

**Cyn PCB  
Storage Facility  
License.**

### 1.0 General Approval Requirements

This subsection provides information concerning the general requirements of Cyn Oil Corporation ("Cyn") storage application. It covers the qualifications of the owners, operators, key employees, and facility design.

### 2.0 Qualifications of the Owner or Operator and Key Employees

On August 31, 2018 100% of the ownership interest of Cyn was sold to Clean Harbors Environmental Services, Inc. The following are Cyn's owners, operators, and key employees who have ownership and/or direct management responsibility for the commercial storage of PCB wastes.

- Clean Harbors Environmental Services, Inc.- (sole shareholder)
- J. Steven Tucci - President
- David Kellner - Chief Financial Officer
- Richard T. Bell - Corporate Operations Manager
- Mark Theriault - Compliance/Facility Manager
- Mark Erickson - Health and Safety Manager

The following information identifies Cyn's principals, key employees' technical qualifications and experience in handling hazardous and toxic wastes (includes education and work experience). Finally, the information lists past Federal, State and local environmental violations involving Cyn.

### 2.1 Locations

1. Corporate Headquarters  
Cyn Environmental Services  
100 Tosca Drive  
Post Office Box 119  
Stoughton, Massachusetts 02072  
(781) 341-1777  
(781) 341-6246 (Fax)
2. Cyn Environmental Services  
1771 Washington Street  
Stoughton, Massachusetts 02072  
(781) 341-5108  
(781) 344-3318 (Fax)
3. Cyn Oil Corporation  
d/b/a Cyn Environmental Services  
8 Progress Drive  
Dover, New Hampshire 03820
4. Cyn Environmental Services  
2232 Riverside Drive  
Vassalboro, Maine 04989  
P207.872.9699; F207.872.2616

## 2.2 Corporate Overview

Former Chairman Albert A. Tucci, founded Cyn in 1974 as a waste oil transportation and recycling firm. Mr. Tucci was a pioneer and innovator in the reclamation and marketing of recycled waste, offering clients flexible scheduling and the safest possible waste oil removal at highly competitive pricing. Over the years, its loyal, satisfied customer base continued to grow. On August 31, 2018 the shares of Cyn were sold to Clean Harbors Environmental Services, Inc., a wholly owned subsidiary of Clean Harbors, Inc., the largest hazardous waste company in North America.

Today, Cyn operates the largest and most modern waste oil recycling facility in New England — recycling more than four million gallons per year. Located in Stoughton, Massachusetts, it is a Part B-permitted Treatment, Storage, and Disposal Facility (TSDF) that can receive liquid, sludge, and solid by-products in containerized and bulk quantities. Cyn has the capacity to service customers who generate a few drums of waste during one event, or those who generate thousands of gallons per month.

In response to its customer needs, Cyn expanded its services to help solve difficult environmental problems, while keeping clients in strict compliance with changing Federal and State Regulations. Cyn added experienced personnel with diverse talents including environmental scientists, civil engineers, chemists, Licensed Site Professionals, hydrogeologists, and environmental construction professionals. Cyn also constructed an analytical laboratory to test and analyze a wide range of hazardous and non-hazardous materials.

In August of 2004, Steven Tucci took over as President and was instrumental in doubling the company's sales within his first three years; he continues to grow Cyn into the highest quality, most client-responsive environmental services firm in the region. With numerous years of senior-level environmental construction experience, Mr. Tucci also developed strategies for managing critical resources and purchased new equipment so that Cyn could continue to offer superior quality services to clients.

One of the most rapidly growing areas of the business is environmental construction. These projects are often time critical and require the ability to create new structures while keeping existing facilities/equipment running on schedule.

Cyn has the expertise, equipment, and personnel to provide cost-effective design-build services for:

- Above and below ground tank removal and installations
- Facilities decontamination
- Hazardous and non-hazardous soil excavation, transportation, and disposal
- Remedial construction projects
- Remediation and restoration of Brownfields
- Treatment systems installations and expansions

These projects require significant environmental and technical knowledge, controlling or mitigating releases of hazardous substances into the environment, working in confined spaces, and working under difficult environmental and physical conditions. Cyn also utilizes a network of highly trained and skilled subcontractors to seamlessly offer its clients a broad range of environmental services. Its subcontractors strictly adhere to health and safety protocols and policies. Like Cyn, many of its subcontractors are Loss Prevention System (LPS) trained and apply the principals of behavior-based safety on a daily basis.

## 2.3 Services

Cyn divides its services offerings into the following functional areas:

- 24/7 Emergency Response and Incident Management
- Site Remediation Services
- Hazardous Waste Management Services
- Waste Disposal Services
- Lab Pack Services
- Waste Oil Recycling

### 2.3.2 24-Hour Emergency Response and Incident Management

Environmental emergencies, if not managed properly, can adversely impact the local ecology as well as the corporate image and the "bottom line". Through its New England branch offices, Cyn's Emergency Response Teams are available 24-hours a day to safely contain, assess and remediate environmental incidents of almost any size including both land and water spills.

When called to the site of an emergency, Cyn's experienced and highly trained Supervisors will ensure that there is proper containment and further evaluate the incident for personnel, equipment and supply requirements which will be communicated back to the company's on-duty Coordinator for dispatch. This extra step assures that the incident will be properly managed without the client incurring any unnecessary costs. In addition, if the incident is in Massachusetts, Cyn can provide Licensed Site Professionals (LSP's) to avoid potentially costly delays in remediating the incident which might occur while waiting for a third party to be contracted. At Cyn, our professional commitment is to ensure safe, reliable and cost effective solutions, which are in full compliance with all regulatory requirements.

### 2.3.3 Site Remediation Services

Remediation Services are those services provided to clean and decontaminate a site and return it to productive use. Remediation may follow an Emergency Response event or it may be a planned project such as plating line decontamination, a separator clean out, a laboratory clean-out, or a chemical/oil tank clean-out which must be completed during a plant shut down.

Cyn has evaluated, designed, implemented and completed numerous site remediation projects including: the installation of remedial systems to remediate contaminated groundwater; the cleaning/removal of above and below ground storage tanks; design and installation of above

and below ground storage systems; cleaning and decontamination of industrial and manufacturing facilities; and excavation and disposal of contaminated soils.

We have developed excellent working relationships with environmental regulators throughout New England, are strong negotiators on our clients' behalf and are dependable guides through the complex compliance process. We have the ability to work with environmental consulting firms to implement and augment traditional as well as innovative remedial technologies. Our field service project managers, supervisors and technicians are 40-hour OSHA trained and provided with complete safety and decontamination equipment and protocols. They receive continual training and are provided with the resources to perform site remediation projects in a safe, timely and cost effective manner.

To assist in assuring that projects are completed on time and at, or below budget, Cyn owns and maintains the equipment necessary to perform site remediation projects. A partial list includes:

- Vacuum trucks/trailers
- Excavators
- Loaders/backhoes
- Dump trucks and trailers
- De-watering equipment
- 20,000 gallon portable storage tanks
- Hydro-Blasting equipment
- Vactors
- Carbon treatment systems
- Portable breathing equipment
- Pumps and compressors

In addition, Cyn can provide "on-site" analytical services to help segregate materials to reduce the costs associated with "off-site" treatment and/or disposal.

#### 2.3.4 Hazardous Waste Management Services

Hazardous Waste Management covers a broad spectrum of environmental services including the transportation, storage and disposal of waste materials as well as environmental compliance and OSHA specified training services. Cyn offers generators a wide variety of Hazardous Waste Management options and disposal services. These services play an integral part in containment and remediation strategies and are an everyday part of a facility's compliance strategy. Whether the contamination issue is a single drum, a leaking underground storage tank (UST) or an abandoned industrial or disposal facility, Cyn's focus is on prompt resolution of the problem in strict compliance with all regulations leading to the reduction of client liability.

#### 2.3.5 Waste Disposal Services

The proper management of manufacturing by-products, sometimes referred to as industrial or hazardous waste, is a keystone to any company's environmental compliance plan. Cyn manages a broad range of wastes including non-hazardous and hazardous solids, liquids and

sludges, and provides clients with a comprehensive package of waste management services from pre-shipment characterization to off-site disposal or treatment.

Cyn is dedicated and equipped to provide for the needs of clients of all sizes. As we have grown we have developed the flexibility to handle the transportation and disposal needs of both the small and large generator. Our fleet of box trucks, with power tailgates, can economically pick up a single container or, if required, our vacuum trailers and tankers can transport millions of gallons of bulk waste for disposal.

To minimize present and future liabilities for both ourselves and our clients, Cyn's compliance specialists audit and approve each disposal facility used by the company to insure that these facilities are operating in accordance with their permits and applicable local, state and federal regulations. Using only approved facilities ensures expedient removal of waste materials while minimizing both present and future client liability.

#### 2.3.6 Lab Pack Services

Packaging and removal of small quantities of hazardous chemical wastes requires a full working knowledge of chemical compatibility, as well as full knowledge of EPA and DOT regulations. Cyn offers full service lab pack disposal at competitive prices. We can safely classify, segregate, package, transport and dispose of hazardous materials generated by industrial or institutional laboratories, schools, and universities. Our lab pack chemists and technicians are OSHA certified and have extensive field experience working with hazardous materials and wastes. We avoid costly laboratory charges by field sampling and analyzing unknown wastes on site. In addition, all necessary forms and certifications are provided as part of our turnkey services.

Cyn has also participated in a number of "household hazardous waste days" sponsored by municipalities. Our technical managers work with the municipality to organize the "day". We assist with developing a budget, planning advertising, designing the collection area, as well as performing the actual packaging, transportation and disposal of the wastes generated. Our knowledge and experience managing small quantities of multiple wastes allows Cyn to be innovative in packaging waste. This innovation often leads to reduced transportation and disposal costs, which are passed on to the municipality to either reduce its budget or expand the scope of the "waste day".

#### 2.3.7 Waste Oil Recycling

Cyn Environmental Services is New England's largest waste oil recycler. We operate a fully permitted, state-of-the-art, Treatment Storage and Disposal Facility (TSDF) in Stoughton, Massachusetts. The facility is completely under roof and all loading/off-loading areas are equipped with a secondary containment to eliminate the risks from spillage. Our modern fleet of vehicles and trained professional drivers provide our clients with safe, reliable and cost effective waste oil pick-up services.

Our driver's field screen the product to ensure that it is not contaminated with chlorinated solvents or other hazardous materials. After transport to our facility, the product is sampled and tested at our on-site laboratory in accordance with state and federal parameters. Recyclable material is then micron filtered, phase separated and transported to approved end-

users, while contaminated waste oils are shipped to licensed hazardous waste management facilities for proper disposal.

In addition to waste oil management, Cyn can design a gas trap and oil separator maintenance program for you that provides for safe and efficient operation of your systems and keeps you in compliance with local, state and federal regulations.

### 3.0 Profiles of Key Personnel

#### **Clean Harbors Environmental Services, Inc., Owner, Norwell, MA.**

Clean Harbors Environmental Services, Inc. is a wholly owned subsidiary of Clean Harbors, Inc. a publically traded corporation on the New York Stock Exchange. Clean Harbors Environmental Services, Inc. and its affiliates are a leading provider of environmental, energy and industrial services throughout North America. We are also the largest re-refiner and recycler of used oil in the world and the largest provider of parts cleaning and related environmental services to commercial, industrial and automotive customers in North America. Please refer to the attached SEC Form 10-K for additional information and qualifications of the Clean Harbors companies.

#### **J. STEVEN TUCCI, President/CEO, Stoughton, Massachusetts**

As President/CEO, Mr. Tucci is responsible for directing the company's full range of environmental services. His clear focus on long term objectives and extensive experience in daily operations has been instrumental in doubling the firm's sales over the past five years. With more than 20 years of hands-on experience, he has in-depth knowledge of environmental construction and contracting. He has expanded the range of services the company provides, recruited new management and staff personnel with considerable environmental expertise, and has increased the firm's client base. Mr. Tucci has been with his father from day one and continues to utilize his personal and business skills to operate the company at a high efficiency level.

##### **Areas of Expertise**

- Strategic business planning and management
- Environmental management and daily operations
- Environmental construction
- Project coordination with regulatory personnel and agencies

#### **DAVID KELLNER, Financial Controller, Stoughton, Massachusetts**

David utilizes his years of experience in accounting to compliment his 10+ years of work in the environmental industry to manage all the financial activities at Cyn Environmental.

Mr. Kellner is responsible for managing the accounting department, which consists of accounts receivable, accounts payable, billing and project accounting. Dave is also personally responsible for all banking and financial investing activities. Separately from the accounting roles, Dave manages the purchasing activities, along with all the information technologies at Cyn.

Mr. Kellner started his career hands on in the carpentry field, and then shifted his focus to accounting and tax preparation, attended Curry College to get a BA in Business Management. He started at working at Cyn in the accounting department in 2003, and worked through almost every role in the department over his 10 years with the company. David was appointed to the controller position in 2012.

**BELL, RICHARD, Director of Field Operations, Stoughton, Massachusetts**

Mr. Bell draws over 20 years of experience in the environmental industry to estimate and plan construction and remediation projects of a comprehensive nature. He has a strong understanding of the environmental services industry from his experience as an operations manager, field supervisor, sales manager, and director of transportation and disposal of hazardous materials.

In addition, he reviews subcontractor bid specifications and develops joint venture partnerships in order to estimate and prepare competitive bids on larger projects.

**Areas of Expertise**

- Field Operations Coordination & Supervision
- Project Management
- Project Estimating
- Regulatory Compliance
- Site Remediation



**Therault, Mark, Compliance Manager/Facility Manager, Dover, New Hampshire**

Mr. Therault is responsible for environmental compliance for the company. Mr. Therault has a BS in Environmental Science with 20 years' experience in environmental compliance regulations.

Mr. Therault is also the facility manager for Cyn's PCB Treatment and Storage Facility and non-hazardous water treatment facility in Dover, New Hampshire.

**Areas of Expertise**

- Environmental compliance regulations.
- Federal, State and Local Regulatory Compliance
- Environmental Sampling and Analysis
- SW 846

**Licenses/Certifications/Registrations**

- OSHA 40-Hour
- OSHA 8-Hour Refresher, Current
- OSHA 10 Supervisor Certified
- New Hampshire Hazardous Waste Coordinator License, Current

**ERICKSON, MARK O., Health and Safety Manager**

Mr. Erickson has the responsibility of coordinating and implementing the Health & Safety programs at Cyn Environmental Services. He is directly involved with developing the health and safety site plans (HASPs) for projects, curriculum for weekly safety meetings, 40 Hour OSHA classes and 8 Hour refresher, supervisor training, and site audits for field crews, plant operations, laboratory, and maintenance areas.

Mr. Erickson has over 28 years of environmental industry knowledge to draw from. In the past, he has been responsible for managing subsurface assessments; due diligence surveys; design, installation and operation of remedial systems; UST upgrades and removals; AST cleaning and demolition; facility decontamination; bulk waste management; identification, consolidation and disposal of hundreds of unknown drums and containers; soil excavation and disposal; Remediation of PCB impacted soil, PCB transformers; transmission line cleanup and restoration and hazardous waste management.

**Areas of Expertise**

- Field Health and Safety Supervisor
- Knowledge of OSHA, EPA, State and local health and safety regulations

**Licenses/Certifications/Registrations**

- OSHA Competent Person
- OSHA 40 with 8 Hour Supervisor
- CPR and First Aide Training
- LPS Training, 2010

**4.0 Compliance History**

A copy of Cyn's compliance history can be found in Exhibit 1.

**5.0 General**

Cyn is a hazardous waste/material management firm which performs a variety of services involving hazardous waste/materials spill remediation, tank management, and transportation. Cyn operates a PCB storage facility in Dover, New Hampshire which accepts PCBs or PCB items including but not limited to, dielectric fluids, transformers, capacitors, contaminated wastewaters, soils, sludges, contaminated oils, etc. which are deemed to be

regulated according to 40 CFR 761. PCB wastes are transported by Cyn or other licensed transporters from the site of generation to Cyn's PCB facility. The majority of PCBs and PCB items accepted at the facility are transported in Cyn's vehicles, however PCBs and PCB items can be delivered by other properly licensed transporters.

Cyn accepts PCBs and PCB items for storage in containers (such as drums or 20 or 30 cubic yard containers), in portable tanks, or in bulk transport vehicles. PCB liquids and solids are sometimes collected and consolidated in tank trucks or roll-off containers at the facility for off-site shipments to treatment and disposal facilities. PCB contaminated waters are treated on-site to meet industrial sewer discharge standards and then are subsequently discharged into the POTW.

#### 5.1 Facility Location

Cyn's PCB storage facility is located at 8 Progress Drive, Dover, New Hampshire 03820. Cyn leases the property, while not having ownership Cyn does exercise complete control of the property.

#### 5.2 EPAID Number

Cyn's EPA ID Number is NHD981211832.

### 6.0 Facility Storage Capacity and Wastewater Treatment System

#### 6.1 Description of Wastes Stored

As a commercial storer of PCB waste, Cyn engages in the storage activities of PCB wastes generated by others, or PCB waste that was removed while servicing the equipment owned by others. PCB wastes are stored on-site in containers such as 55 gallon drums, cubic yard boxes, or bulk solid containers, in tanks, or as transformers. PCB wastes accepted by Cyn are stored on-site until sufficient quantities are accumulated for shipment off-site to other facilities for treatment and disposal or in the case of PCB contaminated wastewaters, treated on-site and then discharged to the POTW. The PCB contaminated waters are segregated or separated by a filtration system, then the treated water is discharged to the POTW pursuant to Cyn's permit. The PCB contaminated filtrate and media is sent off-site for disposal as TSCA regulated waste.

The following is a general description of the categories of PCB wastes stored at Cyn:

- PCB liquids (50 ppm to 60% PCB);
- PCB solids (soil, debris, etc.);
- Articles (e.g. transformers, capacitors, etc.); and
- PCB contaminated wastewaters.

#### 6.1.1 Containment Volume Calculations

The detailed calculations prepared in support of Cyn's plans for their Dover, NH facility can be found in Exhibit 3. The secondary containment is designed and constructed to comply with the requirements of 40 CFR 761.65(b)(1). The secondary containment volume is equal to at least two times the internal volume of the largest PCB Article or PCB Container or 25 percent of the total internal volume of all PCB Articles or PCB containers stored there, whichever is greater.

The existing containment dike has an epoxy seal coating applied on top of the previous one. The site schematic in Exhibit 4 for the Facility Layout shows a seal coated concrete floor containment area, with the dimensions of 32.5 feet by 55 feet by 6 inches. This equals a containment volume of 894 cubic feet or 6688 gallons.

The allowed storage capacity is:

- 120 drums (55 gallons) total volume is 6,600 gallons
- 12 tanks (550 gallons) total volume is 6,600 gallons
- Transformers (not to exceed 2,000 ft<sup>3</sup>), total liquid volume is estimated at 2,400 gallons.
- 1 tank (3,000 gallons)

TOTAL VOLUME OF 18,600 GALLONS

The displacement due to the containers, transformers, portable tanks, tank and aqueous treatment system is calculated to be 673 gallons (see Exhibit 3 for detailed calculations). Therefore, the total secondary containment capacity of 6,012 gallons is 32% of the total maximum storage proposed, which is greater than the required 25%. Due to size variations of transformers no displacement calculation would be an accurate representation of volumes at any given time. Volume calculations will be made before transformers are shipped to the facility to determine if containment capacities would be violated.

#### 6.1.2 Aisle Space/Container Stacking

All 55 gallon or one cubic yard containers are stored on pallets in rows of no more than two drums or one cubic yard container abreast. Rows are separated to allow for visual inspection of container condition and labeling, and if required, emergency response.

Pallets are used between levels of containers when stacking. Only pallets in good condition are used, broken pallets are either repaired or properly disposed of. Stacking of containers is limited to a three-pallet stack height.

#### 6.1.3 Temporary Storage

Temporary storage occurs in the area that is adjacent to the TSCA regulated storage room. PCB materials are temporarily stored adjacent to the storage room in containers on spill pallets. Trucks containing PCB material are parked adjacent to the temporary storage area in the shipping/receiving areas. "Temporary Storage" is defined as ten (10) days or less.

#### 6.1.4 Maximum Inventory

The maximum inventory of PCB in storage at any given time is also the maximum storage capacity of this facility as it is currently designed and constructed. The maximum inventory consists of:

- Drums/Bulk Container -120, 55-gallon or equivalent volume (total 6,600

gallon) containing PCB liquids or solids ( e.g. soil, equipment, personnel protective equipment, capacitors, debris) being held for bulk shipment consolidation to ultimate treatment and/or disposal facilities.

PCB concentrations will range from 50 ppm to 60%. Concentrated PCB transformer fluids are stored in drums until consolidated into bulk transporters for conveyance to off-site licensed treatment facilities or shipped off-site in containers in box trucks or van trailers.

- Portable tanks -12 tanks, 550 gallons per tank (total 6,600 gallons).
- Full and Drained PCB Items and PCB-contaminated transformers - total 2,000 cubic feet. The size of transformers range from 10 cubic feet to 200 cubic feet per unit. Therefore the 2,000 cubic feet could represent as few as 10 large transformers to 130 small transformers. A total liquid capacity is estimated to be 2,400 gallons.
- One (1) Floor Mounted Poly Tank (3,000 gallons) - This tank will be used as a feed tank to the aqueous treatment system.
- Temporary Storage Area - Up to 5,000 gallons can be temporarily stored in the container shipping/receiving areas.

## 6.2 Wastewater Treatment System

Wastewater contaminated with PCB's are treated on-site pursuant to Cyn's City of Dover Industrial Sewer Discharge Permit (see Exhibit 5). Wastewater is transferred from the portable tanks or the permanent 3,000 gallon feed tank and treated through an oil/water separator, two (2) of a total of six (6) bag filters, and either one (1) filter unit with carbon (100 gallon capacity), or a second carbon filtration unit (500 gallon capacity). The treated water is then stored in a 5,000 gallon tank. Since the treated water is not TSCA regulated, this tank is located outside the TSCA storage area. Samples are then taken from the 5,000 gallon "hold tank" and analyzed for sewer discharge requirements. Once it is confirmed that the wastewater meets discharge standards, the wastewater is discharged into the POTW. If the wastewater fails to meet applicable standards, the water is re-treated as described above.

## 7.0 Facility Design

### 7.1 Wall, Ceiling and Roof Construction

The facility has been designed to meet the requirements of 40 CFR 761.65(b)(1) and/or ( c )(7). Specifically the building has adequate roofing and walls to prevent rain and snow from reaching the storage area.

The building is a metal fabricated permanent structure on a concrete pad, fully enclosed and designed to accommodate storage and other facility activities during all seasons. Exhibit 4 is provided as a diagram of the general building layout. The floor of the

containment area is solid with no drain holes or other passageways that could compromise the integrity of the containment. The floor has been sealed with Armorseal ® 1000 HS, an impermeable layer, compatible with oils and dielectric fluids, designed to contain and prevent migration of PCB fluids and PCB material from spreading into the floor. The curbing around the perimeter of the area, inside the walls of the building, is six (6) inches high and the containment volume described is approximately 894 cubic feet. Exhibit 4 is provided as a representation of the PCB containment area.

