt	EPA 2016 Lifetime Health Advisory
Arsenic - Post GAC	Less Than 10 ppb[1]	10 ppb	NYSDOH 10 NYCRR Part 5; Subpart 5-1
Lead - Post GAC	Less Than 15 ppb[1]	Action Level is 15 ppb	NYSDOH 10 NYCRR Part 5; Subpart 5-1

Note 1: Or background based upon pre-carbon sample results.

MAINTENANCE SAMPLING

Commencing three months after the POET system is cleared for use[1] and continuing on a quarterly basis for at least the first four quarters, samples will be taken from private POET systems installed by Taconic to be analyzed for PFOA and the other 5 UCMR3 PFC contaminants. All sampling shall be performed in accordance with the Sample Collection Procedures (See Appendix B).

Taconic's contractor will schedule the sampling directly with the property owner. When results are obtained from the NELAP certified laboratory, results will be reported to the property owner, RCDOH, NYSDOH, NYSDEC, and Taconic.

Quarterly monitoring samples will be taken after the lead GAC filter tank and lag GAC filter tank. When the sample result after the lead tank is at or above 35 ppt PFOA and PFOS combined, the lead tank shall be removed and the lag tank shall be used to replace lead tank and a new GAC filter tank shall be installed in the lag position. When the sample result after the lag tank is at or above an ND level, for PFOA and the

[1] All POETs for which sampling leading to clearance occurred more than 4 months prior to the Effective Date of the Order on Consent between DEC and Tonoga, Inc. shall be sampled as soon as possible and then on a quarterly basis thereafter.

5 other UCMR3 PFC contaminants, the cause will be investigated and the GAC filter tanks will be replaced as necessary.

If after four quarterly sampling events, the 6 PFCs analyzed for are not detected after the lead GAC tank (mid carbon), the sampling frequency will be reduced to once every 6 months. Once any of the 6 PFCs analyzed for are detected after the lead GAC tank (mid carbon), sampling shall be collected quarterly until the cause is investigated and the GAC filter tanks are replaced, as necessary. Based on the results of these samples, a determination will be made whether or not to continue quarterly PFOA sampling. When the sample result after the lag tank (post GAC) is at or above ND the cause will be investigated and the GAC filter tanks will be replaced as necessary.

RAW WATER SAMPLING

Every 15 months, raw water from POET systems will be sampled and tested for PFOA and the other 5 UCMR3 PFC contaminants. If the raw water sample is less than 70 ppt PFOA and PFOS combined, raw water will be sampled quarterly until such time as four quarterly samples are less than 35 ppt PFOA and PFOS combined, at which point GAC treatment shall be terminated.

Every 15 months, raw water from all non-POET properties within the Well Investigation Area shall be sampled and tested for PFOA and the other 5 UCMR3 PFC contaminants. Non-POET property owners will be given the option to request raw water sampling every 9 months. Following NYSDEC's approval of the final Remedial Investigation Report, Taconic may submit a proposal, including technical support, to discontinue well sampling of raw water from non-POET properties.

POET OPERATION AND MAINTENANCE

POET systems contain specific equipment required by NYSDOH, as prescribed in 10 NYCRR Part 5; Appendix 75B (See Appendix C). A summary of the POET systems equipment is described in Appendix D. Aesthetic water treatment systems, such as water softeners or water distillers, are not approved POET equipment to remove PFOA, and are not monitored or maintained by Taconic's contractor.

All required POET system sheds shall meet the following Town of Petersburgh Building Permit specifications:

- Minimum of 6 feet by 8 feet wooden shed with a ceiling height of at least 7 feet.
- Insulated with a minimum of R-38 in ceiling, R-30 in floors, and R-19 in walls.
- Insulated steel door.
- Electrical supply with a 2 KW wall mounted heater, light fixture, and GFI receptacle.

Sheds housing POET systems will be inspected during each sampling event and maintained to ensure adequate heating, ventilation and security. Owners will be advised any non-POET equipment is not to be stored in the sheds.

Property owners are encouraged to change the sediment filter once every month. Spare sediment filters can be obtained from Taconic's contractor who installed the POET system. Sediment filter replacement

procedures and spare sediment filters are left with the property owner when the POET system is installed (See Appendix E). Additional sediment filters will be promptly supplied on an as needed basis.

The POET's carbon tanks will be replaced, as needed, based on the results of the maintenance sampling described above. POET systems installed by Taconic will use Calgon's F600 AR Plus carbon or equivalent as approved by the NYSDEC (See Appendix F).

The POET's UV system will be visually inspected by Taconic's contractor during sampling. Cleaning of quartz sleeve will also be completed during sampling when needed. The UV bulb will be changed out once every year by Taconic's contractor. UV system inspection and maintenance will be documented on a checklist by Taconic's contractor.

Property owners are informed to contact Taconic's POET installation contractor, who is available 24 hours a day, 7 days a week, for questions about operation and maintenance of the POET system. Questions about sampling results are referred to the RCDOH and/or NYSDEC. Property owners who are away for two weeks or more will be advised to flush their POET system for at least 45 minutes upon their return, to destroy any possible bacteria that may have formed. Any unusual issues, such as odors or low pressure associated with the POETs, will be promptly addressed.