The adjacent, interior parking area contiguous to the containment area is inside the building and impervious to wind, rain, snow and other adverse weather conditions. The floor of that area is concrete of the same construction as the containment area but without the coating, and has no drains or construction joints so that any liquid spilled in that area will not find direct access to potential subsurface utilities. Any activity in this area is temporary storage with portable spill containers, tarps, or other equipment to prevent or contain spills during operations. The possibility of run off of contaminated liquids is insignificant in this area due to its limited and short term use and the construction of the facility.

The internal parking area is approximately 360 square feet (8 ft. x 45 ft.) and is used as parking for the vehicles and an indoor transfer port or staging area for PCB items into the containment area. Any PCB items temporarily stored in this area are done so in accordance with 40 CFR 761.65(c)(1) & (2).

## 7.2 Geographic Description

The following exhibits describe the area that the building is built on:

- Exhibit 6, USGS topographic map, shows the approximate location of the Cyn facility at 8 Progress Drive in Dover, New Hampshire.
- Exhibit 7 shows the facility on the City of Dover Tax Map, with the legend.
- Exhibit 8 shows the facility in its proximity to the 100-year flood plain and its proximity to wetlands. The facility does not fall in the 100-year flood plain.

### 7.2.1 Geology

Based upon information provided in a 1987 Assessment Report prepared for the site by Goldberg-Zoino Associates, Inc. (GZA), 6 soil borings were advanced at the site; 4 of which were completed as groundwater monitoring wells. Soil boring log information indicated that surficial soils consisted of, in general, coarse to fine sands and gravel with trace-little cobbles and silt from surface grade to approximately 5 feet below grade. This material was observed to be underlain with silty clay/silt and clay to a maximum observed depth of 17 feet below grade, although not all borings were advanced to this depth. According to the GZA report, the silty clay deposits were deemed to be marine in origin, with the upper portion of the silty clay representing "the crust formed through weathering, desiccation and oxidation of the underlying stiff parent silty clay materials." In general, the stiffness of the silty clay material was observed to decrease with depth in the borings. These materials are consistent with United States Geological Survey (USGS) observations made in

the area.<sup>1</sup> Based on Cyn's inspection of the area surrounding the site, gravel pits are located approximately 0.5 miles to the south of the site. Based on the USGS Bedrock Geologic Map of New Hampshire, the site appears to be located in an area underlain by impure and calcareous quartzite and slate of the Cambrian-Silurian age.

According to the GZA report, groundwater at the site was observed to be at approximately 0.5-2.8 feet below surface grade. Based upon Cyn's observations of the site, groundwater at the site is substantially recharged by precipitation, owing to the unpaved portions of the property. Observations at the site by Cyn indicated that groundwater in a monitoring well located on the southern portion of the property was approximately 1 foot below surface grade. The shallowness of groundwater accounts for the observed wetland area on the southern portion of the site, which consists of an approximate 100 square foot area of wetland vegetation.

No private or municipal drinking water wells are located in the site vicinity. Potable water is provided by the City of Dover.

### 7.3 Internal Tanks

PCB materials are received in containers or portable tanks and in bulk and are shipped out in containers, in tanker trucks, or in bulk roll off containers. Material in the facility containment area is stored in a 3,000 gallon skid-mounted tank, in portable tanks, in drums, or in containers. Storage of PCB waste in tanks complies with the requirements of 40 CFR 761.65(b)(7)(i). Management of the portable tanks and any incidental spill are addressed in the facility Emergency Response Plan in accordance with 40 CFR 761.

#### 7.3.1 Portable Tanks

Up to twelve (12) portable 550 tanks can be utilized at one time. The tanks are 550 gallon, single walled tanks with all openings and vent pipes on the top. The portable tanks (Clawson Jumbo Bin) are specifically engineered for high density liquid storage, such as PCB waste. Manufactured by Clawson Tank Company of Clarkston, Michigan, they meet DOT UN31A1 (formerly DOT 57) specifications. Each tank is permanently marked with the tare weight and maximum gross weight allowed by the manufacturer. Based upon the average gross weight of 6,995 pounds and a tare weight of 585 pounds, each portable container could be filled to its maximum capacity of 550 gallons with PCB liquids up to 11.5 lb./gal. in density without exceeding the gross weight for which the tank was designed. Prior to transferring PCB liquids into a portable tank, where the density of the liquid exceeds 11.5 lb./gal., the tank inventory will be reviewed to ensure that the maximum gross weight allowed is not exceeded. Exhibit 9 provides tank specification data from the manufacturer.

#### 7.3.2 Permanent Tank

The facility has one permanent tank; a 3,000-gallon tank utilized strictly as a feed tank for the water treatment system and as such will only contain water contaminated with

---

<sup>1</sup> Mach, T.J., and Lawlor, S.M. (1992), "Geohydrology and Water Quality of Stratified Drift Aquifers in the Bellamy, Cocheco, and Salmon River Basins, Southeastern New Hampshire," United States Geological Survey Water Resources Investigation Report, 90-4161, 65 pages.

PCBs. The density of this waste is essentially the same as the density of water. Exhibit 9 contains specifications of the 3,000 gallon tank.

#### 7.4 General Description of the Facility Location

The facility is located on a cul-de-sac on Progress Drive in an industrial park. The external parking area in the back of the building is fenced in and beyond that are railroad tracks and beyond that a wooded area. The area around the site is grassy and wooded. The road in front of the facility is paved, the entrance to the facility and the parking lot behind the facility are paved. The entrance to the facility is shared by the neighboring building which is leased to Atlantic Gymnastics Training. On the other side of the facility, at a distance of 50 yards, is another commercial activity serviced by its own entrance.

The facility is generally occupied from 8:00 am to 5:00 pm. During the non-occupied hours the facility is locked, mercury vapor security lights are on outside the building, internal lights are left on and all external doors are locked and from the inside. An eight-foot chain link fence surrounds the yard with a locked gate on the driveway.

#### 7.5 Security

The PCB containment area has only four (4) access points: two (2) bay doors, one (1) personnel gate and one (1) large inside access gate. All doors and access gates are locked when personnel are not in the containment area. Besides the external bay doors to the containment area, the building has four (4) other access points: three (3) personnel doors and one (1) bay door. The parking area is serviced by one of the personnel doors and the bay door. An eight-foot chain link fence surrounds the yard with a locked gate on the driveway.

#### 8.0 Certification of the Design of the TSCA Storage Area

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

I also certify that the area designated as the "TSCA Storage Area" within this Application meets the PCB storage for disposal design criteria of 40 CFR 761.65(b).

x   
\_\_\_\_\_  
J. Stevetti cci  
President VCEO 11/15/18  
Cyn Environmental Services

Exhibit 1 - Compliance History



Exhibit 1– Compliance History  
Exhibit 2–Left Blank Intentionally  
Exhibit 3 – Secondary Containment Volume Calculations  
Exhibit 4 - Facility Layout and Paint Specifications  
Exhibit 5 - City of Dover Industrial Sewer Discharge Permit  
Exhibit 6 - Topographical Map  
Exhibit 7 - City of Dover Tax Map  
Exhibit 8 - 100-year Flood Plain Map  
Exhibit 9 - Tank Specification  
Exhibit 10 – Closure Calculations  
and Certificate of Insurance

---

*Exhibit 1: Compliance History*

## **Cyn Oil Corporation d/b/a Cyn Environmental Services Compliance History**

March 10, 1979 approximately 1,500 gallons of #6 fuel oil was released from the Cyn Oil Facility in Stoughton, MA as a result of vandalism to tanks. Due to prompt and cooperative response on the part of Cyn Oil Corporation, a penalty of only \$250.00 was imposed by Region 1 of the United States Environmental Protection Agency (Case no. 80 EPA 5001). As a result of this incident, the Cyn facility now employs security personnel to monitor the facility during non-working hours.

May 7, 1981 Notice of Non-Compliance for failure to submit engineering and plot plans to the Department of Environmental Quality Engineering (DEQE) as required under the terms of the facility's license. The matter was settled by the submission of the required materials on May 13, 1981.

May, 1981 Complaint and Notice of Opportunity for Hearing concerning violations of the Toxic Substances Control Act 15 U.S.C. Section 2601 et. Seq. was brought by the United States Environmental Protection Agency, Region 1, involving Cyn Oil Corporation's application of approximately 9,500 gallons of waste oil to approximately 3 miles of road in New Boston, New Hampshire on July 10, 1980. Unknown to Cyn, the waste oil so applied contained volatile organic compounds (VOCs) and PCB contaminants. Due to the very low levels of VOCs and PCBs detected, and Cyn's prompt response, no fine was assessed (TSCA No. 81-980).

September 2, 1981, Cyn Oil Corporation received a Notice of Violation (NOV) from MADEP for failure to obtain signatures of generators of waste oil, and plan for review and analysis of materials collected from generators.

October 27, 1981, Notice of Non-Compliance (NON) for delivery of waste oil to an unauthorized facility. Transporter permit modified and facility added.

November 3, 1981 Notice was received from the DEQE that samples taken from two of Cyn's storage tanks contained PCBs.

April 27, 1983, as a result of an EPA Region 1 SPCC Inspection, a discrepancy was noted concerning a fuel truck used for emergency storage. The matter was resolved without payment of a fine by correcting the discrepancy.

April 2, 1987, a Notice of Non-Compliance was received for failure to properly label above-ground storage tanks and manage small leaks and spills. All deficiencies were corrected.

November 30, 1988, a Notice of Non-Compliance was received for failure to insure that a driver was carrying the phone number of CHEMTREC and the National Response Center, failure to carry the Emergency Guide Book, and failure to have fully stocked first aid kit. All deficiencies were corrected.

December 15, 1988, a Notice of Non-Compliance for failure to have hazardous waste transport vehicles carry proper spill containment equipment and failure to properly label a drum of waste oil inside the repair garage. All deficiencies were corrected.

January 31, 1990, Notice of Non-Compliance for failure not properly labeling drums, and failure to return appropriate manifest copies to the appropriate state agencies within 10 days. All deficiencies corrected. It is believed that this NON was issued by MA DEP but the file is missing so the information could not be verified.

June 26, 1991 Notice of Non-Compliance for failure to properly label drums, missing manifest copies, and failure to obtain copy 3 of Cyn-generated manifests. All deficiencies corrected. It is believed that this NON was issued by MA DEP but the file is missing so the information could not be verified.

February 11, 1992, Notice of Non-Compliance issued by Region I, USEPA for failure to dispose of PCB waste within one year of its storage date. Alleged violation was a result of PCB incinerator capacity shortfall, material had been transported to PCB incinerator facility within the one year deadline, however, it was not incinerated in a timely manner.

May 1993, Notice of Non-Compliance issued by the Mass. DEP for failing to submit our monthly transporter report on computer disc in the format described by the Department. The monthly report was being submitted on paper using the old report format. Cyn began submitting monthly reports on computer disc for the month of June 1993.

August 23, 1993, Notice of Non-Compliance issued by the Mass. DEP for failing to keep containers of waste covered at our storage facility in Stoughton, MA, failure to have all required emergency equipment on-board one of our transport vehicles and holding waste in a transport vehicle for more than five days at our facility. All violations were corrected and verified by the Mass. DEP during a follow-up inspection of our facility on September 10, 1993.

On February 1, 1994, a Letter of Deficiency was issued by the NH DES for failing to have our NH Transporter Permit Number displayed on the side of one of our transport vehicles, failure to have an adequate lock for locking the cargo area of the vehicle, and failing to leave the generator copy of the manifest with the generator. All violations were corrected and documented in a follow-up letter to the NH DES dated February 28, 1994.

July 29, 1994, Notice of Non-Compliance (NON), by Mass. DEP for failing to obtain DEP approval prior to initiating a Release Abatement Measure and failure to store Remediation Waste in a secure manner. Corrective measures were immediately taken and approved by DEP.

September 19, 1994, Notice of Non-Compliance issued by the Mass. DEP for failing to maintain records, which document exemption status relative to air emissions source registration and/or plan approval, and operating permit. Source registration was prepared and submitted documenting exemption from source registration and/or plan approval.

September 21, 1994, Notice of Violation issued by the Rhode Island Department of Environmental Management for failing to obtain prior approval for the removal of three underground storage tanks located in the town of Tiverton, RI. An application for removal was subsequently submitted and approved. A penalty of \$6,000 was paid in accordance with a Consent Agreement issued by the Rhode Island DEM.

October 26, 1994, Citation and Notification of Penalty issued by the Occupational Safety & Health Administration (OSHA) for improper confined space procedures and failure to provide proper training to employees. All violations were immediately corrected. A penalty of \$4,125 was paid in accordance with a Settlement Agreement reached with OSHA.

November 21, 1994, Notice of Non-Compliance (NON) by Mass. DEP for failing to obtain DEP approval prior to initiating an Immediate Response Action. Corrective actions were taken and subsequently approved by DEP.

January 27, 1995, Notice of Non-Compliance issued by the Mass. DEP for failing to meet a Compliance date for the installation of a Fire Suppression System at the Cyn Oil Corp. facility in Stoughton, MA. A request for extension of the compliance date was submitted and approved. The Fire Suppression System was subsequently installed.

March 13, 1995, Notice of Non-Compliance (NON) by Mass. DEP for failing to obtain DEP approval prior to initiating an Immediate Response Action. The unusual circumstances were explained to DEP and no further action was required.

On or about October 12, 1995, the Company received a Notice of Potential Liability and Request for Participation in Cleanup Activities from the Maine Department of Environmental Protection (ME DEP) arising from contamination discovered at the Portland Bangor Waste Oil Site in Wells, Maine (PBWO). It is alleged that during the period from approximately 1978 to 1980, the Company delivered to PBWO petroleum products which amount to less than one percent (1%) of the total volume of material transported. The Department of Environmental Protection is currently investigating the Site. The Company is participating in a settlement to resolve all its liability, and has paid its allocated settlement portion into escrow.

By letter dated May 28, 1996, Cyn Oil Corporation d/b/a Cyn Environmental Services received a notice from the United States Coast Guard in Case No. 0162MV96002372, indicating violations of federal regulations on March 21, 1996, for not having an approved Operations Manual with respect to 33 C.F.R.

On September 9, 1996, the City of Boston Fire Department issued Cyn an Abatement Order for failing to comply with regulations relative to the removal of underground tanks, which was subsequently followed by a Complaint and Notice to Show Cause by the Housing Court of the City of Boston in Docket No. 96-CR-03622. At the hearing held on November 12, 1996, the case was dismissed after Cyn provided affidavits from the individuals involved and followed up with an additional information submittal.

On December 10, 1998, EPA issued a Notice of Non-Compliance for failure to identify two drums of waste as PCB waste, failure to indicate the weight in kilograms on the manifest and failure to indicate the storage for disposal date. The two drums were properly disposed and Cyn revised its procedures for characterizing waste generated from truck clean outs to include a separate analysis of the sludge.

On October 12, 1999, MA DEP issued a Notice of Non-Compliance for failure to properly label and cover drums of hazardous waste, failure to provide adequate aisle space and failure to have a current Emergency Procedures Guide in a vehicle. All items were corrected at the time of inspection, a written response was provided to MA DEP and MA DEP issued a Return to Compliance letter.

On February 19, 2001, CT DEP issued a Notice of Violation for failure to submit monthly reports for Cyn's Hazardous Waste Transporter permit for the time period from January through December 1999. Cyn promptly submitted the required reports. No further action was required by CT DEP.

On August 1, 2001, MA DEP issued a Notice of Noncompliance to Cyn's Wilbraham office for failure to notify the local fire chief whenever flammable waste are held on site for more than 48 hours, for having an open container of hazardous waste, for not having the correct wording on signage for the hazardous waste storage area, and for not having appropriate security for the hazardous waste storage area (an overhead garage door had missing and/or broken panels). All deficiencies were corrected and the DEP issued a Return to Compliance letter on September 10, 2001.

On August 22, 2001 MA DEP issued a Notice of Noncompliance to Cyn's Stoughton facility for failure to notify the Department that it was no longer storing drums on pallets and for failing to comply with the license condition that only allows the horizontal tanks to be heated to 60°F. Both deficiencies were corrected and the Department issued a "Return to Compliance" letter on September 25, 2001.

On September 27, 2002 Cyn signed an Administrative Consent Order and Notice of Non-Compliance with MA DEP for inadvertently off-loading waste containing low levels of PCB's at its Stoughton facility which it was later learned to be TSCA regulated. Cyn's error was discovered prior to any movement of the waste and was immediately reported to the MA DEP. Cyn has completed a Supplemental Environmental Project (SEP) as part of its penalty.

On November 26, 2003 MA DEP issued a Notice of Noncompliance for failure to obtain Immediate Response Action approval from the Department for the excavation of approximated 10 cubic yards of petroleum contaminated soil. No corrective measures were required.

On November 26, 2003 MA DEP issued a Notice of Noncompliance for violations relating to Cyn's hazardous waste transporter's license. The violations were failure to have appropriate spill containment equipment, out of date Emergency Procedure handbook and DOT Emergency Response Guide, and an invalid VID card on various licensed hazardous waste vehicles. All deficiencies were corrected and Cyn responded to the Department on December 19, 2003.

On December 17, 2004, MA DEP issued a Notice of Noncompliance for Cyn's failure to include lead in the Stoughton facility's Toxics Use Reduction Plan summary. The deficiency was corrected and Cyn responded to the Department on January 12, 2005.

On June 2, 2005, Cyn received a Penalty Assessment Notice from MADEP for violations of 310 CMR 30.0000 relating to several truck inspections that occurred on March 24, 2005. The violations were failure to have the most recent USDOT Emergency Response Guide, failure to have an eye-wash and adequate PPE, failure to have an update phone number for emergency response, and for having an expired DEXSIL test kit. All violations were corrected during the inspection.

On October 30, 2007 MassDEP issued a Notice of Noncompliance to Cyn's Stoughton facility for sending off site a used "Crystal Clean 142" mineral spirits (a petroleum distillate) used as a vehicle parts washer solvent under a Bill of Lading (BOL) and not on a Hazardous Waste Manifest. The deficiency was corrected and Cyn responded to the MassDEP via letter dated November 12, 2007; MassDEP issued a "Return to Compliance" letter dated November 20, 2007.

MassDEP issued a Notice of Noncompliance, dated December 29, 2008, to Cyn's Stoughton facility for violations observed during its August 19, 2008 inspection. The violations included stacked drums, incorrect or missing labels, limited isle spacing between drums, incorrectly labeled satellite containers, and use of a damaged satellite drum. The deficiencies were immediately corrected during the MassDEP inspection and/or shortly thereafter. Cyn further corrected the deficiency via submittal of a response letter, dated January 7, 2009, to MassDEP. MassDEP issued a "Return to Compliance" letter dated January 29, 2009.

On September 2, 2009 MassDEP issued a Notice of Noncompliance to Cyn for failing to transport hazardous waste from three generators to the designated or alternate facility within five business days, as required by 310 CMR 30.408(1) & (2). The deficiency was noted and Cyn responded to the MassDEP via letter dated September 8, 2009.

MassDEP issued an Administrative Consent Order with Penalty and Notice of Noncompliance, dated November 25, 2009, to Cyn's Stoughton facility for violations observed during its June 18 and July 1, 2009 inspections. The violations included drums overhanging pallets, open satellite storage containers, incorrect labeling on select containers, storing damaged containers, and having an outdated Emergency Coordinator List. The order required that the deficiencies be corrected, and also required repair of steel grate catwalks, insulation around vertical tanks, facility canopy, select berms, and fencing. The deficiencies were corrected within MassDEP's required timeframe. Cyn further corrected the deficiency via submittal of a response letter, dated February 22, 2010 to MassDEP. MassDEP issued a "Return to Compliance" letter dated March 16, 2010.

Cyn's Stoughton facility received a letter from the Town of Stoughton, dated February 1, 2010 expressing concern about the storage of empty roll-off containers, various equipment, and vehicles. Cyn responded with a letter dated February 11, 2010; at the Town of Stoughton's requests, the letter included a site plan indicating current and expected future uses of the property, specifically identifying roll-off, equipment, and vehicle storage locations. No further actions were required.

MassDEP issued a Notice of Noncompliance, dated April 12, 2010, to Cyn's Stoughton facility for violations observed during its March 10 and 16, 2010 inspections. The violations included failure to electronically file a number of manifests with MassDEP, failure to provide select personnel training records to MassDEP, and failure to submit Exception Reports for manifests. The deficiencies were immediately corrected following the MassDEP inspection. Cyn further corrected the deficiency via submittal of a response letter, dated April 21, 2010, to MassDEP. MassDEP issued a "Return to Compliance" letter dated May 4, 2010.

The Maine Department of Environmental Protection (MEDEP) issued Cyn an Initial Notice of Violation and Enforcement Intent, dated December 22, 2010 for various alleged violations. The violations included operating a hazardous waste transfer facility without a license to do so; storage of hazardous waste off the site of generation without a license to do so; hazardous waste manifesting inaccuracies; and failure to account for all manifests during a quarterly reporting period and paying the complete hazardous waste quarterly fees. Cyn identified a clerical error, revised its manifest tracking process, and submitted a "bulk" quarterly report with associated fees to MEDEP for the subject manifests. On January 25, 2011, Cyn completed a written response to document corrective actions taken to address the violations, to gain compliance, and ensure the violations do not recur.

MassDEP issued Cyn a Notice of Enforcement Conference, dated January 14, 2011, for failing to notify MassDEP of a release (approximately 25 gallons of diesel fuel to an asphalt-paved surface) within 2 hours as required in 310 CMR 40.0311(3). Cyn attended a January 27, 2011 conference to discuss the alleged violations and to reach a negotiated settlement to return to compliance. An Administrative Consent Order and Notice of Noncompliance was formally issued to Cyn on May 9, 2011; the order required Cyn to pay the MassDEP a civil administrative penalty of \$4,315.00. The penalty has been paid and MassDEP provided Cyn with a "Return to Compliance" letter dated July 27, 2011.

MassDEP issued a Notice of Noncompliance, dated April 13, 2011, to Cyn Oil Corporation for allegedly failing to report one or more manifests to the it within select Electronic Monthly Operating Reports (EMORS) for calendar year 2008 through 2010. Cyn provided MassDEP with a response letter, dated April

25, 2010, and as of this writing, Cyn is working to fully correct the deficiencies. Upon correcting the deficiencies, Cyn expects MassDEP to issue a "Return to Compliance" letter.

Following up on its Initial Notice of Violation, dated December 22, 2010, the MEDEP issued Cyn a Secondary Notice of Violation, dated July 14, 2011, after identifying additional alleged violations that include failure to account for additional other (waste oil) manifests during a quarterly reporting period and paying the complete (waste oil) hazardous waste quarterly fees. On August 15, 2011 (via electronic mail), Cyn completed a written response to document corrective actions taken to address the violations, to gain compliance, and ensure the violations do not recur.

Following up on its Initial Notice of Violation, dated December 22, 2010, the MEDEP issued Cyn a Tertiary Notice of Violation, dated August 3, 2011, after identifying additional alleged violations. The violations included operating a (waste oil) hazardous waste transfer facility without a license to do so. On August 9, 2011, Cyn completed a written response to document corrective actions taken to address the violations to gain compliance and ensure the violations do not recur.

MassDEP issued a Notice of Noncompliance, dated August 23, 2011, to Cyn's Stoughton facility for violations observed during its July 20, 2011 inspection. The violations included an open container of hazardous waste, and missing or inadequate labeling on one or more drums, totes, roll-off containers. The deficiencies were immediately corrected following the MassDEP inspection. Cyn further corrected the deficiency via submittal of a response via electronic mail on August 31, 2011, to MassDEP. MassDEP is expected to provide Cyn with a "Return to Compliance" letter.

In association with its issuance of the Initial Notice of Violation and Enforcement Intent, dated December 22, 2010; Secondary Notice of Violation, dated July 14, 2011; and Tertiary Notice of Violation, dated August 3, 2011, for various alleged violations, MEDEP issued Cyn an Administrative Consent Agreement (ACA), dated March 23, 2012. As outlined in the ACA, and to finally resolve alleged violations, Cyn agreed to pay a civil monetary penalty, while MEDEP agreed to grant a release of its causes of action against Cyn.

On January 18, 2013, the Massachusetts Attorney General's Office filed a complaint and Final Consent Judgment alleging that Cyn transported one or more twenty-yard roll-off containers to a rail yard in Allston, Massachusetts for temporary staging without obtaining the signature of or designating a secondary transporter on certain hazardous waste manifests; and for failing to use structurally sound containers, and that as a result, at least thirty-five gallons of petroleum oil leaked into the environment. Cyn accepted the terms of the judgment to resolve the dispute and agreed to pay \$80,000 in civil penalties, with \$30,000 to be waived upon Cyn's timely completion of an inspection of all of its containers to ensure their structural integrity. Cyn meet the inspection obligations, and as of February 11, 2014, will have met its final payment obligation for a total of \$50,000 in civil penalties.

MassDEP did not issue any Notice of Noncompliance or Violations for 2014.

MassDEP did not issue any Notice of Noncompliance or Violations for 2015.

MassDEP did not issue any Notice of Noncompliance or Violations for 2016.

MassDEP did not issue any Notice of Noncompliance or Violations for 2017.

MassDEP did not issue any Notice of Noncompliance or Violations for 2018.



***Exhibit 2: Left Blank intentionally***

*Exhibit 3: Secondary Containment Volume Calculation*

**Secondary Containment Calculations:**

**1. Six (6) Inch Containment Area (Max Capacity):**

Width (ft) x	Length (ft) x	Depth (ft) =	Area (ft <sup>3</sup> )	
	32.5	55	0.5	894(ft <sup>3</sup> )
Area (ft <sup>3</sup> ) x	gal/ft <sup>3</sup> =	<b>Max Capacity (gal)</b>		
894	7.481	<b>6688</b>		

**2. Displacement Items:**

**2a Wastewater treatment system**

Four (4) inch platform:

Width (ft) x	Length (ft) x	Depth (ft) =	Area (ft <sup>3</sup> )
25	4	0.33	33
Area (ft <sup>3</sup> ) x	gal/ft <sup>3</sup> =	Platform Displacement	
33	7.481	246.873	

Oil/Water Separator (up to six inches):

Width (ft) x	Length (ft) x	Depth (ft) =	Area (ft <sup>3</sup> )
4	4	0.5	8
Area (ft <sup>3</sup> ) x	gal/ft <sup>3</sup> =	O/W Separator Displacement(gal)	
8	7.481	59.848	

Platform Disp. (g) +	O/W Sep. Disp.(g) =	<b>2a Displacement (gal)</b>
246.873	59.848	<b>306.721</b>

**2b. 15 pallets to store 120 x 55 gallon drums or equivalent**

Pallets:

10 slats 5.5" x 3'4" x 0.5"

Width (ft) x	Length (ft) x	Depth (ft) x	# of slats =	Area (ft <sup>3</sup> )
0.458	3.333	0.042	10	0.64113588

3 lengths 4'x1.25"x 3.5"

Width (ft) x	Length (ft) x	Depth (ft) x	# of lengths =	Area (ft <sup>3</sup> )
4	0.104	0.292	3	0.364416

Slat Area (ft <sup>3</sup> ) +	Length Area (ft <sup>3</sup> ) =	total Area (ft <sup>3</sup> ) x	gal/ft <sup>3</sup> =	Displacement/Pallet (gal)
0.64113588	0.364416	1.00555188	7.481	7.522533614

Drums:

2" of drum height (above 4" pallet)

Total Volume (gal)/	Total Height (in) =	Gal/inch x	Height (in) =	Capacity (gal)
55	34	1.617647059	2	3.235294118

Capacity (gal) x	Drums/Pallet	Displacement/Pallet (gal)
3.235294118	4	12.94117647

Pallet Displ (gal) +	Drum Displ (gal) =	Displ./Pallet (gal) x	# of Pallets =	<b>2b Displacement (gal)</b>
7.522533614	12.94117647	20.46371008	15	<b>306.9556513</b>

**2c. 3,000 gallon tank on two I-beams**

Width (ft) x	Length (ft) x	Depth (ft) =	Area (ft <sup>3</sup> )
	1	5	0.5
			2.5

Area (ft <sup>3</sup> ) x	gal/ft <sup>3</sup> =	Displacement/l-Beam
	(gal) 2.5	7.481      18.7025
Displ/l-Beam (gal) x	# of l-Beams =	<b>2c Displacement (gal)</b>
18.7025	2	<b>37.405</b>

**2d. Portable Tanks (tank legs, circumference = 1.25 ft.)**

$C = 2\pi r$   
 $1.25 = 2\pi r$   
 $r^2 = .039601 \text{ ft}^2$

$\pi \times$	$r^2 \text{ (ft}^2\text{)}$	Height (ft.) =	Volume (ft <sup>3</sup> )/leg
3.14	.039601	0.5	0.06217357

Volume (ft <sup>3</sup> )/leg	gal/ft <sup>3</sup> =	Displacement/Leg (gal)
0.06217357	7.481	0.4651

Displacement/Leg (gal) x	# of legs/tank x	# of Tanks =	<b>2d Displacement (gal)</b>
0.4651	4	12	<b>22.3257</b>

**TOTAL DISPLACEMENT**

2a Displacement (gal) + 2b Displacement (gal) + 2c Displacement (gal) + 2d Displacement (gal) = **Total Displacement (gal)**

306.721	306.955651	37.405	22.3257	<b>673.1727</b>
---------	------------	--------	---------	-----------------

**TOTAL CONTAINMENT CAPACITY**

1. Max Capacity (g) -	2. Displacement (g) =	<b>Total Containment (g)</b>
6688.14375	673.1727	<b>6014.97105</b>

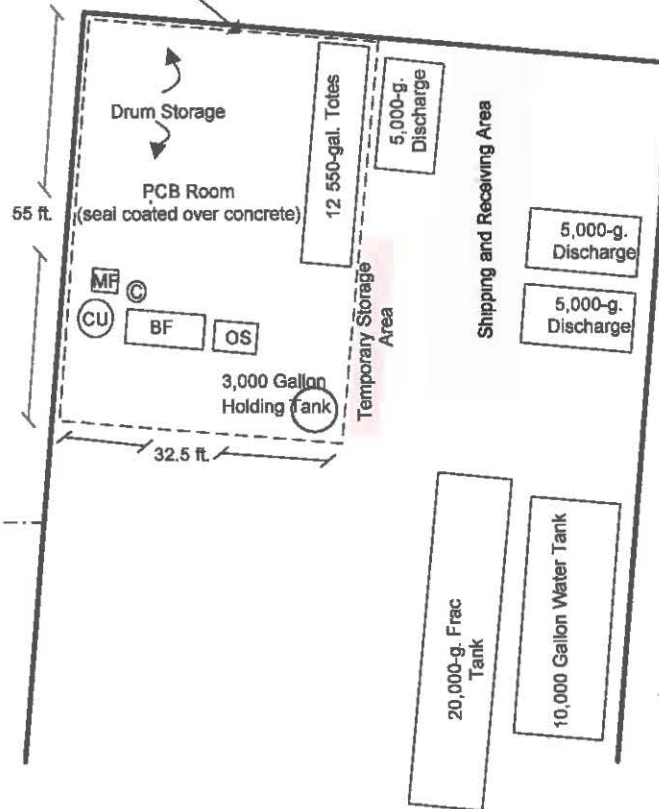
*Exhibit 4: Facility Layout & Paint Specifications*

Source: 2010 Google Earth



Eight-foot Chain Link Fence

Location of 6-inch Containment Berm



**Legend:**

- OS = oil/water separator
- BF = six in-line bag filters
- CU = large carbon vessel
- MF = two in-line Myceltex filters
- C = small carbon vessel
- WWF = Windshield Washer Fluid

**Scale:** As Noted



100 Tosca Drive, Stoughton  
Massachusetts 02072

**Site Schematic**  
Cyn Environmental  
Services  
8 Progress Drive  
Dover, NH

**Drawn:** 02/03/14  
**Author:** E. Strachan  
**Reviewed:** R. LaMothe  
**Revised:** 11-15-18 by MOE  
**Project #:** n/a

**Figure #:** 2

NOTE: 11-15-18 Map edits provided by Mark Theriault Compliance Manager



**ArmorSeal**  
**Heavy**  
**Duty Floor**  
**Coatings**

**ARMORSEAL® 1000 HS**

**PART A**  
**PART B**

**B67-2000**  
**B67V2002**

**SERIES**  
**HARDENER**

Revised: July 9, 2018

**PRODUCT INFORMATION**

8.22

**PRODUCT DESCRIPTION**

**ARMORSEAL 1000 HS** is a high solids, heavy duty, two-component, catalyzed, polyamide epoxy coating formulated for demanding marine and industrial requirements. Dries rapidly to a tough, high gloss finish with excellent resistance to alkalis, abrasion, corrosion, and chemical attack.

- Chemical Resistant
- Impact Resistant
- Abrasion Resistant
- Outstanding application properties

**PRODUCT CHARACTERISTICS**

<b>Finish:</b>	Gloss
<b>Color:</b>	Clear, Haze Gray, Deck Gray, White, Sandstone, Tile Red, Safety Yellow, and a wide range of tinted colors
<b>Volume Solids, mixed:</b>	colors - 65% ± 2% may vary by color clear - 61% ± 2%
<b>Weight Solids, mixed:</b>	74% ± 2%, may vary by color
<b>VOC (EPA Method 24), mixed, may vary by color:</b>	Unreduced: <340 g/L; 2.8 lb/gal clear <400 g/L; 3.33 lb/gal
<b>Mix Ratio:</b>	1:1 by volume

**Recommended Spreading Rate per coat:**

	<b>Minimum</b>	<b>Maximum</b>
<b>Wet mils (microns)</b>	<b>5.0 (125)</b>	<b>8.0 (200)</b>
<b>Dry mils (microns)</b>	<b>3.0 (75)</b>	<b>5.0 (125)</b>
<b>~Coverage sq ft/gal (m<sup>2</sup>/L)</b>	<b>206 (5.0)</b>	<b>350 (8.6)</b>
<b>Theoretical coverage sq ft/gal (m<sup>2</sup>/L) @ 1 mil / 25 microns dft</b>	<b>1040 (25.5)</b>	

*NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.*

**Drying Schedule @ 6.0 mils (150 microns):**

	<b>@ 50°F/10°C</b>	<b>@ 77°F/25°C</b>	<b>@ 120°F/49°C</b>
<b>To touch:</b>	4 hours	2 hours	30 minutes
<b>To recoat:</b>		<b>50% RH</b>	
<b>minimum:</b>	24 hours	8 hours	4 hours
<b>maximum:</b>	7 days	7 days	7 days
<b>Foot traffic:</b>	48 hours	24 hours	12 hours
<b>Heavy traffic:</b>	4-5 days	48-72 hours	24-36 hours
<b>To cure:</b>	10 days	7 days	4 days

*If maximum recoat time is exceeded, abrade surface before topcoating.*

*Drying time is temperature, humidity, and film thickness dependent.*

<b>Pot Life:</b>	6 hours	4 hours	2 hours
<b>Sweat-in-Time:</b>	2 hours	30 minutes	10 minutes

<b>Shelf Life:</b>	36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C)
<b>Flash Point:</b>	>105°F (41°C), Seta, mixed
<b>Reducer/Clean Up:</b>	Reducer #54, R7K54

**RECOMMENDED USES**

- For industrial, commercial, or marine applications where a heavy duty epoxy coating is required.
- Superior resistance to chemicals, moisture, abrasion, and impact
- Excellent resistance to alkalis, dilute acids, spillage of solvents, chemicals, jet fuel, grease, etc.
- Clear finish for interior use only
- Suitable for use in USDA inspected facilities

**PERFORMANCE CHARACTERISTICS**

**Substrate\*:** Concrete

**Surface Preparation\*:** Clean, dry, sound

**System Tested\*:**

1 ct. ArmorSeal 1000 HS (reduced)

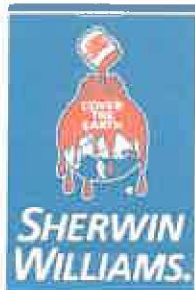
1 ct. ArmorSeal 1000 HS @ 3.0-5.0 mils (75-125 microns) dft

\*unless otherwise noted below

<b>Test Name</b>	<b>Test Method</b>	<b>Results</b>
<b>Abrasion Resistance</b>	ASTM D4060, CS17 wheel, 1000 cycles, 1 Kg load	64.8 mg loss
<b>Adhesion, over concrete</b>	ASTM D4541	350 psi, 100% concrete failure
<b>Direct Impact Resistance (steel)</b>	ASTM D2794	58 in. lbs
<b>Dry Heat Resistance</b>	ASTM D2485	180°F (82°C)
<b>Flexibility (steel)</b>	ASTM D522, 180° bend, 1/8" mandrel	Passes
<b>Pencil Hardness</b>	ASTM D3363	HB
<b>Slip Resistance, Floors</b>	ASTM C1028**, .60 minimum Static Coefficient of Friction	Passes wet and dry, with and without SharkGrip Additive

\*\*Test method withdrawn in 2014 without replacement

Epoxy coatings may darken or yellow following application and curing.



# ArmorSeal Heavy Duty Floor Coatings

# ARMORSEAL® 1000 HS

PART A  
PART B

B67-2000  
B67V2002

SERIES  
HARDENER

## PRODUCT INFORMATION

Revised: July 9, 2018

8.22

### RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
<b>Concrete/Wood:</b>			
1 ct.	ArmorSeal 1000 HS	2.5-4.0	(63-100)
	(reduced as necessary up to 1 pt/gal with R7K54)*		
1-2 cts.	ArmorSeal 1000 HS	3.0-5.0	(75-125)
	(with anti-slip aggregate if required)		
<b>Concrete:</b>			
1 ct.	ArmorSeal 33 Epoxy Primer/Sealer	8.0	(200)
1-2 cts.	ArmorSeal 1000 HS	3.0-5.0	(75-125)
	(with anti-slip aggregate if required)		
<b>Steel:</b>			
1 ct.	Recoatable Epoxy Primer	4.0-5.0	(100-125)
1-2 cts.	ArmorSeal 1000 HS	3.0-5.0	(75-125)
<b>Painted Surfaces in Sound Condition:</b>			
1-2 cts.	ArmorSeal 1000 HS	3.0-5.0	(75-125)

\*Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

The systems listed above are representative of the product's use, other systems may be appropriate.

### SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:  
 \* Iron & Steel: SSPC-SP6/NACE 3  
 Concrete & Masonry: SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3  
 Wood, interior: Clean, smooth, dust free  
 \*Primer Required

#### Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	C St 2	SP 2	-
Pitted & Rusty	D St 2	D St 2	SP 2	-
Rusty	C St 3	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusty	D St 3	SP 3	-

### TINTING

White and Ultradeep may be tinted with Maxitoner Colorants at 200% tinting strength into Part A. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

### APPLICATION CONDITIONS

Temperature: 50°F (10°C) minimum, 120°F (49°C) maximum  
 (air, surface, and material)  
 At least 5°F (2.8°C) above dew point  
 Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

### ORDERING INFORMATION

Packaging:  
 Part A: 1 gallon (3.78L) containers  
 Part B: 1 gallon (3.78L) containers  
 (clear available in 5 gallon /18.9L containers)  
 Weight: 12.51 ± 0.2 lb/gal ; 1.5 Kg/L  
 mixed, may vary by color

### SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

### WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

### DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.





**ArmorSeal**  
**Heavy**  
**Duty Floor**  
**Coatings**

**ARMORSEAL® 1000 HS**

**PART A**  
**PART B**

**B67-2000**  
**B67V2002**

**SERIES**  
**HARDENER**

Revised: July 9, 2018

**APPLICATION BULLETIN**

8.22

**SURFACE PREPARATIONS**

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

**Iron & Steel (atmospheric service)**

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

**Concrete and Masonry**

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.

**Follow the standard methods listed below when applicable:**

- ASTM D4258 Standard Practice for Cleaning Concrete.
- ASTM D4259 Standard Practice for Abrading Concrete.
- ASTM D4260 Standard Practice for Etching Concrete.
- ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
- SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
- ICRI No. 310.2R Concrete Surface Preparation.

**Previously Painted Surfaces**

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

**APPLICATION CONDITIONS**

Temperature: 50°F (10°C) minimum, 120°F (49°C) maximum  
 (air, surface, and material)  
 At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

**APPLICATION EQUIPMENT**

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean Up ..... Reducer #54, R7K54

**Airless Spray**

Pressure.....2500 psi  
 Hose.....3/8" ID  
 Tip......015" - .021"  
 Filter.....60 mesh  
 Reduction.....As needed up to 10% by volume

**Brush**

Nylon/Polyester or Natural Bristle  
 Reduction.....As needed up to 10% by volume

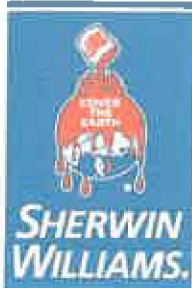
**Roller**

Cover .....3/8" woven with solvent resistant core  
 Reduction.....As needed up to 10% by volume

If specific application equipment is not listed above, equivalent equipment may be substituted.

**Surface Preparation Standards**

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC NACE
White Metal	Sa 3	Sa 3	SP 5 1
Near White Metal	Sa 2.5	Sa 2.5	SP 10 2
Commercial Blast	Sa 2	Sa 2	SP 6 3
Brush-Off Blast	Sa 1	Sa 1	SP 7 4
Hand Tool Cleaning	C St 2	C St 2	SP 2 -
Pitted & Rusted	D St 2	D St 2	SP 2 -
Rusted	C St 3	C St 3	SP 3 -
Power Tool Cleaning	D St 3	D St 3	SP 3 -



**ArmorSeal**  
**Heavy**  
**Duty Floor**  
**Coatings**

**ARMORSEAL® 1000 HS**

**PART A**  
**PART B**

**B67-2000**  
**B67V2002**

**SERIES**  
**HARDENER**

Revised: July 9, 2018

**APPLICATION BULLETIN**

8.22

**APPLICATION PROCEDURES**

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with low speed power agitation. Combine one Part A with one Part B by volume and mix for 3 minutes and until uniform. Allow the material to sweat-in as indicated. Re-stir before using.

Apply paint at the recommended film thickness and spreading rate as indicated below:

**Recommended Spreading Rate per coat:**

	<b>Minimum</b>	<b>Maximum</b>
<b>Wet mils (microns)</b>	<b>5.0 (125)</b>	<b>8.0 (200)</b>
<b>Dry mils (microns)</b>	<b>3.0 (75)</b>	<b>5.0 (125)</b>
<b>~Coverage sq ft/gal (m<sup>2</sup>/L)</b>	<b>206 (5.0)</b>	<b>350 (8.6)</b>
<b>Theoretical coverage sq ft/gal (m<sup>2</sup>/L) @ 1 mil / 25 microns dft</b>	<b>1040 (25.5)</b>	

*NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.*

**Drying Schedule @ 6.0 mils (150 microns):**

	<b>@ 50°F/10°C</b>	<b>@ 77°F/25°C</b>	<b>@ 120°F/49°C</b>
		<b>50% RH</b>	
<b>To touch:</b>	<b>4 hours</b>	<b>2 hours</b>	<b>30 minutes</b>
<b>To recoat:</b>			
<b>minimum:</b>	<b>24 hours</b>	<b>8 hours</b>	<b>4 hours</b>
<b>maximum:</b>	<b>7 days</b>	<b>7 days</b>	<b>7 days</b>
<b>Foot traffic:</b>	<b>48 hours</b>	<b>24 hours</b>	<b>12 hours</b>
<b>Heavy traffic:</b>	<b>4-5 days</b>	<b>48-72 hours</b>	<b>24-36 hours</b>
<b>To cure:</b>	<b>10 days</b>	<b>7 days</b>	<b>4 days</b>
<i>If maximum recoat time is exceeded, abrade surface before topcoating.</i>			
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
<b>Pot Life:</b>	<b>6 hours</b>	<b>4 hours</b>	<b>2 hours</b>
<b>Sweat-in-Time:</b>	<b>2 hours</b>	<b>30 minutes</b>	<b>10 minutes</b>

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

**CLEAN UP INSTRUCTIONS**

Clean spills and spatters immediately with Reducer #54, R7K54. Clean tools immediately after use with Reducer #54, R7K54. Follow manufacturer's safety recommendations when using any solvent.

**DISCLAIMER**

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

**PERFORMANCE TIPS**

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

No reduction of material is recommended as it can affect film build, appearance, and adhesion.

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #54, R7K54

Material can not be sprayed if anti-slip aggregate is use.

Anti-slip additives, such as H&C SharkGrip®, may be added to the coating to provide some slip resistance. This product should not be used in place of a non-skid finish.

Anti-slip additive may be mixed into the final coat just prior to application. Exception: if anti-slip is desired with Clear finish, it should be hand broadcast.

Prime coat for concrete may be reduced up to 1 pint per gallon.

Clear is for interior use only.

Refer to Product Information sheet for additional performance characteristics and properties.

**SAFETY PRECAUTIONS**

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

**WARRANTY**

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. **NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

*Exhibit 5: City of Dover Industrial Sewer Discharge Permit*

(CITY OF DOVER)

INDUSTRIAL WASTE DISCHARGE PERMIT

Issued To:

CYN ENVIRONMENTAL SERVICES, Inc.