REPORTING

Upon receipt of sample results for POET systems and non-POET properties from the NELAP certified laboratory, Taconic shall mail the lab report results along with a cover letter summarizing the results, next steps, and contact information to the property owner, with an electronic copy to RCDOH, NYSDOH, and NYSDEC.

Pursuant to Section XIII of Appendix A of the Order on Consent, POET systems and annual raw sampling of non-POET properties milestones are reported in the Monthly Progress Report (MPR). The following items are included in the MPR;

POET Systems;

- Updated Exhibit C POET Installation list attached, that includes the following milestones;
    1. Total POET System Locations and Total On Hold
    2. Total POET Systems Installed and In Progress
    3. POET Systems Cleared for Use and Pending Cleared for Use
- POET Sampling Milestones;
    1. Total POET Systems Sampled, Current Month and To Be Scheduled
    2. GAC Tank Exchanges

Annual Raw Only Sampling of Locations with No POET System;

- Updated Annual Raw sampling list attached, that includes the following milestones;
    1. Total Annual Raw Locations, Calendar Quarter To be Sampled and Total On Hold
    2. Total Annual Raw Sampled, Current Month and To Be Scheduled
    3. Total New POET System Installed as a result of Annual Raw Sampling
    4. New POET System Cleared for Use and Pending Cleared for Use

Analytical results will be submitted to Taconic from the laboratory in electronic format compatible with the NYSDEC EQuIS format. Taconic will submit results to NYSDEC in EQuIS-ready format within 60 days of sample collection. Taconic may request an extension up to 90 days from sample collection if there are delays in receiving the EQuIS-ready formatted results from the laboratory. An example would include receiving the results from the laboratory greater than 10 business days from sample receipt at laboratory. Taconic will also maintain a database of analytical results to identify and prioritize locations requiring sampling and/or maintenance. Any other letters related to POET maintenance, sampling or well sampling will be provided electronically to the NYSDEC upon mailing of the letter to the homeowner.

APPENDIX A

FLUSHING INSTRUCTIONS

RENSSELAER COUNTY DEPARTMENT OF HEALTH

KATHLEEN M. JIMINO
COUNTY EXECUTIVE

MARYFRAN WACHUNAS
PUBLIC HEALTH DIRECTOR

How To Flush Your Home's Plumbing System

Please follow the procedures below to properly flush your system. Your system will be inspected by the Rensselaer County Department of Health to ensure that it is working properly. In addition, we will take a sample of your water for testing and provide you with the results. We ask that you do **not** drink, use your water for cooking or brush your teeth with it until you have received documentation from us and that your water is safe for all uses.

Follow these steps to ensure your water pipes are adequately flushed after the GAC (granular activated carbon) system has been installed in your home:

. Step 1. Flush cold-water system

- Open all indoor cold-water faucets, including every sink, shower, and bathtub.
- Run the cold water for 5 minutes.
- Shut off all cold-water faucets.

Do not drink, use your water for cooking OR brush your teeth until you have received documentation from the Rensselaer County Department of Health stating that it is acceptable for use.

Step 2. Flush hot-water system

- Open all hot-water faucets, including every sink, shower, and bathtub.
- Run hot water for 15 minutes. This will replace the water in your hot water tank with filtered water.
- Shut off all hot-water faucets.

Step 3. Flush fixtures and appliances

- Flush each toilet at least once. There is no limit on using or flushing toilets during the flushing process.
- Refrigerator water lines and ice makers:
  - Flush refrigerator water dispensers for 5 minutes.
  - Consider replacing any refrigerator water filters, following manufacturer instructions.
  - Discard ice from your freezer. If you have an automatic ice maker, make/discard 5 batches of ice.
  - Clean the ice container with warm water and soap before using it.
- Other water-using appliances:
  - Run dishwashers, washing machines and appliances through one cycle while empty.
  - Discard water; clean your coffee makers, humidifiers, oral, medical or health care devices, or other appliances that may have had contact with contaminated water. Contact the manufacturer if you have questions about cleaning.

Step 4. In-home filtration units, filtered water dispensers (point of use devices), and water softeners

- Take steps to clean water filtration systems, backwash (regenerate) water softeners, and consider replacing filters. Follow manufacturer instructions.

Note: This guidance is consistent with the NYS DEC'S Fact Sheet (March 2016) for systems being intalled in the Town of Hoosick, NY.

APPENDIX B

SAMPLE COLLECTION PROCEDURES

Samples are to be analyzed for PFOA and the 6 UCMR3 contaminates, using the modified EPA Method 537, which reports results down to 2 ppt.

- Coolers filled with HDPE sample bottles, blank labels, and a blank COC form will be obtained from the NELAP certified laboratory.
- Place bag of ice inside cooler. No need to empty the ice out of the bag. Cannot use blue ice.
- PFOA requires larger than typical amounts of sample. For each sample point, two bottles must be filled for PFOA.
- Bottles do not contain preservative and do not use Teflon lined caps.
- Must wear nitrile rubber gloves when collecting sample. Change gloves after each sample point.
- Sampler must avoid contact with aluminum foil, pre-wrapped foods and snacks, Post-It® Notes, water-resistant papers, permanent markers (ie. Sharpie®), and avoid wearing water-resistant/proof clothing, jackets, gloves, shoes, etc. (ie. Gore-Tex®).
- Remove any filters, diffusers, etc., on sample points.
- Flush sample point for at least 3 minutes. When sampling POET systems, first sample post GAC, followed by pre GAC.
- Fill out sample bottle label with regular ink pen. Do not use permanent inks.
- Complete and sign the Chain of Custody form.