(8 Progress Drive)

(Dover, NH 03820)

(1-603-749-4969)

Categorical Standard:  
437 Subpart B existing source

Date:

SEPTEMBER 26, 2015

CONTENTS	PAGE
ABSTRACT	
Effective Date.....	1
Expiration Date.....	1
PART 1 - EFFLUENT LIMITATIONS	
SECTION A - Industry-Specific Limitations	
Discharge Location(s).....	2
Approved Flow Rates.....	2
Average and Maximum Loadings.....	2
SECTION B - Local Discharge Prohibitions and Limitations.....	3,4
SECTION C - Application of Most Stringent Limitations.....	4
SECTION D - Schedule of Compliance.....	5
SECTION E - Limitations Subject to Revision.....	5
PART 2 - INDUSTRY-SPECIFIC MONITORING AND REPORTING REQUIREMENTS	
SECTION A - Monitoring Location(s) and Procedures.....	6
SECTION B - Reporting and Flow	
Measurement and Recording.....	6
Reporting.....	6
Calibration.....	6
SECTION C - Pollutants	
Self-Monitoring, Sample Types, and Frequencies.....	7
Reporting.....	7
PART 3 - SPECIFIC CONDITIONS.....	8

PART 4 - STANDARD REQUIREMENTS

SECTION A - General Conditions

Permit Modification .....9

Toxic Pollutants .....9

Toxic or Hazardous Substance Liability .....9

State Laws .....9

Property Rights .....9

Regulatory Changes .....9

Reapplication for Permit Renewal .....9

Permit Transfer .....10

Severability .....10

SECTION B - Operation and Maintenance

Proper Operation and Maintenance .....10

Need to Halt or Reduce Not a Defense .....10

Duty to Mitigate .....10

Bypass of Treatment System .....10

Upset Conditions .....11

Affirmative Defense .....11

Removed Substances and RCRA Requirements .....11

Emergency Action .....11

Dilution Not Permitted .....11

Disposal of Sludges and Spent Chemicals .....11

SECTION C - Monitoring

Sampling Facility and Monitoring Equipment.....	12
Representative Sampling.....	12
Flow Measurement Devices and Methods.....	12
Monitoring by Approved Methods.....	12
Additional Self-Monitoring.....	12
Combined Wastestream Formula.....	12

SECTION D - Reporting and Record Keeping Requirements

Reporting of Monitoring Results.....	13
Record Contents.....	13
Averaging Measurements.....	14
Frequency of Monitoring Reports.....	14
Retention of Records.....	14
Planned Changes.....	14
Anticipated Noncompliance.....	14
Manifest of Wastes Removed.....	14
Compliance Schedule Reporting.....	14
24-Hour Reporting (Bypass, Upset, Spill, Slug or noncompliance).....	15
Discharge of Toxic Substances.....	15
Duty to Provide Information.....	15
Signatory Requirements.....	16
Availability of Data.....	16
Certification in Lieu of Monitoring.....	16

SECTION E - RESULTS OF NONCOMPLIANCE

Duty to Comply .....17

Penalties for Violations of Permit Conditions .....17

Permit Revocation and Termination .....17

Tampering .....17

Falsification of Reports .....17

Publication in Newspaper for Significant Noncompliance .....17

Civil and Criminal Liability .....18

Recovery of Costs Incurred .....18

PART 5 - OTHER REQUIREMENTS

SECTION A - RIGHT OF ENTRY .....19

SECTION B - ACCIDENTAL SPILL PREVENTION PROGRAM .....19

PART 6 - DEFINITIONS .....20

ATTACHMENT A - SIGNATORY AUTHORIZATION .....22

ATTACHMENT B – PERMIT APPLICATION .....DOCUMENT

ATTACHMENT C – FACT SHEET .....DOCUMENT



PERMIT NO. 1012C

CYN

ABSTRACT

In compliance with the provisions and conditions of the (City of Dover's Sewer Use Ordinance, Chapter 147) and also with any applicable provisions of federal, state, or other local laws or regulations,

CYN ENVIRONMENTAL SERVICES, Inc.  
(8 Progress Drive)  
(Dover, NH 03820)


is authorized to discharge from activities classified by SIC No(s) 5093, 4959, 7699 from premises located at the above address to the (City of Dover's) Publicly Owned Treatment Works (POTW) collection system in accordance with effluent limitations, monitoring requirements, and conditions set forth in Parts 1, 2, 3, 4, 5, and 6 hereof and any attachments.

This permit shall become effective on 09/26/15

and in no case shall the permit duration be for more than five years;

this permit will expire midnight on 09/25/20

Signed this 24<sup>th</sup> day of SEPTEMBER, 2015.

  
(Authorized Representative of the City of Dover)

## PART I - EFFLUENT LIMITATIONS

## SECTION A. INDUSTRY-SPECIFIC LIMITATIONS

The permitted point of discharge is described as the 3 - 5,000 gal. discharge tanks located inside the facility in the process area. The discharge shall consist of treated PCB water and/or treated spill cleanups, where water was involved in a spill and/or clean up situation. Daily discharges of not more than 5,000 gals. shall be of a batch type only. One batch shall consist of treated water being equalized in a 5,000 gal. tank, with no additions to the tank once the water has been tested. With passing test results all water is discharged and the tank emptied. Then the tank filling, testing, and discharge cycles can begin again. Subject to the limitations set forth in this permit, Cyn is permitted to discharge the following quantities of wastewater and pollutants to the (City of Dover's) POTW collection system:

- (1) The average daily total flow for all days of operation in any given calendar month shall not exceed 5,000 gallons.
- (2) The maximum daily total flow for any one day of operation shall not exceed 5,000 gallons of process water.
- (3) The maximum hourly flow rate shall not exceed N/A gallons per hour.
- (4) The permittee shall pay a surcharge for discharge concentrations of BOD5 over N/A mg/L and for TSS over N/A mg/L but shall not discharge concentrations of BOD5 over N/A mg/L or TSS over N/A mg/L.
- (5) Daily loadings of oil and grease shall not be discharged at a flow rate and/or concentration which causes interference or damage to the POTW or the treatment processes. The maximum concentration of oil and grease discharged at any time shall not exceed 100 mg/L.
- (6) The pH of the discharge at any time shall not be less than 6.0 nor greater than 11.0 standard pH units.
- (7) Any discharge shall not exceed a screening level concentration of 2 PPB for PCBs.
- (8) Any discharge shall not exceed a screening level concentration of 2.13 PPM for TTO.

## SECTION B. LOCAL DISCHARGE PROHIBITIONS AND LIMITATIONS

CYN shall not discharge to the POTW:

- (1) Any pollutant(s) which cause pass through or interference;
- (2) Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140°F (60°C) using the test methods specified in 40 CFR 261.21;
- (3) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 6.0, unless the POTW is specifically made to accommodate such discharges;
- (4) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
- (5) 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;
- (6) 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 104°F (40°C);
- (7) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
- (8) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
- (9) Any trucked or hauled pollutants, unless approved by the Control Authority and then only at discharge points designated by the Control Authority.
- (10) No person shall discharge or cause to be discharged into the POTW any of the following, except in quantities or concentrations with provisions as stipulated herein:
  - a. A heavy metal in solution or suspension in concentrations exceeding the following:

### Uniform Concentration Limits

Arsenic (Total) . . . . .	0.40 mg/L	Mercury (Total) . . . . .	0.004 mg/L
Nickel (Total) . . . . .	1.07 mg/L	Cadmium (Total) . . . . .	0.02 mg/L
Selenium (Total) . . . . .	8.55 mg/L	Chromium (Total) . . . . .	mg/L
Silver (Total) . . . . .	0.713 mg/L	Copper (Total) . . . . .	mg/L
Zinc (Total) . . . . .	4.33 mg/L	Lead (Total) . . . . .	mg/L

### Federal Categorical Limits

	Daily Max.mg/L	Max. monthly avg. mg/L
-----	0.000,	.0.000
-----	0.000,	.0.000
Chromium.	0.947,	.0.487
Cobalt.	56.400,	18.800
Copper.	0.405,	.0.310
Lead.	0.222,	.0.172
-----	0.000,	.0.000
Tin . . . . .	0.249,	.0.146
Zinc. . . . .	-----,	.-----
Bis (2ethylhexyl) phthalate.	0.267,	.0.158
Carbazole . . . . .	0.392,	.0.233
n-Decane. . . . .	5.790,	.3.310
Fluoranthene . . . . .	0.787,	.0.393
n-Octadecane . . . . .	1.220,	.0.925

\* NOTE (See Section C below APPLICATION OF MOST STRINGENT LIMIT)

or other heavy metals or toxic materials, except by permit from the city specifying conditions of pretreatment, concentration, volumes and other applicable provisions.

- b. Cyanide or cyanogen compounds in excess of (0.363) milligram per liter as cyanide, a local limit.
  - c. Radioactive wastes or isotopes without a specific permit from the Control Authority. The Control Authority may establish, in compliance with applicable State or federal regulations, regulations for discharge of radioactive wastes into public sewers.
  - d. Organics in excess of Screening levels as specified in Chapter 147-6(E)(10)
  - e. A surfactant, objectionable or toxic substance, which creates foam or deleterious conditions in the POTW's aeration tanks, sludge processing, clarification or effluent toxicity.
  - f. Parameters of concern or discharges causing deleterious conditions to the POTW as indicated in Dover's Sewer Use Ordinance Chapter 147.
- (11) No person shall discharge any water or wastes containing substances in such concentrations as to cause the POTW to violate the NPDES and/or state water pollution control permit or the receiving water effluent quality standards.
- (12) No person shall increase the use of process water or in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the pollutant-specific limitations required by this permit.
- (13) No person shall discharge from locations other than those provided for in this permit without prior approval of the Control Authority.

#### SECTION C. APPLICATION OF MOST STRINGENT LIMITATIONS

For a discharge regulated by National Categorical Standards, State discharge limitations, local discharge limitations, and/or a discharge permit, the most stringent limitations and requirements will apply.

#### **SECTION D. SCHEDULE OF COMPLIANCE**

The permittee shall achieve compliance with the effluent limitations and other requirements provided for in this permit in accordance with the schedule of compliance in Attachment N/A.

#### **SECTION E. LIMITATIONS SUBJECT TO REVISION**

Any changes in federal, State, or local applicable regulations that are more stringent than the requirements of this permit shall supersede this permit.

These specific limitations are subject to revision if and at such time as the effluent limitations and other requirements of the POTW are revised.

These specific limitations are subject to revision at any time with 30 days advanced notice.

**PART 2- INDUSTRY-SPECIFIC MONITORING AND REPORTING REQUIREMENTS**

**SECTION A. MONITORING LOCATION(S)**

Cyn shall provide monitoring through the manhole at the top of each discharge tank. A profile type sample, of the bottom, middle and top of the 5,000 gal. discharge tank for the purpose of ascertaining compliance with the provisions of this permit in accordance with the procedures provided for in the following sections.

**SECTION B. REPORTING & FLOW**

- (1) Sampling performed by CYN indicating a violation, shall be reported to the Control Authority within 24 hours of the industry becoming aware of the violation. In this case the industry shall also resample and submit the analytical results from the resample to the Control Authority within 30 days of becoming aware of the violation.
- (2) N/A
- (3) All sampling and analysis conducted between January and June shall be reported within 30 days of sample collection date. Additionally, all sampling and analysis conducted between July and December shall be reported within 30 days of sample collection. Any noncompliance such as exceeding a discharge limit shall be reported immediately to the POTW. The phone number for the POTW is 516-6475. If there is an emergency situation after plant hours notify the Dover Police department at 742-4646. The semiannual report due by the end of June and December shall be accompanied by the certification found in 40 CFR 403.6(a)(2)(ii). The semiannual report shall include:
  - a. Semiannual report form;
  - b. Records of water usage and wastewater discharges;
  - c. Reporting certification mentioned above;
- (4) CYN shall be responsible for calibration and maintenance of any wastewater flow recording systems. The Control Authority shall be allowed to check or request a check of the calibration of the systems at any time.

**SECTION C. POLLUTANTS**

- (1) Samples from the 5,000 gal. discharge/sampling tank or (2) 5,000 gal. tanks of the same water shall be taken as to provide the most representative samples. Samples shall be conducted on all 5,000 gal. batches of wastewater discharged to the POTW collection system, unless other arrangements are made with the POTW. Samples shall be provided by Cyn, unless the POTW compliance monitors. Once test results indicates compliance, no additions may be made to the discharge tank until that current batch is completely discharged to the POTW.

Preservation of samples, sampling and analysis shall be consistent with the requirements of 40 CFR Part 136.

**Sampling and analysis for the following pollutant parameters shall be conducted:**

<u>Parameters</u>	<u>Method</u>	<u>Type of sample</u>
PCBs -	EPA 608	Profile Grab/Per 5,000 gal.
pH -	EPA 150.1	Profile Grab/Per 5,000 or 10,000 gal. batch
COD -	Hach 8000	"
O&G -	EPA 413.1	"
Cadmium	EPA 200.7	"
Nickel	EPA 200.7	"
Chromium	EPA 200.7	"
Cobalt	EPA 200.7	"
Copper	EPA 200.7	"
Lead	EPA 200.7	"
Tin	EPA 200.7	"
Zinc	EPA 200.7	"
Bis (2ethylhexyl)		
Phthalate	EPA 625	"
Carbazole	EPA 625	"
n-Decane	EPA 624	"
Fluoranthene	EPA 625	"
n-Octadecane	EPA 625	"
TTO	EPA	"

All testing shall be in accordance with 40 CFR Part 136.

- (2) CYN shall also comply with the monitoring and reporting requirements in Part 4 of this permit.

## PART 3 - SPECIFIC CONDITIONS

- A. This section intentionally left blank for future use.
- B. The permit limitations listed herein have been established based on the (City of Dover)'s assessment of the treatment capacity of the POTW treatment facility and a fair and reasonable allotment of a portion of that treatment capacity to CYN. The permit limitations are not established as a basis for the computation of surcharges and should not be viewed as such. Every effort, including incorporation of best management practices, must be made by CYN to continually meet the limitations in this permit in order to aid in maintaining optimum performance of the said treatment facility. Commitment to this basic understanding is hereby a condition of this permit.

- C. The permit limitations established herein are based upon two major factors:

- (1) The ability of the POTW Treatment Facility to assimilate the loadings from CYN and maintain a high quality effluent to the receiving stream(s); and
- (2) the desire by the (City of Dover) to maintain a reasonable safety margin between the average daily loading at the POTW and its treatment capacity.

With these factors in mind, CYN shall notify the Control Authority well in advance of any proposed change in production or treatment processes, which could significantly affect either the volume or character of wastewaters discharged to the POTW collection system.

The Control Authority will evaluate such proposed changes as related to the City's ability to provide adequate treatment or it's ability to provide an adequate working margin, and a modification to the permit limitations may be considered.

- D. Notification of any shutdown period of more than (2) days shall take place at least 48 hours prior to the shutdown period. Notification of any shutdown period of more than (5) days shall be in writing and shall take place at least (2) weeks prior to the first day of shutdown. Notification shall be given to the Control Authority and shall include the following:

- (1) the date shutdown will start;
- (2) the last shift to work on the date of shutdown;
- (3) the date process operations will resume; and
- (4) the first shift to work on the date of start up.

The strength and characteristics of the wastewater load that is generated during any significant shutdown period shall be approved by the Control Authority.

- E. The Control Authority or Publicly Owned Treatment Works (POTW) must be notified if there are any modifications to the permitted processes or treatment system.



**PART 4 - STANDARD REQUIREMENTS****SECTION A. GENERAL CONDITIONS****(1) Permit Modification**

This permit may be modified or revoked and reissued with cause in accordance with the requirements of the (City of Dover) local regulations and/or State or federal regulations.

The permittee shall be informed of any proposed changes in the permit at least 30 days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

**(2) Toxic Pollutants**

If a toxic effluent standard or prohibition is established for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit may be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

**(3) Toxic and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

**(4) State Laws**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

**(5) Property Rights**

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

**(6) Regulatory Changes**

Any changes in federal, State, or local pretreatment regulations that are more stringent than the requirements of this permit shall supersede this permit. The permittee will be notified of the change and required to develop a compliance schedule if changes in the permittee's treatment process or facility are necessary to insure compliance with the regulatory change(s).

**(7) Reapplication for Permit Renewal**

The permittee is responsible for filing an application for reissuance of the permit sixty (60) days prior to the expiration date of this permit.

## **(8) Permit Transfer**

This permit is nontransferable.

## **(9) Severability**

The provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

## **SECTION B. OPERATION AND MAINTENANCE**

### **(1) Proper Operation and Maintenance**

The permittee shall at all times maintain in good working order and operate as efficiently as possible all facilities and systems of treatment, control, sampling and measurement installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate process control.

### **(2) Need to Halt or Reduce Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

### **(3) Duty to Mitigate**

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health, the POTW treatment facility, the waters receiving the POTW treatment facility discharge, or the environment.

Reasonable steps include but are not limited to accelerated or additional monitoring and/or analyses necessary to determine the nature and impact of the noncomplying discharge.

### **(4) Bypass of Treatment System**

Bypass of the treatment system is prohibited, unless:

- a. bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. there was no feasible alternative to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime;
- c. the Control Authority approved an anticipated bypass, considering its adverse effects, if the permittee, knowing in advance of the need for a bypass, submitted prior notice in writing at least ten (10) days before the bypass; or
- d. the bypass does not cause effluent limitations to be exceeded.

#### **(5) Upset Conditions**

An upset is an unintentional and temporary noncompliance with permitted effluent discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed or inadequate treatment facilities, lack of preventative maintenance, or careless or improper operations.

#### **(6) Affirmative Defense**

An upset may constitute an affirmative defense for action brought for the noncompliance. The permittee has the burden of proof to provide evidence and demonstrate that none of the factors specifically listed above were responsible for the noncompliance.

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. an upset occurred and that the permittee can identify the specific cause of the upset;
- b. the permitted facility was at the time being properly operated; and
- c. the permittee submitted notice of the upset as required.

#### **(7) Removed Substances and RCRA Requirements**

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollutants from such materials from entering the sewer system. The permittee is responsible to assure its compliance with any requirements regarding the generation, treatment, storage, and/or disposal of hazardous wastes as defined under the Federal Resource Conservation and Recovery Act and other statutory rules and regulations relative to refuse, liquid and/or solid waste disposal.

#### **(8) Emergency Action**

In the event of a power loss to the permittee's treatment facility, the permittee shall provide treatment to the best of his ability and shall report immediately to the Control Authority any noncompliance resulting from the emergency situation.

#### **(9) Dilution Not Permitted**

The permittee shall not increase the use of potable or process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

#### **(10) Disposal of Sludges and Spent Chemicals**

The permittee shall dispose of sludges and spent chemicals in accordance with procedures in Section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act.

## **SECTION C. MONITORING**

### **(1) Sampling Facility and Monitoring Equipment**

The permittee shall provide a suitable sampling facility(s) together with such necessary manholes, meters and other equipment to facilitate observation, sampling and measurement of the process and/or combined wastes from the permitted discharge.

Such facility(s) and other appurtenances shall be accessible and safely located and shall be constructed in accordance with plans approved by the Industrial Pretreatment Coordinator and shall be constructed, operated, and maintained at the permittee's expense.

Such facility(s) and other appurtenances shall be maintained to be safe and accessible at all times and shall be made available for use by the Industrial Pretreatment Coordinator and/or City's authorized representatives for surcharge sampling if conducted at determined intervals and for other sampling upon request.

### **(2) Representative Sampling**

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring point(s) specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestreams, body of water, or substance. Monitoring points shall not be changed without notification to and approval of the Control Authority.

### **(3) Flow Measurement Devices and Methods**

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained by trained personnel to insure that the accuracy of the measurement is consistent with the accepted capability of that device. A calibration log shall be maintained and must include dates of service and calibration, who performed the calibration and the methods used in the calibration. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

### **(4) Monitoring by Approved Methods**

Monitoring must be conducted according to procedures approved under 40 CFR Part 136.

### **(5) Additional Self-Monitoring**

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the industrial monitoring reports.

### **(6) Combined Wastestream Formula**

The combined wastestream formula shall be applied to industrial facilities that mix unregulated process effluent with other regulated or unregulated wastewaters prior to treatment (40 CFR 403.6). The purpose of the formula is to calculate fixed alternative pollutant limits that shall be applied to the mixed effluent.

## **SECTION D. REPORTING AND RECORD KEEPING REQUIREMENTS**

### **(1) Reporting of Monitoring Results**

The permittee shall submit to the Control Authority an industrial monitoring report no later than June 30th or Dec. 31st for each semiannual reporting period. The industrial monitoring report, unless otherwise specified in this permit, shall at a minimum contain the following:

- a. industry name and address;
- b. reporting period;
- c. quarterly pollutant concentrations, unless regular monitoring reports have been submitted;
- d. average pollutant concentrations if applicable;
- e. mass per day if applicable;
- f. maximum and average flow data;
- g. production rate information if applicable;
- h. compliance statement;
- i. certification statement; and
- j. signature of authorized agent or representative.
- k. chain of custody forms with analytical reports if applicable;
- l. completed flow weighted average formula if applicable.

If, during any period, a permittee fails to comply with permit requirements and limitations, the permittee shall, in addition to or as a part of the monitoring report, submit to the Control Authority an explanation of the noncompliance, any known or suspected cause, and actions the permittee has taken to prevent further occurrences.

### **(2) Record Contents**

Records and monitoring information shall include:

- a. the exact date, location, time and method of sampling;
- b. the individual(s) who performed the sampling or measurement;
- c. the date(s) analyses were performed;
- d. the individual(s) who performed the analyses;
- e. the analytical techniques or methods used; and

- f. the results of all required analyses.
- g. the chain of custody.

### **(3) Averaging Measurements**

Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

### **(4) Frequency of Monitoring Reports**

Monitoring results shall be reported at the intervals specified in Part 2, Sections B and C and Part 4, Section D unless otherwise approved by the Control Authority.

### **(5) Retention of Records**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Control Authority at any time.

All records which pertain to matters which are the subject of enforcement or litigation activities shall be retained and preserved by the permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

### **(6) Planned Changes**

The permittee shall notify the Control Authority as soon as possible but at least 30 days prior to any planned increase or decrease in the volume or nature of the waste being discharged and any planned physical alterations or additions to the permitted facility. This notification shall be in writing and shall apply to all pollutants whether limited by this permit or not and to any activity which would result in the discharge of those pollutants to the POTW.

### **(7) Anticipated Noncompliance**

The permittee shall give notice to the Control Authority as soon as possible but at least 30 days prior to any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

### **(8) Manifest of Wastes Removed**

CYN shall provide a manifest or other record of wastes removed by the pretreatment system and disposed of. These records shall be made available to the Control Authority upon request.

### **(9) Compliance Schedule Reporting**

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedules shall be submitted no later than fourteen (14) days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

**(10) Twenty-four Hour Reporting (Bypass, Upset, Spill, Slug, or Noncompliance)**

The permittee shall report any bypass, upset, spill, slug, or noncompliance to the Control Authority as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstance(s). Written notification shall be made within 5 days and shall contain a description of the event and the suspected cause; the length of time of the event, including exact dates and times; the impact of the event on the permittee's compliance status; and if the cessation of the event has not occurred, the anticipated period of time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the event.

The following shall be included, at a minimum, as information which must be reported within twenty-four (24) hours:

- a. any unanticipated bypass of the pretreatment system;
- b. any upset that results or could result in a discharge that exceeds any maximum daily effluent limitation in the permit;
- c. any accidental spill of any material specified in the approved ASPP whether discharged to the POTW collection system or not.
- d. any slug discharge that could be detrimental to the POTW or the treatment processes or that could pass through to the receiving stream;
- e. any noncompliance with a permit requirement or requirement of local regulations.