APPENDIX C

NYSDOH 10 NYCRR PART 5; APPENDIX 75B

10 NYCRR APPENDIX 75-B

(IWS Treatment Devices)

Effective Date: 12/01/90
Title: Appendix 75-B.1 - Introduction

Section 75-B.1 Introduction. This appendix provides design and performance standards for water treatment devices approved for use on individual household water supplies.

Title: Appendix 75-B.2 - Activated carbon treatment systems

Section 75-B.2 Activated carbon treatment systems. These systems consist of filtration equipment which use activated carbon to remove organic chemicals from individual water supplies. They also may be used to improve the aesthetic quality of drinking water. These systems are normally installed between the water source and the first point of use in the water distribution system.

(a) When an activated carbon filter unit is installed to treat an individual water supply containing organic chemcials, it must meet all of the following conditions:

(1) The units are installed in-line and serve the whole household. Faucet or undersink units shall not be used for the removal of organic chemicals.

(2) The treatment unit must be capable of processing water at a flow rate of at least five gallons per minute (gpm). Flow rates may be reduced if additional pressurized storage is provided after the treatment unit to insure the system will provide at least five gpm of treated water to the household continuously for a minimum of 20 minutes.

(3) The maximum application rate shall be 10 gpm per square foot of activated carbon surface area. Flow rates shall be controlled by a flow limiting device.

(4) The minimum empty bed contact time shall be three minutes. This should be accomplished with at least two filter units of equal size placed in series.

(5) Only virgin carbon shall be used. The cylinder should be recharged at a point outside the residence and the spent activated carbon properly disposed of by the vendor.

(6) Disinfection must be provided after the activated carbon unit. The preferred method of disinfection is an ultraviolet unit with a minimum rating of five gpm. The unit shall have a fail-safe device that detects the intensity of the ultraviolet light and automatically shuts down the system when the intensity decreases to below the minimum effective level specified for the unit. A manual or automatic wipe must be provided. An alternate method of disinfection would be sodium hypochlorite. If sodium hypochlorite is used, contact time adequate to eliminate pathological organisms must be provided after the point of injection and prior to consumption. The local health unit having jurisdiction may allow the use of activated carbon units without disinfection upon the adoption of a

formal procedure for the approval of treatment systems installations, and notification to homeowners of the need for disinfection.

(7) Treatment units capable of backwashing shall only use treated water for that purpose. Backwashing should be at a minimum flow rate of 10 gpm for at least two minutes. The backwashing must be accomplished in a manner that does not create a cross-connection. The wastewater shall not be discharged to the ground surface but may be discharged to a septic system.

(8) All components of treatment units must safely withstand the highest water pressure in the system.

(9) The following must be provided:

(i) A flow meter to record total flow.

(ii) Sampling taps for raw, partially treated and treated water.

(iii) Adequate valving to isolate the various components, and for backwashing of filters.

(iv) Only nontoxic materials and coatings.

(v) Ease of access to all components.

(vi) Prefiltration where appropriate to remove turbidity and bacteria.

(vii) Pressure gauges before and after the activated carbon unit.

(b) Other than whole-house units. Because organic chemicals can be inhaled and absorbed through the skin during baths and showers, the following types of point-of-use activated carbon units are not suitable for use where the water contains organics:

(1) Pour-through units - a stand-alone device, not attached to the water supply system, and normally manually operated.

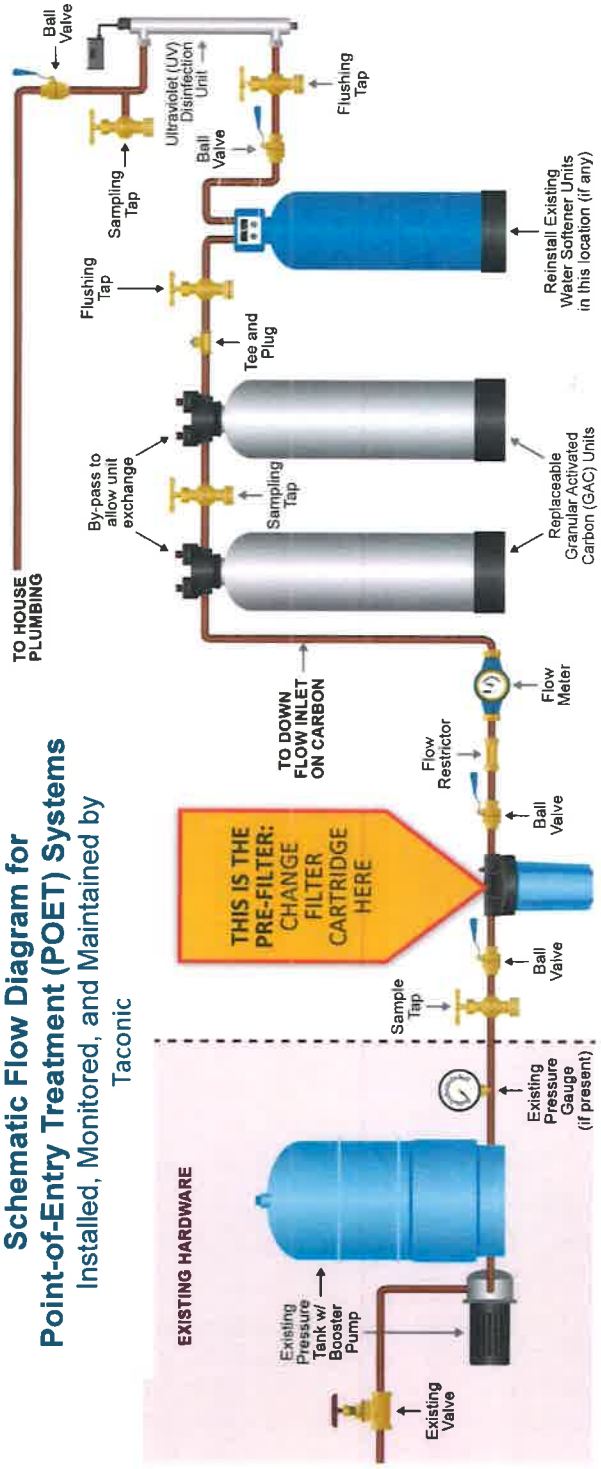
(2) Faucet-mount units - a unit mounted directly at the outlet of an individual tap or faucet.

(3) In-line, one-tap units - a unit mounted in a supply line that serves only one tap or faucet.

(4) Line-bypass units - an in-line unit that serves a separate tap or faucet intended for drinking water use only.

APPENDIX D

NYSDEC POET SYSTEM EQUIPMENT GUIDE



Schematic Flow Diagram for Point-of-Entry Treatment (POET) Systems
Installed, Monitored, and Maintained by Taconic

System Maintenance is Important

Monthly pre-filter replacement is recommended as an important part of keeping the system operating properly and maintaining good water pressure. The pre-filter removes sand, sediment, and other natural small particles that may come in from the well. Maintaining a clean pre-filter also reduces the need for in-home service by Taconic representatives.

While Taconic is responsible for overall maintenance of the system, it is suggested that pre-filter replacement be performed by the occupant.

Taconic will provide a free annual supply of pre-filters and show you how and when to complete the replacement.

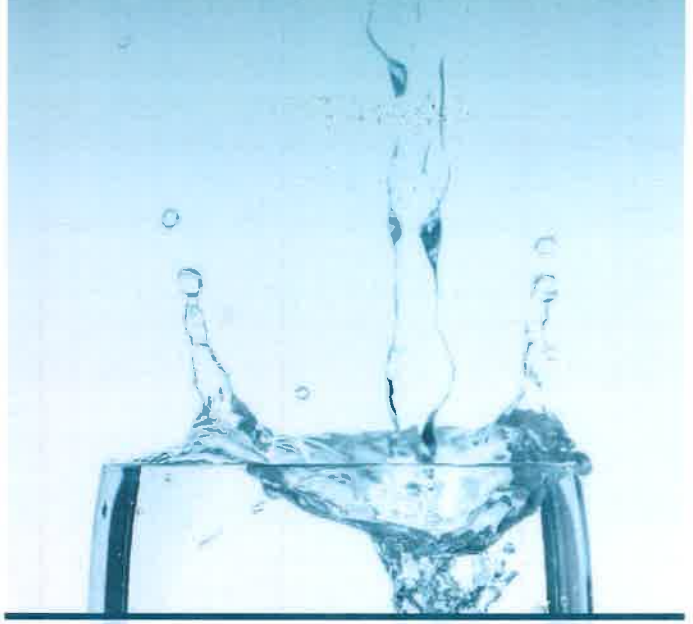
Generic instructions on how to change the pre-filter are provided in the "How To Change the Pre-Filter" supplement to this guide. For more specific guidance or questions, call the Taconic (Wel-Dun) POET Hotline at 1-800-626-3306.

Maintenance activities Taconic must perform include routine sampling, periodic replacement of the GAC tanks, cleaning or replacing the UV light quartz sleeve as needed, system inspection and checking for leaks, and checking proper valve settings and pressure.

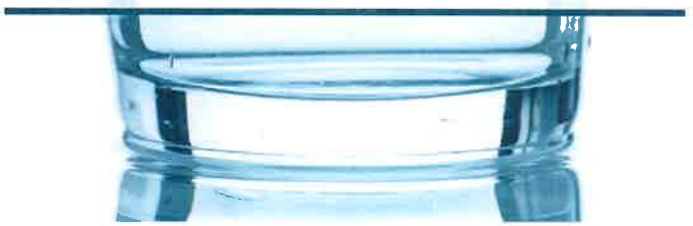
WHEN TO CALL THE TACONIC (WEL-DUN) POET HOTLINE 1-800-626-3306 (24/7)

- Before being away for more than 2 weeks
- To arrange for repair—do not attempt any system or plumbing repairs yourself
- When you need more pre-filters
- If you have any questions

POINT-OF-ENTRY TREATMENT (POET) SYSTEM GUIDE



For Systems Installed, Monitored, and Maintained by Taconic



This guide describes the main components and benefits of the Point-Of-Entry Treatment (POET) System installed in your home or building by TACONIC.