**(11) Discharge of Toxic Substances**

The permittee shall notify the Control Authority as soon as the permittee knows or has reason to believe:

- a. that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant as defined by the Resource Conservation and Recovery Act (RCRA); or
- b. that any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant as defined by RCRA.

**(12) Duty to Provide Information**

The permittee shall furnish to the Control Authority, within a reasonable time, any information, including that requiring additional monitoring and/or analyses, which the Control Authority may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit or to determine compliance with this permit. The permittee shall also furnish, upon request, copies of records required to be kept by this permit.

### **(13) Signatory Requirements**

All reports or information submitted pursuant to the requirements of this permit must be signed and certified by the authorized signatory of the permittee. An authorized signatory is:

- a. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or  
The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendation, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
- b. A general partner or proprietor if the industrial user is a partnership or sole proprietorship respectively; or
- c. A duly authorized representative of the individual designated in (a) or (b) of this definition if (i) the authorization is made in writing by the individual described in (a) or (b) of this definition, and (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, operator of a well, or well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company, and (iii) the written authorization is submitted to the Control Authority.

A statement containing the name and signature of the authorized representative is contained in Attachment A of this permit.

### **(14) Availability of Data**

Except for data determined to be confidential under the (City, District, Other) local regulations, all reports prepared in accordance with terms of this permit shall be available for inspection by the public.

### **(15) Certification in Lieu of Monitoring**

A permittee subject to total toxic organics limitations may be allowed to submit Toxic Organic Management Plan (TOMP) with prior approval of the Control Authority. If a TOMP has been approved for the permittee, the permittee must submit a certification statement as part of the semiannual report (or more frequent reports is required) certifying compliance with the approved TOMP.



## **SECTION E. RESULTS OF NONCOMPLIANCE**

### **(1) Duty to Comply**

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the (City of Dover's) local regulations and is grounds for enforcement action.

### **(2) Penalties for Violations of Permit Conditions**

The permittee is subject to a civil or criminal penalty of not less than \$100.00 nor more than \$10,000.00 per day for each day that the permittee is in violation of the requirements of this permit, the pretreatment standards, or the (City of Dover) local regulations. The permittee may be subject to a minimum \$1,000.00 fine per day per violation. All fines and penalties will be issued in accordance with the approved Enforcement Response Plan and/or the local regulations.

### **(3) Permit Revocation and Termination**

This permit may be revoked and terminated in accordance with the requirements of the (City of Dover) local regulations and/or the approved Enforcement Response Plan.

### **(4) Tampering**

Any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall be subject to civil and/or criminal penalties.

### **(5) Falsification of Reports**

The (City of Dover) local regulations provide that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than ten thousand dollars (\$10,000.00) per day.

### **(6) Publication in Newspaper for Significant Noncompliance**

The (City, District, Other) local regulations provide that, in accordance with 40 CFR 403.8(f)(2)(vii), an industrial user will be published at least one time annually in the largest daily newspaper in the municipality of the POTW when found to be in significant noncompliance. An industrial user is in significant noncompliance if its violation meets one or more of the following criteria:

- (A) Chronic violations of wastewater discharge limits, defined here as those in which 66 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits, as defined by 40 CFR 403.3(1);

- (B) Technical Review Criteria (TRC) violations, defined here as those in which 33 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period equal or exceed the product of the numeric Pretreatment Standard of requirement including instantaneous limits, as defined by 40 CFR 403.3(1) multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, fats, oil and grease, and 1.2 for all other pollutants except pH);
- (C) Any other violation of a Pretreatment Standard or requirement as defined by 40 CFR 403.3(1) (daily maximum, long-term average, instantaneous limit, or narrative Standard) that the POTW determines has caused, alone or in combination with other Discharges, Interference or Pass Through (including endangering the health of POTW personnel or the general public);
- (D) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or the environment or has resulted in the POTW's exercise of its emergency authority under 40 CFR 403.8(f)(1)(vi)(B) to halt or prevent such a discharge;
- (E) Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;
- (F) Failure to provide, within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules;
- (G) Failure to accurately report noncompliance;
- (H) Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment program.

#### **(7) Civil and Criminal Liability**

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

#### **(8) Recovery of Costs Incurred**

In addition to civil and criminal liability, the permittee violating any of the provisions of this permit or Chapter 147 or causing the POTW to violate its NPDES permit or causing damage to or otherwise inhibiting the POTW wastewater disposal system shall be liable to the POTW for any expense, loss, or damage caused by such violation or discharge. The POTW shall bill the permittee for the costs incurred by the POTW for any NPDES violations, expenses, compliance monitoring, loss, damage, cleaning, repair, or replacement work caused by the violation or discharge.

## PART 5 - OTHER REQUIREMENTS

## SECTION A. RIGHT OF ENTRY

The permittee shall allow any authorized representative of the EPA, State (NHDES), or (City of Dover's) pretreatment program, bearing proper credential and identification:

- (1) to enter upon the permittee's premises where a real or potential discharge is located or records are required to be kept under the terms and conditions of this permit;
- (2) at reasonable times to have access to and copy records required to be kept under the terms and conditions of this permit; to inspect any facility or monitoring equipment; to observe monitoring practices, process or facility operations; to sample any discharge; and
- (3) where the permittee has security measures in force which require proper identification and/or clearance before entry onto said permittee's premises is granted, such permittee shall make the necessary arrangements with the security guards that upon presentation of proper identification, authorized representatives shall be permitted to enter without delay.

## SECTION B. ACCIDENTAL SPILL PREVENTION PROGRAM

Issuance of this permit shall be conditional upon the development and approval of an accidental spill prevention plan (ASPP), if required.

Failure of the plan to prevent violations of any other provisions of this permit in no way relieves the permittee from its legal liability for noncompliance with the permit conditions.

At a minimum, the ASPP plan must address the following:

- (1) chemical storage areas;
- (2) chemical loading and unloading areas;
- (3) process tanks; and
- (4) removing process tanks from service.

For each of the above categories, describe:

- proximity to the sanitary sewer system
- material compatibility
- transfer of chemicals
- housekeeping/inspections
- secondary containment
- spill contingency
- batch treatment

The ASPP plan must provide for notification of spill events to the proper authorities, including the POTW. The following information should be included in the plan under notification to the POTW and shall be posted on a chain-of-contacts list on information boards and in other applicable areas throughout the plant:

PUBLICLY OWNED TREATMENT WORKS(POTW): City of Dover

PRETREATMENT COORDINATOR AT PERMIT ISSUANCE: Arnold Powers

CITY ADDRESS: 484 Middle Rd., Dover, NH, 03820

TELEPHONE DAYS: WWTF 1-603-516-6475. EMERGENCY: Dover PD 1-603-742-4646

## PART 6 - DEFINITIONS

- A. **Accidental Spill Prevention Program** means the program conducted by the Control Authority to track potential spill hazards within the industrial community. It includes requiring an **Accidental Spill Prevention Plan** from each industrial user. This plan identifies the methods of spill prevention, response, and reporting conducted by the industrial user.
- B. **ASPP** means accidental spill prevention plan or accidental spill prevention program as defined by the text.
- C. **BOD5** means biological oxygen demand measured over a 5-day incubation period.
- D. **CFR** means Code of Federal Regulations.
- E. **Composite sample** means a sample comprised of a minimum of 12 aliquots collected over a period of no more than 24 hours. The sample may be collected manually or automatically.
- F. **Control Authority** means the local agency regulating the local pretreatment program and its authorized representatives including, but not limited to, the industrial pretreatment coordinator.
- G. **Discharge** means an intentional or unintentional action or omission resulting in the releasing, spilling, leaking, pumping, pouring, emitting, emptying, or dumping of a pollutant into the waters of the State or the U.S., or onto land or into wells from where it might flow or drain into said waters or onto lands outside the jurisdiction of the State. Discharge includes the release of any pollutant into a POTW.
- H. **Flow-proportioned** means a composite sample that is collected continuously or discreetly. Discreet sampling may be flow-proportioned either by varying the time interval between each aliquot or the volume of each aliquot. All composites must be flow-proportional to each stream flow at time of collection of aliquot or to the total flow since the previous aliquot.
- I. **Grab sample** means an individual sample collected over a period of time not to exceed 15 minutes. It is a single sample taken at neither a specific time nor flow and it is representative of conditions or characteristics of the discharge at the time that it is collected.

- J. **Industrial Pretreatment Coordinator** means an authorized representative of the Control Authority that implements and coordinates the pretreatment program.
- K. **mg/L** means milligrams per liter.
- L. **NPDES** means National Pollutant Discharge Elimination System and refers to the discharge permit issued to the POTW.
- M. **PCBs** means polychlorinated biphenyls.
- N. **pH** means the acidity or alkalinity of a solution. Neutral is 7.0, acidic is lower and alkaline is higher.
- O. **POTW** means the publicly owned treatment works including the collection system, treatment plant and other appurtenances. It also means the municipality having jurisdiction over dischargers to and from the treatment plant.
- P. **Significant noncompliance** means the state of noncompliance with pretreatment requirements at which an industrial user is published in the largest daily newspaper in the municipality in which the POTW is located.
- Q. **TSS** means total suspended solids.
- R. **Pass Through** means a discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
- S. **Interference** means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both: (1) Inhibits or disrupts the POTW, its treatment process or operations, or its sludge processes, use or disposal; and (2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA) the Clean Water Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.
- T. **TTO** means the sum total of toxic organics or total toxic organics.

PERMIT NO. 1012C

CYN

ATTACHMENT A - SIGNATORY AUTHORIZATION

All reports and information submitted pursuant to the requirements of discharge permit 1012C will be signed and certified by an authorized signatory of the permittee, CYN. In accordance with this permit and 40 CFR Part 403.12, an authorized signatory is:

- (a) A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or  
The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendation, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
- (b) A general partner or proprietor if the industrial user is a partnership or sole proprietorship respectively; or
- (c) A duly authorized representative of the individual designated in (a) or (b) of this definition if (i) the authorization is made in writing by the individual described in (a) or (b) of this definition; and (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, operator of a well, or well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company, and (iii) the written authorization is submitted to the Control Authority.

Mark Theriault  
Authorized signatory

Authorized signatory, if not  
(a) or (b) above, is authorized by:

[Signature]  
Authorized signature

Mark Theriault  
Name

Facility manager  
Title

\_\_\_\_\_  
Signature

9/24/15  
Effective date

\_\_\_\_\_  
Title

PERMIT NO. \_\_\_\_\_

ABC SIGNIFICANT INDUSTRY

### ATTACHMENT B - SCHEDULE OF COMPLIANCE

**[EDITOR'S NOTE: if the limitations provided for in this permit have not been met and are those required by categorical standards or the local sewer ordinance, the compliance schedule should be issued in the form of an enforcement action. For record keeping purposes, Attachment B should be 2 pages; the first should be a cover page stating that the compliance schedule requirements are contained in the 2nd page which should be the enforcement document.]**

- (1) The permittee shall provide for and implement monitoring and analyses as provided for in this permit within thirty (30) calendar days of the effective date of this permit. If construction or placement of facilities or sampling and monitoring equipment is required, a proposed compliance schedule shall be submitted by the permittee within ten (10) calendar days of the effective date of this permit and must be approved by the Control Authority.
- (2) Within thirty (30) days of the effective date of this permit the effluent from the permitted discharge location shall meet the requirements of this permit. If construction or placement of facilities is required or significant process changes are necessary to meet the effluent requirements of this permit, a proposed compliance schedule shall be submitted by the permittee within ten (10) calendar days of the effective date of this permit and must be approved by the Control Authority.

The compliance schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment facilities and procedures required for the user to meet the applicable pretreatment standards (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contracts for major components, commencing construction, completing construction, etc.). No increment shall exceed nine (9) months nor shall the entire schedule exceed eighteen (18) months.

No later than fourteen (14) calendar days following a date identified in the schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

## FACT SHEET

09/26/15

a. General Information:

CYN Environmental Services  
8 Progress Dr.  
Dover, NH 03820  
Dover Facility – 603-749-4969

b. Operational Description:

CYN is a service oriented company providing clean-up operations for industrial type spills, remediation projects, and for routine pumping of industrial tanks and sumps (SIC#s (5093,4959,7699)). The wide variety of companies that use their services can provide diverse waste streams for treatment. On occasion underground tanks or chambers can be serviced where transformers and lines are located. These enclosures are full of water, and on occasion the site may contain low level PCBs. These wastewaters are processed through their treatment system and then discharged to the sanitary sewer.

c. Production Data:

CYN is not a production type facility.

d. Approval Authority – EPA Region I Boston  
Control Authority – Dover, NH POTW

e. Pretreatment:

Waste streams containing PCB and oil/grease residue are discharged to an oil/water separator. The oil layer is collected as hazardous waste for pick up. The water layer or effluent from the separator is then pumped to three bag filters. This effluent is then treated through a carbon filter. Finally, the PCB water goes through its last treatment stage a Myselex filter cartridge. The final water or treated effluent discharges to tank#1 a PCB designated 5,000 gal. holding tank where the water is sampled and batch dumped with acceptable test results. Wastewater without PCBs is processed through three bag filters, then carbon, and finally pumped into tank #2 and #3 where its sampled and discharged with good results.

f. Description of Discharges:

The information available on CYN's effluent character includes both compliance and self monitorings. These monitorings are indicative of metals, organics, oil & grease, and PCBs present at varying levels.



g. Final Effluent Conditions and Limitations:

Effective no later than the effective date of this permit, and lasting until the expiration date of this permit, CYN is authorized to discharge treated wastewater from its 5,000 gal. holding/discharge tanks on a gravity basis with acceptable test results. The discharge shall be tested as specified below. See specific parameter limits listed in CYN Environmental's industrial discharge permit.

Effluent limits are based on EPA STDs., calculated local limits, and New Hampshire Dept. of Environmental Services Guidance on PCBs in receiving water, and sludge. CYN is authorized to discharge treated wastewater which shall not exceed the concentration of 2 PPB for PCBs, or exceed any other pretreatment standard.

- h. Effective no later than the effective date of this permit and lasting until the expiration date of this permit, CYN is authorized to discharge wastewater from their holding/discharge tanks. This discharge shall be monitored as specified below:

Part 1

Monitoring for Local Standards

PARAMETER	SAMPLING FREQ.	TYPE
PCBs	Per batch discharge	grab profile
Oil & Grease	"	of tank
COD	"	"
Cadmium	"	"
Nickel	"	"
pH	"	"

Monitoring for Federal Standards

PARAMETER	SAMPLING FREQ.	TYPE
Chromium	Per batch discharge	grab profile
Cobalt	"	of tank
Copper	"	"
Lead	"	"
Tin	"	"
Zinc	"	"
Bis(2ethylhexyl)phthalate	"	"
Carbazole	"	"
n-Decane	"	"
Fluoranthene	"	"
n-Octadecane	"	"

i. Reporting Requirements:

Industrial user reporting requirements will be in accordance with those outlined in the City's Sewer Use Ordinance and as outlined in the industrial discharge permit.

J. Standard Conditions:

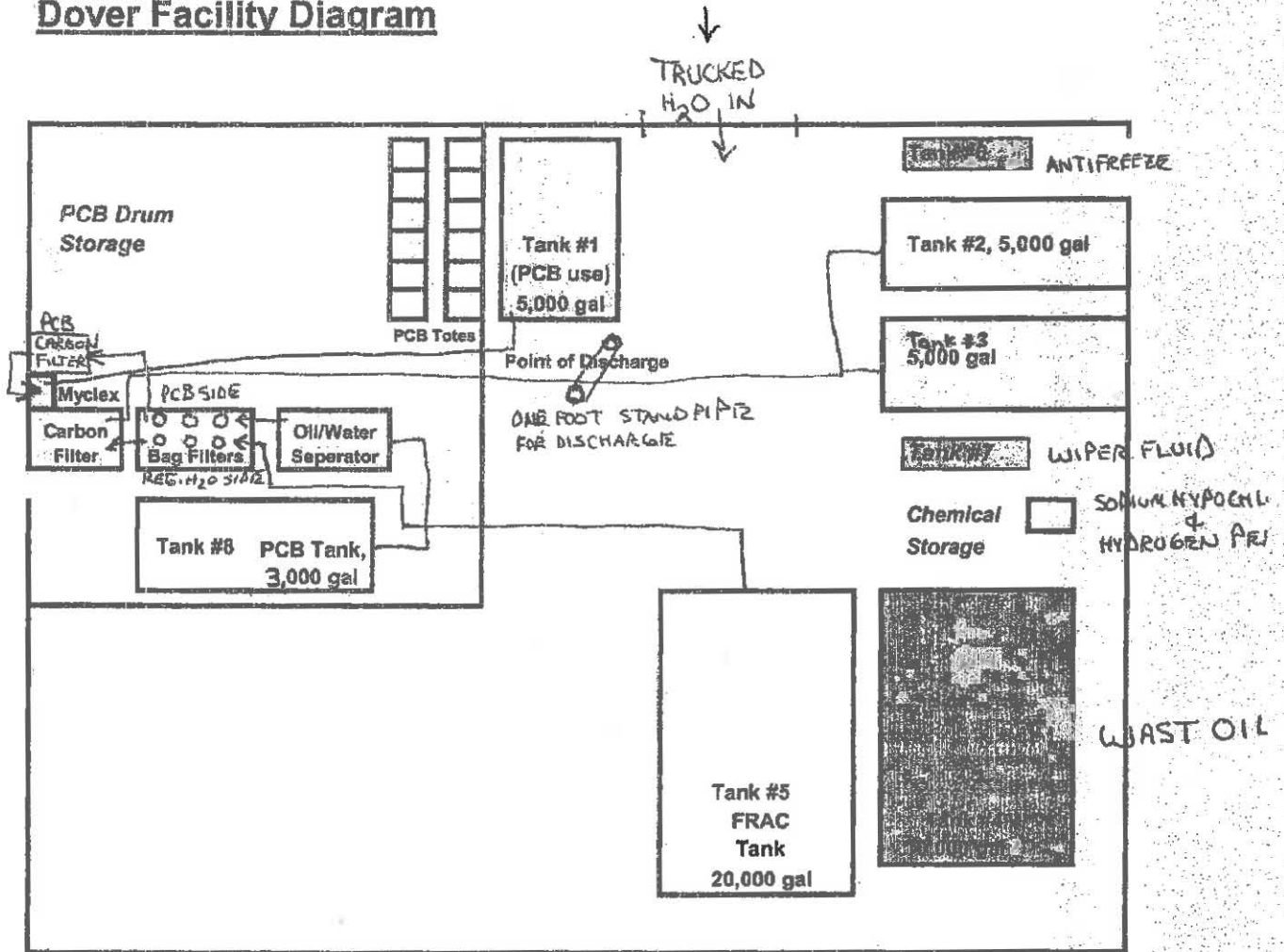
The industrial user permit shall contain conditions to be followed by CYN. These standard conditions in no way shall relieve CYN of any local, state, or federal pretreatment requirement(s).

k. Special Conditions:

- a. Due to the nature of CYN's discharge, only 5,000 GPD may be discharged.
- b. Due to the nature of CYN's discharge, all 5,000 gal. batches shall be tested.



# Dover Facility Diagram








## Water Treatment System

Untreated water stored in "FRAC tank" or "PCB Tank"

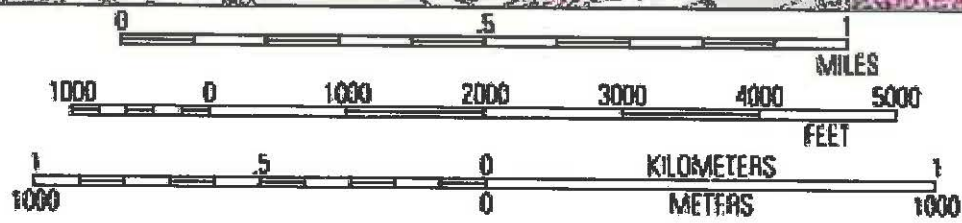
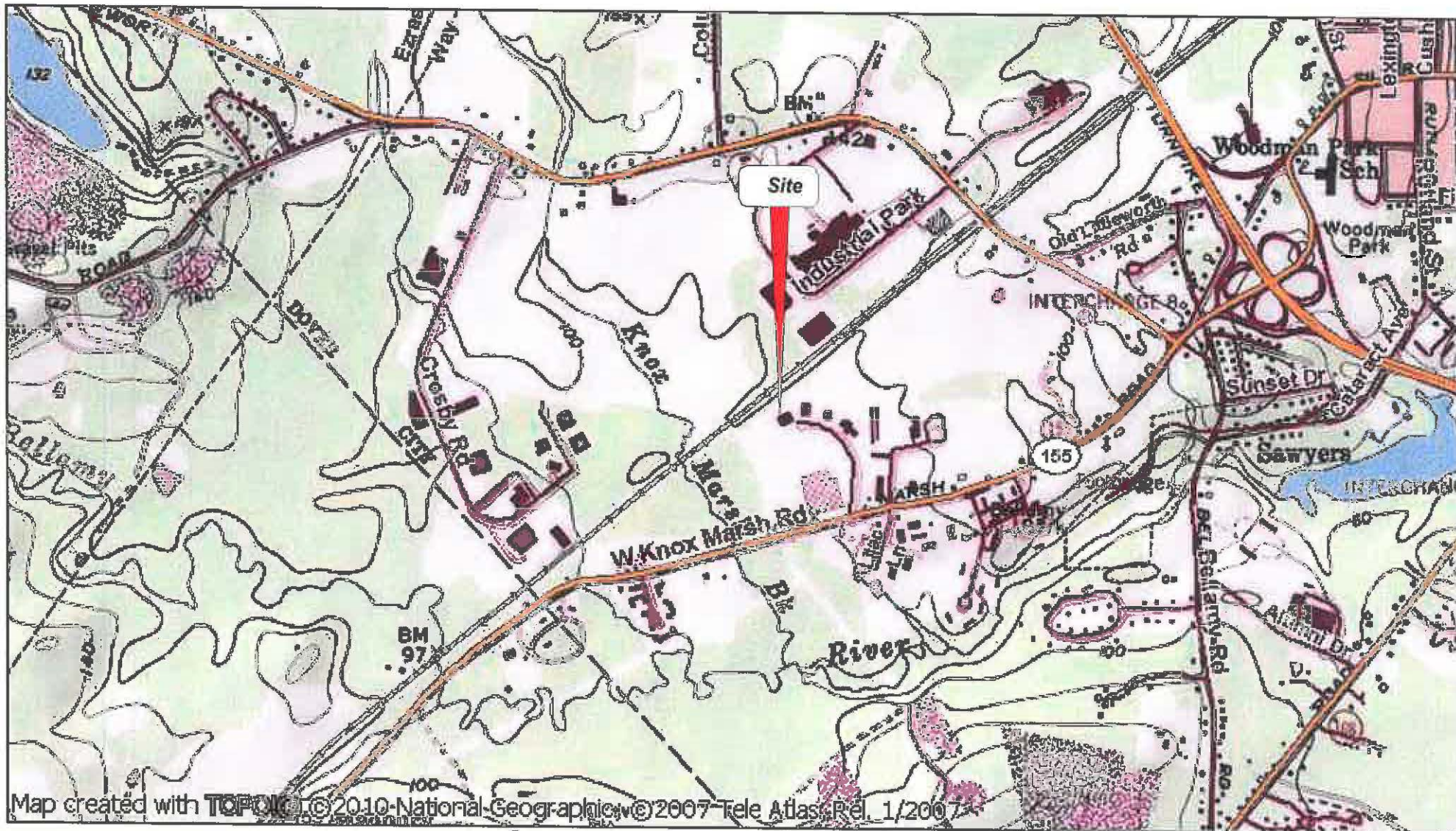
Untreated water flows into treatment system at either the oil/water separator or the bag filters