The purpose of the water treatment is to remove certain contaminants that may be in the drinking water entering area homes and buildings. The water treatment systems installed are specifically designed to address Perfluorinated compounds (PFCs), including perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS).

How the System Works

POETs are installed to filter and treat all water as it enters your home or building. As shown on the system flow diagram (back page), POETs filter and treat water using a small pre-filter followed by two tanks of granular activated carbon (GAC). In certain cases, smaller point-of-use treatment systems (POUTs) attach to faucets and fixtures where your water is dispensed.

POETs are designed to filter and disinfect groundwater (well water) for use in residential or commercial properties. Via your well pump, groundwater is piped into an existing pressure tank and then through an installed pre-filter (sediment trap) to remove sand and other natural small particles that may come in with the water.

As shown on the flow diagram, the water continues through the pre-filter and a flow restrictor, and then through a flow meter to measure how much water is flowing through the system. From there, the water continues into the first of two tanks filled with GAC to begin cleaning the water. The second GAC tank acts as a backup to provide redundancy to the filtering process. Next, the water may flow into a water softener if a softener was already in place before the POET or POUT system was added.

Finally, the water passes through an ultraviolet (UV) unit where the water is disinfected before it flows directly into the existing plumbing for use within the residence or commercial building.

Benefits of Water Treatment

POET and POUT systems control a wide variety of contaminants in drinking water and often use the same technology found in large centralized treatment plants, but at a much smaller scale.

This established technology reduces the amount of organic contaminants, controls turbidity (cloudiness of the water), and removes micro-organisms and many other contaminants. Aesthetic factors such as taste, odor, or color can also be improved with treatment.

QUESTIONS?
PLEASE CALL THE
TACONIC (Wel-Dun) POET HOTLINE
(available 24/7) at 1-800-626-3306

Water Quality Testing

Taconic representatives will collect water from the "sampling taps" installed in the system at a minimum of once per year. Systems with higher incoming concentrations will initially be sampled more frequently. This routine sampling effort will provide data for the Taconic to determine the lifespan of the carbon in the GAC tanks. The sampling and maintenance frequency is based on your specific well water and treatment system, and depends not only on sample results, but also how long the system components are performing as intended.

Additional follow-up visits to replace GAC tanks may be scheduled when necessary. Please note that the periodic sampling and maintenance schedule may change in the future based upon your sampling results, so that the system continues to successfully remove PFOA and PFOS from your drinking water.

Granular Activated Carbon Replacement

When water testing results indicate that a GAC tank needs to be changed, Taconic representatives will promptly schedule a visit to perform the change out. This process typically involves installing a fresh GAC tank to replace the second tank in the system, and moving up the second tank to be first in line on the system. You do not need to flush the line prior to water use after the GAC tanks are replaced.

Maintenance at No Cost to You

Maintenance of POET systems in homes and commercial buildings is expected to continue until sampling data indicate well water treatment is no longer necessary. As the environmental investigation in the area continues and data indicate that a treatment system is no longer needed, Taconic will either remove the system or turn over the system to the property owner, whichever the owner prefers. Property owners are not expected to pay the cost of POET system maintenance and water sampling and analysis.

APPENDIX E

NYSDEC POET SYSTEM MAINTENANCE GUIDE

MAINTENANCE GUIDE
POINT-OF-ENTRY WATER TREATMENT SYSTEM

How to Change the Pre-Filter

Step 1: Place a bucket under the pre-filter.

Step 2: Turn off the water supply using the two valve levers located on either side of the pre-filter (see diagram above for location of pre-filter and levers).

Step 3: Press down on the pressure relief button (if present on top of the housing cap/lid) to relieve pressure inside the filter container.

Step 4: Slowly unscrew (turn to the left) the filter container from below the housing. Do this by hand or use the filter wrench supplied with system. A small amount of water may come out of the housing into the bucket. If the O-ring gasket comes loose, put it back in place around the top of the cartridge. If the O-ring is damaged, call the Taconic (Wel-Dun) POET Hotline for a replacement.

Step 5: Remove the used filter cartridge and discard it in your normal trash. Rinse and clean the inside of the filter container, if needed (there may be some natural sediment in the bottom).

Step 6: Insert a new filter cartridge into the filter container, making sure the cartridge is centered and slips over the small standpipe inside the container or attached to the housing cap/lid.

Step 7: Make sure the new filter is centered, and then screw the filter container back onto the housing cap/lid. Hand tighten it or use the filter wrench to tighten. DO NOT OVER-TIGHTEN.