Treated water flows from the carbon filter or the Myclex filter to Tanks 1, 2 & 3

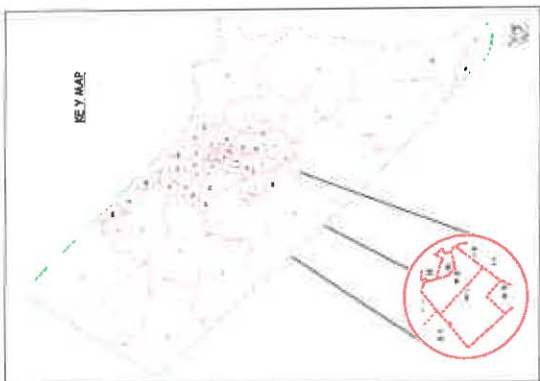
Treated water is discharged with use of flow meter at the "Point of Discharge"

-  is Waste Water Treatment System
-  is treated water storage tanks for discharge
-  is untreated water storage tanks
-  is virgin product storage
-  is used for various liquids depending on need

*Exhibit 6: Topographical Map*



*Exhibit 7: City of Dover Tax Map*



**LEGEND**

City Boundary	Blue line
Water	Blue area
Land	Yellow/Green area
Highway	Thick black line
Other roads	Thin black line
Utility lines	Red/Orange lines
Other features	Various symbols and colors

**CONCRETE'S**

Category	Description	Value
1.1	Commercial	\$1.2
1.2	Industrial	\$1.5
1.3	Office	\$2.0
1.4	Public	\$0.8
1.5	Religious	\$1.0
1.6	Other	\$1.5

**CONCRETE'S**

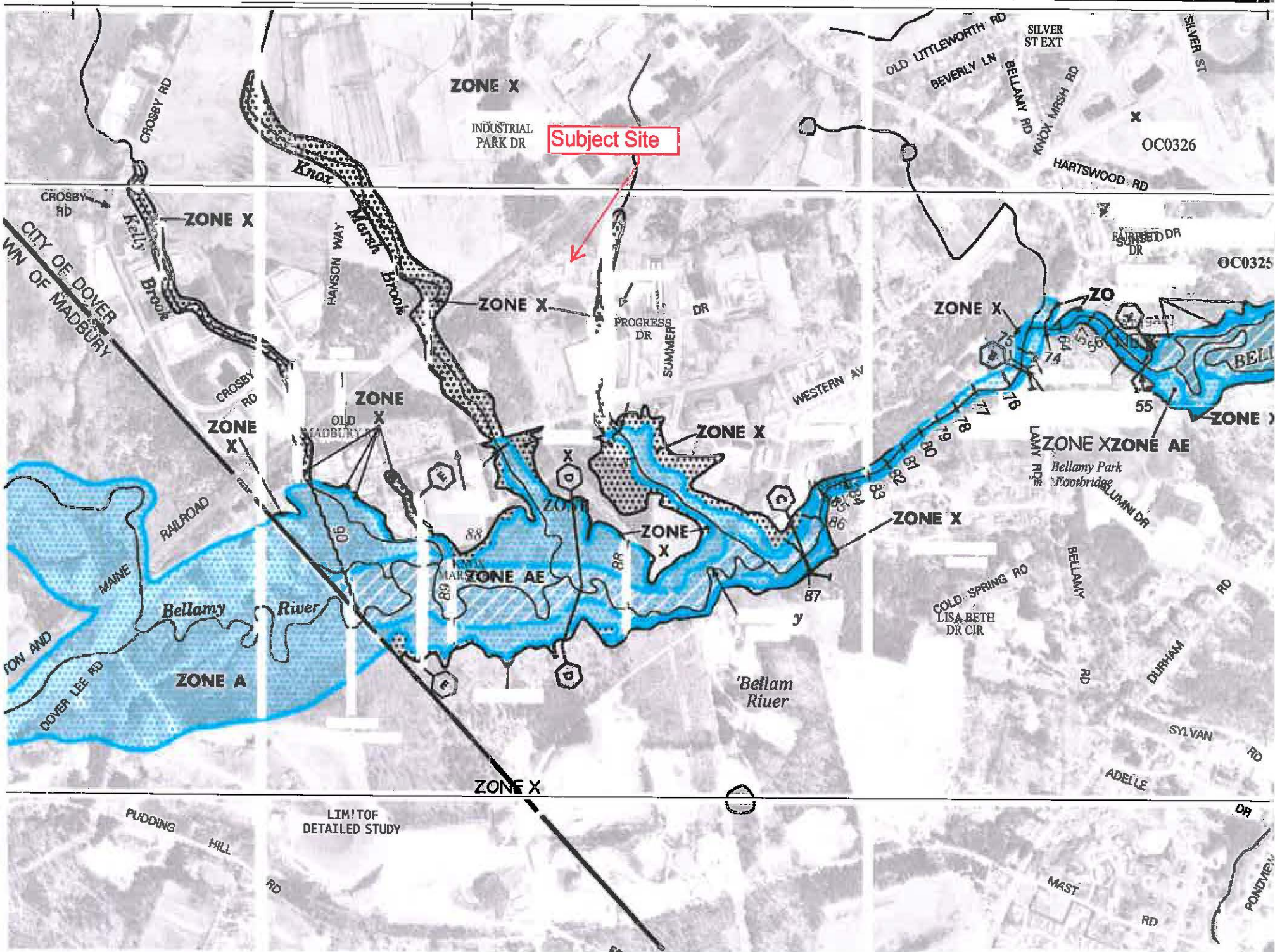
Category	Description	Value
2.1	Residential	\$0.5
2.2	Manufacturing	\$1.0
2.3	Other	\$0.8

STATE OF OHIO COUNTY OF VILLAWAY  
 TAX ASSESSOR S. W.P.  
 S R R





*Exhibit 8: 100 Year Flood Plain Map*



## LEGEND

### SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equated or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

### FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



### OTHER FLOOD AREAS

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.



### OTHER AREAS

- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE-D** Areas in which flood hazards are undetermined, but possible.



### COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS



### OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary

*Exhibit 9: Tank Specifications*



# JUMBO BIN

**T**he Jumbo Bin is a rugged, long-lasting container that is designed to meet the most demanding applications. It is built with heavy-duty materials and features a unique design that provides superior strength and durability.

Not just another IBC, the Clawson Jumbo Bin has proven to be dependable and practical.

Both the top and bottom heads are made of one-piece stamped construction, including corner welds. The top head

is made of 16-gauge carbon steel with a 2" reverse stem ball valve with a 1/2" reinforced valve guard, smooth interior welds, stainless steel that is electro-cleaned, and a chemical resistant polymeric coating on the carbon steel units. The bottom head has Clawson's unique "no heel" bottom. This self-actuating bottom eliminates product heel, which is always present in barrels, while maintaining a flat bottom for handling.

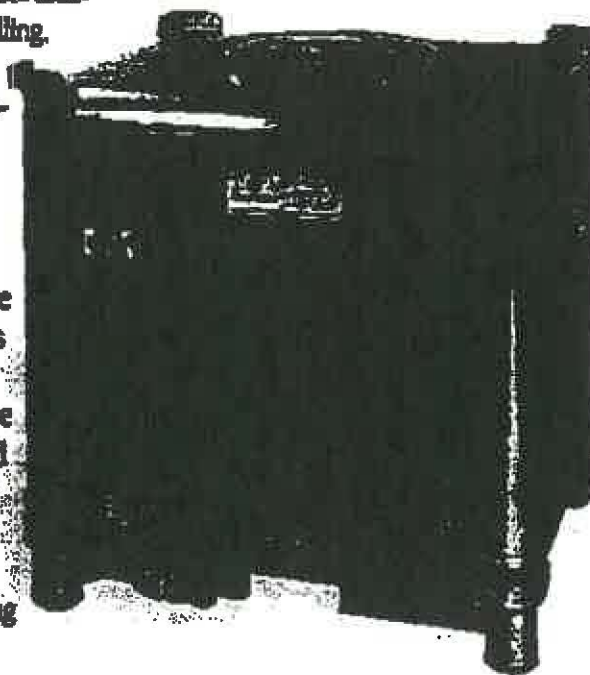
All Jumbo Bin corners have a 2 1/2" radius. They provide the container with greater strength, they make the interior easier to clean, and they improve drainage.

Clawson Jumbo Bins have stacking pads/leg positioners which, at 1/4" plate, are the thickest in the industry. These protect the top of the bin and provide a level stacking surface. This design allows for safe stacking three high and also offers the option of lifting

the container. Other features include: a 2" reverse stem ball valve with a 1/2" reinforced valve guard, smooth interior welds, stainless steel that is electro-cleaned, and a chemical resistant polymeric coating on the carbon steel units.

DOT and UN approved, the Clawson Jumbo Bin is a rugged, long-lasting container.

DOT and UN approved, the Clawson Jumbo Bin is a rugged, long-lasting container.



## SPECS AT A GLANCE

- 70-gallon capacity with large 2 1/2" radius corners
- Exceeds DOT and UN specifications
- Automated full-penetration welds with hand smooth interior welds
- 16-gauge barrel lid with a 2" flush fittings and a fusible vent
- Contains stacking leg positioners for secure stacking three high
- "No heel" bottom ensures full drainage

455 Clawson Blvd. Dr.  
Clawson, MI 48316  
1-800-325-8700



# CLAWSON CONTAINER COMPANY

*Exhibit 10: Closure Costs*

## 1.0 INTRODUCTION

### 1.1 Purpose and Overview of Closure Plan

The following Closure Plan is for the Cyn Environmental Services ("Cyn") facility located at 8 Progress Drive, Dover, New Hampshire. This Closure Plan is a self-contained document that provides the means to remove and properly dispose of all PCB waste stored at the site and to decontaminate the facility.

This Closure Plan has been prepared in accordance with the Toxic Substances Control Act (TSCA) facility closure requirements of 40 CFR 761. The purpose of the Closure Plan is to outline the procedures necessary to partially or completely close the facility at any point during its intended operating life, or at the end of its intended operating life. This plan provides details on:

- Maximum inventory of PCB waste accumulated/stored at any time during the facility life;
- Procedures for decontamination and/or disposal of facility structures and equipment during closure; and
- Anticipated closure schedule and cost estimate.

Prior to any closure activities, Cyn will select a closure contractor to provide management, project administration, and remediation services. The oversight manager will perform sampling and supervise decontamination operations, as well as provide project closure certification. Either the oversight manager or a qualified Cyn person will be named as the Health & Safety Officer.

It shall be the responsibility of the Plant Manager of the Dover, New Hampshire facility or the Manager of environmental compliance to see that this Closure Plan is revised, updated, and maintained in compliance with 40 CFR 761 as it relates to Closure Plan, Cost Estimate, and Financial Assurance requirements. The preparer and person approving any document in this plan are not to be the same person. The Facility Manager of the Dover, New Hampshire facility or the Manager of environmental compliance shall approve all documents relating to this plan. Cyn will maintain a copy of the Closure Plan and all subsequent revisions at the facility until certification of closure is complete.

All closure procedures will be conducted within the context of Cyn's health and safety procedures to ensure employee safety during closure activities. All clean-up work will be supervised and performed using qualified personnel. As necessary, personnel will be equipped with chemical resistant coveralls (e.g., Tyvek suits) and other personnel protective equipment (PPE). Strict supervision will ensure that no open flames, hot surfaces, or smoking are present in or around the work areas.



## 1.2 Closure Performance Standard

The Cyn facility is designed and operated in a manner which minimizes the potential for contamination of the facility structure, equipment, and surrounding property. All materials processing and storage activities are conducted inside an enclosed processing building.

The Cyn building includes designated container handling areas, which are designed with sealed concrete floors, and which allow for rapid clean-up response to spills or leaks. The Cyn facility design, coupled with frequent inspections and facility maintenance, provides safe daily operation and minimizes required clean up and decontamination at closure.

This Closure Plan has been designed to ensure that the facility will not require any post-closure maintenance and control. Implementation of this Closure Plan minimizes or eliminates any threats to public health, welfare, and the environment cause by post-closure escape of PCBs or other constituents to groundwater, surface water, soil, or the atmosphere. A post-closure plan is not required because Cyn is not a land disposal facility and all PCBs and other waste materials will be removed from the site (i.e., the facility will be fully decontaminated at the time of closure).

At closure, samples will be taken of the building structures, processing equipment, and external soil to verify that no PCB contamination remains after facility closure.

## 1.3 Partial and Final Closure

The Closure Plan and Cost Estimate have been developed such that the container handling and process areas may be closed on a partial or facility-wide basis at any time. Cyn shall revise this Closure Plan as necessary to reflect any substantive modifications to the facility equipment, structures, or operating procedures.

## 2.0 PCB Waste Handling Areas and Maximum Waste Inventory

### 2.1 Identification of PCB Waste Handling Areas

PCB storage and handling activities at Cyn shall be limited to the three areas identified below.

#### A. TSCA Storage Area

The TSCA Storage Area, that is designed in accordance with 40 CFR 761.65(b), is used to store PCB items and articles, to store containers and tanks of PCB wastes, and to treat PCB contaminated waters for subsequent discharge into the City of Dover Publically Operated Treatment Works (POTW).

#### B. Container Shipping/Receiving Areas

The Container Shipping/Receiving Areas are utilized for the shipping and receiving of PCB wastes in containerized or bulk form. Containers or bulk loads of inbound or outbound PCB wastes may be staged in these areas for up to 10 days without being considered a "TSCA Storage Area". These units consists of an indoor (i.e., roofed and walled) common floor area immediately adjacent to the TSCA Storage Area and the two areas located outside, and immediately adjacent to, the overhead doors on the west and north sides of the TSCA Storage Area.

### C. Other Areas

Other Areas are assets/structures that provide support services related to Cyn's management of PCBs, but which are not PCB waste storage, treatment, or disposal units or processes requiring a USEPA TSCA permit. Other Areas are identified under this application so that they may be included in confirmatory PCB sampling at the time of facility closure.

- Vehicle Parking Areas - Temporary vehicle parking slots adjacent to the Container Shipping/Receiving Area overhead doors on the west and north sides of the Cyn building. Each of the truck slots is paved with asphalt.
- Roadways System - A combination asphalt and gravel driveway on which all vehicles carrying PCB and non-PCB waste enter/exit the facility.
- Office and lavatory areas

### 2.2 Maximum PCB Inventory and Secondary Containment Calculations

The maximum PCB inventory for the Cyn facility includes:

- 120, 55 gallon drums or equivalent volume (total 6,600 gallons),
- 12, 550 gallon portable tanks (total 2,200 gallons),
- One 3,000 gallon vertical poly tank,
- PCB contaminated equipment such as transformers, capacitors, and switches (total of 2,000 cubic feet), and
- 5,000 gallons temporarily staged in the Container Shipping/Receiving Areas.

Cyn notes that for the purposes of the daily inventory, any container of PCB waste present in the Container Shipping/Receiving Areas shall be counted against the "maximum inventory" for the facility for the purposes of calculating closure costs. Containers of PCB waste on properly permitted vehicles in the Container Shipping/Receiving Areas for less than 10 days from the date of arrival/shipment are considered to be 1) "in the normal course of transportation", 2) are not subject to TSCA commercial storage facility licensing requirements, and 3) shall not be counted against the daily inventory limit. The worst-case

scenario for Closure Plan purposes would be one tank truck with 5,000 gallons of PCB waste.

### 3.0 General Closure Activities

#### 3.1 Expected Life of the Facility

For closure cost estimation and financial assurance purposes, the active life of the facility is assumed to be twenty (20) years.

#### 3.2 Closure Schedule

Cyn will submit a written notice of intended closure to USEPA at least sixty (60) days prior to the date on which closure is expected to begin. To the extent practicable, Cyn shall notify generators which utilize the facility at least thirty (30) days in advance of the date that the facility will discontinue the acceptance of PCB wastes. Within ninety (90) days of when the facility receives the final shipment, all PCB waste materials will be removed from the facility. All closure activities will be completed within one hundred eighty (180) days after receiving the final volume of PCB waste.

Cyn shall certify closure in a written notice to USEPA within sixty (60) days of completion. The certification of closure shall be signed by Cyn and an independent professional engineer. A copy of the certification shall be kept on file at the facility.

#### 3.3 Inventory Removal

At closure, all PCB waste in inventory will be prepared for transport and shipped for off-site treatment/disposal in accordance with 40 CFR 761. No PCB wastes will be treated or disposed of at Cyn.

The waste inventory removal methods to be utilized during closure actions are similar to Cyn's daily operating procedures for consolidating similar waste streams, preparing appropriate paperwork, and loading outbound transport vehicles. Following inventory removal, all dust and other residues will be swept or otherwise cleaned up and handled as PCB waste. To minimize exposure to possible pcb contaminated dust a paraffin based sweeping compound will be applied to the entirety of the floor before cleanup begins.

The specific types of off-site PCB waste management facilities to be used for the disposal of waste inventory and contamination residuals will largely depend on technology improvements and the availability of such units at the time of closure. For cost estimation purposes, the disposal/treatment options to be considered include the following:

- PCB solids and articles such as small capacitors (per 40 CFR 761.60(b)(2)), transformers (per 40 CFR 761.60(b)(1)), floor sweepings, demolished wall surfaces, spill cleanup debris, personnel protection equipment (PPE) and contaminated soil shall be landfilled as PCB waste.

- PCB contaminated wash/rinse waters shall be shipped to Veolia in Port Arthur, Texas for treatment and disposal.

Decontamination of the PCB handling areas shall begin as soon as the unit is cleared of all inventory. Decontamination procedures are described in detail in Section 4.0 below.

#### 4.0 Description of Closure/Decontamination Activities

In Sections 4.1 through 4.3, Cyn describes the procedures and decontamination objectives for the various types of PCB handling units/structures in operation at the facility, including:

- Treatment and storage tanks, piping, and filters used to treat PCB contaminated waters (see Section 4.1)
- Floors, curbs, and walls throughout the TSCA Storage Area and the floor of the interior Container Shipping/Receiving Areas (see Section 4.2)
- Contaminated soil/asphalt from the exterior Container Shipping/Receiving Areas, and the paved roadway system (see Section 4.3)

To the extent practicable, any small-scale equipment decontamination shall be conducted within containers staged inside the storage area. In all cases, Cyn shall take all appropriate precautions to prevent the release of PCB contaminants to surrounding or underlying structures and soils during closure. Methods to eliminate PCB releases may include: lining the floor and work surfaces with plastic sheeting; using absorbent pads/booms to create temporary secondary containment where no such devices are in place or the integrity of an existing containment device is questionable; using caulking material, plastic or other means to plug any gaps or crack in concrete structures prior to application of liquids; and minimizing the amount of liquids (wash waters, solvents, etc.) applied to any one area or object at a particular time.

All wash/rinse waters, PPE, and other equipment and supplies used during the decontamination process shall be containerized and shipped off-site for treatment and disposal as PCB waste. During closure, containerized decontamination wastes shall be staged in the TSCA Storage Area and/or the Container Shipping/Receiving Areas pending transportation to the final disposal facility.

#### 4.1 Treatment Tanks, Piping, and Filters

In general, all waste water treatment equipment, piping, and miscellaneous equipment that is contaminated with PCBs shall be dismantled, accumulated in roll off containers, and shipped off-site for disposal at a TSCA landfill. In general, the wastewater treatment system currently consists of an oil/water separator, six bag filters, a 500gallon carbon filtration unit, a 100 gallon carbon filtration unit, and associated piping and pumps.

In the event that Cyn identifies a significant salvage value (either as scrap metal or non-PCB application) for equipment such as the sand and carbon filter units, Cyn may petition the USEPA to undertake an equipment decontamination program. However, since there are no standard decontamination procedures for such irregularly shaped objects, Cyn shall, prior to commencing such activities, seek USEPA guidance to determine that the actual procedures and sampling/analysis requirements that will be used meet the most-recent TSCA decontamination procedure required by USEPA regulations or Region I policy at the time of closure. Any equipment for which a suitable decontamination plan cannot be agreed upon, or which is unable to meet the established decontamination objective, shall be shipped off-site for landfilling as a TSCA waste.

#### 4.2 Floors, Curbs and Walls

The curb, and wall (The wall height is 14 ft.) surfaces within the TSCA Storage Area shall be decontaminated to comply with the cleanup standard for "high occupancy areas" in 40 CFR 761.61(a), specifically to a TSCA cleanup level of less than  $10 \mu\text{g}/100 \text{ cm}^2$  for non-porous surfaces and 1 mg/Kg PCB for porous surfaces.

The floor being concrete will be cleaned using a Terpene based hydrocarbon solvent.

Once the floors have been cleaned samples will be taken in accordance with 40 CFR 761 Subpart N, O, and P in grid fashion at various locations. The samples will be taken using Exhibit A: EPA's Standard Operating Procedure for Sampling Concrete in the Field. (See Exhibit A)

#### See Section 6.3.3 TSCA Storage Area Decontamination

Wipe samples shall be taken from the wall surfaces in accordance with the sampling procedures described in Section 5.1 below to confirm compliance with the decontamination objective of less than  $10 \mu\text{g}/100 \text{ cm}^2$  for non-porous surfaces or 1 mg/Kg for porous surfaces.

#### 4.3 Soil/Asphalt

The vehicle parking slots and the facility roadway system are soil/asphalt areas, which have been identified as having handled PCBs. These areas shall be sampled to determine if PCB contamination is actually present at the time of closure. The number and location of samples shall be determined using the sample number and grid spacing procedures described in Section 5.1 below. In accordance with 40 CFR 761.61(a), soil in "high occupancy areas" must be cleaned to less than 1 mg/Kg PCBs. Any soil contaminated with less than 1 mg/Kg PCBs shall be considered clean and not requiring further decontamination or closure. Any soil/asphalt which shows a PCB concentration equal to or greater than 1 mg/Kg shall be considered contaminated with PCBs and shall be excavated and disposed of as PCB remediation waste.

If sampling indicates that PCB contamination is present in the asphalt/soil at 1 mg/Kg PCB or greater, the non-impervious asphalt topping and first 10 inches of underlying soil shall be excavated, containerized into rolloffs, and shipped off-site for landfilling as a TSCA waste.

Following the soil excavation, soil samples shall be taken inside the excavated area to confirm compliance with the less than 1 mg/Kg standard. If the less than 1 mg/Kg standard is not achieved after the removal of the top 10 inches of soil, excavation and sampling shall be repeated in 6-inch lifts until the 1 mg/Kg or less decontamination objective is met. Excavated areas shall be backfilled to the surrounding grade with soil that contains less than 1 mg/Kg PCBs.

## 5.0 Sampling Procedures

### 5.1 Sample Number and Location

All cleaned PCB surfaces shall be sampled and analyzed for PCBs to verify the success of the decontamination operations. The roadway leading to the Container Shipping/Receiving Areas will be sampled to verify that outdoor areas are not contaminated with PCBs. In addition, wipe samples will be taken in the office hallway and bathrooms/lavatories.

For floors, walls, and soil areas, Cyn shall collect samples with the number and location based on the grid sampling procedures described in 40 CFR 761 Subpart N, O, and P.

If decontamination of the sand and carbon filtration units and other miscellaneous equipment is attempted (see Section 4.1), the number and location of samples shall be determined in consultation with USEPA Region I prior to undertaking specific decontamination activities.

### 5.2 Wipe and Bulk Testing Protocol

- Wipe testing shall be performed and interpreted as follows:
  1. A 100 cm<sup>2</sup> template shall be placed in the areas to be tested.
  2. The wiping medium shall be a gauze pad, glass wool, or filter paper which has been saturated with hexane.
  3. Collection and testing of field blanks and replicates shall be carried out in accordance with standard laboratory practices.
  4. Results from wipe tests must be less than the decontamination target level (e.g., 10 µg PCB's/100 cm<sup>2</sup>).
  5. If the results are higher than the target level, the areas must be re-cleaned and the wipe testing repeated until the decontamination objective is met.
- Bulk sampling and testing of porous surfaces shall be performed in accordance with EPA's Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs) (Exhibit A).

- Soil sampling will be performed in accordance with applicable requirements described in 40 CFR 761 Subpart N and O.

### 5.3 Quality Assurance/Quality Control Program

All closure sampling and analysis activities (onsite and/or off-site) shall be conducted in accordance with activities with quality assurance and quality control (QA/QC) procedures specified in the EPA document, Test Methods for Evaluating Solid Waste, SW-846 or equivalent.

The Facility Compliance Manager, or other designed person, with relevant experience/qualifications to conduct a QA/QC program, shall be fully responsible for carrying out all facets of the QA/QC program, including sampling and chain-of-custody procedures, and for ensuring that all laboratory analyses are conducted using procedures specified in SW-846, or equivalent.

### 6.0 Closure Cost Estimate

#### 6.1 Introduction

The cost of closure of the Cyn facility is based on the estimated cost at the point at which closure would be most expensive. The PCB waste inventory removal calculations are based on an assumption of maximum utilization of storage capacity up to the inventory maximum of 120, 55 gallon drums or equivalent volume; 12, 550 gallon portable tanks; 1, 3,000 gallon tank; 2,000 ft<sup>3</sup> of PCB items; and 1, 5,000 gallon tank truck containing PCBs in a Container Shipping/Receiving Area at the time of closure. The cost estimate is representative of third party closure based on August 2018 dollars. Third-party disposal facility pricing data is provided in Exhibit B.

#### 6.2 Closure Cost Summary

An estimated \$461,970.30 (2018 dollars) will be needed to conduct the activities described below, including removal of PCB waste inventory, decontamination, disposal of wash agents, sampling and analysis, and closure certification. A summary of the costs is provided below:

1. PCB waste inventory labor/transportation/disposal	\$340,625.00
2. TSCA Storage Area Decontamination/Disposal	\$62,198.00
3. Sampling and Analysis Program	\$12,500.00
4. Certification by Professional Engineer	\$4,650.00
<b>Subtotal</b>	<b>\$419,973.00</b>

Contingency Factor (10%)	\$41,997.30
<b>Total Estimated Closure Cost (2018 dollars)</b>	<b>\$461,970.30</b>

Detailed cost estimation calculations and pertinent assumptions are presented in Section 6.3 below. Each cost estimate identifies the type of treatment/disposal facility to be used and provides unit costs for transportation and disposal as of December 2018.

### 6.3 Closure Cost Calculations

#### 6.3.1 PCB Waste Inventory Transportation/Disposal

This section of the Closure Plan will describe how all PCBs at this facility, including clean-up residuals and materials stored outside of the TSCA Storage Area will be shipped off-site to a permitted facility. All of the actions indicated in this plan will be totally completed within 180 days of the date USEPA approves the Closure Plan and closure is initiated. Actual inventories will be removed from the storage facility within 90 days of initiating closure.

Upon closing its facility, Cyn will ship all inventories of PCBs on-site to a permitted off-site facility(ies). Cyn does not provide disposal capabilities of PCB liquids or solid items; therefore, there will be no treatment of this waste prior to their transportation to the ultimate treatment or storage facilities.

All drums, tanks, portable tanks, and transformers shipped off-site will be in accordance with US DOT packaging requirements (49 CFR 173, 178, and 179), and will be labeled and marked in accordance with US DOT specifications (49 CFR 172), US EP A (40 CFR 262.32) and US EPA PCB marking and labeling requirements. All transporting vehicles will be placarded in accordance with US DOT requirements (49 CFR 172, Subpart F) and TSCA marking requirements.

Removal will consist of consolidating all liquids stored in containers, in tanks, or residuals associated with the treatment system or piping, into bulk tanker truck shipments off-site. This is accomplished by transferring the liquids by pumps and flexible hoses dedicated to PCB operations. Once it is verified that all empty containers, tanks, and other items are free of any liquid, they will be shipped to an off-site PCB landfill facility. All liquid PCB wastes are sent off-site to properly licensed TSCA incinerators.

All drummed solids suitable for landfill will be consolidated into a roll-off container. (However for the purposes of determining closure costs, all drummed material is assumed greater than 500 mg/Kg PCBs (i.e., worst case) and priced for disposal via incineration "as liquids"). Empty drums and tanks will be crushed, when feasible, and consolidated into a roll-off for shipment as PCB waste to an approved PCB disposal facility. The removal of all PCB materials and containers will include any items stored outside or in the area adjacent to the TSCA Storage Area.



Transformers will be drained and flushed. Liquid wastes will be consolidated into bulk transport trucks for incineration. Sealed transformer carcasses are sent for off-site disposal on flatbed trailer trucks.

LIQUID WASTES

• DRUMS	=	120 x 55 gallons	=	6,600 gallons
• PORTABLE TANKS	=	12 x 550 gallons	=	6,600 gallons
• TRANSFORMERS	=	2,000 ft <sup>3</sup>	=	2,400 gallons
• TANK	=	1 x 3,000 gallons	=	3,000 gallons
• UNLOADING/ LOADING AREAS	=	1 x 5,000 gallons	=	5,000 gallons

**TOT AL      23,600 gallons**

ASSUMPTIONS

- The average density of all PCB liquids is assumed to be 11 pounds/gallon.
- The size of transformers range from 10 cubic feet to 200 cubic feet per unit. Therefore the 2,000 cubic feet could represent as few as 10 large transformers to 130 small transformers. A total liquid capacity is estimated to be 2,400 gallons.
- Transportation from Dover, New Hampshire to TCI Alabama to Veolia is \$8,150.00/load.
- Bulk transportation can transport 5,000 gallons/load.
- Contaminated media (including drum and tank sludge, soil, and spill cleanup absorbent) greater than 500 ppm PCBs estimated to be a total of eight (8) drums of solids for incineration.

DISPOSAL COSTS

• PCB liquids – 23,600 gallons x \$8.80/gallon (Veolia, Texas through TCI)	=	\$207,680.00
---	---	--------------

- Contaminated media - 8 drums x \$927.00/dm. = \$7,416.00  
(Clean Harbors)

TRANSPORTATION COSTS

- Five (5) liquid loads - 5 x \$8,150.00/load = \$40,750.00
- Transportation \$45/drum x 8 drums = \$360.00  
(Clean Harbors)

LABOR TO REMOVE INVENTORY

- One Foreman and One Laborer (\$155/hr x 40 hours) = \$6,200.00  
(ENPRO)

**TOTAL = \$262,406.00**

EMPTY DRUMS, PORTABLE TANKS, PERMANENT TANK, SOIL/ASPHALT, PPE, AND DECONTAMINATED CLEAN UP SOLIDS

ASSUMPTIONS

- 25 Crushed drums per cubic yard 120 drums/25 = 4.8 cubic yards
- Portable tanks 1.33 yd. x 1.17 yd. x 1.67 yd = 2.60 cubic yd  
x 12 tanks = 31 cubic yd – 75% due to crushing = 8 cubic yards
- 3,000 gallon tank (approximately 6 yards per 1,000 gallons)  
= 18 cubic yd. – 75% due to crushing = 4.5 cubic yards
- Decontamination Equipment/PPE/Misc. Clean Up = 1 cubic yard
- Wastewater Treatment Equipment = 2 cubic yards  
(bag filters, piping, carbon units, etc)
- Potential Remediation Waste (Soil/Asphalt) -  
one (1) 30 yd<sup>3</sup> container = 30 cubic yards

**TOTAL = 50.3 cubic yards**

- Disposal Costs  
(Wayne Disposal, Michigan)

○ \$200.00 x 50.3 (Cubic Yards)	=	\$10,060.00
○ Michigan Tax \$10/ton (50.3 cubic yards)(1.5 ton/cubic yard)	=	\$754.50
● <u>Transportation Costs</u> (30 cubic yards/load)		
○ Two (2) loads - \$5,600.00/load x 1 (Brighter Horizons)	=	\$11,200.00
● <u>Labor &amp; Equipment to excavate soil/asphalt</u>		
○ Backhoe & Operator (\$ 125/hr. x 16 hr.) (ENPRO)	=	\$2,000.00
● Labor to Load Wastes, Foreman and Laborer (ENPRO, \$155.00/hr. x 8 hr.)	=	\$1,240.00
<b>TOTAL</b>	=	<b>\$25,254.50</b>

EMPTY TRANSFORMERS

ASSUMPTIONS

- 2,000 ft<sup>3</sup> of transformers weighs approx. 40,000 lbs.
- Transformers last contained > 500 ppm PCB

DISPOSAL COST

- 40,000 pounds x \$1.10/lb. (TCI of Alabama) = \$44,000.00

TRANSPORTATION (TCI of Alabama)

- 1 Trip x \$7,725.00/load = \$7,725.00

LABOR TO LOAD

- 1 Foreman and 1 Laborer, 8 hr. x \$155.00/hr. = \$1,240.00

**TOTAL = \$52,965.00**

**GRAND TOTAL = \$340,625.00**

6.3.2 Decontamination of the TSCA Storage Area

This section of the Closure Plan will describe how facility equipment and structures used to manage PCBs will be decontaminated.

### 6.3.3 TSCA Storage Area Decontamination

After all containers, liquids in portable tanks, transformers and system components containing PCBs have been shipped off-site, the TSCA Storage Area and any area outside of the TSCA Storage Area where PCBs have been temporarily stored will be decontaminated to levels specified in 40 CFR 761.61(a), and as described in this section.

First the area will be inspected for signs of leaks or spills and preliminary sampling will be performed as part of a pre-cleanup survey. If spill material is present, free liquids will be absorbed with absorbent, and spilled solid material and absorbent will be shoveled into drums for off-site incineration at a permitted facility. Any area that appears to be stained from past spills will be included as part of the pre-cleanup survey and preliminary sampling program.

Next, the TSCA Storage Area and any area outside of the TSCA Storage Area for which presence of PCBs has been identified will be decontaminated by double washing/rinsing. All impervious solid surfaces within the TSCA Storage Area will be cleaned two times with a solvent or other material in which PCBs are at least five (5%) percent soluble by weight. A volume of PCB-free fluid sufficient to cover the floor and 14 foot high walls of the containment area or adjacent internal storage area, containment berms, steel pallets or containment structure will be used for each wash/rinse (for the purposes of this Closure Plan, Cyn has assumed a volume of solvent will be used that is equal to a volume sufficient to cover the TSCA Storage Area floor and walls with 0.25 inches of solvent). The wash/rinse will be collected from the floor and pumped into a tanker truck for off-site disposal. Due to the height of the ceiling and nature of the facility activity (i.e., drum storage or limited storage in small tanks), it is unlikely that the ceiling will be found to be contaminated with PCB from spills. All internal walls of the storage area are covered with removable polypropylene curtains. These curtains will contain any spillage, which could contact the walls. On closure, all plastic curtains will be removed and disposed of in the bulk solid shipments to a licensed landfill disposal facility. The internal structure walls will be included in the preliminary sampling program, but it is not expected that contamination will be present once the protective curtains are removed.

Following the second wash/rinse operation, the area and steel pallets will be rinsed with the high-pressure steam cleaning unit to remove the rinse/wash solution. There is no potential for run-off of the decontamination rinses as the TSCA Storage Area is completely contained by the storage area berms. Temporary berms will be constructed in areas outside of the TSCA Storage Area that require decontamination. The resulting rinse water will also be collected within the containment area and pumped into a tanker truck for off-site treatment. Decontamination equipment (e.g. squeegees, protective clothing, wipes, hoses) will be consolidated into the bulk solid shipments for landfill disposal as a PCB waste.

To determine if decontamination is complete, post-cleanup verification tests consisting of bulk sampling and/or standard wipe tests that will be taken at specific grid locations and in areas identified in the pre-cleanup survey as possible "spill" sites. The samples will be analyzed for PCBs. To be deemed decontaminated the areas/samples shall meet the TSCA cleanup level of less than 1 mg/Kg PCB for porous surfaces and less than 10 µg/100 cm<sup>2</sup> for non-porous surfaces. The results of these post-cleanup verification tests will be sent to the USEPA Regional Administrator immediately upon availability and will be reviewed by the independent professional engineer supervising closure to determine if decontamination is complete. A certified laboratory will perform the analysis. Chain of Custody procedures will be used to track transfer of the samples. If decontamination is not complete, additional rinses will be repeated.

Any transfer and storage equipment that Cyn wishes to retain and believes can be decontaminated will be triple rinsed in wash baths with a solvent or other material in which PCBs are at least five (5%) percent soluble by weight. At the completion of the cleaning process, wipe tests will be performed on each piece of equipment and the samples analyzed for PCBs. Any equipment that cannot be decontaminated will be discarded as a PCB solid.

All equipment, transfer pumps, hoses, and protective curtains, and all wastes generated from decontamination activities (e.g. mops, buckets, pails, hoses, nozzles, protective clothing and other debris and equipment) will be discarded as PCB solids without any attempt to decontaminate these items. These solid waste materials will be consolidated with the bulked solid wastes and is included in the waste removal closure cost estimate.

#### DECONTAMINATION OF TSCA STORAGE AREA AND OTHER IMPACTED AREAS

##### ASSUMPTIONS

- TSCA storage area is 55' x 32.5' x 14'
- Floor = 55 ft. x 32.5 ft. = 1,787.5 sqft.
- Two long walls = 55 ft. x 14 ft. x 2 = 1,540 sqft.
- Two short walls = 33 ft. x 14 ft. x 2 = 924 sqft.
- Total of 4,251.5 sqft. x 0.020833 ft (0.25" solvent over surface) = 88.57 cubic ft. x 7.48 gallons/cubic ft. = 662.514 gallons per rinse
- 663 gallons x 2 = 1,326 gallons per rinse/wash
- Decontamination of other impacted areas equal the TSCA storage area, 1,326 gallons x 2 rinse and 2 wash = 5,304 gallons

##### DECONTAMINATION & DISPOSAL COSTS (Veolia, Texas)

- Disposal - 5,336 gallons x \$6.75/gal. = \$36,018.00  
(Veolia through TCI)
- Transportation - \$7,150.00 x 2 trips = \$14,300.00

(TCI)

• Labor – 1 Foreman and 1 Laborer x 36 hours x \$155.00/hr. =	\$5,580.00
(ENPRO)	
• Tanker truck & operator for on-site consolidation of liquid waste - 36 hours x \$175.00/hr. =	\$6,300.00
(TCI)	
<b>TOTAL</b>	<b>= \$62,198.00</b>

#### 6.3.4 Protective and Spill Clean-Up Equipment

Following the decontamination operations, all personnel protective equipment, and spill cleanup equipment, which have become contaminated during the operations will be consolidated into bulk conveyances and shipped as a PCB waste to a permitted off-site landfill disposal facility.

The estimated volume of solid materials generated as part of the closure of the facility is expected to account for less than 2,000 pounds. This material will be combined with the empty drums, portable tanks, etc.

#### 6.3.5 Sampling and Analysis Program

Once the decontamination of the TSCA Storage Area is complete and all waste inventory and decontamination residuals have been removed from the site, Cyn shall undertake a sampling and analysis plan to (1) verify the success of the decontamination of the TSCA Storage Area and (2) ensure that PCB contamination is not present in (i) the indoor Container Shipping/Receiving Area, (ii) the Container Shipping/Receiving Area, (iii) areas adjacent to the Container Shipping/Receiving Areas, and (iv) bathrooms/hallway.

##### Assumptions:

1. The final number and location of all samples shall be based on the grid sampling procedures described in 40 CFR Subparts N, O, and P. Cyn will utilize a grid spacing of 3 meters in the TSCA Storage Area and 1.5 meters in the temporary vehicle parking areas and Container Shipping/Receiving Areas, which meets or exceeds the requirements of Subparts N, O and P.
2. Qualified personnel working in accordance with the QA/QC procedures identified in the Closure Plan shall retrieve all samples.
3. Surface wipe samples will be collected from the interior Container Shipping/Receiving Area, and the hallway/lavatory entrances. Because contamination in these areas is most likely caused by tracking, wipe samples are sufficient to indicate whether contamination exists or not.

4. Wipe Samples
- Interior Container Shipping/Receiving Area (8' x 45')  
= (2.4 meters x 13.7 meters)/(1.5 meters)<sup>2</sup> = 15 samples
  - Office Hallway/Lavatories (16' x 27')  
= (4.9 meters x 8.2 meters)/(1.5 meters)<sup>2</sup> = 18 samples
  - Equipment (i.e. steel pallets, containment berm, etc.)  
Assume two samples per four (4) berms = 8 samples  
Assume one sample per thirty (30) pallets = 30 samples
  - Additional 10% sample volume for QA/QC = 12 samples
- TOTAL 83 samples

5. Core/Bulk Samples will be taken throughout the TSCA regulated storage area based upon a grid spacing of 3 meters. Random core/bulk samples will also be taken from areas where a visual inspection has indicated the potential for contamination. Random bulk samples will be obtained in the driveway leading to the shipping/receiving areas and in the three shipping/receiving areas.

Temporary vehicle parking area ( 3 areas x 8 x 45') = 45 Samples  
 $3(2.4 \text{ meters} \times 13.7 \text{ meters}) / (1.5 \text{ meters})^2$

- Roadway on facility property leading to Container Shipping/Receiving Areas = 6 samples
- Three (3) exterior Container Shipping/Receiving Areas (2 samples/areas) = 6 samples
- TSCA Storage Area  
(33' x 55') = (10 meters x 16.8 meters)/(3 meters)<sup>2</sup> = 19 samples
- Additional 10% sample volume for QA/QC = 4 samples

TOTAL 80 samples

Estimated Costs

- Labor to obtain samples (2 chemists, 16 hr. x \$85/hr.) = \$2,720.00  
(Clean Harbors)
- Wipe sample analysis - 83 samples x \$60.00/sample = \$4,980.00
- Bulk sample analysis - 80 samples x \$60.00/samples = \$4,800.00

**TOTAL** **\$12,500.00**

6.4 Financial Assurance Mechanism for Closure


Clean Harbors provided a Certificate of Insurance to provide financial assurance in the amount calculated in the final closure cost estimate. The closure cost estimate shall be adjusted for inflation on an annual basis.

7.0 Post-Closure Cost Estimate and Financial Assurance

This Closure Plan provides for the removal and off-site disposal of PCB wastes and for the decontamination of the structure and equipment. Therefore, the need for a post-Closure Plan and post-closure finance assurance is eliminated.

8.0 Certification by the Person Preparing the Closure Cost Estimate

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements of representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate, and complete.

  
\_\_\_\_\_  
J. Steven Tucci  
President  
Cyn Environmental Services

10/29/18 

Exhibit A - EPA's Standard Operating Procedure for Sampling Concrete in the Field  
Exhibit B - Certificate of Insurance



## **CERTIFICATE OF INSURANCE FOR CLOSURE AND/OR POST-CLOSURE CARE**

**Name and Address of Insurer (herein called the "Insurer"):**

Indian Harbor Insurance Company  
Seaview House, 70 Seaview Avenue  
Stamford, CT 06902-6040

**Name and Address of Insured (herein called the "Insured"):**

Clean Harbors, Inc.  
42 Longwater Drive  
Norwell, MA 02061

**FACILITIES COVERED:**

**Name:** Cyn Environmental Services

**Address:** 8 Progress Drive  
Dover, NH 03820

**EPA ID Number:** NHD 981211832

**Amount insured for this site:** \$461,971

**Face Amount:** \$461,971

**Policy Number:** PEC004201205

**Effective Date:** October 17, 2018

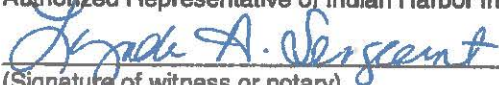
The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for closure for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 40 CFR 761.65 (d)(2)(v), 761.65(g)(5), 40 CFR 264.143(e), 264.145(e), 264.151.(e), 265.143(d), and 265.145(d), as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the EPA Regional Administrator or Delegated Individual, the Insurer agrees to furnish to the Director a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in 40 CFR 264.151(e) as such regulations were constituted on the date shown immediately below.

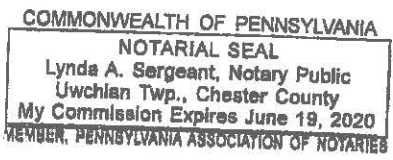
  
\_\_\_\_\_  
(Authorized signature for Insurer)

Joseph Madigan, Head of Environmental, Central Region and Canada  
Authorized Representative of Indian Harbor Insurance Company

  
\_\_\_\_\_  
(Signature of witness or notary)

Nov. 19, 2018  
\_\_\_\_\_  
(Date)

SEAL



*Exhibit A: EPA's Standard Operating Procedure for Sampling Concrete in the Field*

Table of Contents

1.0 Scope and Application ..... 4  
2.0 Summary of Method ..... 4  
3.0 Definitions. .... 4  
4.0 Health and Safety Warnings. .... 5  
5.0 Interferences. .... 6  
6.0 Personnel Qualifications ..... 6  
7.0 Equipment and Supplies ..... 6  
8.0 Sampling Design..... , ..... 7  
9.0 Sample Collection. .... 7  
10.0 Sample Handling, Preservation, and Storage. .... 10  
11.0 Decontamination. .... 11  
12.0 Data and Record Management..... 11  
13.0 Quality Control and Quality Assurance. .... 11  
14.0 Waste Management and Pollution Prevention. .... 12  
13.0 References. .... 12

Attachments:

- Example of Custody Seal and Sample Label
- Example of Chain of Custody Form

## 1.0 Scope and Application

1.1 This Standard Operating Procedure (SOP) is suitable for collection of a porous matrix sample for analysis of Polychlorinated Biphenyls (PCBs).