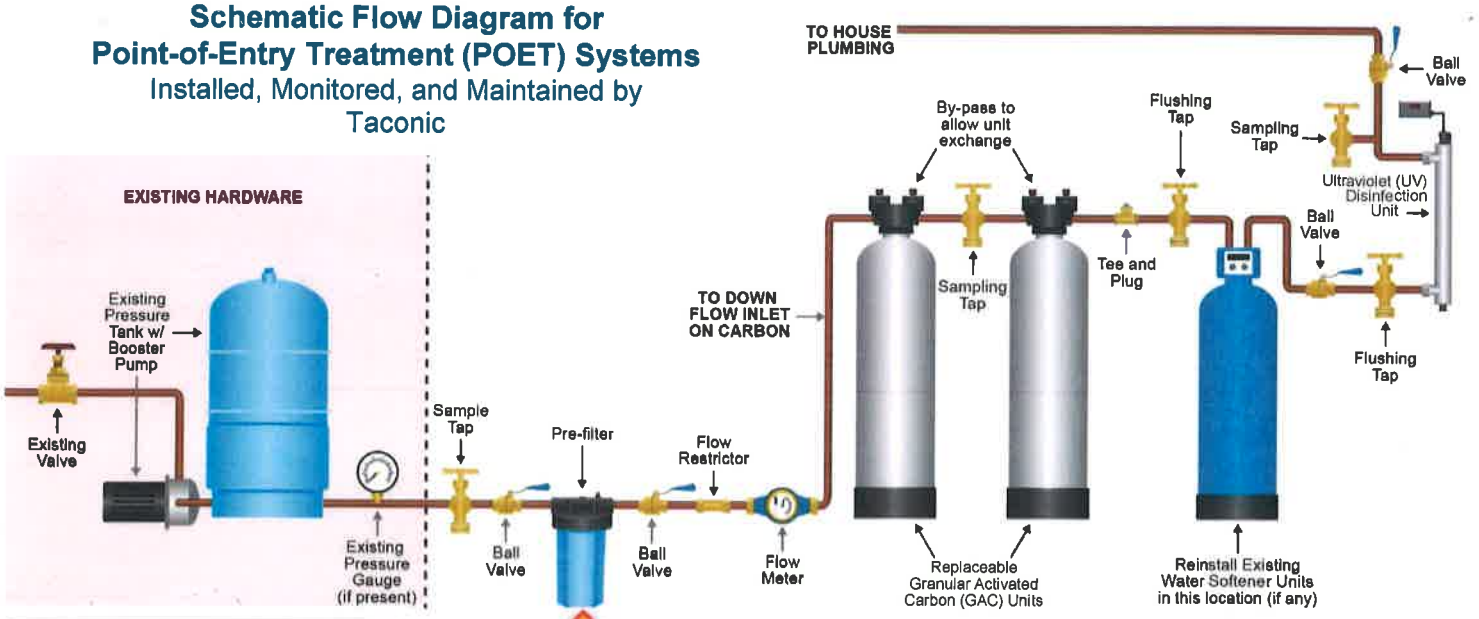
Step 8: Slowly turn on the water supply again and allow the filter housing to fill with water.

Step 9: Press down on the pressure relief button again (if present) to release air that may be trapped inside.

Step 10: Check and inspect for leaks until the unit or system is pressurized. If water leaks from between the housing cap/lid and the filter container, please check that the O-ring gasket is in place and not damaged, and check that the filter was centered and fits easily between the filter container and the housing cap/lid.

Schematic Flow Diagram for Point-of-Entry Treatment (POET) Systems

Installed, Monitored, and Maintained by Taconic



WHEN TO CALL THE TACONIC (Wel-Dun) POET HOTLINE 1-800-626-3306 (24/7)

- Before being away for more than 2 weeks
- To arrange for repair—do not attempt any system or plumbing repairs yourself
- When you need more pre-filters
- If you have any questions

THIS IS THE PRE-FILTER: CHANGE FILTER CARTRIDGE HERE

WHEN TO CHANGE THE PRE-FILTER

- At least monthly so the system operates properly and to reduce the frequency of in-home service by Taconic representatives
- When water pressure drops, which means the filter may be clogged with natural sediment from the well
- Prior to leaving the building for more than 2 weeks—if you are not home during winter months, call the Taconic Hotline for instructions

APPENDIX F

CALGON F600AR PLUS SAFETY DATA SHEET

Filtrasorb 600 AR+ 12X40

Safety Data Sheet

Issued: 04/20/2015
Supersedes: 12/30/2011
Version: 1.0

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product identifier

Product name	: Filtrasorb 600 AR+ 12X40
Product form	: Substance
CAS No	: 7440-44-0
Product code	: 12124
Synonyms	: Activated Carbon

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: Adsorbent

1.3. Details of the supplier of the safety data sheet

Calgon Carbon Corporation
P.O. Box 717
Pittsburgh, PA 15230
412-787-6700

1.4. Emergency telephone number

Emergency number	: CHEMTREC (24 HRS): 1-800-424-9300

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

GHS-US classification

Combustible Dust H232

Not classified as a simple asphyxiant. Product does not displace oxygen in the ambient atmosphere, but slowly adsorbs oxygen from a confined space when wet. Under conditions of anticipated and recommended use, product does not pose an asphyxiation hazard.

2.2. Label elements

GHS-US labeling

Signal word (GHS-US)	: **Warning**
Hazard statements (GHS-US)	: H232 - May form combustible dust concentrations in air

2.3. Other hazards

Other hazards not contributing to the classification	: Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/Information on Ingredients

3.1. Substance

Name	Product identifier	%
Activated Carbon	(CAS No) 7440-44-0	< 100

3.2. Mixture

Not applicable

SECTION 4: First Aid Measures

4.1. Description of first aid measures

First-aid measures general	: If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a comfortable position for breathing.
First-aid measures after skin contact	: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes.
First-aid measures after eye contact	: IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

First-aid measures after ingestion : IF SWALLOWED: Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use. However, dust may cause irritation and redness of the eyes, irritation of the skin and respiratory system. The effects of long-term, low-level exposures to this product have not been determined.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting Measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Carbon dioxide. Dry chemical. Foam. Sand.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Dust may be combustible under specific conditions. May be ignited by heat, sparks or flames.