1.2 This SOP describes sampling techniques for both hard and soft porous surfaces.

1.2.1 Hard surfaces, and most soft surfaces, can be sampled using an impact hammer drill to generate a uniform, finely ground, powder to be extracted and analyzed for PCBs. This procedure is primarily geared at providing enough sample quantity for two analyses. Hard porous surfaces include concrete, brick, asphalt, cement, sandstone, limestone, unglazed ceramics, and other possible PCB suspected material. This procedure may also be used on other softer porous surfaces, such as wood.

1.2.2 Soft surfaces can be sampled using a chisel or sharp knife to generate a representative sample to be extracted and analyzed for PCBs. Soft porous surfaces include wood, wall plasterboard, low density plastics, rubber, caulking, and other PCB suspected material.

1.3 This SOP provides for collection of surface samples (0—0.5 inches) and delineation of PCB contamination throughout the core of the porous surface. The procedure can be used to sample the porous surface at distinctly different depth zones.

## 2.0 Method Summary

A one-inch or other sized diameter carbide drill bit is used in a rotary impact hammer drill to generate a fine powder, or other representative sample, suitable for extraction and analysis of PCBs from porous surfaces. This method also allows the use of chisels or knives for the collection of samples from soft porous surfaces for PCB analysis.

## 3.0 Definitions

3.1 **Field/Bottle Blank:** A sample container of the same lot as the containers used for the environmental samples. This evaluates PCB contamination introduced from the sample container(s) from a common lot.

3.2 **Equipment/Rinse/Rinsate Blanks:** A sample that is collected by pouring hexane over the sample collection equipment after decontamination and before sample collection. The sample is collected in the appropriate sample container identical to the sample containers. This represents background contamination resulting from the field equipment, sampling procedure, sample container, and shipment.

- 3.3 **Field Replicates/Duplicates:** Two or more samples collected at the same sampling location. Field replicates should be samples collected side by side. Field replicates represent the precision of the whole method, site heterogeneity, field sampling, and the laboratory analysis.
- 3.4 **Field Split Samples:** Two or more representative subsamples taken from one environmental sample in the field. Prior to splitting, the environmental sample is homogenized to correct for sample heterogeneity that would adversely impact data comparability. Field split samples are usually analyzed by different laboratories (inter laboratory comparison) or by the same laboratory (intra laboratory comparison). Field splits are used to assess sample handling procedures from field to laboratory and laboratory comparability.
- 3.5 **Laboratory Quality Samples:** Additional samples that will be collected for the laboratory's quality control program: matrix spike, matrix spike duplicate, laboratory duplicates, etc.
- 3.6 **Proficiency Testing (PT)/Performance Evaluation (PE) Sample:** A sample, the composition of which is unknown to the laboratory or analyst, provided to the analyst or laboratory to assess the capability to produce results within acceptable criteria. This is optional depending on the data quality objectives. If possible, it is recommended that the PE sample be of similar matrix as the porous surface(s) being sampled.
- 3.7 **Porous Surface:** Any surface that allows PCBs to penetrate or pass into itself including, but not limited to, paint or coating on metal; corroded metal; fibrous glass or glass wool; unglazed ceramics; ceramics with porous glaze; porous building stone such as sandstone, travertine, limestone, or coral rock; low density plastics such as Styrofoam and low density polyethylene; coated (varnished or painted) or uncoated wood; painted or unpainted concrete or cement; plaster; plasterboard; wallboard; rubber; caulking; fiberboard; chipboard; asphalt; or tar paper.
- 3.8 **Shipping Container Temperature Blank:** A water sample that is transported to the laboratory to measure the temperature of the samples in the cooler.
- 4.0 **Health and Safety**
- 4.1 Eye, respiratory, and hearing protection are required at all times during sample drilling. A properly fitted respirator is required for hard porous surface sampling. A respirator is recommended whenever there is a risk of inhalation of either particulate or volatilized PCBs during sampling.
- 4.2 All proper personal protection clothing and equipment must be worn.

- 4.3 When working with potentially hazardous materials or situations, follow EPA, OSHA, and specific health or safety procedures.
- 4.4 Care must be exercised when using an electrical drill and sharp cutting objects.
- 5.0 Interferences and Potential Problems
- 5.1 This sampling technique produces a finely ground uniform powder, which minimizes the physical matrix effects from variations in the sample consistency (i.e., particle size, uniformity, homogeneity, and surface condition). Matrix spike analysis of a sample is highly recommended to monitor for any matrix related interferences.
- 5.2 Nitrile gloves are recommended. Latex gloves must not be used due to possible phthalate contamination.
- 5.3 Interferences may result from using contaminated equipment, solvents, reagents, sample containers, or sampling in a disturbed area. The drill bit must be decontaminated between samples. (see Section 11.0.)
- 5.4 Cross contamination problems can be eliminated or minimized through the use of dedicated sampling equipment.
- 6.0 Personnel Qualifications
- 6.1 1 All field samplers working at hazardous materials/waste sites are required to take a 40 hour health and safety training course prior to engaging in any field activities. Subsequently, an 8 hour refresher health and safety course is required annually.
- 6.2 The field sampler should be trained by an experienced sampler before initiating this procedure.
- 6.3 All personnel shall be responsible for complying with all quality assurance/quality control requirements that pertain to their organizational/technical function.
- 7.0 Equipment and Supplies
- 7.1 This list varies with the matrix and if depth profiling is required
- Rotary impact hammer variable speed drill
  - 1-inch or other suitable (1/2, 3/4, etc.) diameter carbide tip drill bits
  - Steel chisel or sharp cutting knife, and hammer
  - Brush and cloths to clean area
  - Stainless steel scoopulas

Aluminum foil to collect the powder sample

1 quart Cubitainer with the top cut out to collect the powder sample

Aluminum weighing pans to collect the powder sample

Cleaned glass container (2 oz or 40 mL) with Teflon lined cap

Decontamination supplies: hexane, two small buckets, a scrub brush, detergent, deionized water, hexane squirt bottle, and paper towels

Dedicated vacuum cleaner with a disposable filter or a vacuum pump with a dust filter

Polyethylene tubing and Pasteur pipettes

Sample tags/labels, custody seals, and Chain-of-Custody form

## 8.0 Sampling Design

8.1 A sufficient number of samples must be collected to meet the data quality objectives of the project. If the source of the PCB contamination is regulated under the federal TSCA PCB Regulations at 40 CFR Part 761, the sampler should insure that the sampling design is sufficient to meet any investigation or verification sampling requirements. At a minimum, the following is recommended:

8.1.1 Suspected stained area (s) should be sampled.

8.1.2 At each separate location, collect at least 3 samples of each type of porous surface, regardless of the amount of each type of porous surface present.

8.1.3 In areas where PCB equipment was used or where PCBs were stored, samples should be collected at a frequency of 1 sample/100 square feet (ft').

## 9.0 Sample Collection

### 9.1 Hard Porous Surfaces

9.1.1 Lock a 1/2-inch or another size diameter carbide drill bit into the impact hammer drill and plug the drill into an appropriate power source. For easy identification, sample locations may be pre-marked using a marker or paint. (Note: the actual drilling point must not be marked.) Remove any debris with a clean brush or cloth prior to drilling. All sampling decisions of this nature should be noted in the sampling logbook.

9.1.2 Use a Cubitainer with the top cut off or aluminum foil to contain the powdered sample. Begin drilling in the designated location. Apply steady even pressure and let the drill do the work. Applying too much pressure will generate excessive heat and dull the drill bit prematurely. The drill will provide a finely ground powder that can be easily collected.



- 9.1.3 Samples should be collected at 1/8-inch depth intervals. Thus, the initial surface sample should be collected from 0 — 0.5 inches. A 1/8-inch deep hole generates about 10 grams (20 mL) of powder. Multiple holes located closely adjacent to each other, may be needed to generate sufficient sample volumes for a PCB determination. It is strongly recommended that the analytical laboratory be consulted on the minimum sample size needed for PCB extraction and analysis.
- 9.1.4 Wall and Ceiling Sampling: A team of two samplers will be required for wall and ceiling sampling. The second person will hold a clean catch surface (e.g. an aluminum pan) below the drill to collect the falling powder. Alternatively, use the chuck-end of the drill bit and punch a hole through the center of the collection pan. The drill bit is then mounted through the pan and into the drill. For ceilings, the drill may be held at an angle to collect the powder. Thus the driller can be drilling at an angle while the assistant steadies the pan to catch the falling powder. As a precaution, it may be advantageous to tape a piece of plastic around the drill, just below the chuck, to avoid dust contaminating the body of the drill and entering the drill's cooling vents. Caution must be taken to prevent obstruction of the drill's cooling vents.

## 9.2 Soft Porous Surfaces

- 9.2.1 The procedure for the hard porous surface may be used for certain soft porous surfaces, such as wood.
- 9.2.2 Samples should be collected at no more than 1/8-inch depth intervals using a metal chisel or sharp cutting knife. Thus, the initial surface sample should be collected from 0 — 0.5 inches. It is important to collect at least 10 grams for analysis.
- 9.2.3 For soft porous surfaces, such as caulking and rubber, a representative sample can be collected using a metal chisel or sharp cutting knife.

## 9.3 Multiple Depth Sampling

- 9.3.1 Multiple Depth Sampling may not be applicable to certain porous surfaces, such as caulking.
- 9.3.2 Collect the surface sample as outlined in Section 9.1 or 9.2.
- 9.3.3 Use the vacuum pump or cleaner to clean out the hole.
- 9.3.4 To collect multiple depths there are two options.

9.3.4.1 Option one: drill sequentially 1/8-inch increments with the 1 inch drill.

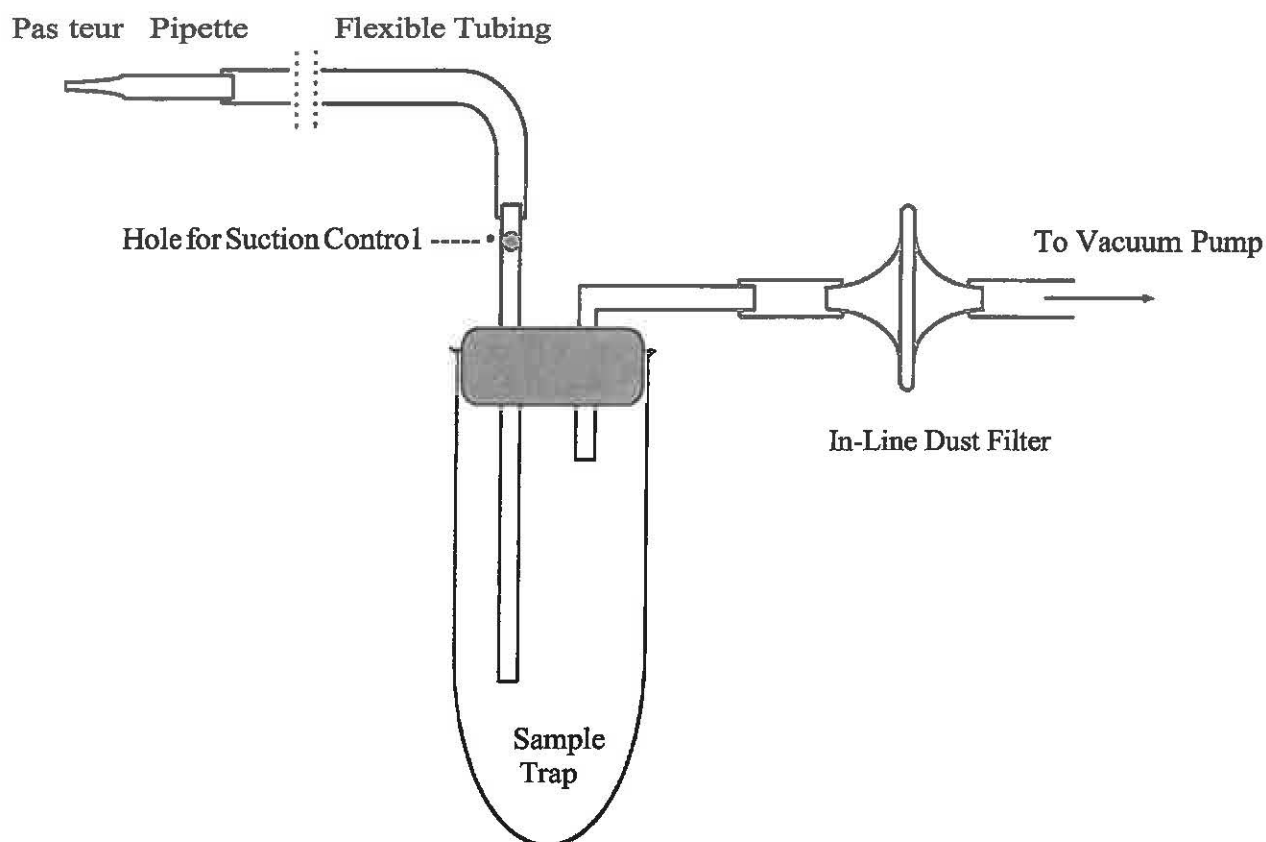
9.3.4.2 Option two: drill with the 1 inch bit and either make the hole larger or use a smaller bit to take the next 1/8 - inch sample.

9.3.5 A stainless steel scoopula will make it easier to collect the sample from the bottom of the hole.

#### 9.4 Vacuum Trap Design and Clean-out

The trap presented in Figure 1 is a convenient and thorough way for collecting and removing concrete powder from drilled holes. The trap system is designed to allow for control of the suction from the vacuum pump and easy trap clean-out between samples. Note, by placing a hole in the inlet tube (see Figure 1), a finger on the hand holding the trap can be used to control the suction at the sampling tip. Thus, when this hole is left completely open, there will be no suction, and the sampler can have complete control over where and what to sample. To change-out between samples the following steps should be taken: 1) the Pasteur pipette and piece of polyethylene tubing at the sample inlet should be replaced with new materials, 2) the portion of the rubber stopper and glass tubing that was in the trap should be wiped down with a clean damp paper towel (wetted with deionized water) and then dried with a fresh paper towel, 3) a clean pipe cleaner should be drawn through the glass inlet tube to remove any concrete dust present, and 4) the glass tube or flask used to collect the sample should be swapped out with a clean decontaminated sample trap. Having several clean tubes or flasks on hand will facilitate change-out between samples.

Figure 1



Note: the holes should be vacuumed thoroughly to minimize any cross-contamination between sample depths and the bits should be decontaminated between samples. (See Section 11.0)

#### 10.0 Sample Handling, Preservation, and Storage

10.1 Samples must be collected in glass containers for PCB analyses. In general, a 2-ounce sample container with a Teflon-lined cap (wide-mouth jars are preferred) will hold sufficient mass for most analyses. A 2-ounce jar can hold roughly 90 grams of sample.

10.2 Samples are to be shipped refrigerated and maintained at  $< 6^{\circ}\text{C}$  until the time of extraction and analysis.

10.3 The suggested holding time for PCB samples is 14 days to extraction.

## 11.0 Decontamination

11.1 1 Assemble two decontamination buckets. The first bucket contains a detergent and potable water solution, and the second bucket is for rinsate. Place all used drill bits, hose for the vacuum cleaner, and utensils in the detergent and water bucket. Scrub each piece thoroughly using the scrub brush. Note, the powder does cling to the metal surfaces, so care should be taken during this step, especially with the twists and curves of the drill bits. Next, rinse each piece with water and hexane. Place the rinsed pieces on clean paper towels and individually dry and inspect each piece. Note: all pieces should be dry prior to reuse.

112 Lightly contaminated drill bits and utensils may be wiped with a hexane soaked cloth and hexane rinsed for decontamination.

## 12.0 Data and Record Management

12.1 All data and information collection should follow a Field Data Management SOP or Quality Assurance Project Plan (QAPP).

12.2 Follow the chain of custody procedures to release the samples to the laboratory. A copy is kept with the sampling records.

1.2.3 The field data is stored for at least 3 years.

## 13.0 Quality Control and Quality Assurance

13.1 Representative samples are required. The sampler will evaluate the site specific conditions to assure the sample will be representative.

13.2 All sampling equipment must be decontaminated prior to use and between each discrete sample.

13.3 All field Quality Control (QC) sample requirements in a Sample and Analysis Plan (SAP) or QAPP must be followed. The SAP or QAPP may involve field blanks, equipment blanks, field duplicates and/or the collection of extra samples for the laboratory's quality control program.

13.4 Field duplicates should be collected at a minimum frequency of 1 per 20 samples or 1 per non-related porous matrix, whichever is greater.

## 14.0 Waste Management and Pollution Prevention


- 14.1 During field sampling events there may be PCB and/or hazardous waste produced from the sample collection. The waste must be handled and disposed of in accordance with federal, state, and local regulations. The dust Tilter, and tubing If a vacuum pump is used, is disposed after each site investigation. This waste will be treated as PCB waste if the samples are positive for PCBs. It may be possible to manage or dispose of the waste produced at the site where the work was performed. If the site does not meet regulatory requirements for these types of activities, the waste must be transported to a facility permitted to manage and/or dispose of the waste.

## 15.0 References

1. Guidance for the Preparation of Standard Operating Procedures for Quality W-Related Operations, QA/G-6, EPA/600/R-96/027, November 1995.
2. 40 CFR Part 761 — Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, and Use Prohibitions
3. Sample Container and Holding Time: RCRA SW 846, Chapter 4, Table 4.1, Revision 4, February, 2007.

Example of Sample Label and Custody Seal

LABEL	U.S. ENVIRONMENTAL PROTECTION AGENCY — REGION I BOSTON, MA85•	
	NAME OF UNIT AND ADDRESS	DATE: YR/MO/DAY
SAMPLE	ENVIRONMENTAL SERVICE BOSTON 60 WESTVIEW STREET LEXINGTON, MASSACHUSETTS 02173	TIME
	SOURCE OF SAMPLE	STATION NO.
		SAMPLE NO. SUB NO.
	SAMPLING CREW (FIRST, INITIAL, LAST NAME)	AMOUNT
	ANALYSIS	

 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICIAL SAMPLE SEAL	SAMPLE NO.	DATE	SEAL BROKEN BY	DATE
	SIGNATURE			
	PRIUTH#EAWDTvLE pwgr<, nSzw+vrF	j		

EPA FORM 7500-2 (RT-75)



CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME				NO. OF CON- TAINERS			REMARKS
STA. NO.	DATE	JJME	COM GRA	STATION LOCATION					
Relinquished by: (s,p*ly)		Date / Time	Received by: (Signature)		Relinquished by: (Signature)		Date / Time	Received by: (Signature)	
Relinquished by: (rs,ye+lv.rj)		Date / Time	Received by: (Signature)		Relinquished by: (Signature)		Date / Time	Received by: (Signature)	
Relinquished by: (Signature)		Date / Time	Received for Laboratory by: (Signature)		Date / Time	Remarks			

Example of Chain of Custody Form

## PUBLIC NOTICE

For  
Cyn Environmental Services  
8 Progress Drive  
Dover, New Hampshire

Cyn Environmental Services has applied to the U.S. Environmental Protection Agency for approval to commercially store polychlorinated biphenyls (PCBs) under Section 6(e)(1) of the Toxic Substances Control Act (TSCA, 15 U.S.C. 2605(e)) and 40 CFR § 761.60(e). Cyn currently conducts commercial storage under interim approval status, in accordance with the federal PCB regulations.

The proposed EPA TSCA PCB approval is being placed before the public for a 30-day comment period. Persons wishing to comment on the EPA's decision to issue the proposed TSCA PCB approval are invited to submit comments by letter or email during the public comment period beginning **November 21, 2018, and ending December 21, 2018**. EPA will finalize its decision after review of and response to all received written comments. A copy of the documents supporting the storage operations, fact sheet, and a draft EPA TSCA PCB approval are available at the EPA's public notice website at <https://www.epa.gov/node/213613/>. All written comments must be submitted by December 21, 2018, to Kimberly Tisa or Katherine Woodward at the EPA address or via the email below.

Hard copies of the documents are also available for review during normal business hours at the following locations:

U.S. Environmental Protection Agency  
5 Post Office Square, Suite 100  
Boston, Massachusetts 02109

Dover Public Library  
73 Locust St,  
Dover, NH 03820

Attention:

Kimberly Tisa  
617-918-1527  
[tisa.kimberly@epa.gov](mailto:tisa.kimberly@epa.gov)

Katherine Woodward  
617-918-1353  
[woodward.katherine@epa.gov](mailto:woodward.katherine@epa.gov)

Office hours 9:00 a.m. to 5:00 p.m.



## PUBLIC NOTICE

For

Cyn Environmental Services  
8 Progress Drive  
Dover, New Hampshire

Cyn Environmental Services has applied to the U.S. Environmental Protection Agency for approval to commercially store polychlorinated biphenyls (PCBs) under Section 6(e)(1) of the Toxic Substances Control Act (TSCA, 15 U.S.C. 2605(e)) and 40 CFR § 761.60(e). Cyn currently conducts commercial storage under interim approval status, in accordance with the federal PCB regulations.

The proposed EPA TSCA PCB approval is being placed before the public for a 30-day comment period. Persons wishing to comment on the EPA's decision to issue the proposed TSCA PCB approval are invited to submit comments by letter or email during the public comment period beginning **November 21, 2018, and ending December 21, 2018**. EPA will finalize its decision after review of and response to all received written comments. A copy of the documents supporting the storage operations, fact sheet, and a draft EPA TSCA PCB approval are available at the EPA's public notice website at <https://www.epa.gov/node/213613/>. All written comments must be submitted by December 21, 2018, to Kimberly Tisa or Katherine Woodward at the EPA address or via the email below.

Hard copies of the documents are also available for review during normal business hours at the following locations:

U.S. Environmental Protection Agency  
5 Post Office Square, Suite 100  
Boston, Massachusetts 02109

Dover Public Library  
73 Locust St,  
Dover, NH 03820

Attention:

Kimberly Tisa  
617-918-1527  
[tisa.kimberly@epa.gov](mailto:tisa.kimberly@epa.gov)

Katherine Woodward  
617-918-1353  
[woodward.katherine@epa.gov](mailto:woodward.katherine@epa.gov)

Office hours 9:00 a.m. to 5:00 p.m.

**STANDARD OPERATING PROCEDURE  
FOR SAMPLING POROUS SURFACES  
FOR POLYCHLORINATED BIPHENYLS (PCBs)**

**The Office of Environmental Measurement and Evaluation**

EPA New England — Region 1

**11 Technology Dr.**

North Chelmsford, MA 01863

Prepared by:  5/5/11  
Dan Granz, Environmental Engineer Date

Reviewed by:  1  
Kim Tisa, TSCA PCB Coordinator Date

Reviewed by:  05/23/11  
Jerry Keefe — EA Team Leader Date

Approved by:  5/05/11  
Dan Boudreau, EIA Chemistry Team Leader Date

Disclaimer: The controlled version of this document is the electronic version viewed on-line only. If this is a printed copy of the document, it is an uncontrolled version and may or may not be the version.

This document contains direction developed solely to provide internal guidance to U.S. Environmental Protection Agency (EPA) personnel. EPA retains the discretion to adopt approaches that differ from these procedures on a case by case basis. The procedures set North do not create any rights, substantive or procedural, enforceable at law by a party to litigation with EPA or the United States.