Explosion hazard : Dust may form explosive mixture in air.

Reactivity : No dangerous reactions known under normal conditions of use. Carbon oxides may be emitted upon combustion of material.

5.3. Advice for firefighters

Firefighting instructions : Wear NIOSH-approved self-contained breathing apparatus suitable for the surrounding fire. Use water spray or fog for cooling exposed containers. Evacuate area.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Product is not soluble, but can cause particulate emission of discharged into waterways. Dike all entrances to sewers and drains to avoid introducing material to waterways. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Sweep or shovel spills into appropriate container for disposal. Minimize generation of dust.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Minimize generation of dust. Dispose of material in compliance with local, state, and federal regulations.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid dust formation. Avoid contact with skin, eyes and clothing. Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a cool, dry, and well-ventilated place. Keep away from ignition sources.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Activated Carbon (7440-44-0)*	
OSHA PEL (TWA) (mg/m³)	≤ 5 (Respirable Fraction) ≤ 15 (Total Dust)

*Exposure limits are for inert or nuisance dust. No specific exposure limits have been established for this activated carbon product by OSHA or ACGIH.

8.2. Exposure controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment with flammable materials. Ensure adequate ventilation, especially in confined areas. Wet activated carbon can deplete oxygen from air in enclosed spaces. If use in an enclosed space is required, procedures for work in an oxygen deficient environment should be followed.

Personal protective equipment : Gloves. Safety glasses. Insufficient ventilation: wear respiratory protection.

Hand protection : Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier.

Eye protection : Use eye protection suitable to the environment. Avoid direct contact with eyes.

Skin and body protection : Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.

Respiratory protection : Use NIOSH-approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Granular, powder, or pelletized substance
Color	: Black
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: Not applicable
Melting point	: Not applicable
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: No data available
Auto-ignition temperature	: > 220 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: > 220 °C
Vapor pressure	: Not applicable
Relative vapor density at 20 °C	: Not applicable
Apparent density	: 0.4 - 0.7 g/cc
Solubility	: Insoluble.
Log Pow	: Not applicable
Log Kow	: Not applicable
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Avoid dust formation. Heat. Ignition sources. Exposure to high concentrations of organic compounds may cause bed temperature to rise.

10.5. Incompatible materials

Alkali metals. Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO_2).

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Activated Carbon (7440-44-0)	
LD50 oral rat	> 2000 mg/kg

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Silica: Crystalline, quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans
The International Agency for Research on Cancer (IARC) has classified "silica dust, crystalline, in the form of quartz or cristobalite" as carcinogenic to humans (group 1). However these warnings refer to crystalline silica dusts and do not apply to solid activated carbon containing crystalline silica as a naturally occuring, bound impurity. As such, we have not classified this product as a carcinogen in accordance with the US OSHA Hazard Communication Standard (29 CFR §1910.1200) but recommmend that users avoid inhalation of product in a dust form.	

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use. However, dust may cause irritation and redness of the eyes, irritation of the skin and respiratory system. The effects of long-term, low-level exposures to this product have not been determined.

SECTION 12: Ecological Information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Waste treatment and disposal methods : Vacuum or shovel material into a closed container. Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment. Subject to Calgon Carbon technical approval, non-powdered activated carbons may be reactivated to allow recycle and reuse.

Additional information : Activated carbon is an adsorbent media; hazard classification is generally determined by the adsorbate. Consult U.S. EPA guidelines listed in 40 CFR 261.3 for more information on hazardous waste disposal.

SECTION 14: Transport Information

14.1. In accordance with DOT

Not classified as hazardous for domestic land transport

UN-No.(DOT)	: None on finished product
DOT NA no.	: None on finished product
Proper Shipping Name (DOT)	: Not regulated
Department of Transportation (DOT) Hazard Classes	: None on finished product
Hazard labels (DOT)	: None on finished product
Packing group (DOT)	: None on finished product
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: None on finished product

14.2. Transport by sea

Not classified as hazardous for water transport

IMO / IMDG

UN/NA Identification Number	: None on finished product
UN- Proper Shipping Name	: Not regulated
Transport Hazard Class	: None on finished product

14.3. Air transport

Not classified as hazardous for air transport

ICAO / IATA

UN/NA No	: None on finished product
UN- Proper Shipping Name	: Not regulated
Transport Hazard Class	: None on finished product
Packing Group	: None on finished product
Marine Pollutant	: None on finished product

14.4. Additional information

Other information : Under the UN classification for activated carbon, all activated carbons have been identified as a class 4.2 product. However, this product type or an equivalent has been tested according to the *United Nations Transport of Dangerous Goods* test protocol for a "self-heating substance" (*United Nations Transportation of Dangerous Goods, Manual of Tests and Criteria, Part III, Section 33.3.1.6 - Test N.4 - Test Method for Self Heating Substances)* and it has been specifically determined that this product type or an equivalent does not meet the definition of a self-heating substance (class 4.2) or any other hazard class, and therefore should not be listed as a DOT hazardous material.

SECTION 15: Regulatory Information

15.1. US Federal regulations

Filtrasorb 600 AR+ 12X40
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt

Cobalt (7440-48-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	0.1 %

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65

WARNING: This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, birth defects, or other reproductive harm.

Silica: Crystalline, quartz (14808-60-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	NA
Cobalt (7440-48-4)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	NA
Titanium dioxide (13463-67-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	NA

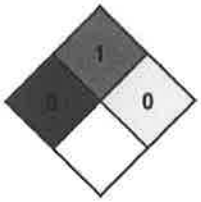
Aluminum oxide (1344-28-1)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right to Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
Calcium sulfate (7778-18-9)
U.S. - Massachusetts - Right to Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Silica: Crystalline, quartz (14808-60-7)
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right to Know List

SECTION 16: Other Information

Indication of changes	:	Revision 1.0: New SDS Created.
Revision Date	:	04/20/2015
Other information	:	Author: CJS.
For internal use only	:	PR #1

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

NFPA health hazard	: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 1 - Must be preheated before ignition can occur.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



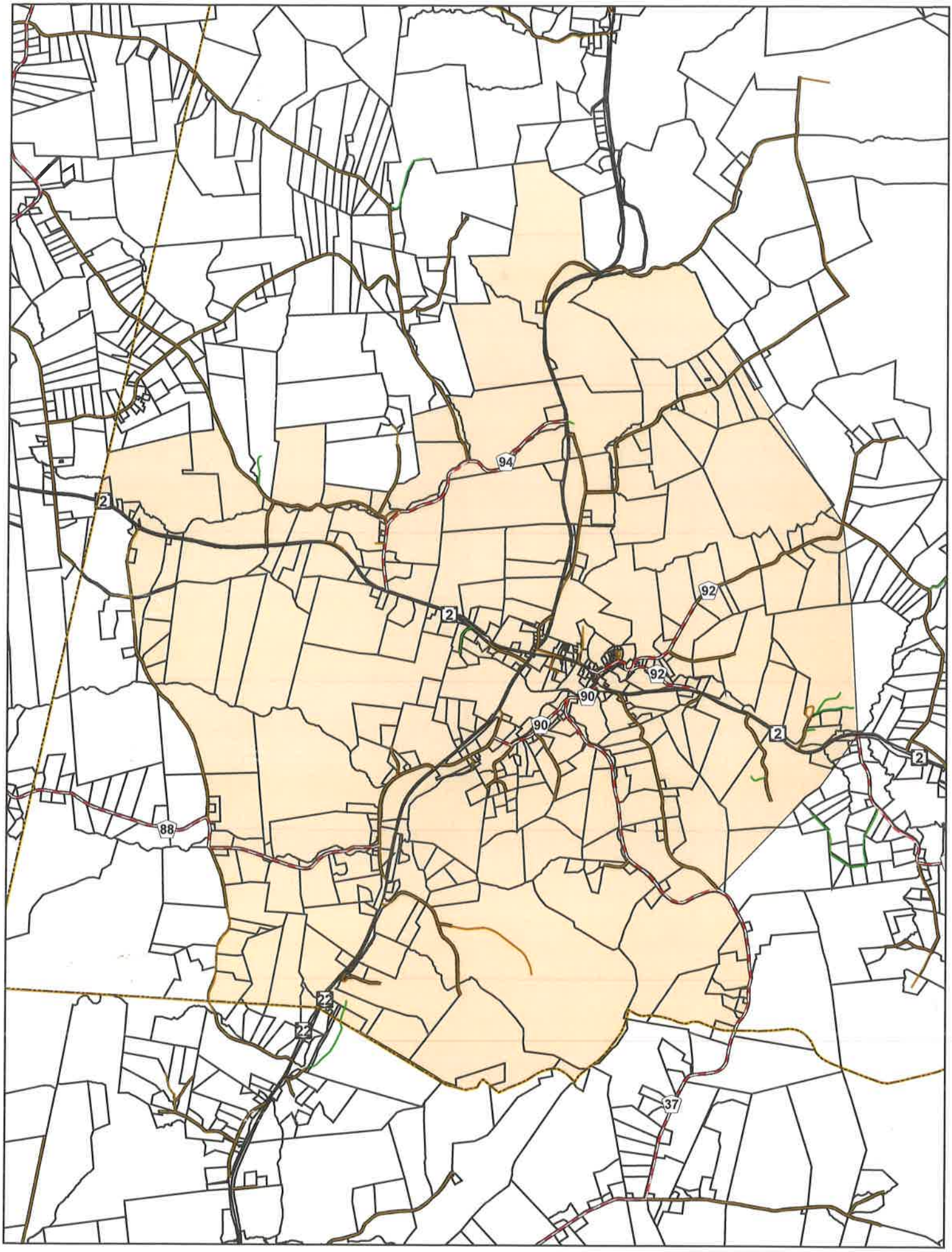
HMIS III Rating

Health	: 0
Flammability	: 1
Physical	: 0
Personal Protection	:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. The information is this document applies to this specific material as supplied. It may not be valid if product is used in combination with other materials. It is the user's responsibility to determine the suitability and completeness of this information for their particular use. While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Calgon Carbon Corporation makes no warranty with respect to the same, and disclaims all liability for reliance thereon.

APPENDIX G

WELL INVESTIGATION AREA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